MELSOFT

MITSUBISHI ELECTRIC

Engineering Software

GT SoftGOT2000 Version1 Operating Manual

-SW1DND-GTWK3-E

SAFETY PRECAUTIONS

Always read the precautions before using this product.

Also read this manual and the relevant manuals mentioned in this manual carefully, and use the product properly while paying full attention to safety.

Note that the precautions in this manual apply only to this product.

The safety precautions are divided into the following levels: warnings and cautions.

⚠ WARNING	**Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.**
⚠ CAUTION	**Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.**

Note that failure to observe ⚠ CAUTION may lead to a serious accident depending on the circumstances.

Make sure to observe both warnings and cautions to ensure personal safety.

Ensure that this manual is easily accessible to all users of this product.

[DESIGN PRECAUTIONS]

⚠WARNING

- Some failures of the personal computer, interface board, or cables may cause GT SoftGOT2000 to keep turning on or off an output.
  An external monitoring circuit should be provided to check for output signals which may lead to a serious accident.
  Not doing so may cause an accident due to a false output or malfunction.
- Do not use GT SoftGOT2000 as the warning device that may cause a serious accident.
  An independent and redundant hardware or mechanical interlock is required to configure a device that displays or outputs a serious warning.
  Not doing so may cause an accident due to a false output or malfunction.
- If you have changed a program or parameter of the controller (such as a PLC) that is monitored by GT SoftGOT2000, restart GT SoftGOT2000.
  Not doing so may cause an accident due to a false output or malfunction.
- Create safety circuits external to the PLC to ensure that the entire system works safely even if the personal computer fails.
  Not doing so may cause an accident due to a false output or malfunction.
  (1) Create the following circuits external to the PLC: emergency stop circuits, protection circuits, interlock circuits that prevent an invert operation (such as a forward/reverse rotation), and interlock circuits that prevent a machine breakage (such as positioning at the upper or lower limit).
  (2) If the station with an interface board is disconnected from the data link due to a data link error, the other stations retain the last-minute data output from that station. The data is retained until the data link resumes (the disconnected station is returned).
  Establish a mechanism so that each station in the data link system monitors the data link status and handles data link errors.
- For the operating status of each station if an error occurs in network communications, refer to the manual for the interface board used.
  Not doing so may cause an accident due to a false output or malfunction.

[DESIGN PRECAUTIONS]

⚠WARNING

- If you change the data during operation, provide an interlock by using the program of the PLC to ensure that the entire system always works safely.
  Establish a mechanism to handle data communication between the personal computer and PLC CPU if a data communication error occurs in the system.
- To maintain the security (confidentiality, integrity, and availability) of the GOT and the system against unauthorized access, DoS[*1] attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
  Mitsubishi Electric shall have no responsibility or liability for any problems involving GOT trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks.
  *1 DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.

[DESIGN PRECAUTIONS]

⚠CAUTION

- Do not run the control line cables and communication cables together with or near the main circuit cables, power line cables, etc.
  Keep a distance of 100 mm or more between them as a guide.
  Not doing so may cause a malfunction due to noise.
- When a GOT2000 series model and a GOT1000 series model are on an Ethernet network, do not set the IP address 192.168.0.18 for the GOTs and the controllers on this network.
  Doing so may cause IP address duplication at the GOT startup, adversely affecting the communication of the device with the IP address 192.168.0.18.
  The operation at IP address duplication depends on the devices and the system.
- Turn on the controllers and the network devices to be ready for communication before they communicate with GT SoftGOT2000.
  Not doing so may cause a communication error on GT SoftGOT2000.

[WIRING PRECAUTIONS]

⚠WARNING

- Make sure to shut off the external power supply for the system in all phases before wiring.
  Not doing so may result in an electric shock, product damage or malfunction.

[WIRING PRECAUTIONS]

⚠CAUTION

- Connect the communication cable to the interface connector of the personal computer, and tighten the mounting screws and terminal screws in the specified torque range.
  Undertightening may cause a short circuit or malfunction.
  Overtightening may damage the screws or personal computer interface, causing a short circuit or malfunction.

[TEST OPERATION PRECAUTIONS]

⚠WARNING

- Before testing the operation of a user-created screen (such as turning on or off a bit device, changing the current value of a word device, changing the set value or current value of a timer or counter, and changing the current value of a buffer memory), thoroughly read the manual to fully understand the operating procedure.
  During the test operation, never change the data of the devices which are used to perform significant operation for the system.
  Doing so may cause an accident due to a false output or malfunction.

[STARTUP/MAINTENANCE PRECAUTIONS]

⚠WARNING

- Do not touch the terminals while power is on.
  Doing so may cause an electric shock or malfunction.
- Before cleaning or terminal screw retightening, make sure to shut off the external power supply in all phases.
  Not doing so may cause damage to the personal computer interface or malfunction.
  Undertightening may cause a short circuit or malfunction.
  Overtightening may damage the screws or personal computer interface, causing a short circuit or malfunction.

[REMOTE CONTROL PRECAUTIONS]

⚠WARNING

- Remote control is available through a network by using GOT functions, including the SoftGOT-GOT link function, the remote personal computer operation function, the VNC server function, and the GOT Mobile function.
  If these functions are used to perform remote control of control equipment, the field operator may not notice the remote control, possibly leading to an accident.
  In addition, a communication delay or interruption may occur depending on the network environment, and remote control of control equipment cannot be performed normally in some cases.
  Before using the above functions to perform remote control, fully grasp the circumstances of the field site and ensure safety.

[EXCLUSIVE AUTHORIZATION CONTROL PRECAUTIONS]

⚠WARNING

- If you use the GOT network interaction function to control the authorization among pieces of equipment to prevent simultaneous operations, make sure to fully understand the function.
  The exclusive authorization control of the GOT network interaction function can be enabled or disabled for each screen. (By default, the exclusive authorization control is disabled for all screens.)
  Properly determine the screens for which the exclusive authorization control is required, and set the control by screen.
  A screen for which the exclusive authorization control is disabled can be operated simultaneously from pieces of equipment. Make sure to determine the operation period for each operator, fully grasp the circumstances of the field site, and ensure safety to perform operations.

CAUTIONS FOR USING THIS SOFTWARE

Required PC memory

The processing may be terminated by Microsoft Windows on a personal computer of which main memory capacity is less than 128M bytes. Make sure to secure the capacity of 128M bytes or more.

Free capacity of hard disk

At least 100M bytes of free capacity of virtual memory should be secured within hard disk to run this software.
The processing may be terminated by Windows, if free space of 100M bytes or more cannot be secured within hard disk while running GTSoftGOT2000.
Secure enough free capacity of virtual memory within hard disk space in order to run the software.

Display of GT SoftGOT2000 and GOT

Display of GT SoftGOT2000 may be different from display of GOT.
Confirm for actual display of GOT on the GOT.

MEMO

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INTRODUCTION

Thank you for choosing Mitsubishi Electric Graphic Operation Terminal (GOT).

Before using the product, read this manual carefully and make sure you understand the functions and performance of the GOT for correct use.

☞ Manuals for GT Works3

☞ Abbreviations, Generic Terms, and Model Icons

How to Use Help

☞ Displaying Help

☞ Using Help

Displaying Help

■Displaying Help from the menu

To display Help, select [Help] → [GT SoftGOT2000 Help] from the menu.

■Difference between GT SoftGOT2000 and GT Designer3

On GT Designer3, display Help (e-Manual) by pressing the [F1] key.

On GT SoftGOT2000, display Help from the menu because the [F1] key is not usable.

Using Help

Help is viewable using e-Manual Viewer.

For information on how to use e-Manual Viewer, refer to the following.

📖e-Manual Viewer Help

Manuals for GT Works3

The electronic manuals related to this product are installed together with the screen design software.
If you need the printed manuals, consult your local sales office.

Manuals for GT Designer3 (GOT2000)

Point

e-Manual refers to the Mitsubishi Electric FA electronic book manuals that can be browsed using a dedicated tool.
e-Manual has the following features:

- Required information can be cross-searched in multiple manuals.
- Other manuals can be accessed from the links in the manual.
- Hardware specifications of each part can be found from the product figures.
- Pages that users often browse can be bookmarked.
- Sample programs can be copied to the engineering tool.

■Screen design software-related manuals

Manual name	Manual number (Model code)	Format
GT Works3 Installation Instructions	-	PDF
GT Designer3 (GOT2000) Screen Design Manual	SH-081220ENG (1D7ML9)	PDF e-Manual
GT Converter2 Version3 Operating Manual for GT Works3	SH-080862ENG	PDF e-Manual
GOT2000 Series MES Interface Function Manual for GT Works3 Version1	SH-081228ENG	PDF e-Manual

■Connection manuals

Manual name	Manual number (Model code)	Format
GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1	SH-081197ENG (1D7MJ8)	PDF e-Manual
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1	SH-081198ENG	PDF e-Manual
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1	SH-081199ENG	PDF e-Manual
GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1	SH-081200ENG	PDF e-Manual
GOT2000 Series Handy GOT Connection Manual For GT Works3 Version1	SH-081867ENG (1D7MS9)	PDF e-Manual
GOT2000 Series Connection Manual (α2 Connection) for GT Works3 Version1	JY997D52301	PDF e-Manual

■GT SoftGOT2000 manuals

Manual name	Manual number (Model code)	Format
GT SoftGOT2000 Version1 Operating Manual	SH-081201ENG	PDF e-Manual
MELSOFT GT OPC UA Client Operating Manual	SH-082174ENG	PDF

■GOT2000 series user's manuals

Manual name	Manual number (Model code)	Format
GOT2000 Series User's Manual (Hardware)	SH-081194ENG (1D7MJ5)	PDF e-Manual
GOT2000 Series User's Manual (Utility)	SH-081195ENG (1D7MJ6)	PDF e-Manual
GOT2000 Series User's Manual (Monitor)	SH-081196ENG (1D7MJ7)	PDF e-Manual

■GOT SIMPLE series user's manuals

Manual name	Manual number	Format
GOT SIMPLE Series User's Manual	JY997D52901	PDF e-Manual

■Manuals related to GT Works3 add-on projects

Manual name	Manual number (Model code)	Format
GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Fundamentals)	SH-082072ENG (1D7MV1)	PDF e-Manual
GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Screen Details)	SH-082074ENG (1D7MV3)	PDF e-Manual

Manuals for GT Designer3 (GOT1000)

Refer to the Help and manuals for GT Designer3 (GOT1000).

Abbreviations, Generic Terms, and Model Icons

The following shows the abbreviations, generic terms, and model icons used in this manual.

GOT

■GOT2000 series

Abbreviations and generic terms			Description	Meaning of icon	
				Available	Unavailable
GT27	GT27-X	GT2715-X	GT2715-XTBA GT2715-XTBD		
	GT27-S	GT2712-S	GT2712-STBA GT2712-STWA GT2712-STBD GT2712-STWD		
		GT2710-S	GT2710-STBA GT2710-STBD		
		GT2708-S	GT2708-STBA GT2708-STBD		
	GT27-V	GT2710-V	GT2710-VTBA GT2710-VTWA GT2710-VTBD GT2710-VTWD		
		GT2708-V	GT2708-VTBA GT2708-VTBD		
		GT2705-V	GT2705-VTBD		
GT25			All GT25 models		
	GT25-W	GT2512-WX	GT2512-WXTBD GT2512-WXTSD		
		GT2510-WX	GT2510-WXTBD GT2510-WXTSD		
		GT2507-W	GT2507-WTBD GT2507-WTSD		
		GT2507T-W	GT2507T-WTSD		
	GT25-S	GT2512-S	GT2512-STBA GT2512-STBD		
		GT2512F-S	GT2512F-STNA GT2512F-STND		
	GT25-V	GT2510-V	GT2510-VTBA GT2510-VTWA GT2510-VTBD GT2510-VTWD		
		GT2510F-V	GT2510F-VTNA GT2510F-VTND		
		GT2508-V	GT2508-VTBA GT2508-VTWA GT2508-VTBD GT2508-VTWD		
		GT2508F-V	GT2508F-VTNA GT2508F-VTND		
		GT2505-V	GT2505-VTBD		
	GT25HS-V Handy GOT	GT2506HS-V	GT2506HS-VTBD		
		GT2505HS-V	GT2505HS-VTBD		
GT23	GT23-V	GT2310-V	GT2310-VTBA GT2310-VTBD		
		GT2308-V	GT2308-VTBA GT2308-VTBD		

Abbreviations and generic terms			Description	Meaning of icon	
				Available	Unavailable
GT21			All GT21 models		
	GT21-W	GT2107-W	GT2107-WTBD GT2107-WTSD		
	GT21-Q	GT2105-Q	GT2105-QTBDS GT2105-QMBDS		
	GT21-R	GT2104-R	GT2104-RTBD		
	GT21-P	GT2104-P	GT2104-PMBD		
			GT2104-PMBDS		
			GT2104-PMBDS2		
			GT2104-PMBLS		
		GT2103-P	GT2103-PMBD		
			GT2103-PMBDS		
			GT2103-PMBDS2		
			GT2103-PMBLS		
GT SoftGOT2000			GT SoftGOT2000 Version1		

■GOT SIMPLE series

Abbreviations and generic terms		Description	Meaning of icon	
			Available	Unavailable
GS25		GS2512-WXTBD		
GS21	GS21-W-N	GS2110-WTBD-N GS2107-WTBD-N		
	GS21-W	GS2110-WTBD GS2107-WTBD		

■GOT1000 series, GOT900 series, and GOT800 series

Abbreviations and generic terms	Description	Meaning of icon
		Available / Unavailable
GOT1000 Series	GOT1000 Series	-
GOT900 Series	GOT-A900 Series GOT-F900 Series	-
GOT800 Series	GOT-800 Series	-

Communication unit

Abbreviations and generic terms	Description
Bus connection unit	GT15-QBUS GT15-QBUS2 GT15-ABUS GT15-ABUS2 GT15-75QBUSL GT15-75QBUS2L GT15-75ABUSL GT15-75ABUS2L
Serial communication unit	GT15-RS2-9P GT15-RS4-9S GT15-RS4-TE
MELSECNET/H communication unit	GT15-J71LP23-25 GT15-J71BR13
CC-Link IE TSN communication unit	GT25-J71GN13-T2
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX
CC-Link IE Field Network communication unit	GT15-J71GF13-T2
CC-Link communication unit	GT15-J61BT13
Wireless LAN communication unit	GT25-WLAN
Serial multi-drop connection unit	GT01-RS4-M
Connection conversion adapter	GT10-9PT5S
Field network adapter unit	GT25-FNADP
Ethernet communication unit	GT25-J71E71-100
RS-232/485 signal conversion adapter	GT14-RS2T4-9P

Option unit

Abbreviations and generic terms	Description
Printer unit	GT15-PRN
Video input unit	GT27-V4-Z (A set of GT16M-V4-Z and GT27-IF1000)
RGB input unit	GT27-R2 GT27-R2-Z (A set of GT16M-R2-Z and GT27-IF1000)
Video/RGB input unit	GT27-V4R1-Z (A set of GT16M-V4R1-Z and GT27-IF1000)
RGB output unit	GT27-ROUT GT27-ROUT-Z (A set of GT16M-ROUT-Z and GT27-IF1000)
Digital video output unit	GT27-VHOUT
Multimedia unit	GT27-MMR-Z (A set of GT16M-MMR-Z and GT27-IF1000)
Video signal conversion unit	GT27-IF1000
External I/O unit	GT15-DIO GT15-DIOR
Sound output unit	GT15-SOUT
SD card unit	GT21-03SDCD

Option

Abbreviations and generic terms	Description
SD card	NZ1MEM-2GBSD NZ1MEM-4GBSD NZ1MEM-8GBSD NZ1MEM-16GBSD L1MEM-2GBSD L1MEM-4GBSD
Battery	GT11-50BAT GT15-BAT
Protective sheet	GT27-15PSGC GT25-12WPSGC GT25-12PSGC GT25-10WPSGC GT25-10PSGC GT25-08PSGC GT21-07WPSGC GT25T-07WPSVC GT25-05PSGC GT25-05PSGC-2 GT21-05PSGC GT21-04RPSGC-UC GT21-03PSGC-UC GT21-04PSGC-UC GT27-15PSCC GT25-12WPSCC GT25-12PSCC GT25-10WPSCC GT25-10PSCC GT25-08PSCC GT25-05PSCC GT25-05PSCC-2 GT25-12PSCC-UC GT25-10PSCC-UC GT25-08PSCC-UC GT21-07WPSCC GT21-05PSCC GT21-04RPSCC-UC GT21-04PSCC-UC GT21-03PSCC-UC GT16H-60PSC GT14H-50PSC
Antibacterial/antiviral protective sheet	GT25-12PSAC GT25-10PSAC GT25-08PSAC
Environmental protection sheet	GT25F-12ESGS GT25F-10ESGS GT25F-08ESGS
Protective cover for oil	GT20-15PCO GT20-12PCO GT20-10PCO GT20-08PCO GT21-12WPCO GT21-10WPCO GT21-07WPCO GT25T-07WPCO GT25-05PCO GT25-05PCO-2 GT05-50PCO GT21-04RPCO GT10-30PCO GT10-20PCO
USB environmental protection cover	GT25-UCOV GT25-05UCOV GT21-WUCOV

Abbreviations and generic terms	Description
Stand	GT15-90STAND GT15-80STAND GT15-70STAND GT05-50STAND GT25-10WSTAND GT21-07WSTAND GT25T-07WSTAND
Attachment	GT15-70ATT-98 GT15-70ATT-87 GT15-60ATT-97 GT15-60ATT-96 GT15-60ATT-87 GT15-60ATT-77 GT21-04RATT-40
Panel-mounted USB port extension	GT14-C10EXUSB-4S GT10-C10EXUSB-5S
Connector conversion box	GT16H-CNB-42S GT16H-CNB-37S GT11H-CNB-37S
Emergency stop switch guard cover	GT16H-60ESCOV GT14H-50ESCOV
Wall-mounting attachment	GT14H-50ATT

Software

■Software related to GOT

Abbreviations and generic terms	Description
GT Works3	SW1DND-GTWK3-J, SW1DND-GTWK3-E, SW1DND-GTWK3-C
GT Designer3 Version1	Screen design software GT Designer3 for GOT2000 and GOT1000 series
GT Designer3	Screen design software for GOT2000 series included in GT Works3
GT Designer3 (GOT2000)	
GT Designer3 (GOT1000)	Screen design software for GOT1000 series included in GT Works3
Speech synthesis license	GT Works Text to Speech License (SW1DND-GTVO-M)
Add-on license	GT Works3 add-on license for GOT2000 enhanced drive control (servo) project data (SW1DND-GTSV-MZ)
GENESIS64 Advanced	GENESIS64 server application (GEN64-APP)
GENESIS64 Basic SCADA	GENESIS64 server application (GEN64-BASIC)
GENESIS64	Generic term of GENESIS64 Advanced and GENESIS64 Basic SCADA
GOT Mobile function license for GT SoftGOT2000	License required to use the GOT Mobile function with GT SoftGOT2000 (SGT2K-WEBSKEY-□)
GT Simulator3	Screen simulator GT Simulator3 for GOT2000, GOT1000, and GOT900 series
GT SoftGOT2000	GOT2000 compatible HMI software GT SoftGOT2000
GT OPC UA Client	MELSOFT GT OPC UA Client (SW1DNN-GTOUC-MD)
GT Converter2	Data conversion software GT Converter2 for GOT1000 and GOT900 series
GT Designer2 Classic	Screen design software GT Designer2 Classic for GOT900 series
GT Designer2	Screen design software GT Designer2 for GOT1000 and GOT900 series
DU/WIN	Screen design software FX-PCS-DU/WIN for GOT-F900 series

■Software related to iQ Works

Abbreviations and generic terms	Description
iQ Works	iQ Platform compatible engineering environment MELSOFT iQ Works
MELSOFT Navigator	Integrated development environment software included in SW□DND-IQWK (iQ Platform compatible engineering environment MELSOFT iQ Works) (□ represents a version.)
MELSOFT iQ AppPortal	SW□DND-IQAPL-M type integrated application management software (□ represents a version.)

■Other software

Abbreviations and generic terms		Description
GX Works3		SW□DND-GXW3-E (-EA, -EAZ) type programmable controller engineering software (□ represents a version.)
GX Works2		SW□DNC-GXW2-E (-EA, -EAZ) type programmable controller engineering software (□ represents a version.)
Controller simulator	GX Simulator3	Simulation function of GX Works3
	GX Simulator2	Simulation function of GX Works2
	GX Simulator	SW□D5C-LLT-E (-EV) type ladder logic test tool function software package (SW5D5C-LLT (-V) or later versions) (□ represents a version.)
GX Developer		SW□D5C-GPPW-E (-EV)/SW□D5F-GPPW (-V) type software package (□ represents a version.)
GX LogViewer		SW□DNN-VIEWER-E type software package (□ represents a version.)
MI Configurator		Configuration and monitor tool for Mitsubishi Electric industrial computers (SW□DNNMICONF-M) (□ represents a version.)
PX Developer		SW□D5C-FBDQ-E type FBD software package for process control (□ represents a version.)
MT Works2		Motion controller engineering environment MELSOFT MT Works2 (SW□DND-MTW2-E) (□ represents a version.)
MT Developer		SW□RNC-GSV type integrated start-up support software for motion controller Q series (□ represents a version.)
CW Configurator		Setting/monitoring tools for the C Controller module and MELSECWinCPU (SW□DND-RCCPU-E) (□ represents a version.)
MR Configurator2		SW□DNC-MRC2-E type servo configuration software (□ represents a version.)
MR Configurator		MRZJW□-SETUP type servo configuration software (□ represents a version.)
FR Configurator2		Inverter setup software (SW□DND-FRC2-E) (□ represents a version.)
FR Configurator		Inverter setup software (FR-SW□-SETUP-WE) (□ represents a version.)
NC Configurator2		CNC parameter setting support tool (FCSB1221)
NC Configurator		CNC parameter setting support tool
FX Configurator-FP		Parameter setting, monitoring, and testing software package for FX3U-20SSC-H (SW□D5CFXSSCE) (□ represents a version.)
FX Configurator-EN-L		FX3U-ENET-L type Ethernet module setting software (SW1D5-FXENETL-E)
FX Configurator-EN		FX3U-ENET type Ethernet module setting software (SW1D5C-FXENET-E)
RT ToolBox2		Robot program creation software (3D-11C-WINE)
RT ToolBox3		Robot program creation software (3F-14C-WINE)
MX Component		MX Component Version□ (SW□D5C-ACT-E, SW□D5C-ACT-EA) (□ represents a version.)
MX Sheet		MX Sheet Version□ (SW□D5C-SHEET-E, SW□D5C-SHEET-EA) (□ represents a version.)
CPU Module Logging Configuration Tool		CPU module logging configuration tool (SW1DNN-LLUTL-E)

License key (for GT SoftGOT2000)

Abbreviations and generic terms	Description
License key	GT27-SGTKEY-U

Others

Abbreviations and generic terms	Description
IAI	IAI Corporation
AZBIL	Azbil Corporation
OMRON	OMRON Corporation
KEYENCE	KEYENCE CORPORATION
JTEKT ELECTRONICS (formerly KOYO EI)	JTEKT ELECTRONICS CORPORATION (formerly KOYO ELECTRONICS INDUSTRIES CO., LTD.)
JTEKT	JTEKT CORPORATION
SHARP	Sharp Corporation
SHINKO	Shinko Technos Co., Ltd.
CHINO	CHINO CORPORATION
TOSHIBA	TOSHIBA CORPORATION
SHIBAURA MACHINE	SHIBAURA MACHINE CO., LTD.
PANASONIC	Panasonic Corporation
PANASONIC IDS	Panasonic Industrial Devices SUNX Co., Ltd.
HITACHI IES	Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI	Hitachi, Ltd.
HIRATA	Hirata Corporation
FUJI	FUJI ELECTRIC CO., LTD.
MURATEC	Muratec products manufactured by Murata Machinery, Ltd.
YASKAWA	YASKAWA Electric Corporation
YOKOGAWA	Yokogawa Electric Corporation
RKC	RKC INSTRUMENT INC.
ALLEN-BRADLEY	Allen-Bradley products manufactured by Rockwell Automation, Inc.
CLPA	CC-Link Partner Association
GE	GE Intelligent Platforms, Inc.
HMS	HMS Industrial Networks
LS ELECTRIC (formerly LS IS)	LS ELECTRIC Co., Ltd (formerly LS Industrial Systems Co., Ltd.)
MITSUBISHI INDIA	Mitsubishi Electric India Pvt. Ltd.
ODVA	Open DeviceNet Vendor Association, Inc.
SCHNEIDER	Schneider Electric SA
SICK	SICK AG
SIEMENS	Siemens AG
SCHNEIDER EJH	Schneider Electric Japan Holdings Ltd.
PLC	Programmable controller manufactured by its respective company
Control equipment	Control equipment manufactured by its respective company
Temperature controller	Temperature controller manufactured by its respective company
Indicating controller	Indicating controller manufactured by its respective company
Controller	Controller manufactured by its respective company
Industrial switch (for CC-Link IE TSN Class B)	CC-Link IE TSN Class B (Synchronized Realtime Communication) hub certified by CC-Link Partner Association
Industrial switch (for CC-Link IE TSN Class A)	CC-Link IE TSN Class A (Realtime Communication) hub certified by CC-Link Partner Association
CC-Link IE TSN-equipped module	Generic term for the following CC-Link IE TSN master/local modules and CC-Link IE TSN Plus master/local module • RJ71GN11-T2 • RJ71GN11-EIP • FX5-CCLGN-MS

1 FUNDAMENTALS OF GT SoftGOT2000

☞ Page 25 GT SoftGOT2000
☞ Page 30 Before Using This Software

1.1 GT SoftGOT2000

This manual explains the system configuration, specifications, screen structure, and operating method of monitoring software GT SoftGOT2000 (hereinafter abbreviated as GT SoftGOT2000).
GT SoftGOT2000 is the software that has the same functions as the GOT2000 series and is used to display lamps, data, and messages on personal computers and panel controllers.
When applying the following program examples to the actual system, make sure to examine the applicability and confirm that it will not cause system control problems.

Point

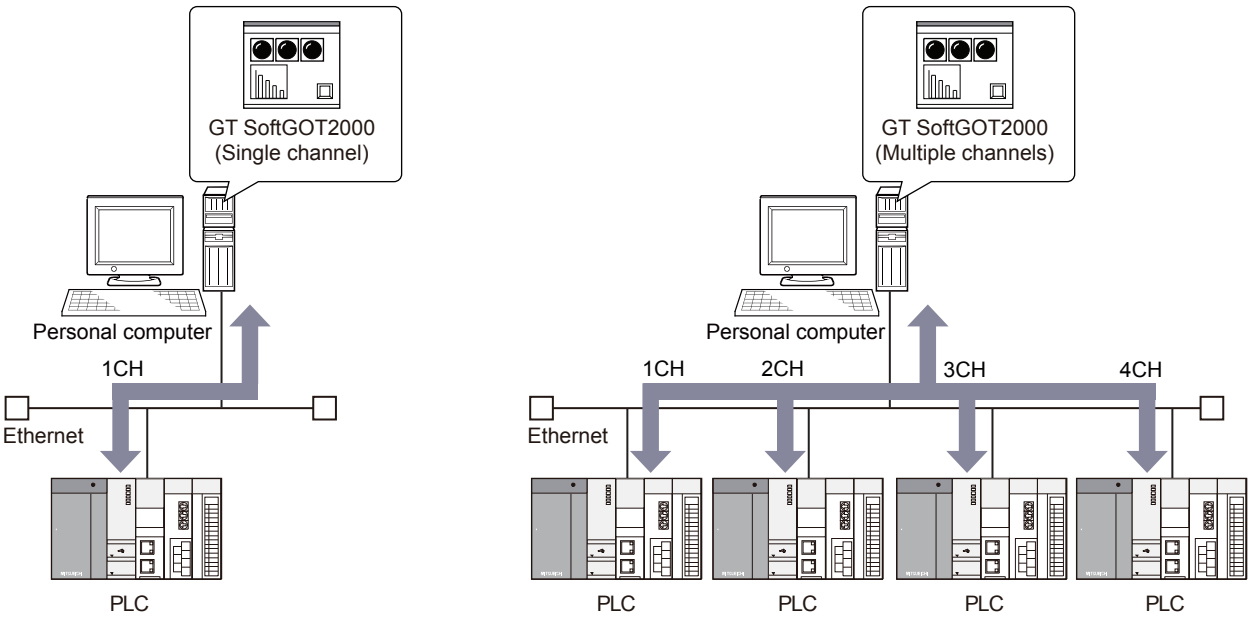
Described contents in this manual
This manual describes the operation method for GT SoftGOT2000.
For other than the operation method, refer to the following manuals.
• Installation method of GT SoftGOT2000
For the installation method of GT SoftGOT2000, refer to the following manuals.
📖GT Works3 Version1 Installation Instructions Manual
• Project data creating method of GT Designer3
For the project data creating method of GT Designer3, refer to the following manuals.
📖GT Designer3 (GOT2000) Screen Design Manual
• Available devices for monitoring
For the available devices for monitoring, refer to the following manual.
📖GT Designer3 (GOT2000) Screen Design Manual

GT SoftGOT2000 module types

GT SoftGOT2000 consists of the following two types of modules.

GT SoftGOT2000 (Single channel): Monitors channel No. 1 only.

GT SoftGOT2000 (Multiple channels): Monitors channel No. 1 to No. 4.



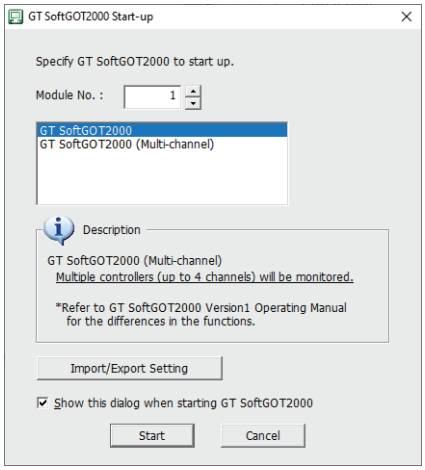
GT SoftGOT2000 (Multiple channels) supports more functions than GT SoftGOT2000 (Single channel) does.

When monitoring a controller using a connection type that is supported by both GT SoftGOT2000 (Multiple channels) and GT SoftGOT2000 (Single channel), you are recommended to use GT SoftGOT2000 (Multiple channels).

For the difference between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels), refer to the following.

☞ Page 38 Differences between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels)

You can select a module type in the [GT SoftGOT2000 Start-up] dialog that appears when GT SoftGOT2000 is started.



Select [GT SoftGOT2000] to start GT SoftGOT2000 (Single channel).

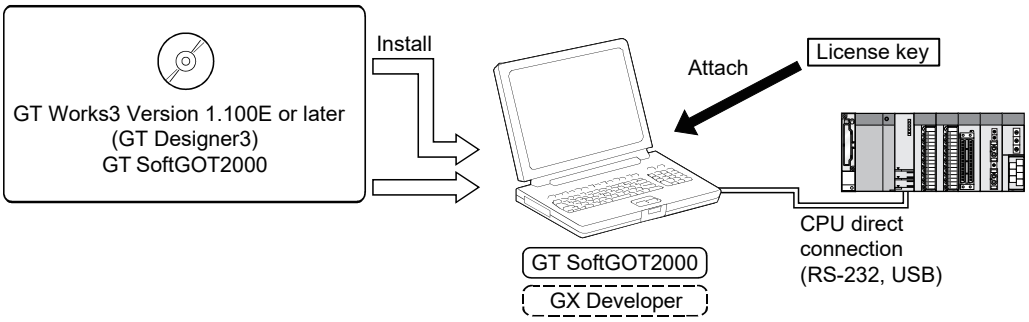
Select [GT SoftGOT2000 (Multi-channel)] to start GT SoftGOT2000 (Multiple channels).

The features of the GOT series and advantages of personal computer and panel computer are available

■Interactive use with applications (including MELSOFT)

• Interactive use with GT Designer3

Installation of GT SoftGOT2000 and GT Designer3 on the same personal computer allows operations from screen creation to monitoring to be supported by a single personal computer.



Immediately after creating or modifying a screen on GT Designer3, the screen can be monitored on GTSoftGOT2000. Therefore, design efficiency is improved greatly.

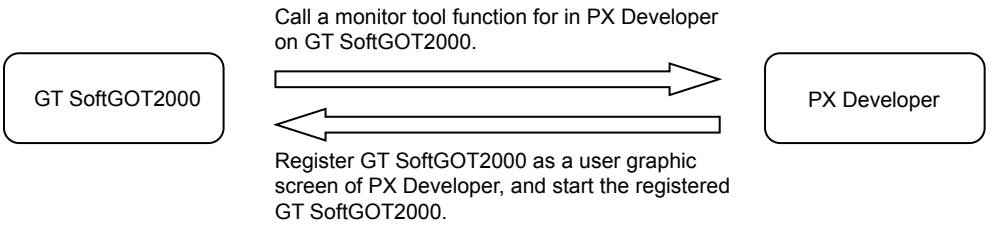
• Interaction with PX Developer

With interaction between GT SoftGOT2000 and PX Developer, monitor tool functions for PX Developer can be called on GT SoftGOT2000.

GT SoftGOT2000 can also be started on PX Developer, and the functions can be shared.

For the monitor tool of PX Developer, refer to the following manual.

PX Developer Version □ Operating Manual (Monitor Tool)

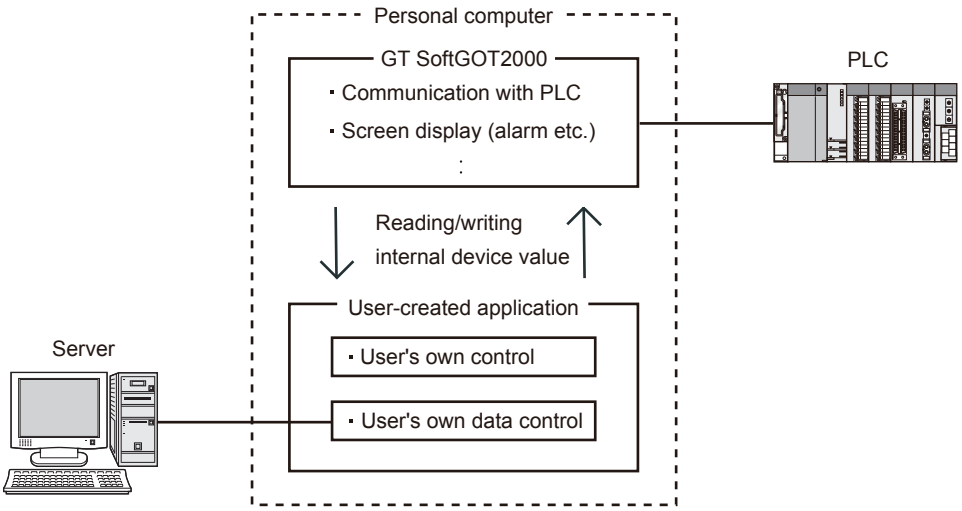


• Interactive use with Windows applications

A Windows application can be started up from GT SoftGOT2000.

Also, the data of GT SoftGOT2000 internal devices can be read/written from a user-created application.

With interaction between GT SoftGOT2000 and a user-created application, the user can control or manage data by own method.



■Flexible response to high-resolution

You can select a screen resolution from WUXGA to VGA, or specify the resolution in dots according to the application purpose.

For the resolutions supported by GT SoftGOT2000, refer to the following.

☞ Page 33 Specifications of GT SoftGOT2000

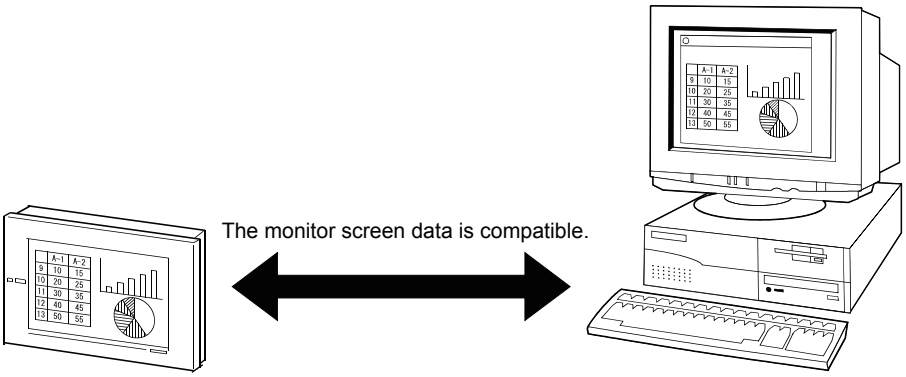
The monitor screen data created for the GOT2000 series is applicable to GT SoftGOT2000.

The GT SoftGOT2000 uses monitor screen data created with GT Designer3.

By converting the GOT type for GT SoftGOT2000, the monitor screen data used for the GOT2000 series can be used without modification.

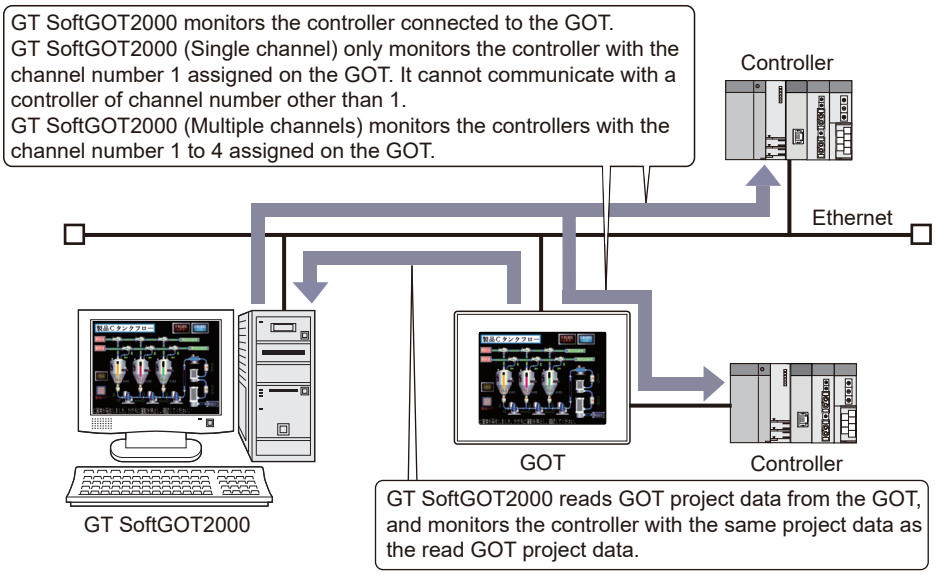
GT SoftGOT2000 uses the same screens and operations as GOT.

Therefore, there will be no discomfort or confusion for the operators and maintenance personnel.

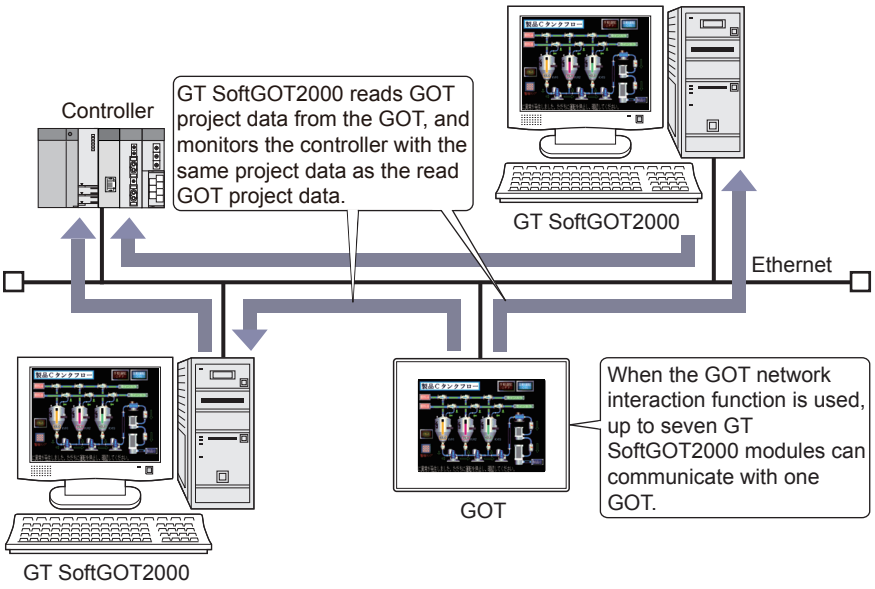


Synchronizing GT SoftGOT2000 data with GOT data

The SoftGOT-GOT link function enables GT SoftGOT2000 to connect the GOT via Ethernet.
And then, the function synchronizes GT SoftGOT2000 data with GOT project data and resource data.
When input objects (touch switch, numerical input, and text input) are input or other operation is performed, the simultaneous operation between GT SoftGOT2000 and the GOT must be prevented.
The operation by either GT SoftGOT2000 or the GOT is allowed.
GT SoftGOT2000 can monitor a controller connected to the GOT.



With the GOT network interaction function, multiple GT SoftGOT2000 applications can communicate with one GOT.
☞ Page 612 SoftGOT-GOT Link Function



1.2 Before Using This Software

Operating environment

The following shows the GT SoftGOT2000 operating environment.

Item	Description
Personal computer	• A personal computer that can run Windows • PPC-852-21G, and PPC-852-22F manufactured by CONTEC CO., LTD *5 • MELIPC (MI5122-VW, MI3321G-W*11, MI3315G-W*11, MI2012-W, or MI2012-W-CL) *10
OS (English, Simplified Chinese, Traditional Chinese, Korean, German, or Italian version)*7	• Microsoft Windows Server 2019 Standard (64 bit)*2*3*6*12*13*14 • Microsoft Windows Server 2016 Standard (64 bit) *2*3*6*12*13 • Microsoft Windows 11 Education (64 bit)*2*3*6*9*12*13 • Microsoft Windows 11 Enterprise (64 bit)*2*3*6*9*12*13 • Microsoft Windows 11 Pro (64 bit)*2*3*6*9*12*13 • Microsoft Windows 11 Home (64 bit)*2*3*6*9*12*13 • Microsoft Windows 10 Enterprise (64 bit, 32 bit) *2*3*6*12*13 • Microsoft Windows 10 Pro (64 bit, 32 bit) *2*3*6*12*13 • Microsoft Windows 10 Home (64 bit, 32 bit) *2*3*6*12*13 • Microsoft Windows 10 IoT Enterprise 2019 LTSC (64 bit) (English OPK, or English OPK and a language pack for localization) *2*3*6*8*9*12*13 • Microsoft Windows 10 IoT Enterprise 2016 LTSB (64 bit) (English OPK, or English OPK and a language pack for localization) *2*3*6*8*9*12*13
CPU	• Windows 11: 64 bit-compatible processor with dual-core or more or System on a Chip (SoC)*15 • Other than Windows 11: Intel Core 2 Duo Processor 2.0 GHz or more recommended*15
Memory	• For Windows 11: 4 GB or more recommended • For 64-bit OS other than Windows 11: 2 GB or more recommended • For 32-bit OS other than Windows 11: 1GB or more recommended
Display	Resolution XGA (1024 × 768 dots) or higher
Hard disk space *1	• For installation: 5 GB or more recommended For execution: 512 MB or more recommended
Display color	High color (16 bits) or more
Hardware	• GT27-SGTKEY-U (License key (for USB port))

Item	Description
Other software	The following software is required to create the project data. GT Designer3 Version1.100E or later *4
	The following software is required for interaction with PX Developer. PX Developer Version1.40S or later GT Designer3 Version 1.105K or later
	The following software is required to connect with GX Simulator. GX Simulator Version5.00A or later
	The following software is required to connect with GX Simulator2. GX Works2 Version1.12N or later
	The following software is required to connect with GX Simulator3. GX Works3 Version1.007H or later
	The following software is required to connect with MT Simulator2. MT Works2 Version1.70Y or later
	The following software is required to use the OPC UA client connection. • GT OPC UA Client
Other hardware	Use the hardware compatible with the above OSs. For installation: Mouse, keyboard, or DVD drive For execution: Mouse or keyboard For printing: Printer Prepare the following hardware if necessary. For execution (only when outputting buzzer sound or others): Sound function or speaker

*1 When using GT Designer3 or PX Developer besides GT SoftGOT2000, additional free space is required.
For the available space required when using GT Designer3, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual
For the available space required when using monitor tool functions of PX Developer, refer to the following manual.
PX Developer Version □ Operating Manual (Monitor Tool)
When using a user-created application, free space is required separately.

*2 Administrator authority is required for installing and using GT SoftGOT2000.
If you use GT SoftGOT2000 and other MELSOFT products simultaneously on the same personal computer, run the MELSOFT products with administrator authority as well.

*3 The following functions are not supported.
Activating the application with Windows compatibility mode
Fast user switching
Changing the desktop theme (or font size)
Remote desktop
Setting the size of text and illustrations on the screen to any size other than [Small-100%]

*4 Use GT Designer3 included in GT Works3 that contains GT SoftGOT2000.

*5 Refer to the manual of the PC CPU module to be used.

*6 Tap and press-and-hold features are supported.
As operations such as flicking are not supported, the following operations are unavailable accordingly.
Touching two touch switches simultaneously
Moving an overlap window or key window by a slide operation
When [Allow press-and-hold of a mouse button to function as a right-click] is selected in the [Environment Setup] dialog of GT SoftGOT2000, the following operations are also unavailable.
Touching a touch switch ([Action]: [Momentary])
Touching a touch switch ([Delay]: [ON])
Touching the utility call key

*7 Operation in a virtual environment such as Hyper-V is not supported.

*8 The following OSs are not supported.
Microsoft Windows 10 IoT Enterprise for Retail or Thin Client
Microsoft Windows 10 IoT Enterprise for Tablets
Microsoft Windows 10 IoT Enterprise for Small Tablets

*9 The following lockdown features are not supported.
Unified Write Filter
Assigned Access
USB Filter
Layout Control
AppLocker
Shell Launcher
Text cursor indicator

*10 Microsoft Windows 10 IoT Enterprise 2016 LTSB is preinstalled.
For the specifications of the MELIPC, refer to the following.
MELIPC MI5000 Series User's Manual (Startup)
MELIPC MI3000 User's Manual
MI2012-W User's Manual
*11 GT SoftGOT2000 (English version) is preinstalled.
*12 Disable high-speed startup.
If enabled, GT SoftGOT2000 may not operate properly when the personal computer is shut down and then started.
*13 Some digital pens are unusable.
*14 Only Desktop Experience is available.
*15 ARM64 and ARM32 are not supported.

Point

• Operating environment when using a user-created application

A user-created application is used with GT SoftGOT2000.

When using a user-created application, therefore, prepare an operating environment where both the user created application and GT SoftGOT2000 can operate.

• Resume function, suspend setting, power saving function, standby mode, and sleep function of the personal computer

The following phenomena may occur when the resume function setting, suspend setting, power saving function setting, standby mode setting, and sleep function setting are configured in the personal computer.

A communication error occurs when communicating with the PLC CPU.

License key becomes unrecognizable.

Therefore, do not set the above-mentioned items.

• Operating environment for starting multiple modules or using the multi-channel function

Monitoring performance may be degraded or a timeout may occur depending on the specifications of the personal computer.

Request the network administrator to adjust each communication setting, which may improve such situations.

Specifications of GT SoftGOT2000

The following shows the specifications of GT SoftGOT2000.

Item	Specifications
Resolution (dots)	640 × 480, 800 × 600, 1024 × 768, 1280 × 1024, 1600 × 1200, 1920 × 1080, and X × Y (user-definable) *1
Display color (color)	65536 colors Note that the following items are displayed in 16777216 colors. • Parts display • Parts movement • Image file
Built-in flash memory (user area)	57MB
Memory for operation (RAM) (user area)	256MB

*1 X and Y are resolution values set by the user.
☞ Page 68 [Environment Setup] dialog

Point

Project data display

• Full screen mode

If the resolution of the personal computer used is the same as that of GT SoftGOT2000, it is recommended to hide the frame and menu part using the full screen mode function.

When not using the full screen mode function, the top/bottom and left/right parts of the display are hidden by the frame and menu part.

• GOT type and resolution

For GT SoftGOT2000, set the same resolution as the GOT type (model, resolution) of the project data created by GT Designer3.

If the resolution settings are different, the project data cannot be read into the GOT.

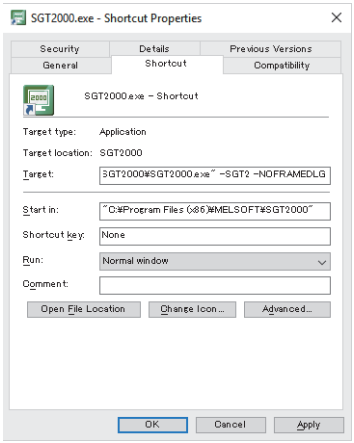
Executable files for GT SoftGOT2000 and keywords

The executable files for GT SoftGOT2000 are stored in the folder where GT SoftGOT2000 is installed.
(Default: C:\Program Files\MELSOFT\SGT2000)
The executable files launch the following dialog or modules.
SGT2000Main.exe: [GT SoftGOT2000 Start-up] dialog
SGT2000.exe: GT SoftGOT2000 (Single channel)
SGT2000_MultiCH.exe: GT SoftGOT2000 (Multiple channels)
To start a specific GT SoftGOT2000 module, specify a module number or mode by appending the following keywords to the path to each executable file in its shortcut properties or by other methods.
Module number: -SGTn (n: Module number in the range of 1 to 32767)
Full screen mode (Full screen 1): -NOFRAME
Full screen mode (Full screen 2): -NOFRAMEDLG
Full screen mode (Full screen 3): -NOFRAMEDLGMENU
Monitor-only mode: /MNTONLY
A one-byte space is required before a keyword.
The following shows combinations of executable files and keywords.

Executable file	Keyword	Module to be started
SGT2000Main.exe	-SGTn	GT SoftGOT2000 (Single channel) Example) Starting GT SoftGOT2000 (Single channel) module No. 2 C:\Program Files\MELSOFT\SGT2000\SGT2000Main.exe -SGT2
	-NOFRAME	GT SoftGOT2000 (Single channel) The module starts in full screen mode (Full screen 1).
	-NOFRAMEDLG	GT SoftGOT2000 (Single channel) The module starts in full screen mode (Full screen 2).
	-NOFRAMEDLGMENU	GT SoftGOT2000 (Single channel) The module starts in full screen mode (Full screen 3).
	/MNTONLY	GT SoftGOT2000 (Single channel) The module starts in the monitor-only mode.
	-MULTICH	GT SoftGOT2000 (Multiple channels) Example) Starting GT SoftGOT2000 (Multiple channels) module No. 3 C:\Program Files\MELSOFT\SGT2000\SGT2000Main.exe -MULTICH -SGT3
SGT2000.exe	-SGTn	GT SoftGOT2000 (Single channel) Example) Starting GT SoftGOT2000 (Single channel) module No. 2 C:\Program Files\MELSOFT\SGT2000\SGT2000.exe -SGT2
	-NOFRAME	GT SoftGOT2000 (Single channel) The module starts in full screen mode (Full screen 1).
	-NOFRAMEDLG	GT SoftGOT2000 (Single channel) The module starts in full screen mode (Full screen 2).
	-NOFRAMEDLGMENU	GT SoftGOT2000 (Single channel) The module starts in full screen mode (Full screen 3).
	/MNTONLY	GT SoftGOT2000 (Single channel) The module starts in the monitor-only mode.
SGT2000_MultiCH.exe	-SGTn	GT SoftGOT2000 (Multiple channels) Example) Starting GT SoftGOT2000 (Multiple channels) module No. 3 C:\Program Files\MELSOFT\SGT2000\SGT2000_MultiCH.exe -SGT3
	-NOFRAME	GT SoftGOT2000 (Multiple channels) The module starts in full screen mode (Full screen 1).
	-NOFRAMEDLG	GT SoftGOT2000 (Multiple channels) The module starts in full screen mode (Full screen 2).
	-NOFRAMEDLGMENU	GT SoftGOT2000 (Multiple channels) The module starts in full screen mode (Full screen 3).
	/MNTONLY	GT SoftGOT2000 (Multiple channels) The module starts in the monitor-only mode.

Multiple keywords can be added in combination.

Example) Starting GT SoftGOT2000 (Single channel) module No. 2 in full screen mode (Full screen 2)



For specifying a module, refer to the following.

☞ Page 58 Directly starting the specified GT SoftGOT2000 module

For the full screen mode, refer to the following.

☞ Page 668 Full Screen Mode

For the monitor-only mode, refer to the following.

☞ Page 682 Monitor-only Mode

Items managed by each GT SoftGOT2000 module

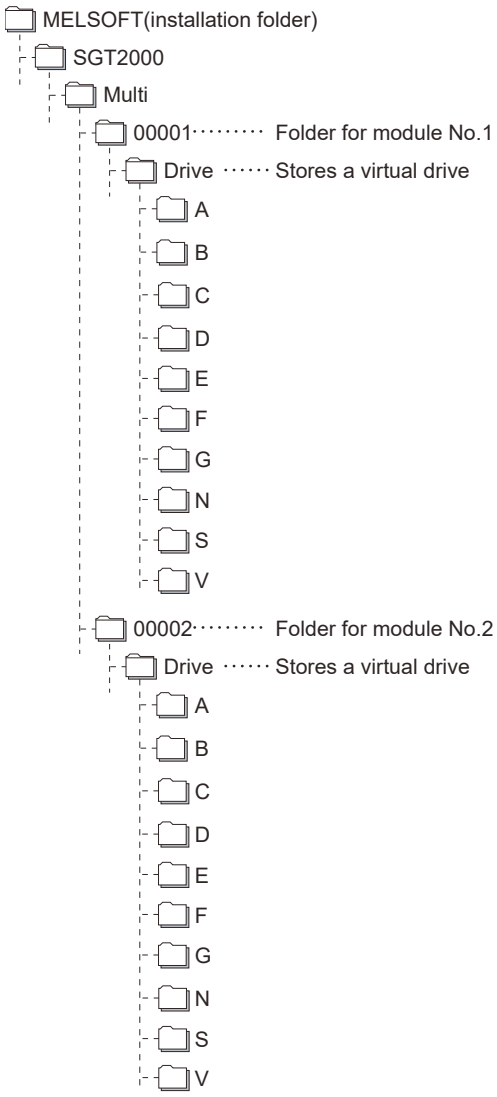
The following shows the items managed by each GT SoftGOT2000 module.

Item managed by each module	Reference
Each setting	-
Virtual drive	☞ Page 36 Virtual drive
GT SoftGOT2000 window position upon startup	☞ Page 52 Start GT SoftGOT2000
GOT internal device	📖GT Designer3 (GOT2000) Screen Design Manual
Advanced APP setup file	☞ Page 599 [Advanced APP Setup] tab
Application start-up history	☞ Page 603 Application start-up history
PX Developer function call history	☞ Page 662 PX Developer function call history
Edgecross interaction configuration file	☞ Page 667 Settings on GT SoftGOT2000

Virtual drive

GT SoftGOT2000 uses the following folder located on the hard disk of a personal computer as a virtual drive.

A virtual drive is created for each module.



Any folder can be set as a virtual drive.

For changing the folder specified as the virtual drive, refer to the following.

☞ Page 67 Environment Setup

Resource data storage destination

Resource data is stored to the virtual A drive or a user-specified folder with the configuration shown below.

Storage destination		Function		
Virtual A Drive or user-specified folder	Folder name specified in project data	Alarm observation	Recipe,	Logging,
		Hard copy (File save),		Operation log function
		Time action		
	G2SgtReport	Report (Print)		
	G2SgtHardcopy	Hard copy (Print)		

The file formats of resource data are described below.

Function	Folder name	File format and file name
Alarm Observation	Folder name set in project data	File name set in project data AAM*****.G2A
		File name set in project data AAM*****.CSV
		File name set in project data AAM*****.TXT
Recipe	Folder name set in project data	File name set in project data ARP*****.G2P
		File name set in project data ARP*****.CSV
		File name set in project data ARP*****.TXT
Logging	Folder name set in project data	File name set in project data LOG*****_*****.G2L
		File name set in project data LOG*****_*****.CSV
		File name set in project data LOG*****_*****.TXT
Hard copy (File save)	Folder name set in project data	File name set in project data SNAP***.BMP
		File name set in project data SNAP****.JPG
Hard copy (Print)	G2SgtHardcopy	HARDCOPY.BMP
Report (Print) *1	G2SgtReport	REP00001.CSV - REP00099.CSV
Operation log function	Folder name set in project data	File name set in project data OPELOG_YYYYMMDD_SSSS.G2O
		File name set in project data OPELOG_YYYYMMDD_SSSS.CSV
		File name set in project data OPELOG_YYYYMMDD_SSSS.TXT
Time action	Folder name set in project data	File name set in project data TIMEACTION.G2T

*1 Before outputting a report for which any language other than Japanese and English is used to a CSV file, turn on GS522.b2. Change the character code to Unicode, and the delimiter to tab-delimited.
If GS522.b2 is not turned on, the characters are not displayed correctly.
For the details of GS522.b2, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual
When outputting a report in Japanese to a CSV file in the environment where the characters cannot be displayed in Japanese, the characters may not be displayed correctly if GS522.b2 is turned off.

Point

Precautions on file names for the virtual drive

As a folder name for the virtual drive, only ASCII characters (excluding "|", "," and ";") can be used with up to 78 characters.

Set the file name with up to 256 characters including the path name for file storage destination and file name to be stored (including extension).

Differences between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels)

The following shows the differences between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels).

Common function

○: Supported, ×: Not supported

Function	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)
System font display	○	○
Option font display	○	○
Superimposition of objects	○	○
Base screen display	○	○
Overlap window display	○	○
Superimpose window display	○	○
Key window display	○	○
Set overlay screen	○	○
Screen Switching	○	○
Station No. Switching	○	○
Buffer memory unit No. switching	○	○
Language Switching	○	○
System information	○	○
Security authentication	○	○
Status observation	○	○
Time action	○	○
Hard copy function	○	○
Comment	○	○
Figure	○	○
Internal device	○	○
Cursor movement	○	○
Operation Log	○	○
Logging	○	○
Recipe	○	○
Script	○	○
Multi-channel connection	×	○
Vertical display	○	○
Touch panel and touch key	○	○
Lamp	○	○
Numerical display/input	○	○
Text display/input	○	○
Historical data list display	○	○
Clock display	○	○
Comment display	○	○
Parts display, parts movement	○	○
Alarm display	○	○
Alarm popup display	○	○
Recipe display (record List)	○	○
Graphical meter	○	○
Panel meter display	○	○
Historical trend graph	○	○
Line graph	○	○
Bar graph	○	○
Scatter graph	○	○
Statistics graph	○	○

Function	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)
Level display	○	○
Touch switch	○	○
Slider	○	○
Script parts	○	○
Mobile screen display	○*1	○
Hyperlink	○*1	○

*1 It is recommended to use GT SoftGOT2000 (Multiple channels) for this function.

Utility function

○: Supported, ×: Not supported

Function	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)
System launcher	×	○
System launcher (servo network)	×	○
Drive recorder	×	○
Servo amplifier graph	×	○

Extended function

○: Supported, ×: Not supported

Function	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)
Kana-Kanji/Pinyin conversion	○	○
SoftGOT-GOT link function	○	○
System launcher	×	○
System launcher (servo network)	×	○
Backup/Restore Function	×	○
Gateway(Server, Client)	○*1	○*1
Barcode	○	○
RFID	○	○
Operation panel	○	○
Report	○	○
Printer	○	○
Sound Output	○	○
GOT Network Interaction	○	○
Device Data Transfer	○	○
Drive recorder	×	○
Servo amplifier graph	×	○
Recipe Operation	○	○
Recipe Display (Record List)	○	○
Operator authentication	○	○
Document Display	○	○

*1 GT SoftGOT2000 supports the server function.

Communication function

For the connection types supported by GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels), refer to the following.

☞ Page 113 Supported Connection Types

Access range

The access range is different between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels).

For GT SoftGOT2000 (Single channel), refer to the following.

☞ Page 136 Access range

For GT SoftGOT2000 (Multiple channels), refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

Controller

The supported controllers are the same between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels).

Precautions for using GT SoftGOT2000

Numerical display

For the numerical display object where [Format] is set to [Real], if the specified device stores an invalid value, GT SoftGOT2000 displays the value.
(The GOT displays [non].)

Time display

The clock data of the personal computer is used for clock display when monitoring on GT SoftGOT2000.
When controlling a system using clock data, set the same clock data for the PLC CPU and personal computer.
GT SoftGOT2000 does not support the daylight saving function.
Do not check [Automatically adjust clock for daylight saving changes] on the personal computer.

Time settings

■Time setting function

The time of the personal computer where GT SoftGOT2000 runs is synchronized with the time of the controller.
Under the following conditions, the time setting function cannot be used on GT SoftGOT2000.
If the function is used under the following conditions, a time difference occurs.
The user who has started GT SoftGOT2000 does not have the authority to change the system time.
The clock of the personal computer is synchronized with an Internet time server.
Software that periodically adjusts the clock of the personal computer is used.

■Time notification function

The time of the controller is synchronized with the time of the personal computer where GT SoftGOT2000 runs.

■Controllers subjected to the time synchronization functions

Only Mitsubishi Electric controllers are applicable.
For the details of the applicable controllers, refer to the following.
☞ Page 114 Controllers that can be monitored by connection type

■When connecting with a simulator

When [GX Simulator], [GX Simulator2], [GX Simulator3], or [MT Simulator2] is selected for [Connection] in the [Communication Setup] dialog, the time setting function and the time notification function are not available.

■Unavailable functions

GT SoftGOT2000 does not support the following functions.
Synchronizing the time with an SNTP server
Setting the time zone
Changing the current time with the GOT special registers (GS512 to GS516)

■Time zone of the personal computer

Set the same time zone for the personal computer and controller.
Otherwise, a time difference occurs.

■Performing the time setting function while the SoftGOT-GOT link function is used

To perform the time setting function while the SoftGOT-GOT link function is used, select [Adjust the clock] in the [Communication Setup] dialog.
For the [Communication Setup] dialog, refer to the following.
☞ Page 75 [Communication Setup] dialog

Version of GT SoftGOT2000

Be sure to use the GT SoftGOT2000 of the same version as GT Designer3 that the project data is created.
When using different versions of GT SoftGOT2000 and GT Designer3, the file may not be opened, functions/settings may be invalid, or GT SoftGOT2000 may not work correctly.
Refer to the following for the project data compatibility.
☞ Page 734 Applicable Project Data

Hard copy function

■Output destination

Set the hard copy output destination in GT Designer3.
When [Printer] is selected as the output destination
Data is output to a printer.
At the same time, the data is saved to an image file in the G2SgtHardcopy folder of virtual drive A.
When [File] is selected as the output destination
Data is output to an image file and saved to the location specified in the hard copy function setting on GT Designer3.
Some settings made in the [Hard Copy] dialog in GT Designer3 may be invalid in GT SoftGOT2000.
For the details, refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

■System signals

GT SoftGOT2000 does not support the system signals related to the hard copy function.
For the details, refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

■GOT special registers (GS)

For GS devices available for GT SoftGOT2000, refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

■System alarm

GT SoftGOT2000 does not support PDF output of the hard copy function.
If project data for which [PDF] is specified for the hard copy output destination is used with the SoftGOT-GOT link function, a system alarm will occur when a hard copy output is executed.
No system alarm except the above occurs in GT SoftGOT2000 regarding the hard copy function.
For the troubleshooting for the hard copy function, refer to the following.
☞ Page 731 Troubleshooting for print
☞ Page 731 Troubleshooting for file save problems

Report function

Data cannot be output to a printer directly.
Print images (in CSV format) are stored to the virtual A drive of a personal computer once.
Output these images in each file to a printer.

Virtual drive V

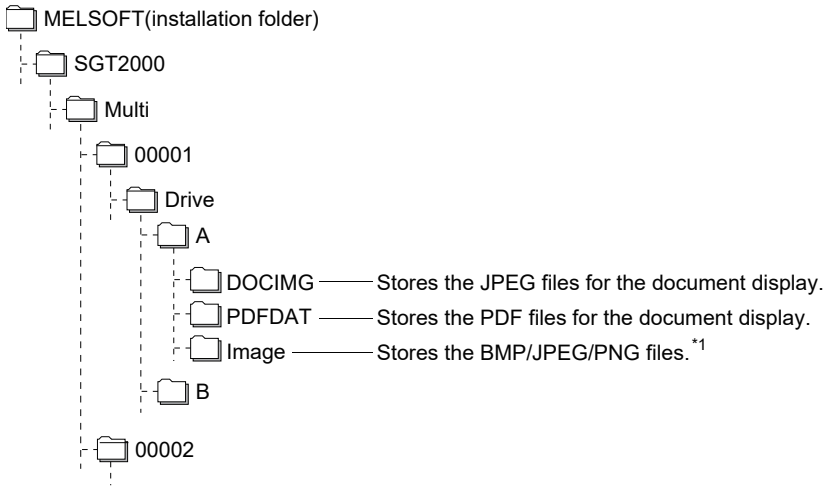
To store image files in drive V and use them for parts displays, satisfy all the following conditions.

- Store the image files directly under drive V using the FTP server function that can run on Windows.
- Use IMG1.jpg, IMG2.jpg, IMG3.jpg, and IMG4.jpg only for the file name and extension.
- Limit the total file size to less than 6 MB.
- Do not store any file other than IMG1.jpg, IMG2.jpg, IMG3.jpg, and IMG4.jpg.

The files in drive V are deleted when monitoring starts with GT SoftGOT2000 or GT SoftGOT2000 exits.
For the details, refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

Functions in which data are stored in the memory card in advance by the user

Store the BMP/JPEG/PNG files used for parts and the data used for the document display in a virtual drive.
(The drive to be used depends on the specifications and setting of the object.)
For details of each function, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual
Except for the virtual drive, GT SoftGOT2000 does not recognize BPM/JPEG files and other files.



*1 You can rename the folder.

When using the Buzzer Output signal (System signal 1-1.b14)

If the Buzzer Output signal (System signal 1-1.b14) remains on, the buzzer sound may be interrupted.

Using GT SoftGOT2000 (Multiple channels) with a MELSOFT product running as a Windows service

If you use a MELSOFT product that runs as a Windows service, start it as a process.
If GT SoftGOT2000 (Multiple channels) and a MELSOFT product running as a service perform communication simultaneously, a communication error will occur.

License key

To use GT SoftGOT2000, a license key is required.

The following shows the model of the license key.

Model name	Attachment type
GT27-SGTKEY-U	Attached to USB port

The license key is recognized by OS as a connected device.

To access the license key, install its system driver.

☞ Page 45 Installing and uninstalling the system driver

Be sure to attach the license key before starting monitoring on GT SoftGOT2000.

When monitoring starts without a license key, GT SoftGOT2000 automatically ends in about three hours.

Also, from starting monitoring to exiting it, use GT SoftGOT2000 with the license key attached.

If the license key is disconnected during monitoring, GT SoftGOT2000 will exit automatically.

For troubleshooting the license key-related problems, refer to the following.

☞ Page 726 Troubleshooting for license key

Point

License key

• License key use target

The GT27-SGTKEY-U is dedicated for GT SoftGOT2000.

It cannot be used for GT SoftGOT1000 or GT SoftGOT2.

• Use of a USB hub

Do not use GT27-SGTKEY-U through a USB hub.

When using GT27-SGTKEY-U, connect GT27-SGTKEY-U to a personal computer directly.

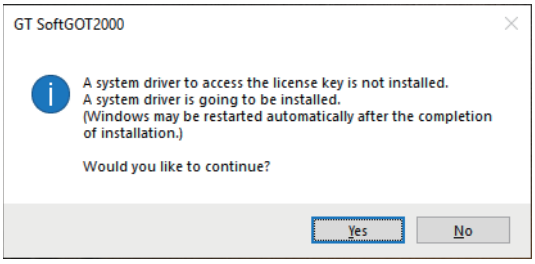
Installing and uninstalling the system driver

Before installing or uninstalling the system driver, remove the license key GT27-SGTKEY-U.
Otherwise, installation may fail.
If installation has failed, remove the GT27-SGTKEY-U, uninstall the system driver, and then install it again.

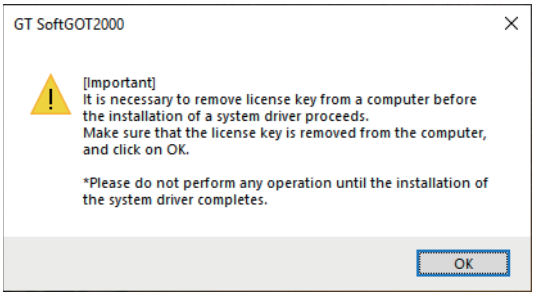
■Installing the system driver

If the system driver is not installed, it will be installed when GT SoftGOT2000 is started.

1. Start GT SoftGOT2000 to display the following dialog.



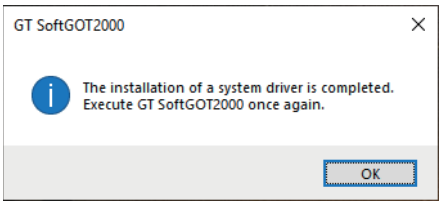
2. Click the [Yes] button to display the following dialog.



3. Click the [OK] button to start installation.

The installation process may take a few minutes to complete.
Do not operate GT SoftGOT2000 until the installation of the system driver is complete.

4. When the installation is complete, the following dialog appears.



5. Click the [OK] button to restart GT SoftGOT2000.

■Uninstalling the system driver

In [Programs and Features] in the Windows Control Panel, uninstall [Sentinel Protection Installer □.□.□].

Point

If the system driver cannot be installed or uninstalled properly, use the following installer.
(GT SoftGOT2000 installation folder)\SGT2000\SystemDriver\SPI_771.exe

Function that can be used in GT SoftGOT2000, features that are not available

In GT SoftGOT2000, some functions available in GOT2000 series cannot be used.

Function that can be used in GT SoftGOT2000, it is identified in the following features that are not available.

Common function

○: Available, -: Unavailable

Function	Supported/Unsupported	Function	Supported/Unsupported
System font display	○	Multi-channel connection	○
Option font display	○	Vertical display	-
Superimposition of objects	○	Touch panel and touch key	○
Base screen display	○	Numerical display/input	○
Overlap window display	○	Text display/input	○
Superimpose window display	○	Historical data list display	○
Key window display	○	Clock display	○
Set overlay screen	○	Comment display	○
Screen Switching	○	Alarm display	○
Station No. Switching	○	Alarm popup display	○
Buffer memory unit No. switching	○	Recipe display (record List)	○
Language Switching	○	Graphical meter	○
System information	○	Panel meter display	○
Security authentication	○	Historical trend graph	○
Status observation	○	Line graph	○
Time action	○	Bar graph	○
Hard copy function	○	Scatter graph	○
Comment	○	Statistics graph	○
Figure	○	Level display	○
Internal device	○	Touch switch	○
Cursor movement	○	Slider	○
Operation Log	○	Video/RGB display object	-
Logging	○	Script parts	○
Recipe	○	Mobile screen display	○
Script	○	Hyperlink	○

Utility function

○: Available, -: Unavailable

Category	Function	Available/Unavailable	Function	Available/Unavailable
[GOT basic set]	[Display]	○	[Time]	-
	[Language]	○	[Controller]	-
	[Specific Information]	-	[Ethernet Communication]	-
	[IP Address]	-	[Transparent Mode]	-
	[IP filter setting]	-	[GOT internal device monitor]	-
	[Operation]	○	[Security]	○
	[Utility Call Key]	○	[Operator Authentication]	○
	[USB Host]	-		
[Extended Setting]	[SoftGOT-GOT Link Function]	-	[Wireless LAN Setting]	-
	[VNC Server Function]	-	[System launcher]	○
	[Sequence Program Monitor]	-	[iQSS utility]	-
	[Backup/Restore]	○	[ANDON Setting]	○
	[License Management]	-	[Ethernet printer]	-
	[Video/RGB]	-	[Network drive setting]	-
	[Multimedia]	-		
[Maintenance]	[Batch Self Check]	-	[Font check]	-
	[USB Device Management]	-	[Touch panel check]	-
	[Clean/Display Screen]	-	[I/O check]	-
	[Touch panel calibration]	-	[Ethernet Status Check]	-
	[System Alarm]	○	[GOT Information]	-
	[Drawing check]	-	[GOT Mobile information]	○
[Monitor]	[System launcher]	○	[Log viewer]	-
	[Device monitor]	-	[Network status display]	-
	[Seq. program monitor(Ladder)]	-	[FX list editor]	-
	[Seq. program monitor(iQ-R Ladder)]	-	[CNC Machining Program Edit]	-
	[FX Ladder monitor]	-	[CNC data I/O]	-
	[Network monitor]	-	[Motion program editor]	-
	[Intelligent module monitor]	-	[Motion program I/O]	-
	[Servo amp Monitor]	-	[MELSEC-L Troubleshooting]	-
	[Q Motion monitor]	-	[iQSS utility]	-
	[R Motion monitor]	-	[Drive recorder]	○
	[CNC monitor]	-	[CC-Link IE TSN/CC-Link IE Field Network diagnostics]	-
	[CNC monitor2]	-	[Servo amplifier graph]	○
	[Seq. program monitor(SFC)]	-	[Vision sensor monitor]	-
	[Motion SFC monitor]			
[Data Control]	[Alarm information]	○	[Package Management]	○ *1
	[Image File Management]	○	[Backup/Restore Function]	○
	[Recipe Information]	○	[SRAM control]	○ *2
	[Logging information]	○	[Memory card format]	-
	[Operation log information]	○	[Memory check]	-
	[File manager]	-	[GOT Pkg. acquisition]	-
	[File print]	-		

*1 [Delete all labels] and [Sort out labels] are supported.
*2 [Initialize all] and [Initialize selected area] are supported.

Extended function

○: Available, -: Unavailable

Function	Available/Unavailable	Function	Available/Unavailable
Screen gesture	-	MES Interface	-
Object gesture	-	Device monitor	-
Kana-Kanji/Pinyin conversion	○	Network monitor	-
Wireless LAN	-	Log viewer	-
SoftGOT-GOT link function	○	iQSS Utility	-
System launcher	○	Intelligent module monitor	-
System launcher (servo network)	○	Servo amplifier monitor	-
Sequence Program Monitor(Ladder)	-	Drive Recorder	○
Sequence Program Monitor(iQ-R Ladder)	-	Servo amplifier graph	○
Sequence Program Monitor(SFC)	-	R motion monitor	-
FX Ladder Monitor	-	Q motion monitor	-
Backup/restore	○	CNC Monitor	-
Gateway(Server, Client)	○*1	CNC Data I/O	-
Gateway(Mail)	-	CNC Manufacturing Program Editor	-
Gateway(FTP Server)	-	CNC Monitor2	-
File Transfer	-	Motion Program Editor	-
Barcode	○	Motion Program Input/Output	-
RFID	○	Motion SFC monitor	-
Remote personal computer operation (Serial)	-	FX list editor	-
Remote personal computer operation (Ethernet)	-	CC-Link IE TSN/CC-Link IE Field Network diagnostics	-
VNC server	-	Recipe Operation	○
Video display	-	Recipe Display (Record List)	○
RGB display	-	Operation log screen image	-
Multimedia	-	Operator authentication	○
Operation panel *2	○	File Manager	-
External I/O	-	Document Display	○
Report	○	MELSEC-L Troubleshooting Function	-
Printer	○	Video/RGB display object	-
Sound Output	○	GOT Platform Library	-
GOT Network Interaction	○	Base screen size expansion	-
GOT Mobile Setting	-	Vision sensor monitor	-
Device Data Transfer	○		

*1 GT SoftGOT2000 supports the server function.

*2 The keyboard input function can be used to perform the same operation as the operation panel function.

Using GT SoftGOT2000 on an MI3000

License key

A license key for GT SoftGOT2000 is not required.

Software license agreement

The software license agreement screen appears at the first startup of GT SoftGOT2000.

Click the [Agree] button to activate GT SoftGOT2000.

The screen does not appear if you already accepted the software license agreement on GT SoftGOT2000 Commander.

Upgrade

To upgrade the preinstalled GT SoftGOT2000, use the English installer.

Linking GT SoftGOT2000 with Edgecross

OPC UA client connection

GT SoftGOT2000 connects to the Edgecross basic software (OPC UA server) by using the OPC UA client connection.

☞ Page 324 OPC UA client connection

Edgecross interaction function

GT SoftGOT2000 monitors the data collected by Edgecross.

☞ Page 663 Edgecross Interaction Function

MEMO

2 MONITORING THE PROJECT DATA WITH GT SoftGOT2000

☞ Page 52 Starting and Exiting GT SoftGOT2000
☞ Page 63 Screen Configuration of GT SoftGOT2000
☞ Page 67 Environment Setup
☞ Page 74 Setting the Communication Method
☞ Page 103 Opening the Project
☞ Page 107 Monitoring
☞ Page 109 Help

2.1 Starting and Exiting GT SoftGOT2000

Start GT SoftGOT2000

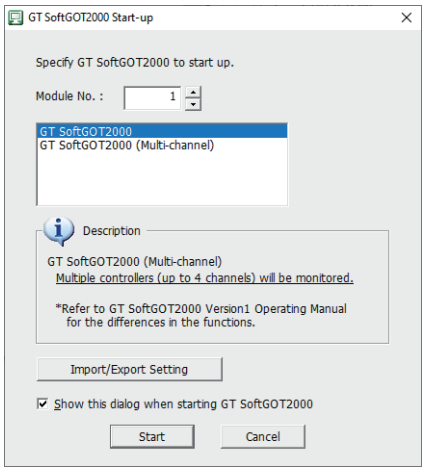
Start GT SoftGOT2000.

To use GT SoftGOT2000, attach a license key and install the system driver for accessing the license key.

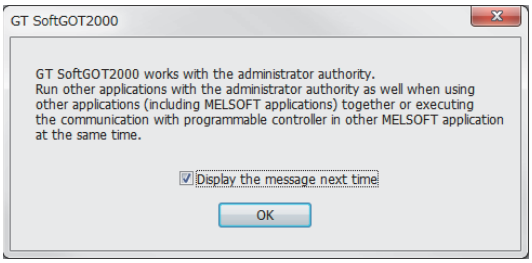
For the details, refer to the following.

☞ Page 44 License key

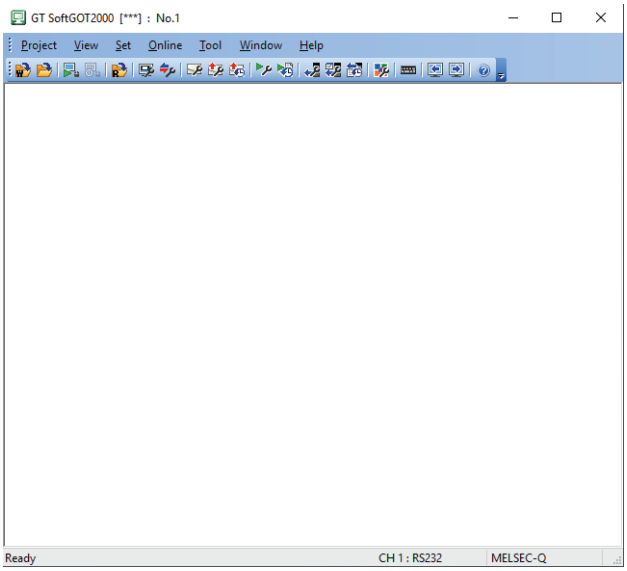
1. From the Windows start menu, select [MELSOFT] → [GT Works3] → [GT SoftGOT2000] to display the [GT SoftGOT2000 Start-up] dialog.



2. Set [Module No.], select a GT SoftGOT2000 module type, and click the [Start] button to display the dialog requesting the administrator authority.



3. Click the [OK] button to start GT SoftGOT2000.



Point

Display position when starting up the GT SoftGOT2000

Select either of the following items on the [Display Setup] tab in the [Environment Setup] dialog.

[Start at the display position of the previous termination]

[Start at the specified display position]

For the details, refer to the following.

☞ Page 70 [Display Setup] tab

If GT SoftGOT2000 was abnormally terminated, its window at the next startup will be displayed in the position where the software was last exited properly.

Display position is stored for each CPU number of GT SoftGOT2000.

Precautions for launching other MELSOFT applications while GT SoftGOT2000 is running

Run other MELSOFT applications using the following procedure.

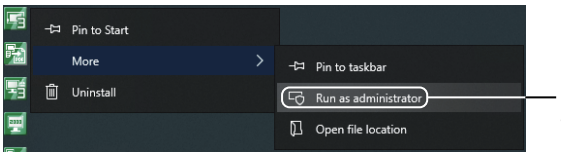
■When the User Account Control (UAC) is disabled

Run an application with no need to select [Run as administrator].

■When the User Account Control (UAC) is enabled

Run an application as the administrator.

1. Right-click an application to execute in the Windows start menu.
2. Select [More] → [Run as administrator] to run the software.



Select [Run as administrator] from the right-click context menu.

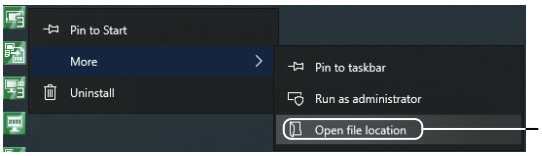
■Always running an application as an administrator

To always run an application as an administrator, configure the following setting.

1. Select and right-click the application to execute from the start menu of Windows.

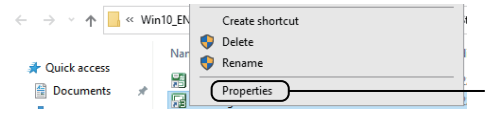
Right-click a MELSOFT application.

2. Select [More] → [Open file location] to open the folder of the application to be run.



Select [Open file location] from the right-click context menu.

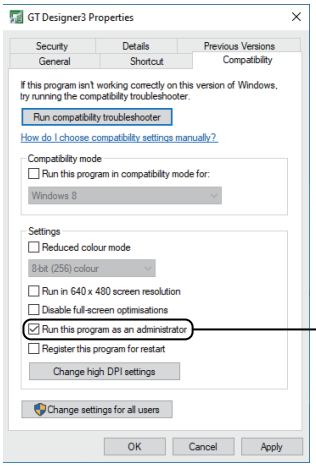
3. Right-click the application to be run, and select [Properties].



Select [Properties] from the right-click context menu.

4. In the [Properties] dialog, select the [Compatibility] tab.

Select [Run this program as an administrator] in [Settings].

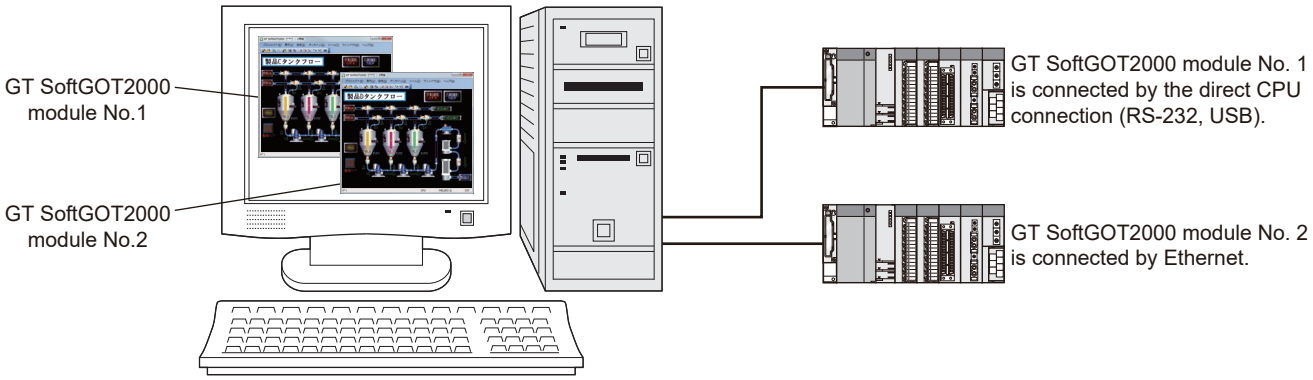


Select [Run this program as an administrator].

5. Click the [OK] button to close the dialog.

Starting up multiple GT SoftGOT2000 modules

Multiple modules of GT SoftGOT2000 can be started up simultaneously by a single computer.
Each module of GT SoftGOT2000 is started up as an "n" module, and can be monitored by different connection types.
The module number appears in the title bar.
Whether to display or hide the module number is selectable on the [Auxiliary Setup] tab in the [Environment Setup] dialog.
While a GT SoftGOT2000 (Single channel) module is running, you cannot start a GT SoftGOT2000 (Multiple channels) module having the same module number, and vice versa.
Once you open the [GT SoftGOT2000 Start-up] dialog to start a module, make sure to close the dialog afterward.
If you try to open the [GT SoftGOT2000 Start-up] dialog while it is already open, an error message will appear.
For information on how to specify a module in its shortcut properties, refer to the following.
☞ Page 58 Directly starting the specified GT SoftGOT2000 module



When multiple SoftGOT2000 modules are used, a CPU is automatically assigned to each module when the module starts monitoring.

Precautions for starting multiple GT SoftGOT2000 modules

■Monitoring speed when starting up multiple GT SoftGOT2000 modules

When starting up multiple GT SoftGOT2000 modules, the monitoring speed may be reduced according to the performance of the personal computer.

GT SoftGOT2000	Recommended number of modules
GT SoftGOT2000 (Single channel)	Up to 4
GT SoftGOT2000 (Multiple channels)	1

The settable module number ranges from 1 to 32767.

■GOT internal device when multiple modules are started up

GOT internal device for each module is controlled separately.
GOT internal device cannot be shared by different modules.

■Data save location when multiple applications are started up

Data save location for each module is controlled separately.

■Monitoring PLCs while multiple modules are running

If the same port number is specified in multiple GT SoftGOT2000 modules to monitor PLCs, only the module that starts monitoring first can communicate with the PLCs.
Communication of the GT SoftGOT1000 module that begins monitoring later will time out.

Point

Operating environment when multiple modules are running
Monitoring performance may be degraded or a timeout may occur depending on the specifications of the personal computer.
Request the network administrator to adjust each communication setting, which may improve such situations.

Starting GT SoftGOT2000 automatically when starting Windows

The following explains how to start up GT SoftGOT2000 automatically when Windows is started up by using [Online after starting].

Point

Before automatic startup

Make sure that the power supply to the connected PLC CPU is turned on before starting up Windows when performing automatic startup.

Automatic startup settings

Configure the automatic startup settings using [Task Scheduler] of Windows.

1. Start GT SoftGOT2000, and read the project data to be used at automatic startup of GT SoftGOT2000.
2. In the [Environment Setup] dialog, select the [Auxiliary Setup] tab, and clear [Display the dialog about administrator authority when starting GT SoftGOT2000.].

☞ Page 72 [Auxiliary Setup] tab

3. Choose any of the following.

[Online] → [Startup in Online Mode]

[Startup in Online Mode] by right-clicking the mouse

4. Close GT SoftGOT2000.
5. Start Task Scheduler.

For how to start Task Scheduler, refer to Windows Help.

6. Select [Create Task] from [Actions] in [Task Scheduler].
7. On the [General] tab, configure the following settings.

Setting item	Settings
[Name]	Set a name.
[Run with highest privileges]	Select this item.
[Configure for]	Select the OS used.

8. On the [Triggers] tab, click the [New] button and configure the following settings.

Setting item	Settings
[Begin the task]	Select [At log on].
[Delay task for]	Select [30 seconds]. According to the personal computer environment, set the optimum time. When the multiple GT SoftGOT2000 modules do not start automatically although the automatic startup is enabled, adjust the delay time for each task.
[Enabled]	Select this item.

9. On the [Actions] tab, click the [New] button and configure the following settings.

Setting item	Settings
[Action]	Select [Start a program].
[Program/script]	Specify the executable file of GT SoftGOT2000. • For GT SoftGOT2000 (Single channel): SGT2000.exe • For GT SoftGOT2000 (Multiple channels): SGT2000_MultiCH.exe To start a GT SoftGOT2000 module by specifying the module number, enter the keyword for the module in [Add arguments (optional)]. For the keyword for the module number, refer to the following. ☞ Page 58 Directly starting the specified GT SoftGOT2000 module

10. On the [Settings] tab, configure the following settings.

Setting item	Settings
[If the task fails, restart every]	Set this item as required.
[Stop the task if it runs longer than]	Set this item as required. (Default: 3 days)

11. Click the [OK] button to complete the settings.

Directly starting the specified GT SoftGOT2000 module

The following shows how to start the specified GT SoftGOT2000 module from a shortcut.
Create a shortcut to each module, and specify a module number in the [GT SoftGOT2000 Properties] dialog for each module.
In the following procedure, you start GT SoftGOT2000 (Single channel) module No. 2 as an example.

1. Create a shortcut to GT SoftGOT2000.

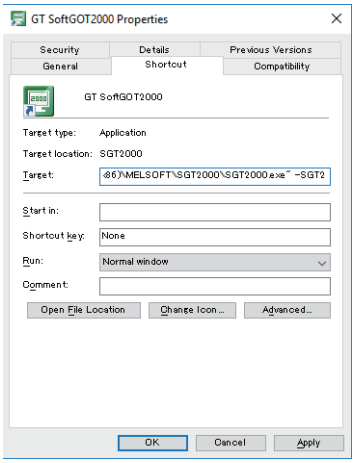
For GT SoftGOT2000 (Single channel): SGT2000.exe
For GT SoftGOT2000 (Multiple channels): SGT2000_MultiCH.exe

2. Right-click the shortcut, and select [Properties].

3. In the [GT SoftGOT2000 Properties] dialog, select the [Shortcut] tab, and append the keyword for the module to be started to the character string in [Target].

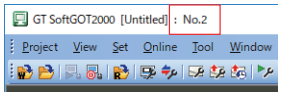
Keyword	Description
-SGTn *1	-SGTn *1 Specifies the number of the module to be started up. Set the number of the module to be started up to "n". (1 to 32767)

*1 A single-byte space is required before "_".



4. Press the [OK] button after entering the module number.

5. The specified GT SoftGOT2000 module will start upon the next startup.



When module No. 2 is started

6. Delete the keyword that was entered in the [Target] field when not specifying the module No.

Point

When starting the GT SoftGOT2000 with the specified module number in the full-screen mode
The specified module of GT SoftGOT2000 can be started in the full-screen by entering the keyword for both full screen mode and module No. in the [Target] of [GT SoftGOT2000 Properties].
(There are no rules for the order of entering keywords.)
Example) Starting GT SoftGOT2000 (Single channel) module No. 3 in full screen 1

C:\Program Files\MELSOFT\SGT2000\SGT2000.exe -SGT3 -NOFRAME

A one-byte space is necessary in front of keyword

Refer to the following for the keyword for the full screen mode.
☞ Page 668 Full Screen Mode

Starting a module with linked project data

GT SoftGOT2000 links the project data to the module number before the user exits the program.
At the next startup, GT SoftGOT2000 reads the linked project data and starts monitoring.

1. Configure the settings to start GT SoftGOT2000 by specifying a module number.
☞ Page 58 Directly starting the specified GT SoftGOT2000 module
2. Open the project data to be linked to the module number.
3. Exit GT SoftGOT2000.
4. Start the GT SoftGOT2000 module that has been specified in step 1.
5. Click the [Monitor Start] button to start monitoring using the project data linked in step 2.

Point

How to start monitoring automatically
To start monitoring automatically upon startup of GT SoftGOT2000, select [Online] → [Startup in Online Mode] from the menu.

Exiting from GT SoftGOT2000

This section describes how to exit from GT SoftGOT2000.

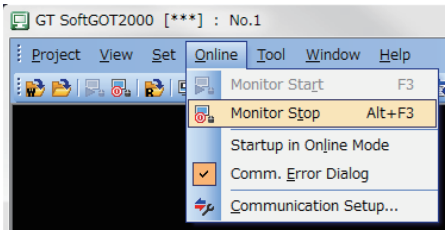
1. Perform either of the following operations.

Select [Project] → [Exit] from the menu.

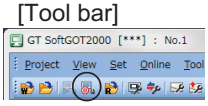
Click the [X] on the tool bar.

Right-click the mouse and select [Exit] from the menu.

2. GT SoftGOT2000 is exited.



[Tool bar]



Select either method.

Point

Exiting with GOT internal device

Turn ON the GOT internal device (system data area of GT SoftGOT2000: GS500.b0) to exit from GT SoftGOT2000.

Presetting the above device as a touch key enables to exit from GT SoftGOT2000 without selecting the menu. (GT SoftGOT2000 may not be terminated if device ON time is too short. Keep the device ON until GT SoftGOT2000 is terminated.)

For details of the GOT internal device, refer to the following.

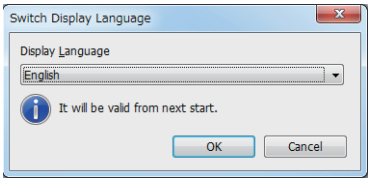
GT Designer3 (GOT2000) Screen Design Manual

Switching the display language of GT SoftGOT2000

You can use GT SoftGOT2000 in multiple languages on one personal computer by switching the display language of GT SoftGOT2000.

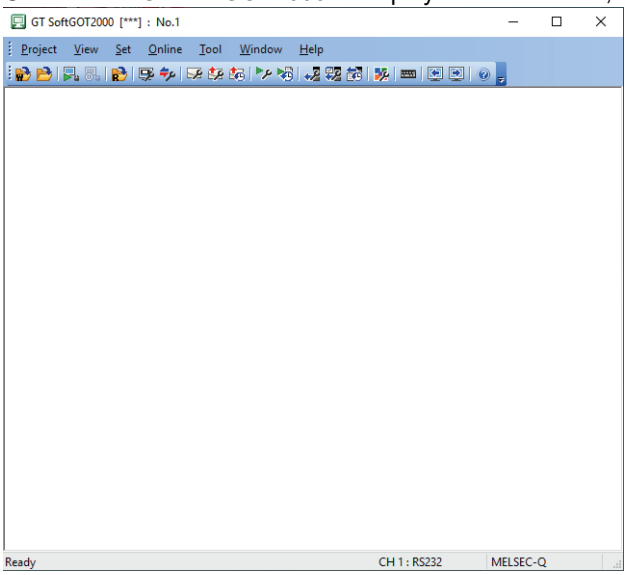
1. Select [View] → [Switch Display Language] from the menu.
2. The [Switch Display Language] dialog appears.

Configure the following setting and click the [OK] button.



Item	Description
[Display Language]	Select a display language. • [English] • [Japanese(日本語)] • [Chinese Simplified(簡体中文)]

3. Restart GT SoftGOT2000 to display the menu items, dialogs, messages, and others in the set language.



Restrictions on the display language switching

■Languages supported on the personal computer

When the personal computer does not support a language to be switched to, screen layouts collapse and characters become garbled on GT SoftGOT2000.

Install a language pack or others on the personal computer as needed.

■Items to which the display language switching is not applied

The display language switching is not applied to the following items.

Item		Display specifications
Some right-click context menu items		The display language depends on the OS language.
Setting items and buttons in some dialogs		The display language depends on the OS language.
Manuals		The display language depends on the language version of the manual installed.
Advanced application setting	Advanced application setting files	The display language depends on the OS language.
	Log files of setting check	
Contents of the software license agreement		Only available in Japanese and English.

■Language of history data

In the following functions, history data after a display language switching is created in the new display language and added into an existing history file.

Therefore, the history file may contain data in multiple display languages set before and after the switching.

If a history file of the mail send function has already been created with GT SoftGOT2000 whose version is earlier than 1.122C, another history file is created to record history data after a display language switching.

Application start-up

Mail send function

Functions called from PX Developer

■Operation when multiple modules of GT SoftGOT2000 are started

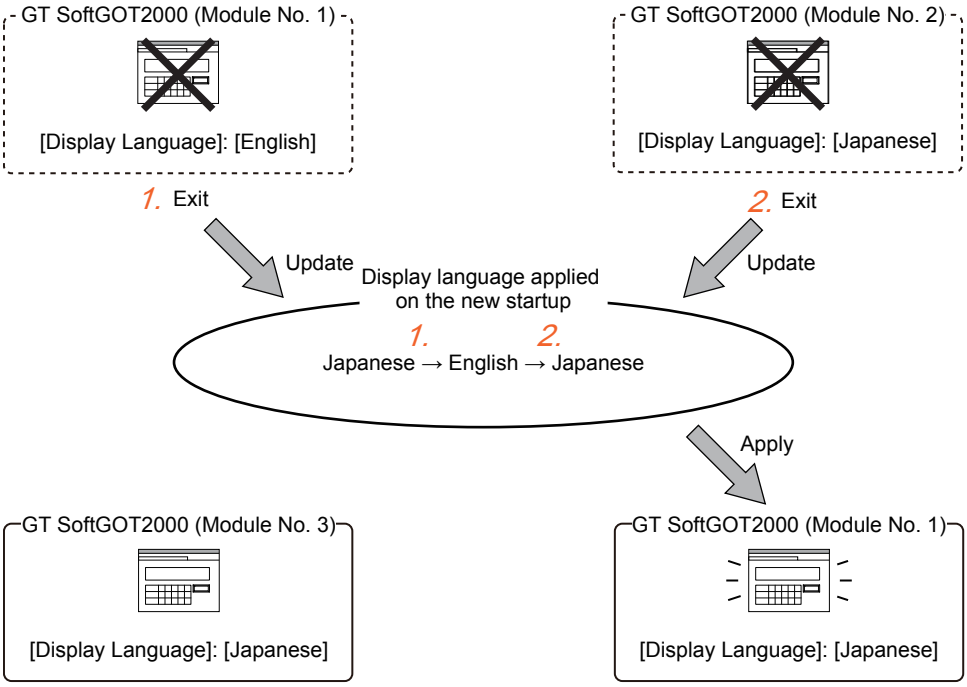
The display language is shared among all modules of GT SoftGOT2000.

When the display language setting is changed, the setting change is reflected by exiting GT SoftGOT2000 where the setting change is made.

The display language of the last exited GT SoftGOT2000 is applied when you newly start a GT SoftGOT2000 module.

Example) When exiting GT SoftGOT2000 (Module No. 1) ([Display Language]: [English]), and then exiting GT SoftGOT2000 (Module No. 2) ([Display Language]: [Japanese])

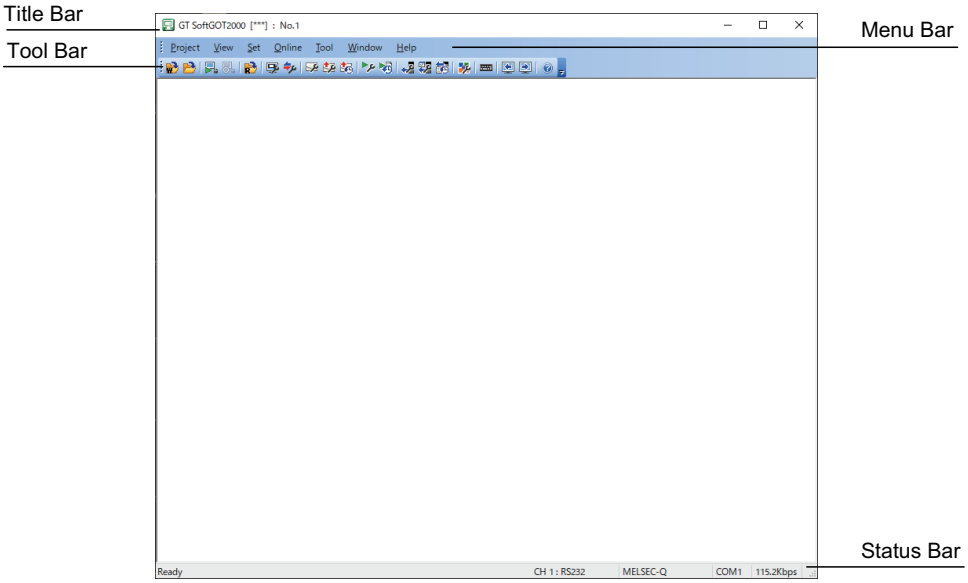
Japanese is applied as the display language when GT SoftGOT2000 (Module No. 1) is newly started.

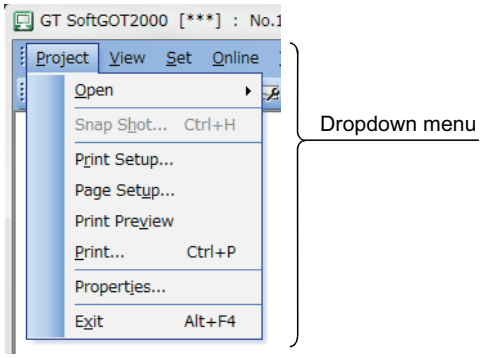


For the already started module of GT SoftGOT2000, its display language is not changed.

2.2 Screen Configuration of GT SoftGOT2000

This section describes screen configuration.





Item	Description
Title Bar	Displays a GT SoftGOT2000 module type, project name and module number, or the comment set with GT SoftGOT2000 Commander. • GT SoftGOT2000 module type GT SoftGOT2000 (Single channel) or GT SoftGOT2000 (Multiple channels) is displayed as shown below. • GT SoftGOT2000 (Single channel): GT SoftGOT2000 • GT SoftGOT2000 (Multiple channels): GT SoftGOT2000(Multi-channel) • Project name and module number If GT SoftGOT2000 displays the project data for the first time, the title bar displays [***] as the project name. If the project title is not set for the project data monitored by GT SoftGOT2000, the title bar displays [No title] as the project name. • Comment set with GT SoftGOT2000 Commander Display the comment set with GT SoftGOT2000 Commander. (The line feeds are disabled, and the comment is displayed in one line.) If GT SoftGOT2000 monitors the linked GOT for the first time, the title bar displays [***]. If the comment is not set with GT SoftGOT2000 Commander, the title bar displays [No comments (**.**.**.**)]. (**.**.**.** indicates the IP address of the linked GOT.) To display the project name and/or the module number, or the comment set with GT SoftGOT2000 Commander, make a selection in the title bar setting in the [Environment Setup] dialog. For the details of the title bar setting, refer to the following. ☞ Page 67 Environment Setup
Menu Bar	Operate GT SoftGOT2000 by using a drop-down menu. For the details of the menu bar, refer to the following. ☞ Page 64 Menu Bar
Tool Bar	Operate GT SoftGOT2000 by selecting an icon. For the details of the tool bar, refer to the following. ☞ Page 66 Tool bar
Status Bar	Displays a description of a command or icon and communication settings, including the channel settings, connection type, controller type, communication port, and baud rate.

Menu Bar

This section describes commands assigned to the menu bar.

[Project]

Menu		Description
[Open]	[Open a Project]	Opens a workspace format project created with GT Designer3.
	[Open a File]	Opens a single file format project (*.GTX) created with GT Designer3.
[Snap Shot]		The screen image being monitored is saved into BMP or JPEG format file.
[Print Setup]		Configure the print settings.
[Page Setup]		Adjusts the page layout for printing.
[Print Preview]		Displays a print preview.
[Print]		The screen image being monitored is output to a printer.
[Properties]		The project title, project ID and data size of project data being monitored are displayed.
[License Registration Information]		Displays the license registration information of GT SoftGOT2000.
[Exit]		Exit GT SoftGOT2000.

[View]

Menu	Description
[Toolbar]	Displays or hides the toolbar.
[Status Bar]	Displays or hides the status bar.
[Scroll Bar]	Displays or hides the scroll bar.
[Full Screen Mode]	Switches to full screen mode.
[Back Screen Mode]	Switches to back screen mode.
[Switch Display Language]	Switches the display language of GT SoftGOT2000.

[Set]

Menu		Description
[Environment Setup]		Performs environment settings for GT SoftGOT2000.
[Mail Setup]	[Mail Setup]	Performs mail settings such as dial-up, send address.
	[Mail Condition]	Disables the mail send setting of the project data.
	[Mail History]	Displays the operation history of mail sendings.
[Application Setup]	[Application Start-up Setting]	Allows settings for starting up applications from GT SoftGOT2000.
	[Application Start-up History]	Shows operation histories of application start-up.
[PX Developer Function Setting]	[PX Developer Function Call Setting]	Configure the setting to call the monitor tool functions of PX Developer on GT SoftGOT2000.
	[PX Developer Function Call Sub-Setting]	Configure the setting to create a history of calling the PX Developer functions.
	[PX Developer Function Call History]	Displays the history of calling the monitor tool functions of PX Developer.
[SoftGOT-GOT Link Function Setting]		Set resource data to be synchronized together with project data.
[Edgecross Interaction Function Setting]		Assign items of data that has been output from Edgecross to SoftGOT2000 internal devices.
[Keyboard]		Enables or disables the keyboard input.
[Monitor-only Mode]		Enables or disables mouse and keyboard operations on the monitored screen.
[Popup Menu]		Enables or disables the mouse right click.
[Close Menu]		Enables or disables the Close button.
[Exit Key [F12]]		Enables or disables exiting GT SoftGOT2000 with the [F12] key.

[Online]

Menu	Description
[Monitor Start]	Starts monitoring.
[Monitor Stop]	Stops monitoring.
[Startup in Online Mode]	Starts or does not start monitoring upon startup of GT SoftGOT2000.
[Comm. Error Dialog]	Displays or hides the communication error dialog when a communication error occurs.
[Communication Setup]	Performs communication settings for GT SoftGOT2000.

[Tool]

Menu		Description
[Resource Data]		Refers to the resource data in the personal computer.
[File Information in PLC] *1		GT SoftGOT2000 displays the file information in the connected PLC (QCPU or QSCPU).
[SoftGOT-GOT Link Function]	[GOT Project Data Acquisition]	Synchronizes the project data and resource data of the GOT and GT SoftGOT2000 when the SoftGOT-GOT link function is used.
	[Resource Data Upload Status]	Check the upload status of resource data.
[Script Error]		Monitor the execution status of a script (Error Information) to display the current status.
[Object Script Error]		Monitor the execution status of an object script (Error Information) to display the current status.
[Import]		Imports a setting file.
[Export]		Exports a setting file.

*1 Not available to GT SoftGOT2000 (Multiple channels).

[Window]

Menu	Description
[Cascade]	Cascades the windows of the active GT SoftGOT2000.
[Minimize All Windows]	Minimizes all the windows of the active GT SoftGOT2000 modules.
[Move Window]	Moves the GT SoftGOT2000 window with a mouse or the Move buttons.
[Move to Start-up Display Position]	Moves the GT SoftGOT2000 window to the startup display position.
[Move to Previous Display]	Moves the GT SoftGOT2000 window to the display with the previous display No., when multiple displays are used.
[Move to Next Display]	Moves the GT SoftGOT2000 window to the display with the next display No., when multiple displays are used.
Move to Display □ *1	Moves the GT SoftGOT2000 window to the specified display, when multiple displays are used.

*1 The number of menu options increases correspondingly with the increase in the number of displays.

[Help]

Menu	Description
[GT SoftGOT2000 Help]	Displays Help (e-Manual) of GT SoftGOT2000.
[Manual List]	Displays the index of PDF manuals.
[Connection to MITSUBISHI ELECTRIC FA Global Website]	Connects to the Mitsubishi Electric Factory Automation Global Website.
[About GT SoftGOT2000]	Used to check the GT SoftGOT2000 version.

Tool bar

This section describes the tool bar.

Name		Description
	[Open a Project]	Opens a workspace format project created with GT Designer3.
	[Open a File]	Opens a single file format project (*.GTX) created with GT Designer3.
	[Monitor Start]	Starts monitoring.
	[Monitor Stop]	Stops monitoring.
	[Resource Data]	Displays resource data.
	[Environment Setup]	Performs environment settings for GT SoftGOT2000.
	[Communication Setup]	Performs communication settings for GT SoftGOT2000.
	[Mail Setup]	Performs mail settings such as dial-up, send address.
	[Mail Condition]	Disables the mail send setting of the project data.
	[Mail History]	Displays the operation history of mail sendings.
	[Application Start-up Setting]	Allows settings for starting up applications from GT SoftGOT2000.
	[Application Start-up History]	Shows operation histories of application start-up.
	[PX Developer Function Call Setting]	Configure the setting to call the monitor tool functions of PX Developer on GT SoftGOT2000.
	[PX Developer Function Call Sub-Setting]	Configure the setting to create a history of calling the PX Developer functions.
	[PX Developer Function Call History]	Displays the history of calling the monitor tool functions of PX Developer.
	[Edgecross Interaction Function Setting]	Configure the settings of the Edgecross interaction function.
	[Keyboard]	Switches keyboard input enable/disable.
	[Move to Previous Display]	Moves the window to the display with the previous display No. when using multiple displays.
	[Move to Next Display]	Moves the window to the display with the next display No. when using multiple displays.
	[GT SoftGOT2000 Help]	Displays Help (e-Manual) of GT SoftGOT2000.

2.3 Environment Setup

In Environment Setup, set the resolution, etc. of GT SoftGOT2000.

1. Perform either of the following operations.

Clicking [Environment Setup]

Selecting [Set] → [Environment Setup] from the menu

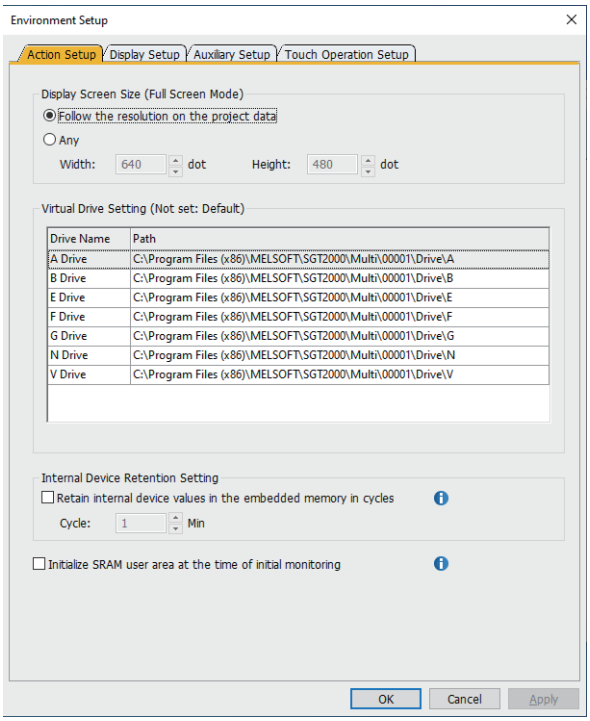
Right-clicking the mouse to select [Environment Setup] from the menu

2. The [Environment Setup] dialog is displayed.

3. Set each item and click the [OK] button.

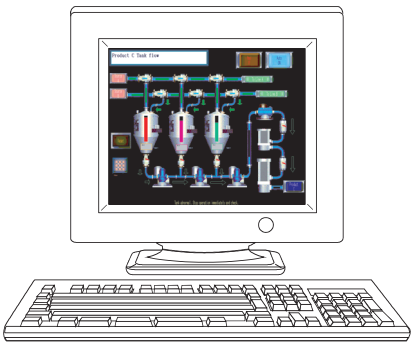
[Environment Setup] dialog

[Action Setup] tab



Item	Description
[Display Screen Size (Full Screen Mode)] *1	Set the size of the screen display of GT SoftGOT2000 applied when the full screen mode function is used. • [Follow the resolution on the project data]: Select this item when displaying GT SoftGOT2000 on full-screen display in the size of the display screen that corresponds to the resolution set in the project data. • [Any]: Select this item to set the size of the display screen of GT SoftGOT2000 on full-screen display. After selecting, set the size of the display screen. (Width: [320] to [1920] dots, Height: [240] to [1200] dots)
[Virtual Drive Setting (Not set: Default)]	Specify a folder on a hard disk of the personal computer as a virtual drive. (Default: Standard virtual drive) ☞ Page 33 Specifications of GT SoftGOT2000 To specify the network drive as a virtual drive, set a shared folder on the personal computer. In such a case, the shared folder must be accessible. For information on how to set a shared folder on the personal computer, refer to Windows Help. For the details of the network drive, refer to the following. 📖GT Designer3 (GOT2000) Screen Design Manual
[Internal Device Retention Setting]	Set whether to save the values of GOT internal devices (GB and GD) at the specified intervals while GTSoftGOT2000 monitors a controller. • [Retain internal device values in the embedded memory in cycles] Saves the values of GOT internal devices to the SRAM user area at the specified intervals. If this item is deselected, the values will be saved when GT SoftGOT2000 exits. • [Cycle] Set a time interval to save the values of GOT internal devices to the SRAM user area. The setting range is [1] minute to [60] minutes. To use the internal device retention function, configure settings in GT Designer3. 📖GT Designer3 (GOT2000) Screen Design Manual
[Initialize SRAM user area at the time of initial monitoring]	Initializes the SRAM user area when GT SoftGOT2000 starts monitoring. The following functions save data to the SRAM user area. • User alarm observation • System alarm observation • Logging function • Recipe function • Internal device retention Deselect this item when: • GT SoftGOT2000 starts monitoring with the data in the SRAM user area at the last exit. • [GOT Embedded Memory (SRAM)] is set to be uploaded in [SoftGOT-GOT Link Function Setting]. ☞ Page 637 SoftGOT-GOT link function setting

*1 When [Display Screen Size (Full Screen Mode)] is set to a smaller size than the size set for [Resolution] in the [Environment Setup] dialog, the user can simultaneously use the full-screen GT SoftGOT2000 and other applications.



When the sizes set for [Resolution] and [Display Screen Size (Full Screen Mode)] are the same
· [Resolution] : 1280 × 1024
· [Display Screen Size (Full Screen Mode)] : 1280 × 1024

When [Display Screen Size (Full Screen Mode)] is set to a smaller size than the size set for [Resolution]
· [Resolution] : 1280 × 1024
· [Display Screen Size (Full Screen Mode)] : 1280 × 512

Displaying the scroll bars enables GT SoftGOT2000 to display the hidden part of the monitor screen.
☞ Page 676 Scroll Function

Point

Screen size in full screen mode

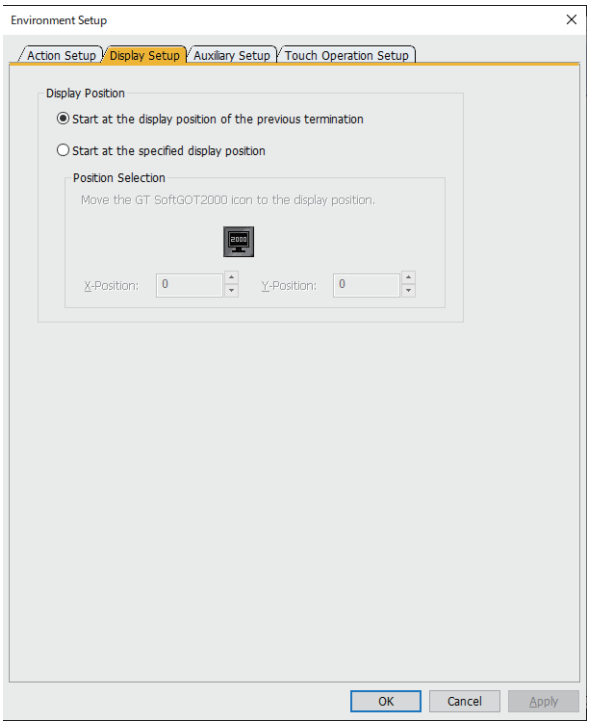
For selecting [User Setting] for [Display Screen Size (Full Screen Mode)], [Width] and [Height] can be set with GOT internal devices (Width: GS503, Height: GS504).

Input values into the corresponding GOT internal devices, and the screen size changes.

For GOT internal devices, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

[Display Setup] tab



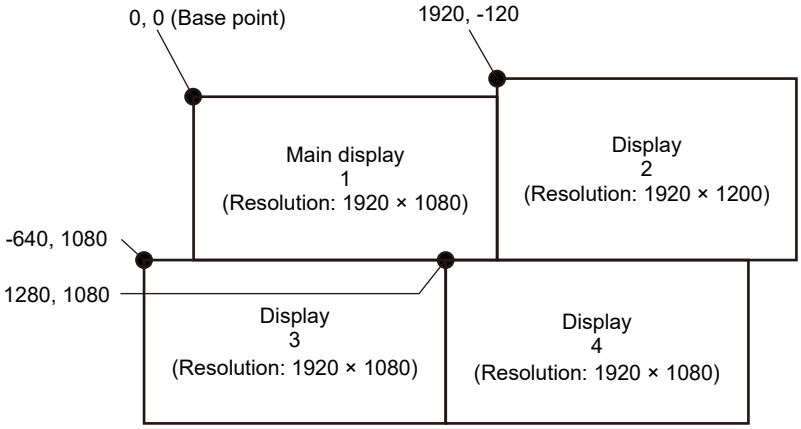
Item	Description
[Display Position]	Specify the position where the GT SoftGOT2000 window is displayed at startup. • [Start at the display position of the previous termination] Start a GT SoftGOT2000 window at the position where the software was last exited. However, if GT SoftGOT2000 was illegally terminated, the window is displayed where the last time GT SoftGOT2000 was normally closed. When the coordinates of the display position of the last exit do not exist on the display, the window at startup is displayed on the X coordinate, Y coordinate (0, 0) on the upper-left corner of the main display. • [Start at the specified display position] Start a GT SoftGOT2000 window at a specified position. When the coordinates of the specified display position do not exist on the display, the window at startup is displayed on the X coordinate, Y coordinate (0, 0) on the upper-left corner of the main display.
[Position Selection]	When [Start at the specified display position] is selected, set the startup display position of the window by one of the following methods. • Specify the display position with the GT SoftGOT2000 icon. Move the GT SoftGOT2000 icon to the display position. For the details, refer to the following. ☞ Page 71 Setting procedure • Specify the display position by directly entering values. Enter values in [X-Position] and [Y-Position]. ([-32768] to [32767])

Point

Coordinates of each display

For the coordinates of each display, the X coordinate and Y coordinate on the upper-left corner of the main display are the base point (0, 0).

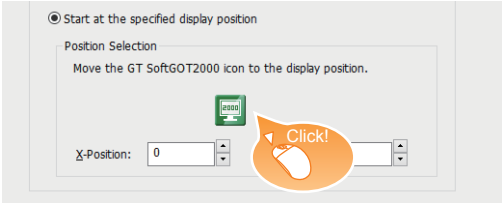
Example) When four displays are used



■Setting procedure

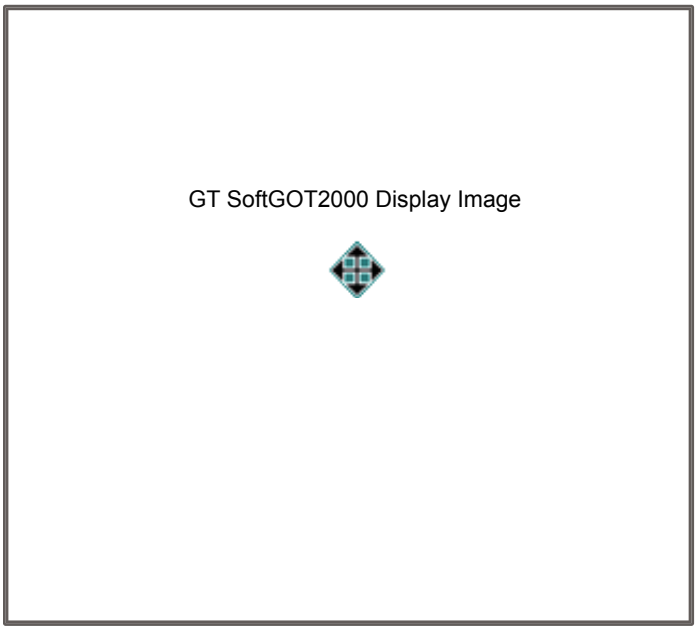
The following shows how to specify the display position.

1. Select [Start at the specified display position] on the [Display Setup] tab.
2. Click the GT SoftGOT2000 icon.

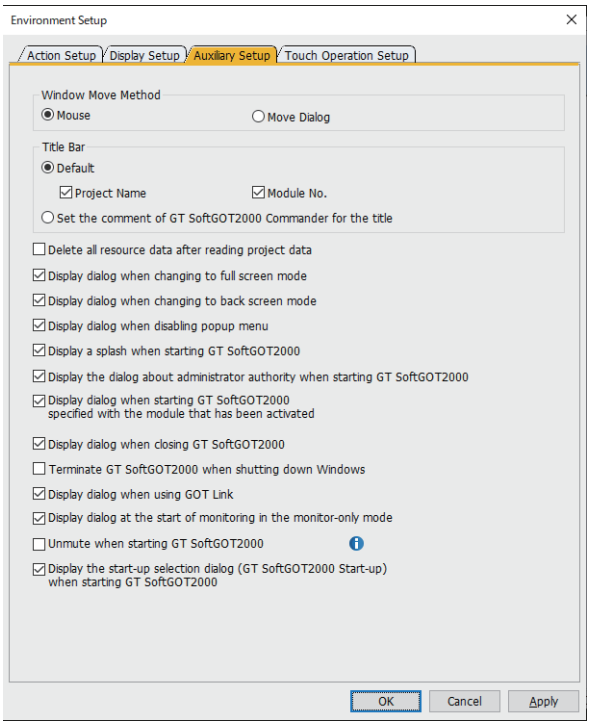


3. When [GT SoftGOT2000 Display Image] appears, drag it to the window display position at the next start.

Release the mouse button, and the values are stored in [X-Position] and [Y-Position].



[Auxiliary Setup] tab

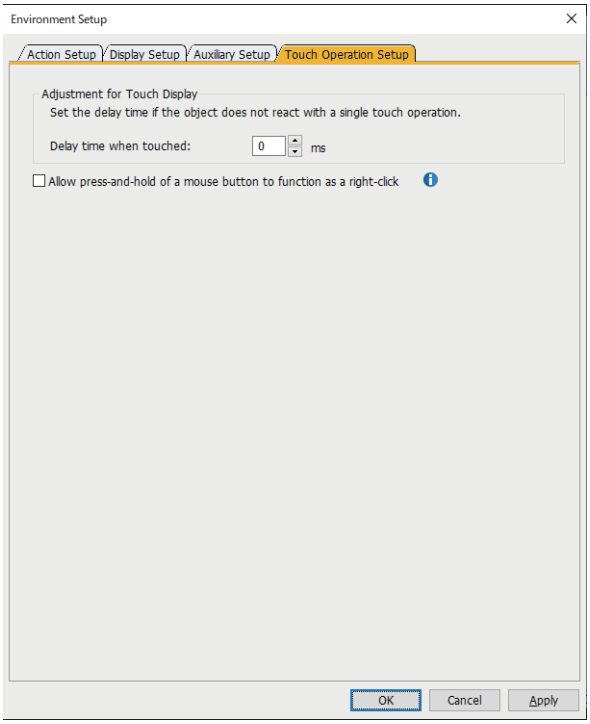


Item	Description
[Window Move Method]	Select a means of moving the GT SoftGOT2000 window when its title bar is hidden in full screen mode or for other reasons. For details on moving a window, refer to the following. ☞ Page 677 Moving the Window • [Mouse] :Uses a mouse to move the GT SoftGOT2000 window. Determine the window position with a mouse-click. • [Move Dialog] :The Move window dialog is displayed for window movement, and clicking the up, down, left or right button moves GT SoftGOT2000 on a 10-dot basis. A window can also be moved on a panel computer that cannot use a mouse.
[Title Bar]	Select information to be displayed on the title bar. • [Default] :Displays a project name or module number. Select an item to be displayed. • [Set the comment of GT SoftGOT2000 Commander for the title] :Displays the comment set with GT SoftGOT2000 Commander. For information on how to set the comment, refer to the following. ☞ Page 642 Managing GT SoftGOT2000 and GT SoftGOT1000 modules that use the SoftGOT-GOT link function (GT SoftGOT2000 Commander)
[Delete all resource data after reading project data.]	Deletes all resource data in the virtual drive after reading project data is complete.
[Display dialog when changing to full screen mode.]	Displays a confirmation dialog when GT SoftGOT2000 switches to full screen mode.
[Display dialog when changing to back screen mode.]	Displays a confirmation dialog when GT SoftGOT2000 switches to back screen mode.
[Display dialog when disabling popup menu.]	Displays a confirmation dialog when the popup menu becomes disabled.
[Display a splash when starting GT SoftGOT2000.]	Displays the splash screen at GT SoftGOT2000 startup.
[Display the dialog about administrator authority when starting GT SoftGOT2000.]	Displays a dialog requesting the administrator authority at GT SoftGOT2000 startup.
[Display dialog when starting GT SoftGOT2000, specified with the module that has been activated.]	Displays a caution dialog when the running GT SoftGOT2000 module is attempted to start again.
[Display dialog when closing GT SoftGOT2000.]	Displays a confirmation dialog when GT SoftGOT2000 exits.
[Terminate GT SoftGOT2000 when shutting down Windows.] *1	Exits GT SoftGOT2000 at Windows logoff or shutdown.

Item	Description
[Display dialog when using GOT Link.]	Displays a confirmation dialog when the GOT synchronizes project data.
[Display dialog at the start of monitoring in the monitor-only mode.]	Displays a confirmation dialog when monitoring starts in monitor-only mode.
[Unmute when starting GT SoftGOT2000]	Unmutes GT SoftGOT2000 at its startup regardless of the Windows sound settings.
[Display the start-up selection dialog (GT SoftGOT2000 Start-up) when starting GT SoftGOT2000]	Displays the [GT SoftGOT2000 Start-up] dialog when GT SoftGOT2000 starts. This setting is invalid when [Startup in Online Mode] is enabled.

*1 It may not work depending on the usage environment.

[Touch Operation Setup] tab



Item	Description
[Adjustment for Touch Display]	Set the delay time to be given after a touch operation is performed on the touch display or the tablet computer. (Setting range: [0] to [500] (ms)) If an object, such as a touch switch, does not operate upon being touched, set this item. The optimal delay time varies depending on the operating environment. Set 30 (ms) first and check the operation of an object. When the object does not operate properly, adjust the time as follows. • If the object does not operate, set a longer delay time. • If the object operates with delay, set a shorter delay time.
[Allow press-and-hold of a mouse button to function as a right-click]	Displays the right-click context menu with press-and-hold operation. When this item is selected, you cannot use touch switches whose action is set to [Momentary] and touch switches for which [Delay] is set to [ON].

2.4 Setting the Communication Method

In Communication Setup, set the type of the PLC CPU to be connected, the communication time-out period, etc.

1. Perform either of the following operations.

Clicking [Communication Setup]

Select [Online] → [Communication Setup] from the menu.

Right-click the mouse to select [Communication Setup] from the menu.

2. The [Communication Setup] dialog is displayed.

3. Set each item and click the [OK] button.

Point

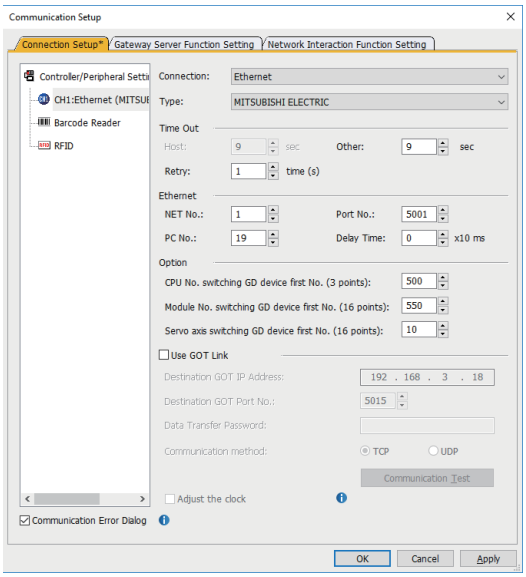
Communication Setup

Make Communication Setup before starting monitoring.

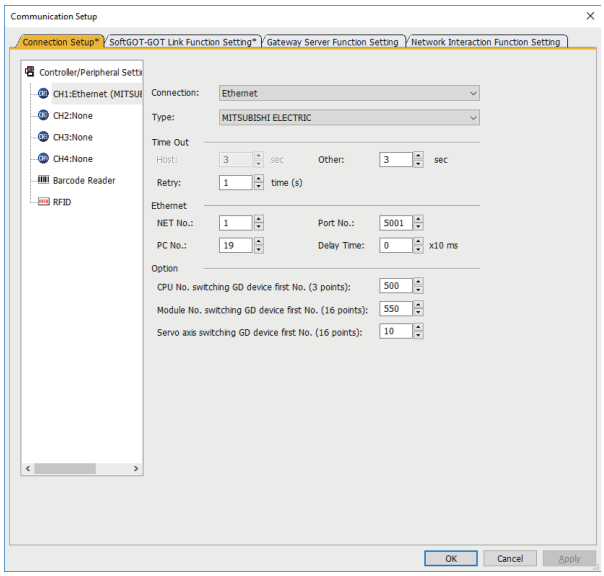
After start of monitoring on GT SoftGOT2000, Communication Setup cannot be changed.

(The "Communication Error Dialog" setting can be changed during monitoring.)

[Communication Setup] dialog



GT SoftGOT2000 (Single channel)



GT SoftGOT2000 (Multiple channels)

The [Communication Setup] dialog displays controller settings (connection type and controller type for each channel) and peripheral settings in the tree structure in the left part of the dialog.

To use channel No. 2 to 4 in GT SoftGOT2000 (Multiple channels), select [Use CH*].

The items selectable for [Connection] are different between GT SoftGOT2000 (Single channel) and GT SoftGOT2000(Multiple channels).

The following table shows the details.

○: Supported, ×: Not supported

Item in the tree structure	Selectable item in [Connection]	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)	Reference
CH1 to CH4	[RS232]	○	○ *1	☞ Page 76 [RS232]
	[USB]	○	×	☞ Page 79 [USB]
	[C24]	○	×	☞ Page 80 [C24]
	[NET/H]	○	×	☞ Page 81 [NET/H]
	[CC IE Control]	○	×	☞ Page 82 [CC IE Control] or [CC IE Field]
	[CC IE Field]			
	[Ethernet]	○	○ *2	☞ Page 83 [Ethernet]
	[OPC]	○	○	☞ Page 88 [OPC]
	[MELIPC Direct]	○	×	☞ Page 92 [MELIPC Direct]
	[BUS]	○	×	☞ Page 93 [BUS]
	[GX Simulator]	○	×	☞ Page 94 [GX Simulator]
	[GX Simulator2]	○	×	☞ Page 95 [GX Simulator2]
	[GX Simulator2/MT Simulator2]	○	×	☞ Page 96 [GX Simulator2/MT Simulator2]
	[GX Simulator3]	○	×	☞ Page 97 [GX Simulator3]
[Barcode Reader]	-	○	○	☞ Page 98 [Barcode Reader]
[RFID]	-	○	○	☞ Page 99 [RFID]

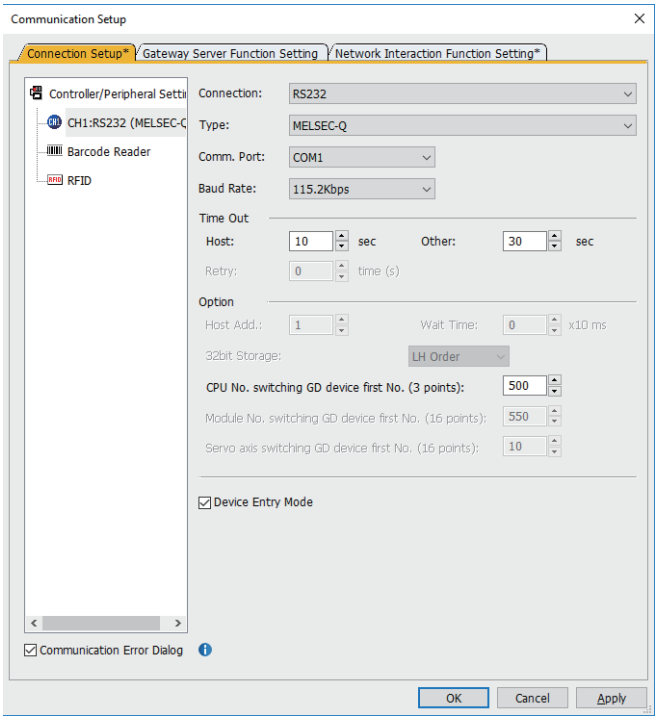
*1 Only the microcomputer connection (serial) is supported.

*2 Connection via GOT is not supported.

[Communication Setup] dialog ([Connection Setup] tab)

This section explains how to configure settings in GT SoftGOT2000 (Single channel).

[RS232]



Item	Description	
[Connection]	Select [RS232].	
[Type] *1*2	Select the PLC to be connected. ([MELSEC iQ-F], [MELSEC-A], [MELSEC-QnA], [MELSEC-Q], [MELSEC-Q(A-Mode)], [MELSEC-L], [MELSEC-FX], [MELDAS C6*], [OMRON SYSMAC], [YASKAWA], or [Computer])	
[Comm. Port]	Select a communication port of the personal computer. ([COM1] to [COM63]) When starting multiple applications including GT SoftGOT2000, set a communication port different from those set for the other applications. If the same communication port is specified, a communication timeout may occur, interrupting monitoring.	
[Baud Rate]	Set the transmission speed to/from the CPU. ([9.6Kbps], [19.2Kbps], [38.4Kbps], [57.6Kbps], [115.2Kbps]) If the connection target is FXCPU, select a baud rate that FXCPU supports. When the set baud rate is not supported, communication is made at 9.6kbps. When selecting a transmission speed that is not supported by OMRON SYSMAC, a communication error occurs.	
[Time Out]	Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.	
	[Host]	Set the timeout period for host station monitor. ([1] to [90] sec)
	[Other]	Set the timeout period for other station monitor. ([1] to [90] sec)
	[Retry]	[0] time
[Option]	The following items are settable only when [YASKAWA] is selected for [Type].	
	[Host Add.]	Specify the host address (the station number of a programmable controller to which connects GT SoftGOT2000) within the connection network. ([1] to [31])
	[Wait Time]	Set the transmission wait time to reduce the load on the network and target PLC. ([0] to [300] (ms))
	The following item is settable only when [MELSEC-Q] is selected for [Type].	
	[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers. ([0] to [65520])
	The following item is settable only when [MELSEC iQ-F] is selected for [Type].	
	[Module No. switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify module numbers. ([0] to [65520])
	[Servo axis switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify an axis number. ([0] to [65520])

Item	Description	
[Option]	The following items are settable only when [Computer] is selected for [Type].	
	[Baud Rate]	Set the transmission speed to/from the CPU. ([9.6Kbps], [19.2Kbps], [38.4Kbps], [57.6Kbps], [115.2Kbps]) Set the baud rate to be used.
	[Data Bit]	Set this item when changing the data length in communication with controllers. ([7bit], [8bit])
	[Stop Bit]	Specify the stop bit length in communication. ([1bit], [2bit])
	[Parity]	Specify whether to perform a parity check during communication, and specify the type of the parity check when necessary. ([None], [Even], or [Odd])
	[Host Add.]	Specify the host address (the station number of the PLC connected to GT SoftGOT2000) in the connected network. ([0] to [31])
	[Format]	Select a communication format. ([1] to [15]) • Format 1: GOT-A900 Series microcomputer connection (format 1) • Format 2: GOT-A900 Series microcomputer connection (format 2) • Format 3: A compatible 1C frame (format 1) • Format 4: A compatible 1C frame (format 2) • Format 5: A compatible 1C frame (format 3) • Format 6: A compatible 1C frame (format 4) • Format 7: QnA compatible 4C frame (format 1) • Format 8: QnA compatible 4C frame (format 2) • Format 9: QnA compatible 4C frame (format 3) • Format 10: QnA compatible 4C frame (format 4) • Format 11: SCHNEIDER EJH's memory link method (compatibility mode) • Format 12: SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1) • Format 13: SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n) • Format 14: GOT-F900 Series microcomputer connection (format 1) • Format 15: GOT-F900 Series microcomputer connection (format 2)
	[Interrupt Data Byte]	Set the number of bytes of the interrupt data. ([1Byte], [2Byte], or [4Byte])
	[Special Interrupt Code]	Set whether to output special interrupt codes. ([Done] or [None])
	[Control Method]	Set a control method. ([None] or [XON/XOFF]) • [None]: Does not set the control method. *3 • [XON/XOFF]: Uses the XON or XOFF control.
	[32bit Storage]	Select the storage order of 32-bit data. • [LH Order]: The GOT writes data into controller devices in order of data from lower 16 bits to upper 16 bits. • [HL Order]: The GOT writes data into controller devices in order of data from upper 16 bits to lower 16 bits.
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	
[Device Entry Mode]	Select this item to enable high-speed monitoring on GT SoftGOT2000. If the device entry mode is used when a FXCPU is connected, the device range for monitoring may be restricted, and monitoring may not be performed properly. This item is selectable only when [CPU Direct Connection (RS232)] is selected for [Connection] and [MELSEC-Q], [MELSEC-L], or [MELSEC-FX] is selected for [Type].	

*1 To monitor the CNC C70, select [MELSEC-Q].

*2 Only [Computer] is available to GT SoftGOT2000 (Multiple channels).

*3 To use the DTR (ER) control as the control method, set [None].

■Precautions for using device entry mode (When the MELSEC-FX connection)

The precautions for applying the device entry mode are described below.

Apply the device entry mode after the adequate debugging.

• Devices that can be set

An error (Communication time out) may occur if the following device (Bit device) is set.

For the device as objects, set other than the devices shown below when applying the device entry mode.

Type of connected CPU	Device name (Bit device)	Device range
$FX_{0(S)}$,FX_{0N}	Counter contact (C)	C224 to C239
		C240 to C255
	Special auxiliary relay (M)	M8240 to M8255
FX_{1}	Timer contact (T)	T240 to T255
	Counter contact (C)	C128 to C143
		C224 to C239
		C240 to C255
FX_{1S}	Counter contact (C)	C224 to C239
FX_{1N}	Counter contact (C)	C192 to C207
$FX_{2(C)}$	Counter contact (C)	C192 to C207
$FX_{2N(C)}$	Counter contact (C)	C192 to C207
$FX_{3U(C)}$	Counter contact (C)	C192 to C207
$FX_{3G(C)}$	Counter contact (C)	C192 to C207
FX_{3S}	Counter contact (C)	C192 to C207

• When using the offset function

When offset function is applied, the device range above may be monitored during an unintended moment and an error (Communication time out) may occur.

Create the project data so that any offset will not operate for the devices above.

■Outputting special interrupt codes

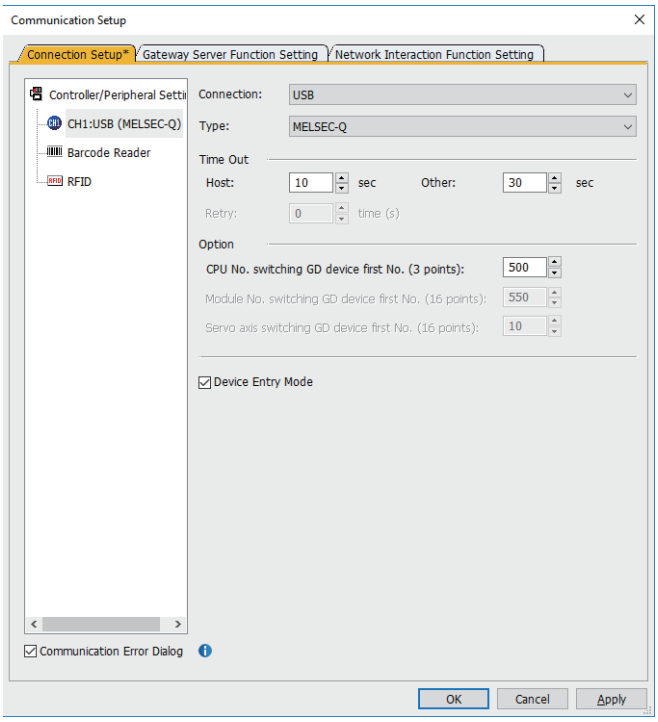
A special interrupt code is output when an event occurs.

If multiple events occur simultaneously, special interrupt codes may not be output.

The following shows special interrupt codes and the events that correspond to the codes.

Special interrupt code (Hex)	Event type
20H	Base screens and overlap windows 1 to 5 When a screen is switched according to the screen switching device, the special interrupt code is output. Base screens and overlap windows are switched independently. (Example) If the values of the screen switching devices for a base screen and overlap windows 1 and 2 are changed, three special interrupt codes will be output.
21H	When inputting a value or ASCII character is complete, the special interrupt code is output.
22H	When reading or writing recipe data is complete, the special interrupt code is output.
23H	When reading a barcode or RFID data is complete, the special interrupt code is output.

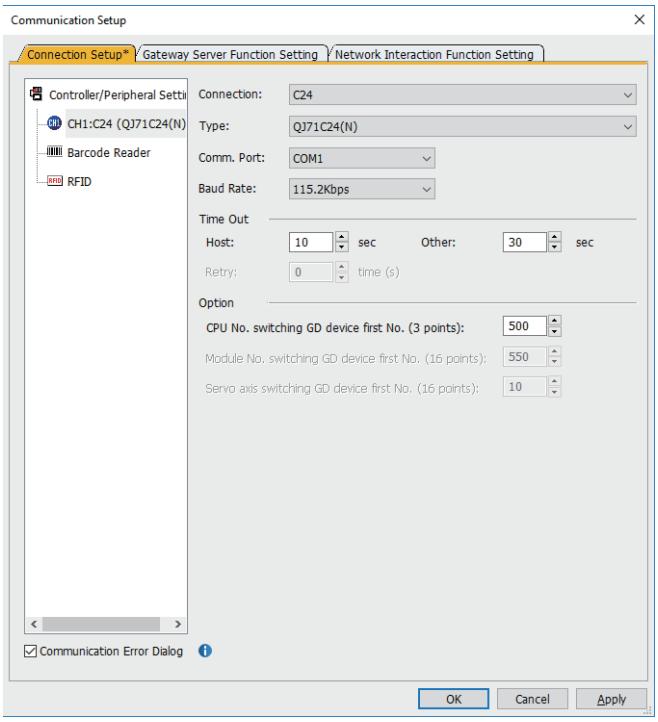
[USB]



Item	Description	
[Connection]	Select [USB].	
[Type] *1	Select the PLC to be connected. ([MELSEC iQ-R], [MELSEC iQ-L], [MELSEC iQ-F], [MELSEC-Q], [MELSEC-QS], [MELSEC-L], [MELSEC-FX])	
[Time Out]	Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.	
	[Host]	Set the timeout period for host station monitor. ([1] to [90] sec)
	[Other]	Set the timeout period for other station monitor. ([1] to [90] sec)
	[Retry]	[0] time
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	
[Option]	The following item is settable when [MELSEC iQ-R], [MELSEC-Q], or [MELSEC-QS] is selected for [Type].	
	[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers. ([0] to [65520])
	The following item is settable when [MELSEC iQ-R] or [MELSEC iQ-F] is selected for [Type].	
	[Module No. switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify module numbers. ([0] to [65520])
	[Servo axis switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify an axis number. ([0] to [65520])
[Device Entry Mode]	Select this item to enable high-speed monitoring on GT SoftGOT2000. If the device entry mode is used when a FXCPU is connected, the device range for monitoring may be restricted, and monitoring may not be performed properly. This item is selectable only when [USB] is selected for [Connection] and [MELSEC-Q], [MELSEC-L], or [MELSEC-FX] is selected for [Type].	

*1 To monitor the CNC C80, select [MELSEC iQ-R].
To monitor the CNC C70, select [MELSEC-Q].

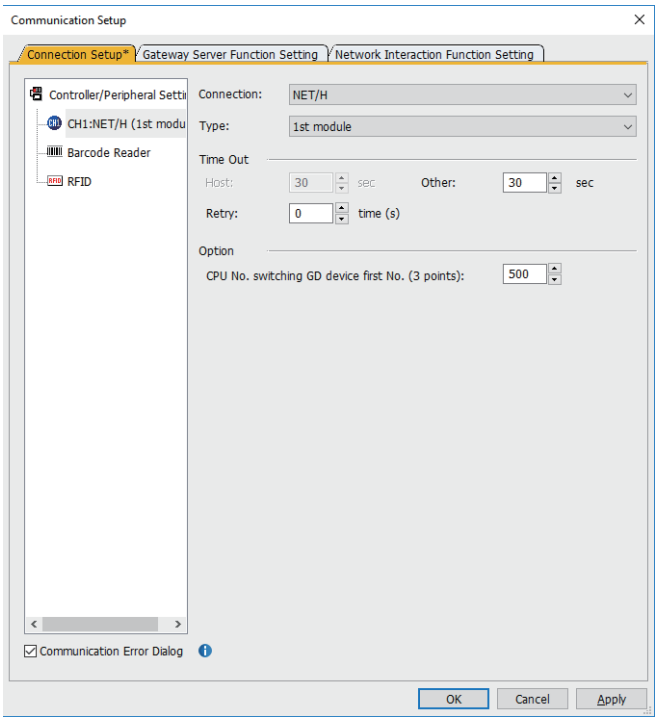
[C24]



Item	Description	
[Connection]	Select [C24].	
[Type] *1	Select the PLC (computer link module or serial communication module) to be connected.([AJ71C24], [AJ71UC24], [AJ71QC24], [AJ71QC24N], [QJ71C24(N)], [QJ71CMO], [LJ71C24], [RJ71C24])	
[Comm. Port]	Select a communication port of the personal computer. ([COM1] to [COM63]) When starting multiple applications including GT SoftGOT2000, set a communication port different from those set for the other applications. If the same communication port is specified, a communication timeout may occur, interrupting monitoring.	
[Baud Rate]	Set the transmission speed to/from the CPU. ([9.6Kbps], [19.2Kbps], [38.4Kbps], [57.6Kbps], [115.2Kbps]) Set the baud rate to be used. When the set baud rate is not supported, communication is made at 9.6kbps.	
[Time Out]	Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.	
	[Host]	Set the timeout period for host station monitor. ([1] to [90] sec)
	[Other]	Set the timeout period for other station monitor. ([1] to [90] sec)
	[Retry]	[0] time
[Option]	The following item is settable when [QJ71C24(N)], [QJ71CMO], or [RJ71C24] is selected for [Type].	
	[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers. ([0] to [65520])
	The following item is settable only when [RJ71C24] is selected for [Type].	
	[Module No. switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify module numbers. ([0] to [65520])
	[Servo axis switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify an axis number. ([0] to [65520])
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

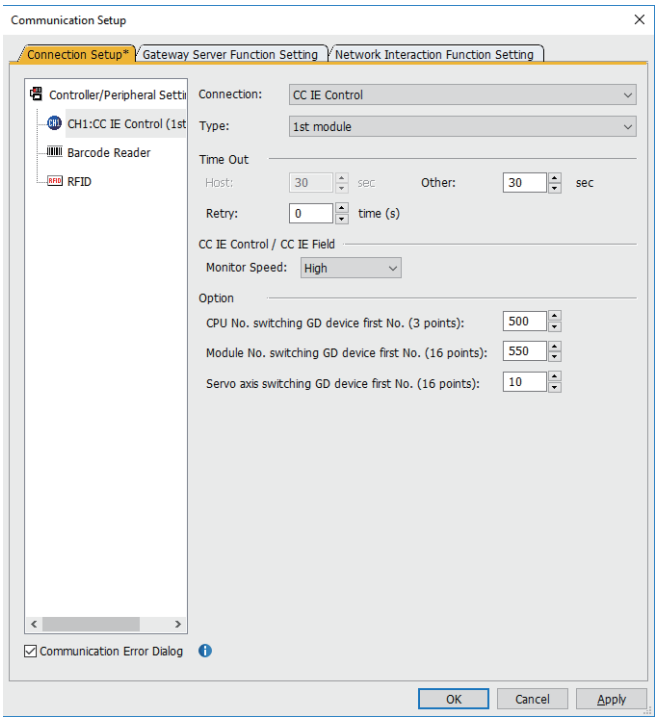
*1 To monitor the CNC C80, select [RJ71C24].
To monitor the CNC C70, select [QJ71C24(N)] or [QJ71CMO].

[NET/H]



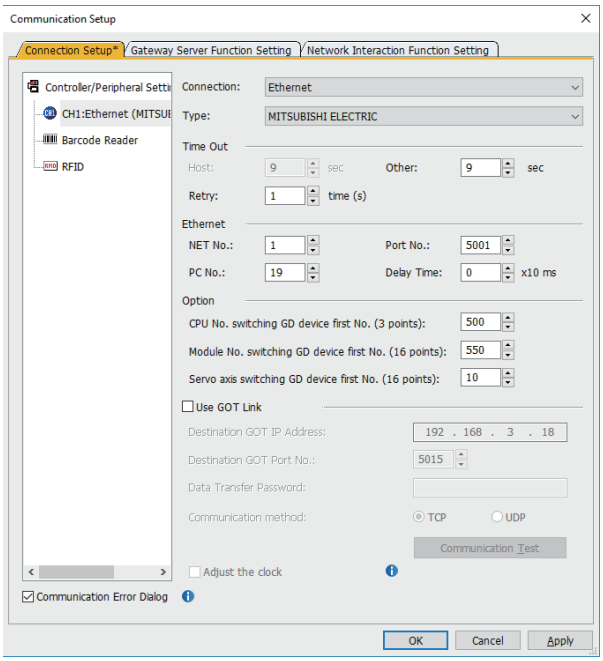
Item	Description	
[Connection]	Select the [NET/H].	
[Type]	Select the PLC (MELSECNET/H unit) to be connected.([1st module], [2st module], [3st module], [4st module])	
[Time Out]	Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.	
	[Host]	Set the timeout period for host station monitor. ([1] to [90] sec)
	[Other]	Set the timeout period for other station monitor. ([1] to [90] sec)
	[Retry]	[0] time to [10] times
[Option]	[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers. ([0] to [65520])
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[CC IE Control] or [CC IE Field]

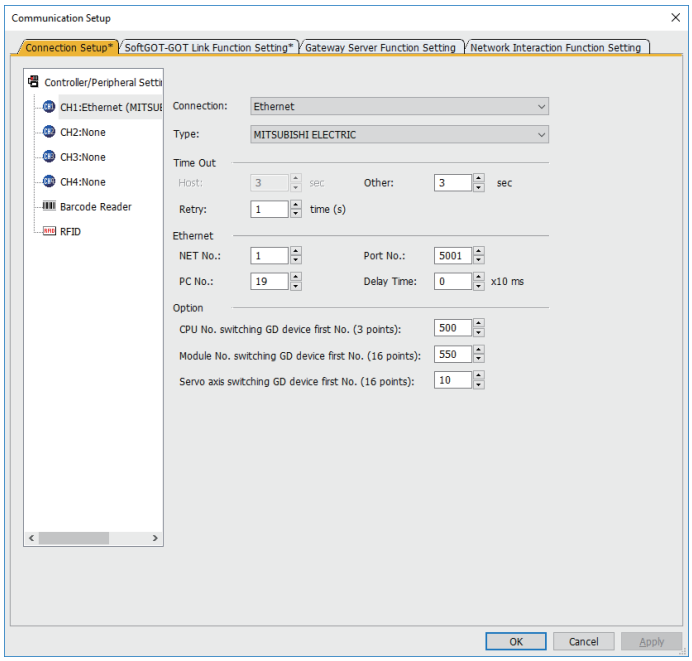


Item	Description	
[Connection]	Select [CC IE Control] or [CC IE Field].	
[Type]	Select the PLC (CC-Link IE Controller Network communication unit or CC-Link IE Field Network communication unit) to be connected.([1st module], [2st module], [3st module], [4st module])	
[Time Out]	Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.	
	[Host]	Set the timeout period for host station monitor. ([1] to [90] sec)
	[Other]	Set the timeout period for other station monitor. ([1] to [90] sec)
	[Retry]	[0] time to [10] times
[CC IE Control/CC IE Field]	Select a monitor speed.	
	[Monitor Speed]	The following shows the items to be selected. • [High] • [Normal] • [Low]
[Option]	[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers. ([0] to [65520])
	[Module No. switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify module numbers. ([0] to [65520])
	[Servo axis switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify an axis number. ([0] to [65520])
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[Ethernet]



GT SoftGOT2000 (Single channel)



GT SoftGOT2000 (Multiple channels)

Item	Description	
[Connection]	Select [Ethernet].	
[Type]	Select the PLC to be connected. ([MITSUBISHI ELECTRIC], [OMRON SYSMAC], [OMRON NJ/NX][*1], [YASKAWA], [YASKAWA MP3000], [YASKAWA Robot Controller], [YOKOGAWA], [TOSHIBA nv], [SIEMENS S7], [SIEMENS OP], [KEYENCE KV], [HITACHI], [LS Industrial Systems], [AB Control/CompactLogix(Tag)][*1], [MODBUS Slave(GOT:Master)], [MODBUS Master(GOT:Slave)], [SLMP], [GOT][*2], or [Computer])		
[Time Out]	The following items are settable when an item other than [Computer] is selected for [Type]. Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.	
	[Host]	Set the timeout period for host station monitor.
		[MITSUBISHI ELECTRIC] [OMRON SYSMAC] [OMRON NJ/NX] [YASKAWA] [YASKAWA MP3000] [YASKAWA Robot Controller] [YOKOGAWA] [TOSHIBA nv] [SIEMENS S7] [SIEMENS OP] [KEYENCE KV] [HITACHI] [LS Industrial Systems] [AB Control/CompactLogix(Tag)] [MODBUS Slave(GOT:Master)] [SLMP] — [1] to [90] sec
		[MODBUS Master(GOT:Slave)] — [3] sec
		[GOT] — [3] to [90] sec

Item	Description		
[Time Out]	[Other]	Set the timeout period for other station monitor.	
		[MITSUBISHI ELECTRIC] [OMRON SYSMAC] [OMRON NJ/NX] [YASKAWA] [YASKAWA MP3000] [YASKAWA Robot Controller] [YOKOGAWA] [TOSHIBA nv] [SIEMENS S7] [SIEMENS OP] [KEYENCE KV] [HITACHI] [LS Industrial Systems] [AB Control/CompactLogix(Tag)] [MODBUS Slave(GOT:Master)] [SLMP]	[1] to [90] sec
		[MODBUS Master(GOT:Slave)]	[3] sec
		[GOT]	[3] to [90] sec
	[Retry]	[MITSUBISHI ELECTRIC] [GOT]	[0] to [10] Time(s)
		[OMRON SYSMAC] [YASKAWA] [YASKAWA MP3000] [YASKAWA Robot Controller] [YOKOGAWA] [TOSHIBA nv] [KEYENCE KV] [HITACHI] [LS Industrial Systems] [MODBUS Slave(GOT:Master)] [SLMP]	[0] to [5] Time(s)
		[OMRON NJ/NX] [SIEMENS S7] [SIEMENS OP] [AB Control/CompactLogix(Tag)] [MODBUS Master(GOT:Slave)]	[3] times

Item	Description	
[Option]	The following items are settable when [MITSUBISHI ELECTRIC] or [GOT] is selected for [Type].*2	
	[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers. ([0] to [65520])
	[Module No. switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify a Unit No. ([0] to [65520])
	[Servo axis switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify module numbers. ([0] to [65520])
	The following item is settable when [MODBUS Slave(GOT:Master)], [MODBUS Master(GOT:Slave)], or [Computer] is selected for [Type].	
	[32bit Storage]	Select the storage order of 32-bit data. • [LH Order] : The GOT writes data into controller devices in order of data from lower 16 bits to upper 16 bits. • [HL Order] : The GOT writes data into controller devices in order of data from upper 16 bits to lower 16 bits.
	The following items are settable when [MODBUS Slave(GOT:Master)] is selected for [Type].	
	[FunctionCode[0F]]	Select whether to use the function code [0F]. • [Used] • [Unused]
	[FunctionCode[10]]	Select whether to use the function code [10]. • [Used] • [Unused]
	[Coil read times]	Set the number of coils to be read. ([1] to [2000])
	[Input relay read times]	Set the number of input relays to be read. ([1] to [2000])
	[Holding register read times]	Set the number of holding registers to be read. ([1] to [125])
	[Input register read times]	Set the number of input registers to be read. ([1] to [125])
	[Coil write times]	Set the number of coils to be written. ([1] to [800])
	[Holding register write times]	Set the number of holding registers to be written. ([1] to [100])
	The following item is settable only when [SLMP] is selected for [Type].	
	[Message Format]	Set a message format. • [QnA compatible 3E frame] • [4E frame]
	[Communication data code]	Set a communication data code. • [ASCII code] • [Binary code]
	[Device read points]	Set the number of consecutive devices from which data is read ([1] to [960]).
	[Device write points]	Set the number of consecutive devices to which data is written ([1] to [960]).
	[Device read random points]	Set the number of separate devices from which data is read ([0] to [192]).
	[Device write random points]	Set the number of separate devices to which data is written ([0] to [160]).
	The following items are settable only when [Computer] is selected for [Type].	
	[Protocol]	Select a communication protocol. • [TCP/IP] • [UDP/IP]
	[Format]	Select a communication format. ([1] to [9])
	[Interrupt Data Byte]	Select the number of bytes of the interrupt data. • [1Byte] • [2Byte] • [4Byte]
	[Special Interrupt Code]	Select whether to have the special interrupt code output or not. • [Done] • [None]
	[Living Confirmation]	Select whether to perform the living confirmation. • [Yes] • [No]
	[Living Confirmation Cycle]	Set the cycle to perform the living confirmation. ([10] (sec) to [100] (sec))
	[Destination module I/O number]	Select the I/O number and station number of the connection destination module that responds to the request from the controller. • [0] • [Same as requested value]

Item	Description		
[Ethernet]	[NET No.]	Set the network number of GT SoftGOT2000.	
		[MITSUBISHI ELECTRIC] [OMRON NJ/NX] [YASKAWA] [YASKAWA MP3000] [YOKOGAWA] [TOSHIBA nv] [SIEMENS S7] [SIEMENS OP] [KEYENCE KV] [HITACHI] [LS Industrial Systems] [AB Control/CompactLogix(Tag)] [MODBUS Slave(GOT:Master)] [SLMP] [Computer]	[1] to [239]
		[OMRON SYSMAC]	[1] to [127]
		[YASKAWA Robot Controller]	[1]
		[MODBUS Master(GOT:Slave)] [GOT]	[0]
	[Port No.]	Set the port number of the personal computer.	
		[MITSUBISHI ELECTRIC]	GT SoftGOT2000 (Single channel): [1024] to [65535] GT SoftGOT2000 (Multiple channels): [1024] to [65534]
		[OMRON SYSMAC] [YASKAWA] [YASKAWA MP3000] [YASKAWA Robot Controller] [YOKOGAWA] [TOSHIBA nv] [SIEMENS S7] [SIEMENS OP] [KEYENCE KV] [HITACHI] [LS Industrial Systems] [MODBUS Slave(GOT:Master)] [SLMP] [Computer]	[1024] to [65534] (Except [5011], [5012], [5013], and [49153] to [49170])
		[OMRON NJ/NX] [AB Control/CompactLogix(Tag)]	[1024] to [65534] (Except [5011], [5012], [5013], [44818], and [49153] to [49170])
		[MODBUS Master(GOT:Slave)]	[502] to [65534] (Except [503] to [1023], [5011], [5012], [5013], and [49153] to [49170])
		[GOT]	[5001]
	[PC No.] *3	Set the PLC station number of GT SoftGOT2000.	
		[MITSUBISHI ELECTRIC] [YASKAWA Robot Controller] [SLMP]	[1] to [120]
		[OMRON SYSMAC] [TOSHIBA nv] [SIEMENS S7] [SIEMENS OP] [KEYENCE KV] [HITACHI]	[1] to [254]
		[OMRON NJ/NX] [YASKAWA] [YASKAWA MP3000] [YOKOGAWA] [LS Industrial Systems] [AB Control/CompactLogix(Tag)] [Computer]	[1] to [64]
		[MODBUS Slave(GOT:Master)]	[1] to [247]
		[MODBUS Master(GOT:Slave)]	[255]
		[GOT]	[19]

Item	Description		
[Ethernet]	[Wait Time]	Set the transmission wait time to reduce the load on the network and target PLC.	
		[MITSUBISHI ELECTRIC] [OMRON SYSMAC] [YASKAWA] [YASKAWA MP3000] [YOKOGAWA] [TOSHIBA nv] [SIEMENS S7] [SIEMENS OP] [KEYENCE KV] [MODBUS Slave(GOT:Master)] [GOT]	[0] to [10000] (x 10 ms)
		[OMRON NJ/NX] [YASKAWA Robot Controller] [HITACHI] [LS Industrial Systems] [AB Control/CompactLogix(Tag)] [MODBUS Master(GOT:Slave)] [SLMP] [Computer]	[0] to [10000] (ms)
[Use GOT Link] *4*5	Select this item to use the SoftGOT-GOT link function. For the SoftGOT-GOT link function, refer to the following. ☞ Page 612 SoftGOT-GOT Link Function		
	[Destination GOT IP Address]	Set the IP address of the GOT. Click the [Communication Test] button to execute the communication test with the GOT.	
	[Destination GOT Port No.]	Set the port No. of the GOT.	
	[Data Transfer Password]	Set a password to authenticate reading project data from the GOT as necessary. Up to 32 characters can be set. Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available. !"#$%&()*+,-./:;<=>?@[\]^_`{|}~ By setting a password, an authentication is automatically executed when project data is read from the GOT.	
	[Communication method]	Set the communication method. [TCP]: Communication using TCP/IP [UDP]: Communication using UDP/IP	
	[Communication Test] button	Executes a communication test.	
[Adjust the clock] *4	Synchronizes the time of the personal computer where GT SoftGOT2000 runs with the time of the controller while the SoftGOT-GOT link function is used. For precautions when using the time setting function, refer to the following. ☞ Page 41 Precautions for using GT SoftGOT2000		
[Communication Error Dialog] *4	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.		

*1 [OMRON NJ/NX] and [AB Control/CompactLogix(Tag)] are not available in GT SoftGOT2000 (Single channel).

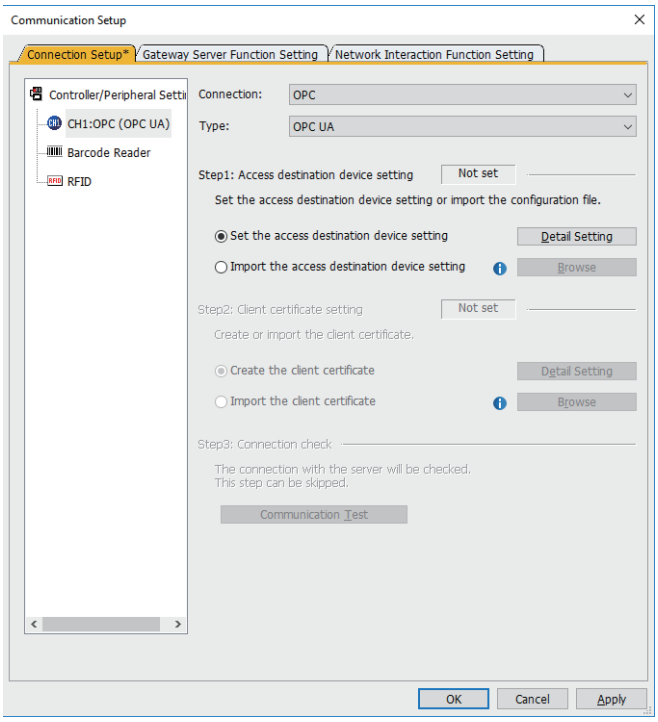
*2 [GOT] is not available in GT SoftGOT2000 (Multiple channels).

*3 Set a different PLC number for each controller on the same network.
Also, when monitoring the controllers on a network through multiple GT SoftGOT2000 modules and other applications on a personal computer simultaneously, set different PLC numbers for the controllers.

*4 For configuring the settings in GT SoftGOT2000 (Multiple channels), refer to the following.
☞ Page 100 [Communication Setup] dialog ([SoftGOT-GOT Link Function Setting] tab)

*5 The SoftGOT-GOT link function and gateway server function cannot be used at the same time.
This item cannot be set when [Use Gateway Server Function] in the [Gateway Server Function Setting] tab is selected.
☞ Page 101 [Communication Setup] dialog ([Gateway Server Function Setting] tab)

[OPC]

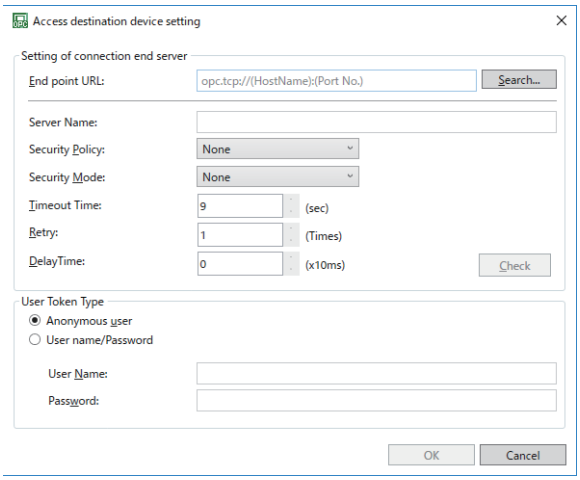


Item	Description	
[Connection]	Select [OPC].	
[Type]	Select [OPC UA].	
[Step1: Access destination device setting]	Configure or import the access destination device settings. • [Not set]: The access destination device settings are not configured. • [Set]: The access destination device settings are configured or imported.	
	[Set the access destination device setting]	Enables configuring the access destination device settings. Click the [Detail Setting] button to display the [Access destination device setting] dialog. For the details of the [Access destination device setting] dialog, refer to the following. ☞ Page 89 [Access destination device setting] dialog
	[Import the access destination device setting]	Imports the data of access destination device settings. Click the [Browse] button to specify the file to be imported. The following files can be imported. • Access destination device setting file (*.gtpm) • GT Designer3 Files(*.GTX)
[Step2: Client certificate setting]	Create or import a client certificate. • [Not set]: The client certificate settings are not configured. • [Set]: The client certificate setting is set, or the client certificate is imported.	
	[Create the client certificate]	Creates a client certificate. Click the [Detail Setting] button to display the [Creation of client certificate] dialog. For the details of the [Creation of client certificate] dialog, refer to the following. ☞ Page 90 [Creation of client certificate] dialog The location where a client certificate and security key are saved is different between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels). Example) When GT SoftGOT2000 (Single channel) module No. 1 has been started through channel No. 1 • Client certificate (client.der) GT SoftGOT2000 installation folder\Multi\00001\OPC UA Set\SingleCh\PKI\certs • Security key (client.pem) GT SoftGOT2000 installation folder\Multi\00001\OPC UA Set\SingleCh\PKI\private Example) If GT SoftGOT2000 (Multiple channels) module No. 1 has started through channel No. 1 • Client certificate (client.der) GT SoftGOT2000 installation folder\Multi\00001\OPC UA Set\Ch1\PKI\certs • Security key (client.pem) GT SoftGOT2000 installation folder\Multi\00001\OPC UA Set\Ch1\PKI\private
	[Import the client certificate]	Imports a client certificate. Click the [Browse] button to specify the file to be imported. The following files can be imported. • Client certificate (*.gtcl)

Item	Description
[Step3: Connection check]	Check the connection with the OPC UA server. Click the [Communication Test] button to perform a communication test.

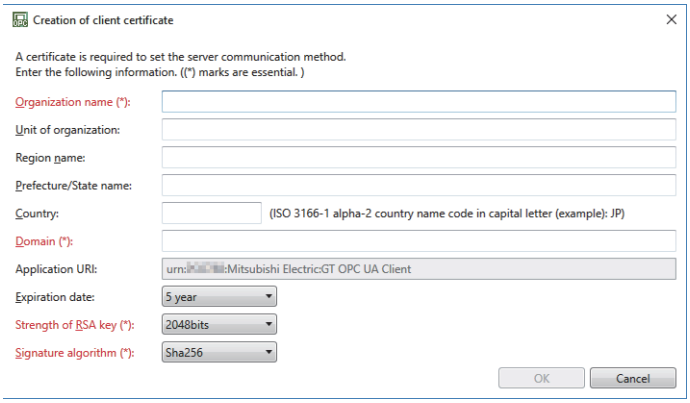
■[Access destination device setting] dialog

Configure the settings according to the settings of the OPC UA server to be connected.



Item	Description	
[Setting of connection end server]	[End point URL]	Set the endpoint URL of the OPC UA server. Up to 1024 characters can be entered directly. Click the [Search] button to search for OPC UA servers on the host or subnet on which GTSoftGOT2000 resides. For the details of the [Search] dialog, refer to the following. ☞ Page 91 [Search] dialog
	[Server Name]	Displays the OPC UA server name.
	[Security Policy]	Select a security policy for communication. • [None] Does not encrypt messages. • [Basic128Rsa15] Uses 128-bit encryption. • [Basic256] Uses 256-bit encryption. • [Basic256Sha256] Uses digital signing and 256-bit encryption.
	[Security Mode]	Set whether to digitally sign or encrypt messages. • [None] Does not encrypt messages. • [Sign] Digitally signs messages. • [SignAndEncrypt] Digitally signs and encrypts messages.
	[Timeout Time]	Set a time-out period to connect to the server. Set a time-out period to search for available servers and connect to the specified server. The setting range is [1] (second) to [30] (seconds).
	[Retry]	Set the number of retries to connect to the server. The setting range is [0] (times) to [10] (times).
	[Delay Time]	Set the wait time for sending when the server is connected. The setting range is [0] (× 10 ms) to [10000] (× 10 ms).
	[Check] button	Displays the [Authentication of server certificate] dialog if the connection to the server succeeds. For the details of the [Authentication of server certificate] dialog, refer to the following. ☞ Page 91 [Authentication of server certificate] dialog
[User Token Type]	Select a user authentication method. • [Anonymous user] Performs an anonymous login. • [Use name/Password] Authenticates users with a user name and password. Select this item, and set [User Name] and [Password]	

■[Creation of client certificate] dialog

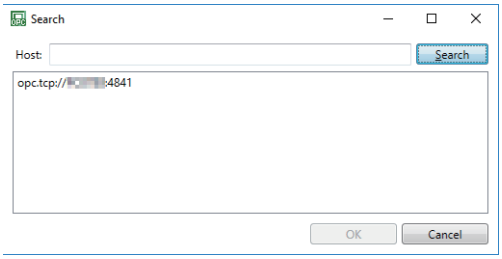


Item	Description
[Organization name]	Specify an organization name within 256 characters. This setting is mandatory.
[Unit of organization]	Specify an organization unit within 256 characters.
[Region name]	Specify a region name within 256 characters.
[Prefecture/State name]	Specify a prefecture or state name within 256 characters.
[Country]	Specify a country with its ISO 3166-1 alpha-2 code. Up to two one-byte alphanumeric characters can be entered. Example) Japan: JP
[Domain]	Specify a domain within 16 characters. This setting is mandatory.
[Application URI]	Displays the application URI. *1
[Expiration date]	Set the expiration date of the client certificate. • [1 hour] • [1 day] • [1 week] • [1 month] • [1 year] • [2 year] • [3 year] • [4 year] • [5 year] • [10 year] • [20 year]
[Strength of RSA key]	Set the strength of the RSA key *2 This setting is mandatory. • [1024bits] • [2048bits] • [3072bits] • [4096bits]
[Signature algorithm]	Set a signature algorithm. This setting is mandatory. • [Sha1] • [Sha256]

*1 The application URI identifies its OPC UA client.

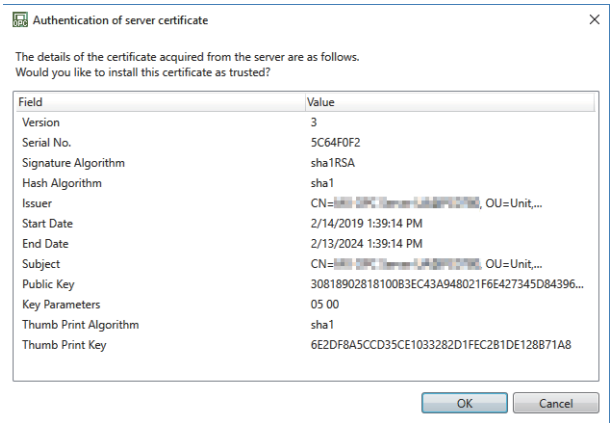
*2 The RSA key is a pair of a public key and a private key used in public-key cryptosystems.

■[Search] dialog



Item	Description
[Host]	Enter all or part of a host name and click the [Search] button to display the search results in the endpoint URL list.
Endpoint URL list	Lists the endpoint URLs of the OPC UA servers found. Select an endpoint URL and click the [OK] button to reflect it in [End point URL] in the [Access destination device setting] dialog.

■[Authentication of server certificate] dialog



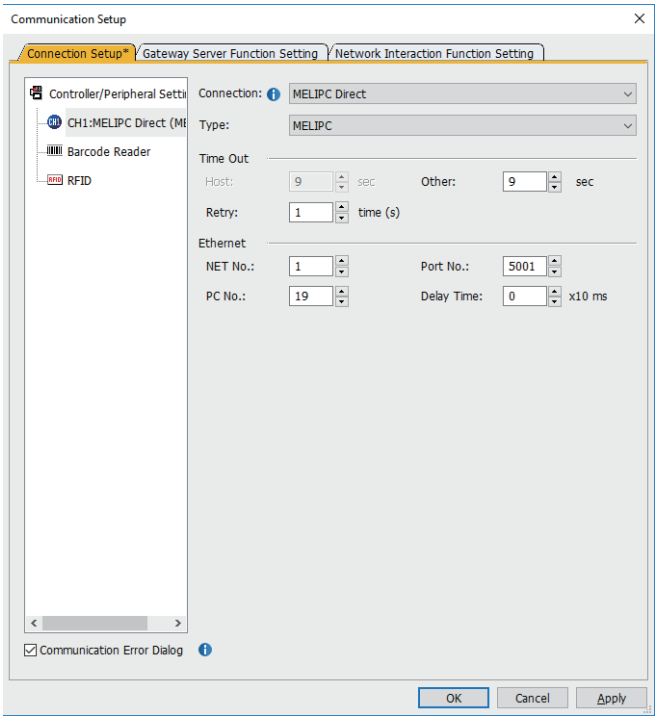
Item	Description
[Field]	Displays the fields in the server certificate.
[Value]	Displays the values obtained from the server certificate.

[MELIPC Direct]

To connect GT SoftGOT2000 on the Windows part of a MELIPC to the VxWorks part of the MELIPC via virtual Ethernet, set [Connection] to [MELIPC Direct].

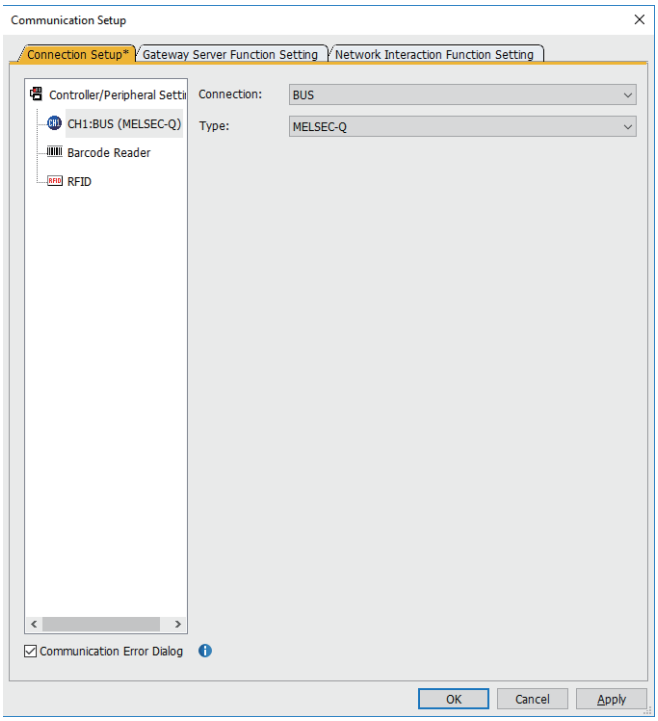
To connect GT SoftGOT2000 to a MELIPC via Ethernet or CC-Link IE Field, set [Connection] to [Ethernet], and set [Type] to [MITSUBISHI ELECTRIC].

☞ Page 83 [Ethernet]



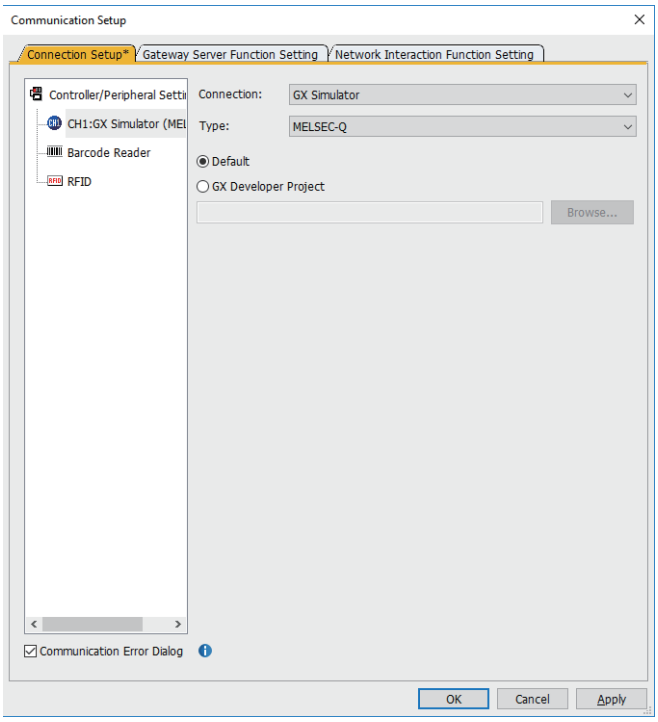
Item	Description	
[Connection]	Select [MELIPC Direct].	
[Type]	Select the PLC to be connected. ([MELIPC])	
[Time Out]	Set the timeout period and retry count.	
	[Other]	Set the timeout period for other station monitor. ([1] to [90] sec)
	[Retry]	[0] to [10] Time(s)
[Ethernet]	[NET No.]	[1] to [239]
	[Port No.]	[1024] to [65535]
	[PC No.]	[1] to [120]
	[Wait Time]	Set the transmission wait time to reduce the load on the network and target PLC. [0] to [10000] (x 10ms)
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[BUS]



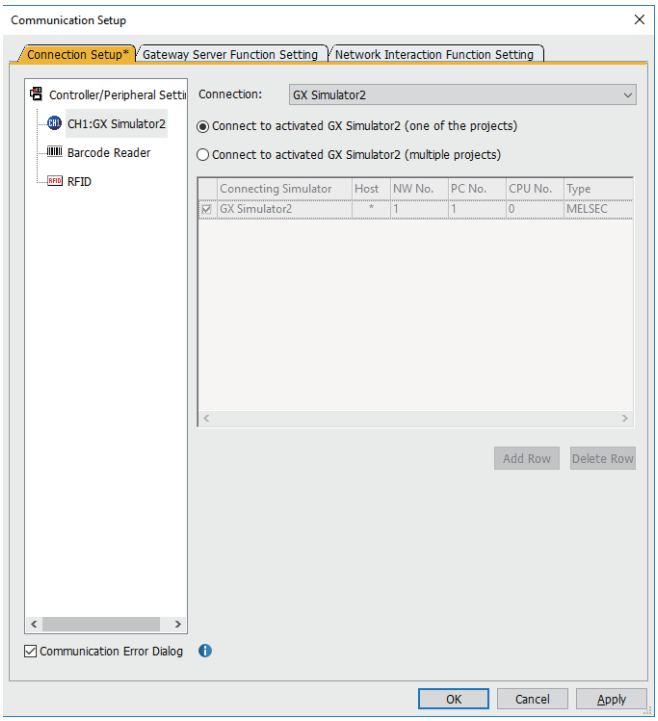
Item	Description
[Connection]	Select [BUS].
[Type]	Select the PLC to be connected.([MELSEC-Q])
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.

[GX Simulator]



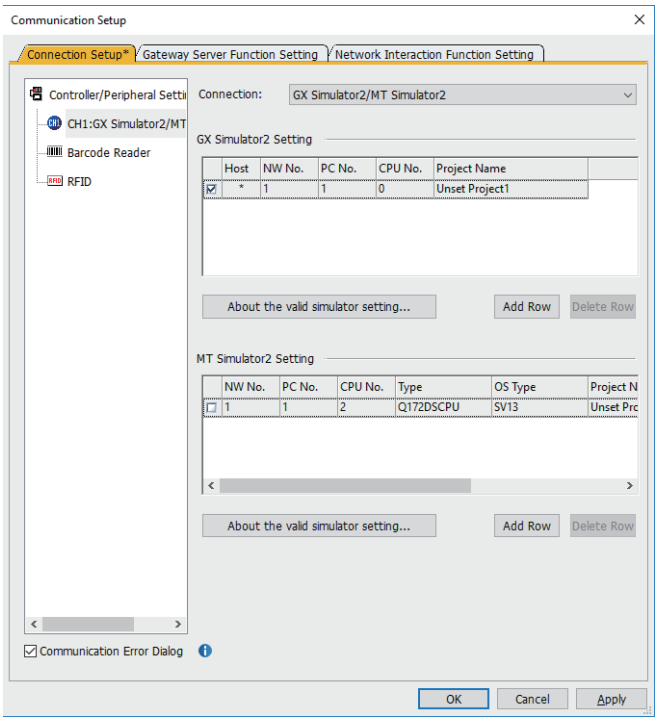
Item	Description	
[Connection]	Select [GX Simulator].	
[Type]	Select the PLC to be connected.([MELSEC-A], [MELSEC-QnA], [MELSEC-Q], [MELSEC-Q(A-Mode)], [MELSEC-FX])	
	[Default]	Reads sequence programs for the END instruction only.
	[GX Developer Project]	Specifies the sequence programs to be read.
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[GX Simulator2]



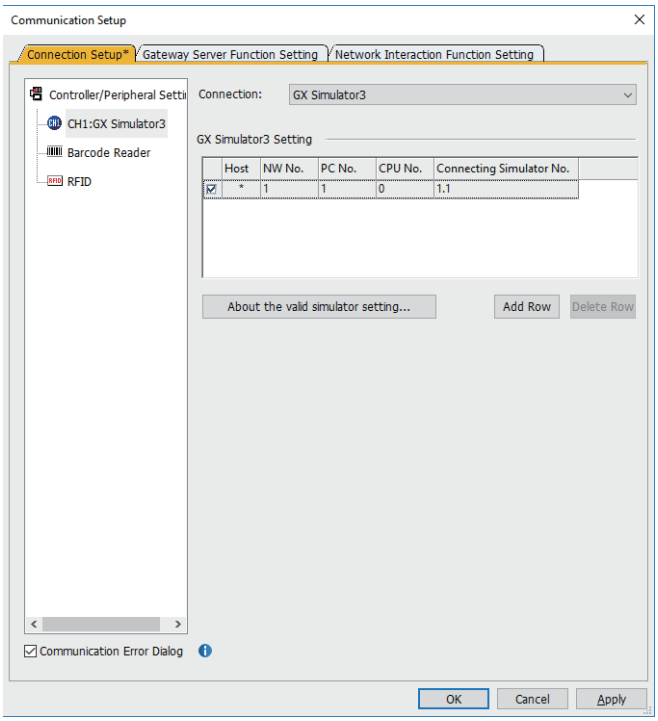
Item	Description	
[Connection]	Select [GX Simulator2].	
[Connect to activated GXSimulator2 (one of the projects)]	Select this item when connecting to a single module of GX Simulator2.	
	[Type]	Select the PLC to be connected.
[Connect GX Simulator2 (multiple projects)]	Select this item when connecting to multiple modules of GX Simulator2.	
	Select the simulator to be connected to enable the setting.	
	[Connection Simulator]	Select the simulators to be connected.
	[Host]	Select this item when setting to the host station.
	[NW No.]	Set the network No. ([0] to [239])
	[PC No.]	Set the station No. ([0] to [255])
	[CPU No.]	Set the CPU No. ([0] to [4])
	[Type]	Select the PLC to be connected.
	[Project Name]	Set the project used with the simulator to be connected.
	[Add Row]	Adds a new row. (a maximum of 7 rows)
	[Delete Row]	Deletes a selected row.
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[GX Simulator2/MT Simulator2]



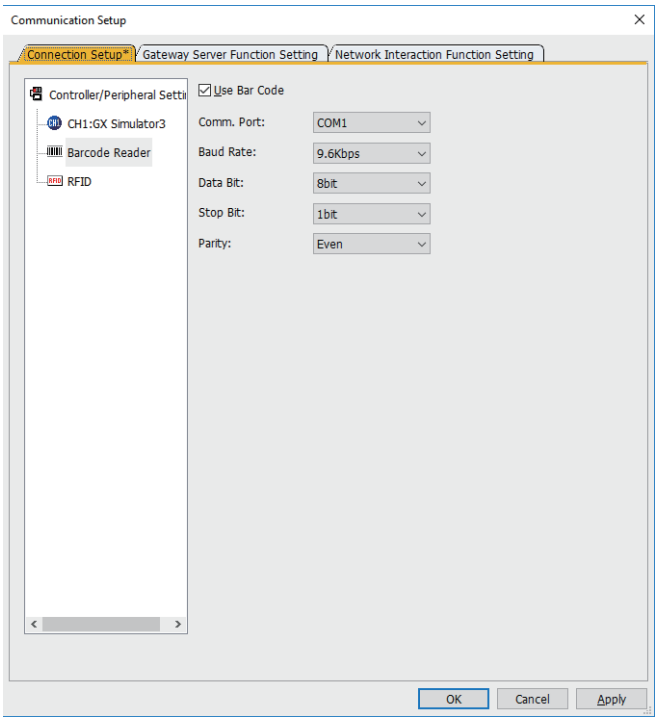
Item	Description	
[Connection]	Select GX Simulator2/MT Simulator2.	
[GX Simulator2 Setting]	Select the simulator to be connected to enable the setting.	
	[Host]	Select this item when setting to the host station.
	[NW No.]	Set the network No. ([0] to [239])
	[PC No.]	Set the station No. ([0] to [255])
	[CPU No.]	Set the CPU No. ([0] to [4])
	[Project Name]	Set the project used with the simulator to be connected.
	[Add Row]	Adds a new row. (a maximum of 4 rows)
	[Delete Row]	Deletes a selected row.
[MT Simulator2 Setting]	Select a connection method to enable the setting.	
	[Host]	Select this item when setting to the host station.
	[NW No.]	Set the network No. ([0] to [239])
	[PC No.]	Set the station No. ([0] to [255])
	[CPU No.]	Set the CPU No. ([2] to [4])
	[Type]	Select the PLC to be connected.
	[OS]	Select the OS used of PLC.
	[Project Name]	Set the project used with the simulator to be connected.
	[User name]	Set the user name used with the simulator to be connected.
	[Password]	Set the password used with the simulator to be connected.
	[Add Row]	Adds a new row. (a maximum of 3 rows)
	[Delete Row]	Deletes a selected row.
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[GX Simulator3]



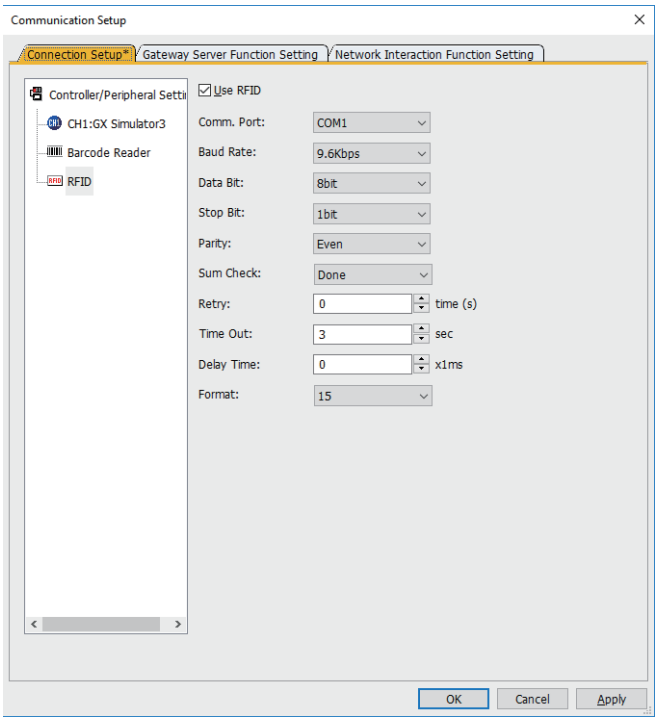
Item	Description	
[Connection]	Select GX Simulator3.	
[GX Simulator3 Setting]	Select the simulator to be connected to enable the setting.	
	[Host]	Select this item when setting to the host station.
	[NW No.]	Set the network No. ([0] to [239])
	[PC No.]	Set the station No. ([0] to [255])
	[CPU No.]	Set the CPU No. ([0] to [4])
	[Connecting Simulator No.]	Set the simulator No. displayed on the corresponding GX Simulator3. ([1.1] to [64.4])
	[Add Row]	Adds a new row. (a maximum of 32 rows)
	[Delete Row]	Deletes a selected row.

[Barcode Reader]



Item	Description
[Use Bar Code]	Select this item to use barcodes.
[Comm. Port]	Choose the communication port on the personal computer side. ([COM1] to [COM16]) When starting multiple applications including GT SoftGOT2000, set a communication port different from those set for the other applications. If the same communication port is specified, a communication timeout may occur, interrupting monitoring.
[Baud Rate]	Set this item when changing the baud rate in communication with controllers.([4.8kbps], [9.6kbps], [19.2kbps], [38.4kbps], [57.6kbps], [115.2kbps])
[Data Bit]	Set this item when changing the data length in communication with controllers. ([7bit], [8bit])
[Stop Bit]	Specify the stop bit length in communication. ([1bit], [2bit])
[Parity]	Specify whether to carry out parity checks in communication and specify the type of parity check if carrying out. ([None], [Even], [Odd])

[RFID]



Item	Description
[Use RFID]	Select this item to use RFID.
[Comm. Port]	Choose the communication port on the personal computer side. ([COM1] to [COM16]) When starting multiple applications including GT SoftGOT2000, set a communication port different from those set for the other applications. If the same communication port is specified, a communication timeout may occur, interrupting monitoring.
[Baud Rate]	Set this item when changing the baud rate in communication with controllers.([4.8kbps], [9.6kbps], [19.2kbps], [38.4kbps], [57.6kbps], [115.2kbps])
[Data Bit]	Set this item when changing the data length in communication with controllers. ([7bit], [8bit])
[Stop Bit]	Specify the stop bit length in communication. ([1bit], [2bit])
[Parity]	Specify whether to carry out parity checks in communication and specify the type of parity check if carrying out. ([None], [Even], [Odd])
[Sum Check]	Select whether to carry out sum checks in communication. ([Done], [None])
[Retry]	Set the number of retries to be performed when a communication error occurs. ([0] to [5] time(s))When receiving no response after retries, the communication times out.
[Time Out]	Set the time required for communication to time out. ([3] to [30] sec)
[Delay Time]	Set this item to adjust the timing with which a communication request is sent from the GOT. ([0] to [3000] ms)
[Format]	Select the communication format. ([10], [11], [12], [15]) Dedicated protocol Format10: Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.) Format11: Dedicated protocol (ICU-60S manufactured by MARS TECHNO SCIENCE Corp.) Format12: Dedicated protocol (ICU-215 (Mifare) manufactured by MARS TECHNO SCIENCECorp.) Nonprocedural protocol Format15

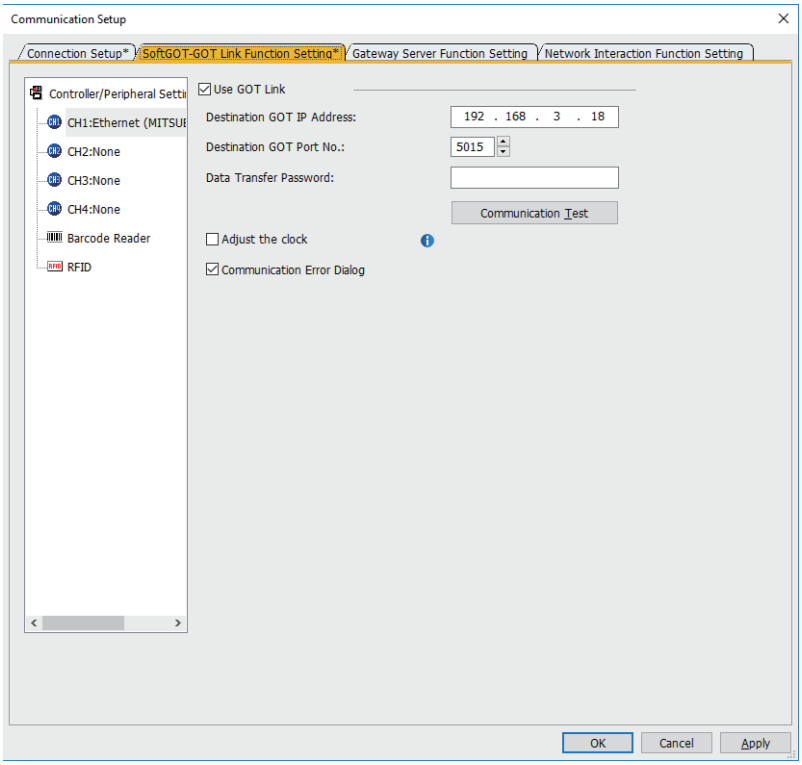
[Communication Setup] dialog ([SoftGOT-GOT Link Function Setting] tab)

This dialog is displayed only when the settings are configured in GT SoftGOT2000 (Multiple channels).

The SoftGOT-GOT link function and gateway server function cannot be used at the same time.

This item cannot be set when [Use Gateway Server Function] in the [Gateway Server Function Setting] tab is selected.

☞ Page 101 [Communication Setup] dialog ([Gateway Server Function Setting] tab)



Item	Description	
[Use GOT Link]	Select this item to use the SoftGOT-GOT link function. For the SoftGOT-GOT link function, refer to the following. ☞ Page 612 SoftGOT-GOT Link Function	
	[Destination GOT IP Address]	Set the IP address of the GOT. Click the [Communication Test] button to execute the communication test with the GOT.
	[Destination GOT Port No.]	Set the port No. of the GOT.
	[Data Transfer Password]	Set a password to authenticate reading project data from the GOT as necessary. Up to 32 characters can be set. Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available. !"#$%&()*+,-./:;<=>?@[\]^_`{|}~ By setting a password, an authentication is automatically executed when project data is read from the GOT.
	[Communication Test] button	Executes a communication test.
[Adjust the clock]	Synchronizes the time of the personal computer where GT SoftGOT2000 runs with the time of the controller while the SoftGOT-GOT link function is used. For precautions when using the time setting function, refer to the following. ☞ Page 41 Precautions for using GT SoftGOT2000	
[Communication Error Dialog]	Select this item to display the error dialog on GT SoftGOT2000 when a communication error occurs.	

[Communication Setup] dialog ([Gateway Server Function Setting] tab)

Set this item when using the gateway server function with GT SoftGOT2000 as the server.

For the details, refer to the description of the server/client function in the following manual.

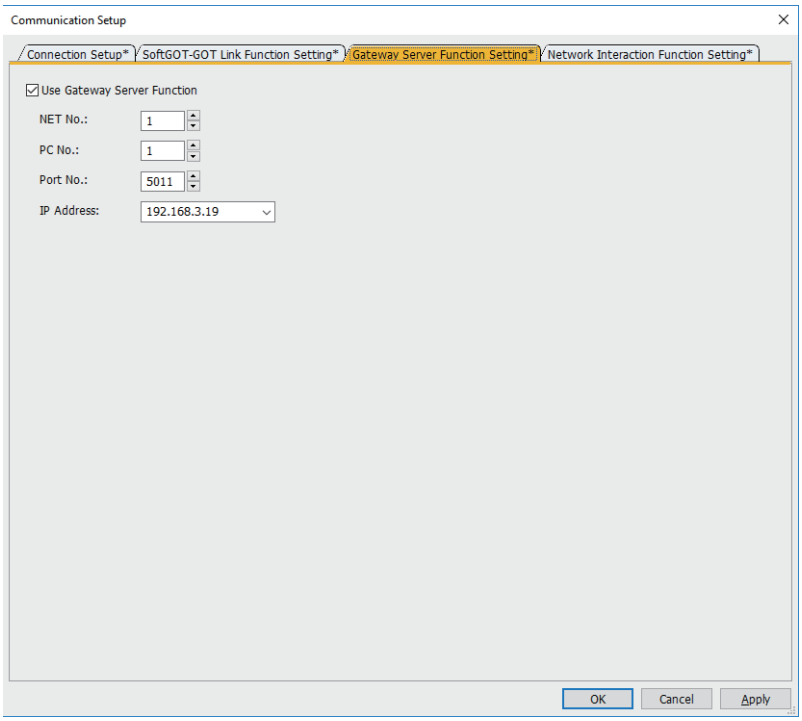
📖GT Designer3 (GOT2000) Screen Design Manual

The SoftGOT-GOT link function and gateway server function cannot be used at the same time.

This item cannot be set when [Use Gateway Server Function] in the [Connection Setup] tab or [SoftGOT-GOT Link Function Setting] tab is selected.

☞ Page 76 [Communication Setup] dialog ([Connection Setup] tab)

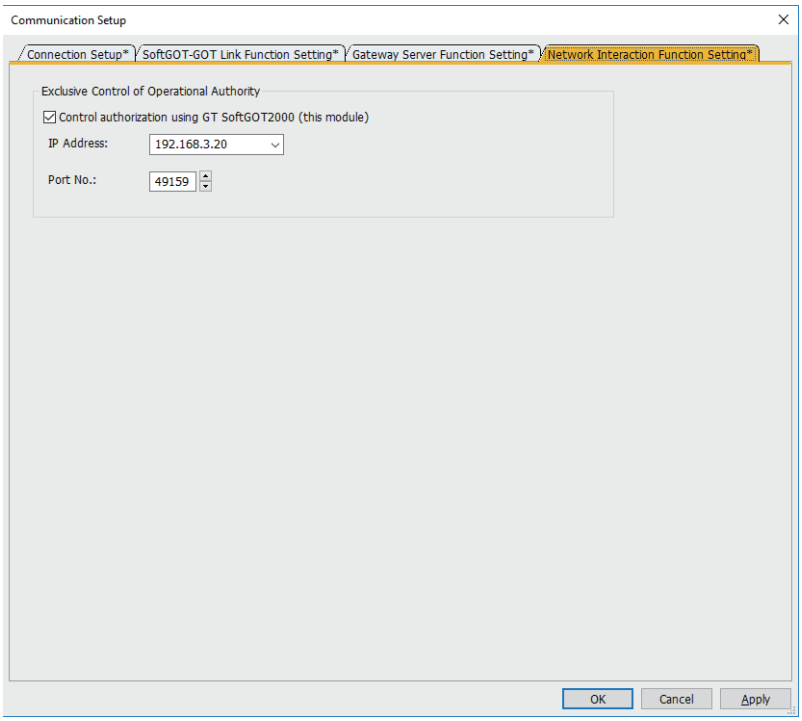
☞ Page 100 [Communication Setup] dialog ([SoftGOT-GOT Link Function Setting] tab)



Item	Description	
[Use Gateway Server Function]	Select this item to enable the gateway server function.	
	[NET No.]	Set the network number of the GT SoftGOT2000. ([1] to [239])
	[PC No.]	Set the PLC station number of the GT SoftGOT2000. ([1] to [64])
	[Port No.]	Set the Ethernet port number of the device with GT SoftGOT2000 installed. ([1024] to [65534])
	[IP Address]	Set the IP address of the device with GT SoftGOT2000 installed. ([0.0.0.0] to [255.255.255.255])

[Communication Setup] dialog ([GOT network interaction function settings] tab)

Configure the settings to specify GT SoftGOT2000 as the master GOT when using the GOT network interaction function.



Item	Description	
[Control authorization using GT SoftGOT2000 (this module)]	Select this item to specify this module as the master GOT.	
	[IP Address]	Set the IP address of the device with GT SoftGOT2000 installed. ([0.0.0.0] to [255.255.255.255])
	[Port No.]	Set the Ethernet port number of the device with GT SoftGOT2000 installed. ([1024] to [65534])

2.5 Opening the Project

Set a project data for monitoring and start monitoring.

The project data that can be set is the GT Designer3 project, a single file format project, and the GT Designer2 file.

- GT Designer3 project: Project data created with GT Designer3
- A single file format project (*.GTX) of GT Designer3: Compressed project data created with GT Designer3

Opening workspace files

1. Perform either of the following operations.

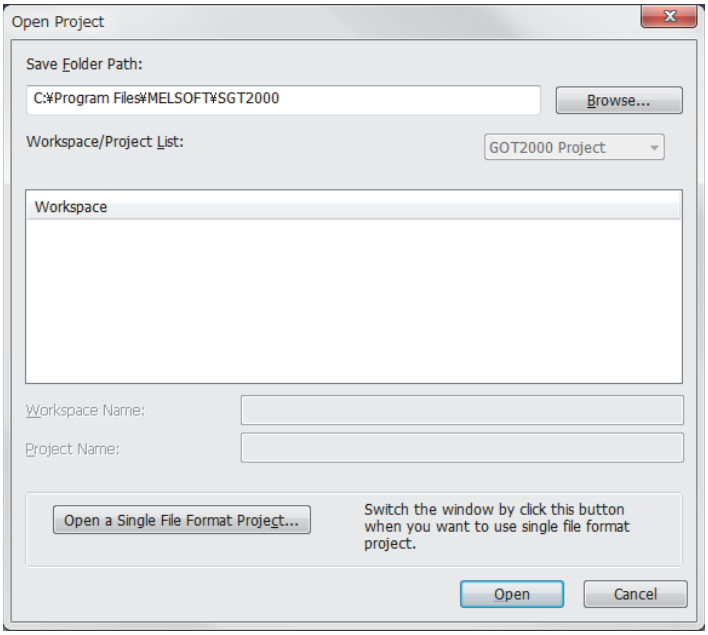
Click [Open a Project].

Select [Project] → [Open] → [Open a Project.] from the menu.

Right-click the mouse and select [Open] → [Open a Project.] from the menu.

2. The [Open Project] dialog is displayed.

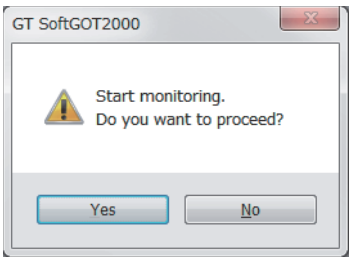
Set the following items, and click the [Open] button.



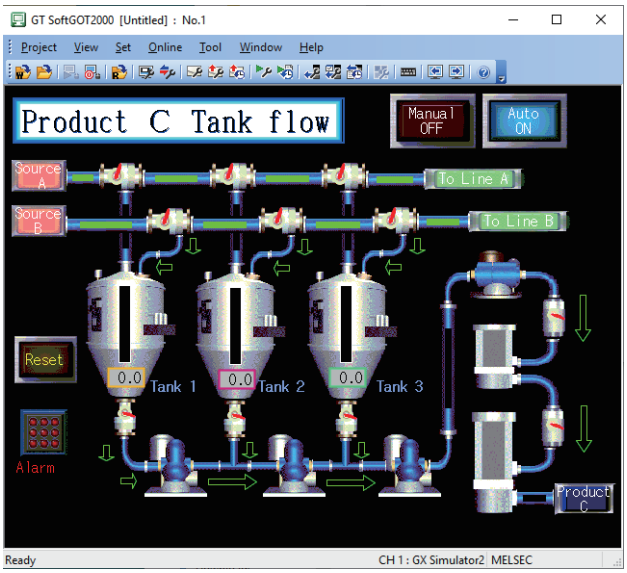
Item	Description
[Save Folder Path]	Enter the path of the location where the workspace is stored.
[Workspace/Project List]	Displays the workspace or project existing in the same path entered for [Folder path to save]. Double-click the workspace to be opened to display projects stored in the workspace. Select the project to be opened.
[Workspace Name]	Displays the workspace name where the project selected in [Workspace/Project List] is stored.
[Project Name]	Displays the project name selected in [Workspace/Project List].

3. The confirmation dialog is displayed.

(The dialog is not displayed if GT SoftGOT2000 is already in online mode.)



4. Select [Yes] to start monitoring with the project selected in the [Open Project] dialog.



If you select [No], no project is displayed.

Opening a single file format project

1. Perform either of the following operations.

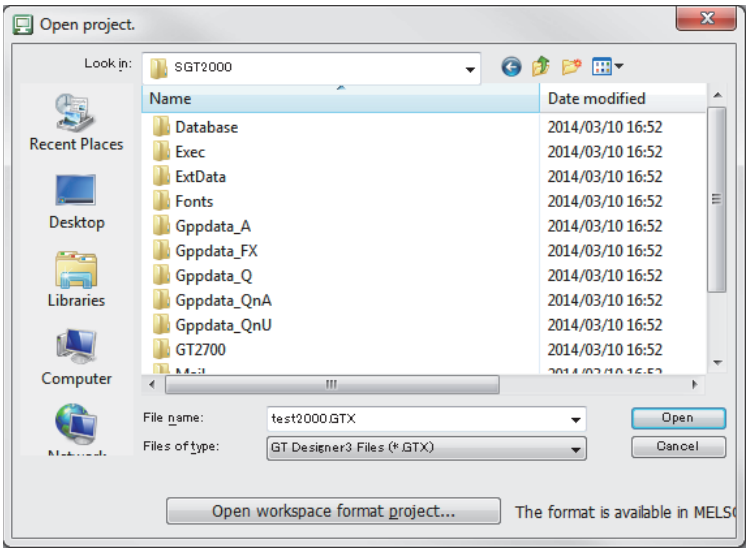
Click [Open a File].

Select [Project] → [Open] → [Open a File] from the menu.

Right-click the mouse and select [Open] → [Open a File] from the menu.

2. The [Open project.] dialog is displayed.

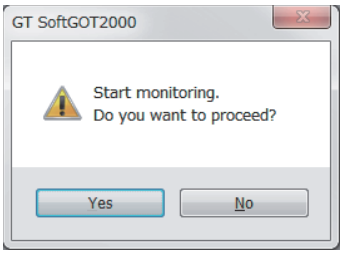
Set up the following items and click the [Open] button.



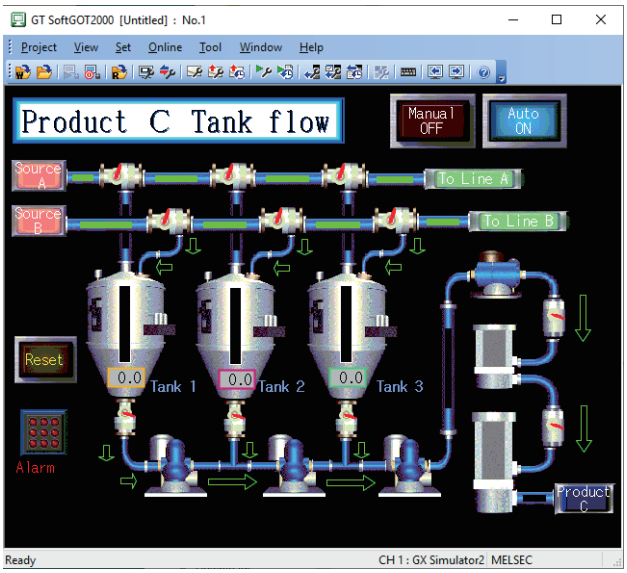
Item	Description
[Look in]	Enter the path of the location where the workspace is stored.
[File name]	Sets project data name for monitoring.
[Files of type]	Selects a file format of the project data. GOT2000 file (*.GTX): GTX format

3. The confirmation dialog is displayed.

(The dialog is not displayed if GT SoftGOT2000 is already in online mode.)



4. Select [Yes] to start monitoring with the project selected in the [Open Project] dialog.



If you select [No], no project is displayed.

2.6 Monitoring

Starting Monitoring

This section describes how to perform monitoring with the project data monitored previously.

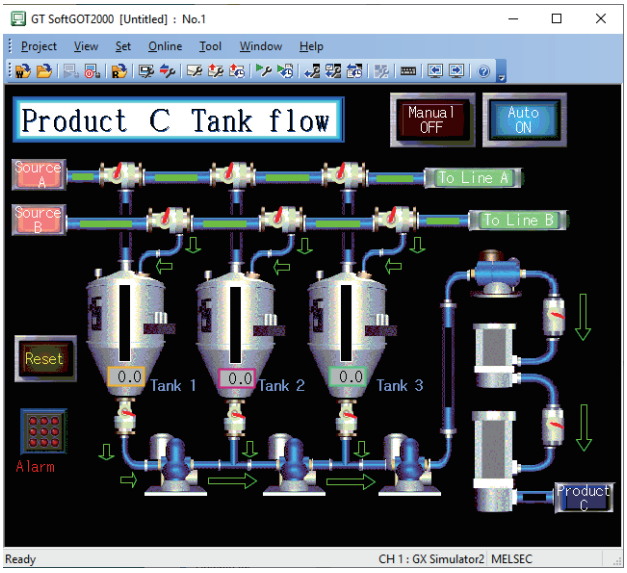
1. Perform either of the following operations.

Click [Monitor Start]

Select [Online] → [Monitor Start] from the menu.

Right-click the mouse and select [Monitor Start] from the menu.

2. Monitoring is started with the project data monitored previously.



Point

Before monitoring

The following shows the procedure used when not starting monitoring with the project data monitored previously.

• When performing a monitoring for the first time

Select [Project] → [Open] and set a project data to be monitored.

☞ Page 103 Opening the Project

When performing a monitoring for the first time, performing the operation shown in this section causes GT SoftGOT2000 to display the Utility.

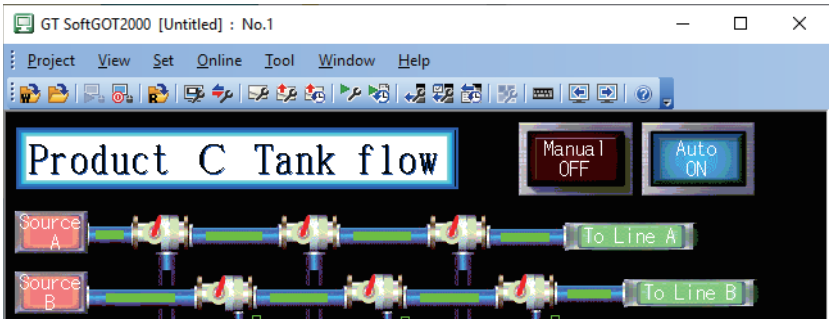
• When project data has been changed after previous monitoring

Select [Project] → [Open] and set the project data to be monitored before starting monitoring.

☞ Page 103 Opening the Project

Operation while monitoring

During monitoring, you can operate GT SoftGOT2000 with a mouse or via the touchscreen.



Monitor Stop

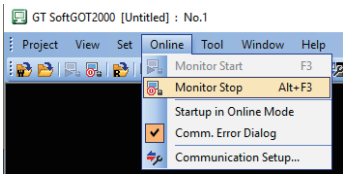
This section describes how to stop a monitoring.

1. Perform either of the following operations.

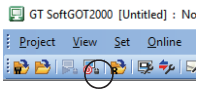
Click [Monitor Stop].

Select [Online] → [Monitor Stop] from the menu.

Right-click the mouse and select [Monitor Stop] from the menu.



[Tool bar]



Select either method.

2. The monitoring stops.

2.7 Help

With Help, You can view GT SoftGOT2000 Help (e-Manual) and PDF manual, and check the software version.

Point

• Before viewing Help (e-Manual)

To view an e-Manual, install e-Manual Viewer.

• Before viewing the PDF manual

To view the PDF manual, GT Manual3 and Adobe Reader must be installed.

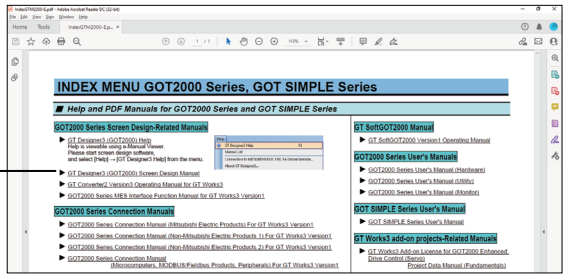
Operating method

1. Click an item within [Help].

Item	Description
[GT SoftGOT2000 Help]	Displays Help (e-Manual) of GT SoftGOT2000.
[Manual List]	Displays the index of PDF manuals.
[Connection to the Mitsubishi Electric Factory Automation Global Website.]	Connects to the Mitsubishi Electric Factory Automation Global Website.
[About GT SoftGOT2000]	Used to check the GT SoftGOT2000 version.

How to view a PDF manual (When [Manual List] is selected)

1. Select [Help] → [Manual List] from the menu to display the following screen, and then click a manual to view.

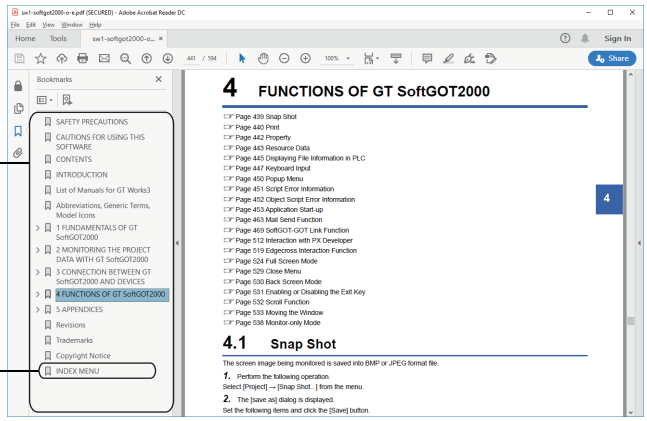


Click.

Since the above page was created for explanation purpose, it differs from the actual page.

2. The selected manual is displayed.

(For the operation of Adobe Reader, refer to the Adobe Reader Help.)



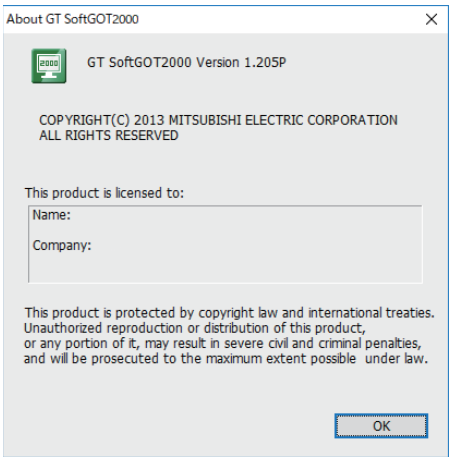
Switches the current display to the page of the selected section.

Returns to INDEX MENU.

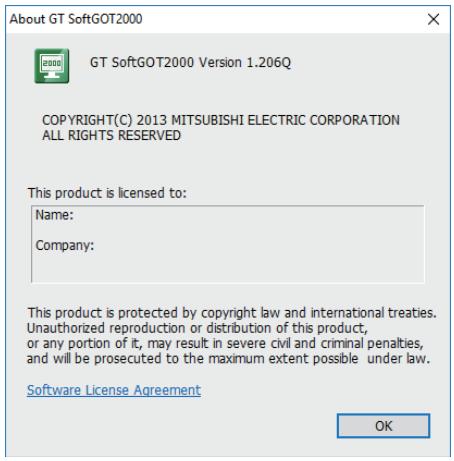
Since the above page was created for explanation purpose, it differs from the actual page.

Confirming GT SoftGOT2000 version (When [About GT SoftGOT2000...] is selected)

1. After operation in [Help] → [About GT SoftGOT2000], the screen about GT SoftGOT2000 is displayed.



When GT SoftGOT2000 is installed



When GT SoftGOT2000 is preinstalled

Item	Description
[GT SoftGOT2000]	Displays GT SoftGOT2000 version.
[Name]	Displays the name entered during GT SoftGOT2000 installation.
[Company]	Displays the company name entered during GT SoftGOT2000 installation.
[Software License Agreement]	Appears when GT SoftGOT2000 is used on an MI3000. Click this item to display the software license agreement screen.
[OK]	Closes the About GT SoftGOT2000 screen.

3 CONNECTION BETWEEN GT SoftGOT2000 AND DEVICES

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☞ Page 113 Supported Connection Types
☞ Page 114 Controller that can be Monitored and the Accessible Range
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☞ Page 365 Servo Amplifier Connection (via Motion Module)
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☞ Page 375 Connecting with GX Simulator3
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☞ Page 418 Microcomputer Connection (Serial)
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☞ Page 557 MODBUS/TCP Master Connection
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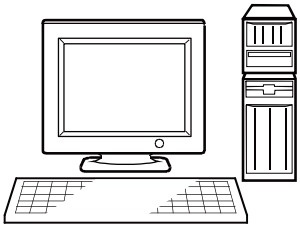
☞ Page 562 SLMP Connection
☞ Page 565 Barcode Reader Connection
☞ Page 567 RFID Connection
☞ Page 569 Sound Output Device Connection

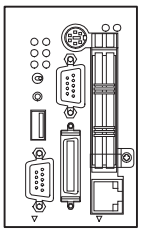
3.1 Required Devices

Type of personal computer to be used

The system configuration and connection conditions differ according to the type of the PC used with GT SoftGOT2000.



Personal computer that can run Windows



PC CPU

MELIPC

Personal computer that can run Windows

Connect a PC/AT compatible PC with the controller using a cable.

Use an interface board according to the communication type.

PC CPU

Mount a PC CPU to the base unit of Q series PLC CPU.

Bus connection is available between PC CPUs on the same base unit.

In other connection types, connect a PC CPU with the controller using a cable.

MELIPC

To connect GT SoftGOT2000 on a MELIPC to the VxWorks part of the MELIPC, no connection cable is required.

To connect GT SoftGOT2000 on a MELIPC to any other controller, use applicable cables according to the connection type used.

Connectable devices

For the connection types of GT SoftGOT2000 and the controllers that can be monitored by each connection type, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

Usable converters and cables

The converters and cables used for GX Work2 or GX Developer can also be used for GT SoftGOT2000.

3.2 Supported Connection Types

The supported connection types are different between GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multiple channels).

Refer to the following table, and select GT SoftGOT2000 (single channel) or GT SoftGOT2000 (Multiple channels) according to the number of channels and the connection type to be used.

○: Supported, ×: Not supported

Connection type	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)	Reference
Ethernet connection	○	○	☞ Page 227 Ethernet Connection
Direct CPU connection (RS-232, USB)	○	×	☞ Page 297 Direct CPU connection (RS-232, USB)
Serial communication connection	○	×	☞ Page 306 Serial Communication Connection
Bus connection	○	×	☞ Page 316 Bus Connection
MELSECNET/H or MELSECNET/10 connection	○	×	☞ Page 317 MELSECNET/H, MELSECNET/10 Connection
CC-Link IE Controller Network connection	○	×	☞ Page 320 CC-Link IE Controller Network Connection
CC-Link IE Field Network connection	○	×	☞ Page 322 CC-Link IE Field Network Connection
OPC UA client connection	○	○	☞ Page 324 OPC UA client connection
MELIPC connection	○	○ *1	☞ Page 329 MELIPC Connection
CNC connection	○	○ *1	☞ Page 337 CNC Connection
Robot controller connection	○	○	☞ Page 342 Robot Controller Connection
Inverter connection	×	○ *1	☞ Page 347 Inverter Connection (Direct Connection) ☞ Page 358 Inverter Connection (via PLC)
Servo amplifier connection (via Motion controller or Simple Motion module)	○	○ *1	☞ Page 360 Servo amplifier connection (via Motion controller or Simple Motion module)
Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)	×	○ *1	☞ Page 363 Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)
Servo amplifier connection (via Motion module)	×	○ *1	☞ Page 365 Servo Amplifier Connection (via Motion Module)
Servo Amplifier Connection (via CC-Link IE TSN Master/Local Module)	×	○ *1	☞ Page 367 Servo Amplifier Connection (via CC-Link IE TSN-equipped Module)
Servo amplifier connection (direct connection)	×	○	☞ Page 369 Servo Amplifier Connection (Direct Connection)
Connecting with GX Simulator3	○	×	☞ Page 375 Connecting with GX Simulator3
Connecting with GX Simulator2 or MT Simulator2	○	×	☞ Page 376 Connecting with GX Simulator2, MT Simulator2
Connecting with GX Simulator	○	×	☞ Page 377 Connecting with GX Simulator
OMRON PLC connection	○	○ *1	☞ Page 378 Non-Mitsubishi Electric PLC connection
KEYENCE PLC connection	○	○	☞ Page 385 KEYENCE PLC
TOSHIBA PLC connection	○	○	☞ Page 388 TOSHIBA PLC
HITACHI IES PLC	○	○	☞ Page 391 HITACHI IES PLC
YASKAWA PLC connection	○	○ *1	☞ Page 394 YASKAWA PLC
YASKAWA robot controller	○	○	☞ Page 402 YASKAWA robot controller
YOKOGAWA PLC connection	○	○	☞ Page 405 YOKOGAWA PLC
LS Industrial Systems PLC	○	○	☞ Page 408 LS Industrial Systems PLC
ALLEN-BRADLEY PLC	×	○	☞ Page 411 ALLEN-BRADLEY PLC
SIEMENCE PLC connection	○	○	☞ Page 414 SIEMENS PLC
Microcomputer Connection (Serial)	○	○ *2	☞ Page 418 Microcomputer Connection (Serial)
Microcomputer Connection (Ethernet)	○	○	☞ Page 485 Microcomputer Connection (Ethernet)
MODBUS/TCP master connection	○	○	☞ Page 557 MODBUS/TCP Master Connection
MODBUS/TCP slave connection	○	○	☞ Page 560 MODBUS/TCP Slave Connection
SLMP connection	○	○	☞ Page 562 SLMP Connection
Barcode reader connection	○	○	☞ Page 565 Barcode Reader Connection

Connection type	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)	Reference
RFID connection	○	○	☞ Page 567 RFID Connection
Sound output device connection	○	○	☞ Page 569 Sound Output Device Connection

*1 Only the Ethernet connection is supported.

*2 One of channels 1 to 4 is available only.

3.3 Controller that can be Monitored and the Accessible Range

Controllers that can be monitored by connection type

This section describes the controllers that can be monitored by GT SoftGOT2000 and the supported connection types.

The controllers listed in this section are explained with the abbreviations and generic terms.

The following shows an example of a list of controllers.

Some of the contents are different from the contents in the actual list of controllers.

Controller	Connection type													Clock function
	CPU direct		C24	Ether			MODBUS / TCP		MNET		CC IE Cont	CC IE Field		
	RS-232	USB		Via PLC	Via servo amplifier	Direct	M	S	H	10		Via PLC	Direct	
PLC CPU	×	○	○	×	○	○	×	×	×	×	○	×	○	○

1) 2) 3) 4) 5) 6) 7) 8)

No.	Abbreviations and generic terms		Description
1)	CPU direct	RS-232	Direct CPU connection (RS-232)
		USB	Direct CPU connection (USB)
2)	C24		Serial communication connection
3)	Ether	Via PLC	Ethernet connection (via PLC)
		Via servo amplifier	Ethernet connection (via servo amplifier)
		Direct	Direct Ethernet connection
4)	MODBUS/TCP	M	MODBUS/TCP master connection
		S	MODBUS/TCP slave connection
5)	MNET	H	MELSECNET/H connection
		10	MELSECNET/10 connection
6)	CC IE Cont		CC-Link IE Controller Network connection
7)	CC IE Field	Via PLC	CC-Link IE Field Network connection (via PLC)
		Direct	CC-Link IE Field Network connection
8)	Clock function		Time setting function, time notification function

MELSEC PLC

■RCPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS / TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
PLC CPU	R00CPU	×	○	○	○	○ *13	×	×	×	×	○	○	○ *10*11
	R01CPU												
	R02CPU												
	R04CPU	×	○	○	○	○ *13	×	×	×	×	○	○	○ *10*11
	R08CPU												
	R16CPU												
	R32CPU												
	R120CPU												
Process CPU	R08PCPU *6	×	○	○ *8	×	○ *9	×	×	×	×	○ *9	○ *7*9	○ *10*11
	R16PCPU *6												
	R32PCPU *6												
	R120PCPU *6												
Safety CPU	R08SFCPU *2	×	○	○	×	○	×	×	×	×	○	○	○ *10*11
	R16SFCPU *2												
	R32SFCPU *2												
	R120SFCPU *2												
SIL2 process CPU (redundant mode)	R08PSFCPU *12	×	○	×	×	○ *9	×	×	×	×	○ *9	○ *7*9	○ *10*11
	R16PSFCPU *12												
	R32PSFCPU *12												
	R120PSFCPU *12												
CPU with built-in CC-Link IE	R04ENCPU	×	○	○	○	○ *3	×	×	×	×	○ *4	○ *5	○ *10*11
	R08ENCPU												
	R16ENCPU												
	R32ENCPU												
	R120ENCPU												

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 Mount the safety function module (R6SFM) next to the CPU module on the base unit.
The CPU module and the safety function module (R6SFM) must have the same pair version.
If their pair versions differ, the CPU module does not operate.

*3 The Ethernet port built in the CPU (CPU P1 or P2), RJ71EN71, RJ71GN11-T2, RJ71GN11-EIP, or Motion module (RD78G□) is usable.
The connection with RJ71GN11-T2, RJ71GN11-EIP, or the Motion module (RD78G□) is only available to GT SoftGOT2000 (Multiple channels).

*4 Use RJ71GP21-SX.

*5 The Ethernet port built in the CPU (port P1 or port P2), RJ71EN71, RJ71GF11-T2, RD77GF4, RD77GF8, RD77GF16, or RD77GF32 is usable.

*6 The MELSEC redundant system is configurable by mounting the redundant function module (R6RFM).

*7 For a redundant system, use a CC-Link IE Field Network interface board that has a serial number starting with 18042 or later.

*8 Not applicable to the redundant system.

*9 For the redundant system, use a communication module having a firmware version as shown below.
RJ71EN71, RJ71GP21-SX, and RJ71GF11-T2: Firmware version 12 or later
RJ61BT11: Firmware version 04 or later
RJ71C24, RJ71C24-R2, and RJ71C24-R4: Firmware version 07 or later

*10 For the multiple CPU system, the time setting function or the time notification function is performed to CPU No. 1.

*11 For the CC-Link IE Controller Network connection or CC-Link IE Field Network connection, the time setting function and the time notification function are not available.
*12 Mount a SIL2 function module (R6PSFM) and a redundant function module (R6RFM) next to a SIL2 process CPU on the base unit.
*13 RJ71EN71, RJ71GN11-T2, RJ71GN11-EIP, or the Motion module (RD78G□) is usable.
The connection with RJ71GN11-T2, RJ71GN11-EIP, or the Motion module (RD78G□) is only available to GT SoftGOT2000 (Multiple channels).

■LHCPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS / TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
MELSEC iQ-L series	L04HCPU	×	○	×	○	○	×	×	×	×	×	×	○
	L08HCPU												
	L16HCPU												
	L32HCPU												

*1 Communication is established through the built-in Ethernet port.
Configure the Ethernet settings, including the IP address.

■LCPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS / TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
MELSEC-L series	L02CPU	○ *2	○	○	○	○	×	×	×	×	×	○ *3	○ *4
	L06CPU												
	L26CPU												
	L26CPU-BT												
	L02CPU-P												
	L06CPU-P												
	L26CPU-P												
	L26CPU-PBT												
	L02SCPU	○			×								
	L02SCPU-P												

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.
*2 The direct CPU connection (RS-232) requires an adapter L6ADP-R2.
*3 The CPU having a serial number starting with 13012 or later in the first 5 digits can be monitored.
Use version 1.50C or later of GX Works2.
*4 For the CC-Link IE Field Network connection, the time setting function and the time notification function are not available.

■QCPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

The bus connection can be used only when a PC CPU module is used.

For the connectable QCPU, refer to the following.

📖User's manual of the PC CPU used

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS / TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
Basic model CPU	Q00JCPU	○	×	○	×	○	×	×	○ *5	○ *5	○ *6*7	×	○ *16*17
	Q00CPU *2*3												
	Q01CPU *2*3												
High Performance model CPU	Q02CPU *3*4										○ *8*9		○ *16*17
	Q02HCPU *3*4		○										
	Q06HCPU *3*4												
	Q12HCPU *3*4												
	Q25HCPU *3*4												
Process CPU	Q02PHCPU	○	○	○	×	○	×	×	○ *5	○ *5	○ *9	×	○ *16*17
	Q06PHCPU												
	Q12PHCPU										○ *9*10		
	Q25PHCPU												
Redundant CPU (main base)	Q12PRHCPU	○	○	×	×	○	×	×	○ *5*11*12	○ *5*11	○ *6*10	×	○ *17
	Q25PRHCPU												
Redundant CPU (extension base)	Q12PRHCPU	×	×	○	×	○	×	×	×	×	×	×	○
	Q25PRHCPU												
Universal model	Q00UJCPU *2	○	○	○	×	○	×	×	○ *5	○ *5	○ *13	○	○ *16*17
	Q00UJCPU(-S8) *2												
	Q00UCPU *2												
	Q01UCPU *2												
	Q02UCPU *2										○ *13*14		
	Q03UDCPU *2												
	Q04UDHCPU *2										○ *13		
	Q06UDHCPU *2												
	Q10UDHCPU *2												
	Q13UDHCPU *2												
	Q20UDHCPU *2												
	Q26UDHCPU *2												
Universal model (Built-in Ethernet port CPU)	Q03UDECPU	○ *15	○	○	×	○	×	×	○ *5	○ *5	○ *13*14	○	○ *16*17
	Q04UDEHCPU										○ *13		
	Q06UDEHCPU												
	Q10UDEHCPU												
	Q13UDEHCPU												
	Q20UDEHCPU												
	Q26UDEHCPU												
	Q50UDEHCPU												
	Q100UDEHCPU												

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS / TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
High-speed Universal model (Built-in Ethernet port CPU)	Q03UDVCPU	○ *15	○	○	○	○	×	×	○ *5	○ *5	○ *13	○	○ *16*17
	Q04UDVCPU												
	Q06UDVCPU												
	Q13UDVCPU												
	Q26UDVCPU												

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.
*2 The serial communication function is not supported.
*3 To configure a multiple CPU system, use a CPU with function version B or later.
*4 To monitor a High Performance model CPU by the MELSECNET/10 connection, the CPU function version must be B or later.
*5 Use a MELSECNET/H network module with function version B or later.
*6 Use a CC-Link IE Controller Network module with function version D or later.
*7 Use a CPU with function version B or later.
*8 Use a CPU having a serial number stating with 09012 or later in the first 5 digits.
*9 If the number of stations on one network is 65 or more, use a CC-Link IE Controller Network module with a serial number starting with 09042 or later in the first 5 digits.
*10 Use a CPU having a serial number stating with 10042 or later in the first 5 digits.
*11 Use a MELSECNET/H interface board driver (SW0DNC-MNETH-B) with version K or later.
*12 The MELSECNET/H extended mode cannot be used in a QCPU redundant system.
*13 Use a CC-Link IE Controller Network module having a serial number starting with 09042 or later in the first 5 digits.
*14 Use a CPU having a serial number stating with 09042 or later in the first 5 digits.
*15 No interface for direct connection is provided.
Use the serial port of the QCPU in a multiple CPU system.
*16 For the multiple CPU system, the time setting function or the time notification function is performed to CPU No. 1.
*17 For the bus connection, MELSECNET/H connection, CC-Link IE Controller Network connection, or CC-Link IE Field Network connection, the time setting function and the time notification function are not available.

■C Controller module

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
MELSEC iQ-R series	R12CCPU-V	×	○ *3	○ *4	○	○ *5	×	×	×	×	○	○	○ *10*11
MELSEC-Q series	Q12DCCPU-V *2	○ *6	○	○ *7	×	○ *8	×	×	○	○	○ *9	○	○ *11
	Q24DHCCPU-V												
	Q24DHCCPU-LS												
	Q26DHCCPU-LS												
	Q24DHCCPU-VG												

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 Use a C Controller module having a serial number starting with 12042 or later in the first 5 digits.

*3 This module has no USB port to connect to a personal computer.
Monitor the module via an RCPU in the multiple CPU system.

*4 Use a serial port of the serial communication module controlled by another module in the multiple CPU system.

*5 R12CCPU-V is not compatible with RJ71EN71.
Use the Ethernet port built in the CPU.

*6 No interface for direct connection is provided.
Use the serial port of the QCPU in a multiple CPU system.

*7 Use the C24 serial port controlled by another module in the multiple CPU system.

*8 C Controller modules are not compatible with QJ71E71.
Use the Ethernet port built in the CPU.

*9 Use a CC-Link IE Controller Network module having a serial number starting with 09042 or later in the first 5 digits.

*10 For the multiple CPU system, the time setting function or the time notification function is performed to CPU No.1.

*11 For the MELSECNET/H connection, CC-Link IE Controller Network connection, or CC-Link IE Field Network connection, the time setting function and the time notification function are not available.

■MELSECWinCPU

Supported by GT SoftGOT2000 (Multiple channels) only.

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
MELSEC iQ-R series	R102WCPU-W	×	×	×	○	×	×	×	×	×	×	×

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■MELSECNET/H remote I/O station

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
MELSECNET/H remote I/O station	QJ72LP25-25	○	×	×	×	×	×	×	×	×	×	×
	QJ72LP25G											
	QJ72BR15											

■QSCPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
MELSEC-QS series	QS001CPU *1	×	○ *2	×	○ *3	×	×	○ *3	○ *3	○ *3*4	○ *3*5	×

*1 Writing data to a QS001CPU always causes an error.
*2 To communicate with the CPU, configure the following settings in the device setting dialog on GT Designer3.
Set [CPU No.] to 0.
Select [Host].
*3 A safety CPU cannot be set as a relay station for another network connection.
*4 Use a CC-Link IE Controller Network module with the function version D or later.
*5 Use a CPU having a serial number stating with 13042 or later in the first 5 digits.
Use GX Developer version 8.98C or later.

■QCPU(A mode)

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
MELSEC-Q series (A mode)	Q02CPU-A *1	○ *2	×	○	○	×	×	×	○	×	×	×
	Q02HCPU-A *1											
	Q06HCPU-A *1											

*1 Monitor the CPU as an A4UCPU.
*2 Other MELSOFT products (such as GX Developer) cannot be connected while GT SoftGOT2000 is connected.

■QnACPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
QnACPU type	Q2ACPU	○	×	○ *1	○ *1*2	×	×	×	○	×	×	×
	Q2ACPU-S1											
	Q3ACPU											
	Q4ACPU											
	Q4ARCPU											
QnASCPU type	Q2ASCPU											
	Q2ASCPU-S1											
	Q2ASHCPU											
	Q2ASHCPU-S1											

*1 GT SoftGOT2000 cannot monitor a QnACPU that uses an A series computer link module or Ethernet module.

*2 Use function version B or later of an AJ71QE71 and QnACPU.
If function version of an AJ71QE71 or QnACPU is earlier than B, this connection is not available.

■ACPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller			Connection type										Clock function
			CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
			RS-232	USB		Direct	M	S	H	10		Direct	
AnCPU type	AnUCPU	A2UCPU	○	×	○ *3	○	×	×	×	○	×	×	×
		A2UCPU-S1											
		A3UCPU											
		A4UCPU											
	AnACPU	A2ACPU											
		A2ACPUP21											
		A2ACPUR21											
		A2ACPU-S1											
		A2ACPUP21-S1											
		A2ACPUR21-S1											
		A3ACPU											
		A3ACPUP21											
		A3ACPUR21											
	AnNCPU	A1NCPU	○ *2										
		A1NCPUP21											
		A1NCPUR21											
		A2NCPU											
		A2NCPUP21											
		A2NCPUR21											
		A2NCPU-S1											
		A2NCPUP21-S1											
		A2NCPUR21-S1											
		A3NCPU											
		A3NCPUP21											
		A3NCPUR21											

Controller			Connection type										Clock function
			CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
			RS-232	USB		Direct	M	S	H	10		Direct	
AnCPU type	AnUS(H)CPU	A2USCPU	○	×	○ *3*4	○	×	×	×	○	×	×	×
		A2USCPU-S1											
		A2USHCPU-S1											
	AnS(H)CPU	A1SCPU											
		A1SCPUC24-R2											
		A1SHCPU											
		A2SCPU	○ *2										
		A2SCPU-S1											
		A2SHCPU	○										
		A2SHCPU-S1											
	A1SJ(H)CPU	A1SJCPU											
		A1SJCPU-S3											
		A1SJHCPU											
A0J2HCPU		A0J2HCPU *1	○ *2							×			
		A0J2HCPUP21 *1											
		A0J2HCPUR21 *1											
		A0J2HCPU-DC24 *1											
A2CCPU		A2CCPU			×	×							
		A2CCPU-P21	○										
		A2CCPU-R21											
		A2CCPUC24			○ *3*4								
		A2CCPUC24-PRF											
		A2CJCPU			×								
		A2CJCPU-S3											
A1FXCPU		A1FXCPU											

*1 A0J2-C214-S1 (computer link module dedicated to A0J2HCPU) cannot be used.

*2 Data can be written to the CPUs having the software version as show below.
AnNCPU(S1) (with data link): Version L or later, AnNCPU(S1) (without data link): Version H or later
A2SCPU: Version H or later, A0J2HCPU: Version E or later
A0J2HCPU-DC24: Version B or later, A2CCPU: Version H or later

*3 A0J2-C214-S3, A2CCPU, and A2CJCPU are not connectable by the computer link connection.

*4 Use a computer link module having software version U or later for the computer link connection.

■MELSEC iQ-F

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether *1		MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
MELSEC iQ-F series	FX5U	○	×	×	○	○	×	×	×	×	×	×	○ *2
	FX5UC												
	FX5UJ		○										
	FX5S												

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

*2 The time setting function or the time notification function is performed to CPU No. 1.

■FXCPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
MELSEC-FX series	FX0 series	○	×	×	×	×	×	×	×	×	×	×
	FX0S series											
	FX0N series											
	FX1 series											
	FX1S series											
	FX1N series											
	FX1NC series											
	FX2 series											
	FX2C series											
	FX2N series											
	FX2NC series											
	FX3U series				○							
	FX3UC series											
	FX3G series		○									
	FX3GC series											
	FX3GE											
	FX3S series											

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■CC-Link IE Field Network head module

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
CC-Link IE Field Network head module	RJ72GF15-T2	×	○	○	○	×	×	×	×	×	○	×
	LJ72GF15-T2				×							

■CC-Link IE Field Network Ethernet adapter module

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
CC-Link IE Field Network Ethernet adapter module *2	NZ2GF-ETB	×	×	×	○	×	×	×	×	×	×	×

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

*2 The host station cannot be monitored.

■Motion CPU

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller			Connection type										Clock function
			CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
			RS-232	USB		Direct	M	S	H	10		Direct	
MELSEC iQ-R series		R16MTCPU	×	○	○	○	×	×	×	×	○	○	○ *11
		R32MTCPU											
		R64MTCPU											
MELSEC-Q series		Q170MCPU *2*3*4	○	○	○	○	×	×	○	○	○	○	○ *11
		Q170MSCPU *2*3											
		Q170MSCPU-S1 *2*3											
		Q172DSCPU	○ *5										
		Q173DSCPU											
MELSEC-A series *6	Large type	A273UHCPU *7	○ *10	×	○	○	×	×	×	○	×	×	×
		A273UHCPU-S3 *7											
	Compact type	A171SHCPU *8*9											
		A171SHCPUN *8											
		A172SHCPU *8*9											
		A172SHCPUN *8											
		A173UHCPU *7											
		A173UHCPU-S1 *7											

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 Only the PLC CPU area (CPU No.1) can be monitored.
The PERIPHERAL I/F cannot be used.

*3 Monitor the CPU as a Q03UDCPU.

*4 The following requirements must be satisfied.
Software: MT Works2 Version 1.23Z
CPU model name: Q170M SV43

*5 No interface for direct connection is provided.
Use the serial port of the QCPU in a multiple CPU system.

*6 If a motion controller (A series) is used as a remote I/O station, the controller cannot be connected by any connection type.

*7 Monitor the CPU as an A3UCPU.

*8 Monitor the CPU as an A2SHCPU.

*9 Use a computer link module having software version U or later for the computer link connection.

*10 Other MELSOFT products (such as GX Developer) cannot be connected while GT SoftGOT2000 is connected.

*11 For the multiple CPU system, the time setting function or the time notification function is performed to CPU No. 1.

OPC UA server

For the connectable OPC UA servers and system equipment, refer to the following Technical News.

📖List of Valid Devices Applicable for GOT2000 Series OPC UA Server Connection (GOT-A-0137)

For Technical News, contact your local distributor.

MELIPC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether		MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via servo amplifier	Direct	M	S	H	10		Direct	
MELIPC	MI5122-VW	×	×	×	○	○	×	×	×	×	×	○	○

CNC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
CNC C80	R16NCCPU-S1	×	○ *2	×	○ *3	×	×	×	×	×	×	○ *10
CNC C70	Q173NCCPU *4	○ *5	○ *6	○	○			○	○	○ *7	○	○ *10
MELDAS C6/C64	FCA C6 *8*9	○	×	×	○			×	×	×	×	×
	FCA C64 *8*9											

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 No interface for direct connection is provided.
Use the USB port of the RCPU in a multiple CPU system.

*3 Use an Ethernet connector or RJ71EN71.

*4 CNC C70 cannot be used as a relay station for another network connection.

*5 No interface for direct connection is provided.
Use the serial port of the QCPU in a multiple CPU system.

*6 No interface for direct connection is provided.
Use the USB port of the QCPU in a multiple CPU system.

*7 Use a CPU having a serial number stating with 09042 or later in the first 5 digits.

*8 Use an NC system with the software version D0 or later.

*9 Monitor the controller as a Q4ACPU.

*10 For the multiple CPU system, the time setting function or the time notification function is performed to CPU No. 1.

Robot controller

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
Robot controller	CR800-R(R16RTCPU)	×	○ *8	×	○	×	×	×	×	×	×	○ *10
	CR800-D	×	×	×		×	×	×	×	×	×	○ *11
	CRnQ-700	○ *2	○ *9	○	○ *3*4*12	×	×	○	○	○ *5	○ *6	○ *10
	CR750-Q											
	CR751-Q											
	CR800-Q (Q172DSRCPU)											
	CRnD-700 *7	×	×	×	○	×	×	×	×	×	×	○ *11
	CR750-D *7											
	CR751-D *7											

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 No interface for direct connection is provided.
Use the serial port of the QCPU in a multiple CPU system.

*3 The Ethernet connection is available only by using an Ethernet module (QJ71E71) or the Ethernet port built in the QnUDECPU.

*4 The Display I/F cannot be used.

*5 Use a CPU having a serial number stating with 09042 or later in the first 5 digits.

*6 This connection type can be used only in a multiple CPU configuration.

*7 Monitor the controller as a Q03UDCPU.

*8 No interface for direct connection is provided.
Use the USB port of the RCPU in a multiple CPU system.

*9 No interface for direct connection is provided.
Use the USB port of the QCPU in a multiple CPU system.

*10 For the multiple CPU system, the time setting function or the time notification function is performed to CPU No. 1.

*11 The time setting function or the time notification function is performed to CPU No. 1.

*12 For CR800-Q (Q172DSRCPU), the Ethernet connection is available via one of the following.
Ethernet port built in the robot controller (PERIPHERAL I/F)
Ethernet module (QJ71E71)
Ethernet port built in the QnUD(E/V)CPU

Inverter

Supported by GT SoftGOT2000 (Multiple channels) only.

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type											Clock function
		CPU direct		C24	Ether		MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Via PLC	Direct	M	S	H	10		Direct	
FR-E700 series	FR-E7□0-NE	×	×	×	○	○	×	×	×	×	×	×	×
FR-A800 series	FR-A8□0	×	×	×	○	×	×	×	×	×	×	×	×
	FR-A8□2												
	FR-A8□6												
	FR-A8□0-E	×	×	×	○	○	×	×	×	×	×	×	×
	FR-A8□2-E												
	FR-A8□6-E												
	FR-A8□0-GF	×	×	×	○	×	×	×	×	×	×	×	×
	FR-A8□2-GF												
	FR-A8□0-GN	×	×	×	○	○	×	×	×	×	×	×	×
	FR-A8□2-GN												
FR-A800 Plus series	FR-A8□0-CRN	×	×	×	○	×	×	×	×	×	×	×	×
	FR-A8□2-CRN												
	FR-A8□0-R2R												
	FR-A8□2-R2R												
	FR-A8□0-LC												
	FR-A8□0-E-CRN	×	×	×	○	○	×	×	×	×	×	×	×
	FR-A8□2-E-CRN												
	FR-A8□0-E-R2R												
	FR-A8□2-E-R2R												
	FR-A8□0-E-AWH												
	FR-A8□0-E-LC												
FR-F800 series	FR-F8□0	×	×	×	○	×	×	×	×	×	×	×	×
	FR-F8□2												
	FR-F8□6												
	FR-F8□0-E	×	×	×	○	○	×	×	×	×	×	×	×
	FR-F8□2-E												
FR-E800 series	FR-E8□0	×	×	×	○	×	×	×	×	×	×	×	×
	FR-E8□0-E	×	×	×	○	○	×	×	×	×	×	×	×

Servo amplifier

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type												Clock function
		CPU direct		C24	Ether		MODBUS / TCP		MNET		CC IE Cont	CC IE Field		
		RS-232	USB		Via PLC	Direct	M	S	H	10		Via PLC	Direct	
MELSERVO-J4 series	MR-J4-□B[*1]	×	○ [*2]	○ [*2]	○	×	×	×	×	×	○ [*2]	○ [*2]	×	×
	MR-J4-□B-RJ[*1]													
	MR-J4W2-□B[*1]													
	MR-J4W3-□B[*1]													
	MR-J4-GF(-RJ)[*3*6]	×	×	×	○	×	×	×	×	×	×	○[*2]	×	×
MELSERVO-J5 series [*4]	MR-J5-□G[*5*7]	×	×	×	○	○	×	×	×	×	×	×	×	×
	MR-J5-□G-RJ[*5*7]													
	MR-J5W2-□G[*5*7]													
	MR-J5W3-□G[*5*7]													
	MR-J5D1-□G4[*5*7]													
	MR-J5D2-□G4[*5*7]													
	MR-J5D3-□G4[*5*7]													
	MR-J5-□B[*1]					×								
	MR-J5-□B-RJ[*1]													
	MR-J5W2-□B[*1]													
	MR-J5W3-□B[*1]													
MELSERVO-JE series [*1]	MR-JE-□B MR-JE-□BF	×	○ [*2]	○ [*2]	○	×	×	×	×	×	○ [*2]	○ [*2]	×	×
MELSERVO-JET series[*4*5*7]	MR-JET-□G	×	×	×	○	○	×	×	×	×	×	×	×	×

*1 Access a servo amplifier through a Motion controller in the multiple CPU system or a Simple Motion module.
*2 A servo amplifier cannot be monitored through the Simple Motion module FX5-40SSC-S or FX5-80SSC-S.
*3 Access a servo amplifier through a Simple Motion module or a CC-Link IE Field Network master/local module.
*4 Supported by GT SoftGOT2000 (Multiple channels) only.
*5 Access a servo amplifier through a Motion module.
*6 Supported by GT SoftGOT2000 (Multiple channels) only when accessed through a CC-Link IE Field Network master/local module.
*7 Access a servo amplifier through a CC-Link IE TSN-equipped module.

Other PLC

■OMRON PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
SYSMAC CPM	CPM2A	○	×	×	×	×	×	×	×	×	×	○
SYSMAC α	C200HX	○	×	×	×	×	×	×	×	×	×	○
	C200HG											
	C200HE											
SYSMAC CQM1	CQM1	○ *2	×	×	×	×	×	×	×	×	×	○
SYSMAC CQM1H	CQM1H	○	×	×	×	×	×	×	×	×	×	○
SYSMAC CS1	CS1H	○	×	×	○	×	×	×	×	×	×	○
	CS1G											
	CS1D				○ *3							
SYSMAC CJ1	CJ1H	○	×	×	○	×	×	×	×	×	×	○
	CJ1G											
	CJ1M											
SYSMAC CJ2	CJ2H(-EIP)	○	×	×	○	×	×	×	×	×	×	○
	CJ2M	○ *4										
SYSMAC CP1	CP1E	○ *5	×	×	×	×	×	×	×	×	×	○
SYSMAC CP2	CP2E-E	○	×	×	×	×	×	×	×	×	×	○
	CP2E-S											
	CP2E-N	×	×	×	○	×	×	×	×	×	×	○
SYSMAC CVM1/CV	CV500 *6	○ *7	×	×	×	×	×	×	×	×	×	○
	CV1000 *6											
	CV2000 *6											
	CVM1 *6											
NJ	NJ101*8	×	×	×	○	×	×	×	×	×	×	○
	NJ301*8											
	NJ501*8											
NX	NX1P2*8											
	NX701*8											
	NX102*8											

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 CQM1-CPU1 cannot be connected because it has no RS-232 interface.

*3 The Ethernet network redundancy is not supported.

*4 Only CJ2M-CPU1 □ can be connected by the direct CPU connection (RS-232).

*5 E-type CP1E cannot be connected.

*6 The CPU module upgraded to version V1 can be connected.
The following shows model names of the CPU modules with the upgraded version.
Model: CVM1-CPU01-V1
Model: CVM1-CPU11-V1
Model: CV500-CPU01-V1
Model: CV1000-CPU01-V1
Model: CV2000-CPU01-V1

*7 Only models supporting the direct CPU connection (RS-232) can be connected.

*8 Only available to GT SoftGOT2000 (Multiple channels).

■KEYENCE PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
KEYENCE PLC	KV-700	×	×	×	○	×	×	×	×	×	×	○
	KV-1000											
	KV-3000											
	KV-5000											
	KV-5500											
	KV-7300											
	KV-7500											
	KV-8000											

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

■TOSHIBA PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller			Connection type										Clock function
			CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
			RS-232	USB		Direct	M	S	H	10		Direct	
Unified Controller nv series	Controller type1	PU811	×	×	×	○	×	×	×	×	×	×	○
	Controller type1 light *2	PUM11											
		PUM12											
		PUM14											

*1 The built-in Ethernet port CPU can be connected through the Ethernet port.
To communicate with the CPU, configure the Ethernet setting, including the IP address.
The setting method is the same as when the CPU is connected through an Ethernet module.

*2 Use a CPU with firmware version V01.90 or later.
Use nV-Tool V4.14.5 or later.

■HITACHI IES PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
EHV series	EHV-CPU08	×	×	×	○	×	×	×	×	×	×	○
	EHV-CPU16											
	EHV-CPU32											
	EHV-CPU64											
	EHV-CPU128											
MICRO-EHV series	MVH-A40□□□											
	MVH-D40□□□											
	MVH-A64□□□											
	MVH-D64□□□											

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■YASKAWA PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
YASKAWA PLC	GL120	○	×	×	×	×	×	×	×	×	×	○
	GL130											
	GL60S	×		○								×
	GL60H											
	GL70H											
	CP-9200SH											
	CP-9300MS	○		×	×							
	MP-920			○	○							
	MP-930			×	×							
	MP-940											
	MP2200	×		○	○							
	MP2300											
	MP2300S											
	MP3200			×								
	MP3300											
	PROGIC-8	○			×							
	CP-9200(H)											
	CP-312	×										
	CP-317			○	○							

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■YASKAWA robot controller

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
YASKAWA robot controller	YRC1000	×	×	×	○*1	×	×	×	×	×	×	×*2
	YRC1000micro											

*1 The high speed Ethernet server function (option) of the YRC1000 or YRC1000micro is required.

*2 The YRC1000 and YRC1000micro have the clock function but cannot acquire clock information from the GOT.

■YOKOGAWA PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
FA-M3	F3SP05	×	×	×	○	×	×	×	×	×	×	○
	F3SP08											
	F3FP36											
	F3SP21											
	F3SP25											
	F3SP35											
	F3SP28											
	F3SP38											
	F3SP53											
	F3SP58											
	F3SP59											
	F3SP66											
	F3SP67											
FA-M3V	F3SP71-4N											
	F3SP71-4S											
	F3SP76-7S											
STARDOM	NFCP100				×	○						×
	NFJT100											

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■LS Industrial Systems PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
XGT series	XGK-CPUU	×	×	×	○	×	×	×	×	×	×	○
	XGK-CPUH											
	XGK-CPUA											
	XGK-CPUS											
	XGK-CPUE											
	XGK-CPUUN											
	XGK-CPUHN											
	XGK-CPUSN											

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■ALLEN-BRADLEY PLC

Only available to GT SoftGOT2000 (Multiple channels).

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether*1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
ControlLogix series	1756-L	×	×	×	○	×	×	×	×	×	×	×
	1756-L1M1											
	1756-L1M2											
	1756-L1M3											
	1756-L55M12											
	1756-L55M13											
	1756-L55M14											
	1756-L55M16											
	1756-L55M22											
	1756-L55M23											
	1756-L55M24											
	1756-L61											
	1756-L62											
	1756-L63											
	1756-L72S											
	1756-L71											
	1756-L72											
	1756-L73											
	1756-L74											
	1756-L75											
	1756-L81E											
	1756-L82E											
	1756-L83E											
	1756-L84E											
	1756-L85E											

Controller		Connection type										Clock function
		CPU direct		C24	Ether*1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
CompactLogix series	1769-L32E	×	×	×	○	×	×	×	×	×	×	×
	1769-L35E											
FlexLogix series	1794-L33											
	1794-L34											

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

■SIEMENS PLC

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller		Connection type										Clock function
		CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
		RS-232	USB		Direct	M	S	H	10		Direct	
SIEMENS PLC	SIMATIC S7-200	×	×	×	○ *2	×	×	×	×	×	×	×
	SIMATIC S7-200 SMART											○
	SIMATIC S7-300				○							
	SIMATIC S7-400											
	SIMATIC S7-1200				○ *2							×
	SIMATIC S7-1500											

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.
*2 Only SIEMENS OP (Ethernet connection) is supported.

Microcomputer

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller	Connection type										Clock function
	CPU direct		C24	Ether *1	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
	RS-232	USB		Direct	M	S	H	10		Direct	
Host	○	×	×	○	×	×	×	×	×	×	○

*1 The built-in Ethernet port CPU can be communicated through the Ethernet port.
In that case, the Ethernet setting, including the IP address setting, is required, like Ethernet module connection.

MODBUS/TCP equipment

For the explanation of the table, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

○: Applicable, ×: Inapplicable

Controller	Connection type										Clock function
	CPU direct		C24	Ether	MODBUS /TCP		MNET		CC IE Cont	CC IE Field	
	RS-232	USB		Direct	M	S	H	10		Direct	
MODBUS/TCP equipment *1	×	×	×	×	○	○	×	×	×	×	○

*1 For connectable MODBUS/TCP and system equipment, refer to the following Technical News.
📖 List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical News, contact your local distributor.

SLMP-compatible device

For the connectable SLMP-compatible devices and system devices, refer to the following Technical News.

📖List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0085)

For Technical News, contact your local distributor.

Barcode reader

For connectable barcode readers and system equipment, refer to the following Technical News.

📖List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

For Technical News, contact your local distributor.

RFID controller

For connectable RFID controllers and system equipment, refer to the following Technical bulletin.

📖List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

For Technical News, contact your local distributor.

Access range

This section explains networks accessible by GT SoftGOT2000 (Single channel).

Point

Networks accessible by GT SoftGOT2000 (Multiple channels)

GT SoftGOT2000 (Multiple channels) can access the networks that are accessible by the GOT2000 series (hardware).

For the networks accessible by the GOT2000 series (hardware), refer to the following.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

☞ Page 137 Ethernet connection

☞ Page 143 Direct CPU connection (RS-232, USB), serial communication connection

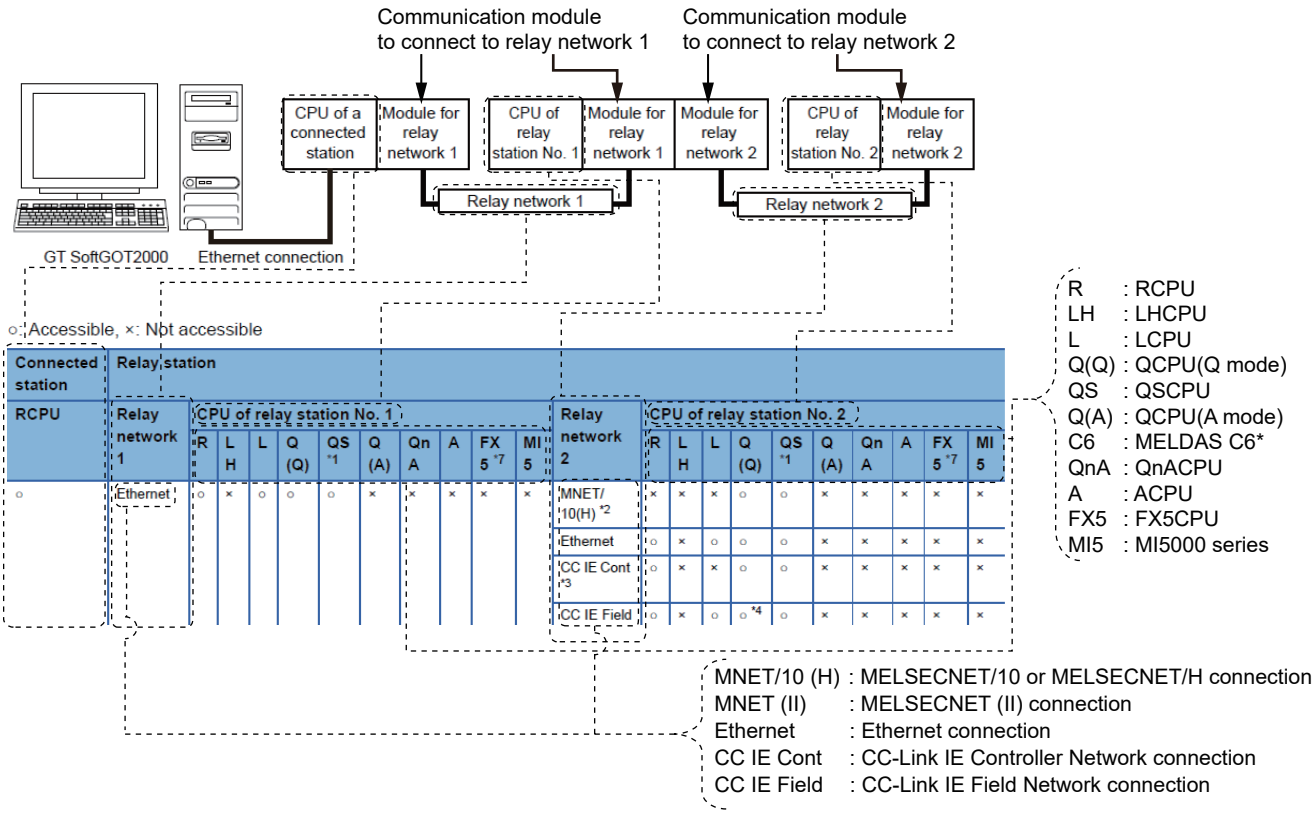
☞ Page 150 Bus connection

☞ Page 151 MELSECNET/H connection, MELSECNET/10 connection

☞ Page 154 CC-Link IE Controller Network connection

☞ Page 157 CC-Link IE Field Network connection

The following shows the correspondence of an illustration and a table in this section.



○: Accessible, ×: Not accessible

Connected station	Relay station																				
RCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX 5 *7	MI 5		R	LH	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX 5 *7	MI 5
○	Ethernet	○	×	○	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×

R : RCPU
LH : LHCPU
L : LCPU
Q(Q) : QCPU(Q mode)
QS : QSCPU
Q(A) : QCPU(A mode)
C6 : MELDAS C6*
QnA : QnACPU
A : ACPU
FX5 : FX5CPU
MI5 : MI5000 series

MNET/10 (H) : MELSECNET/10 or MELSECNET/H connection
MNET (II) : MELSECNET (II) connection
Ethernet : Ethernet connection
CC IE Cont : CC-Link IE Controller Network connection
CC IE Field : CC-Link IE Field Network connection

Ethernet connection

When GT SoftGOT2000 is connected to a station by Ethernet, the range accessible by GT SoftGOT2000 via the station is shown below.

Point

• When monitoring other networks (Routing parameter setting)

To monitor other networks, configure the routing parameter setting.

For the routing parameter setting, refer to the following.

☞ Page 227 Ethernet Connection

• When monitoring the devices of other stations on the same network

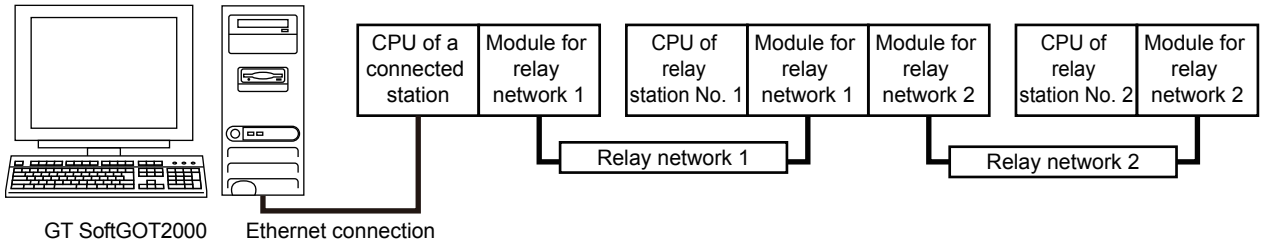
If the GOT monitors the devices, such as D and M, of other stations on the same network, the GOT takes a long time to display data.

In such a case, monitor the device assigned to the link register (B) or link register (W) of the network parameter.

■Connecting with RCPU

For the correspondence of the illustration and the table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
RCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX 5 *7	MI 5		R	LH	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX 5 *7	MI 5
○	Ethernet	○	×	○	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Cont	○	×	×	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Field	○	×	○	○	○	×	×	×	○ *5*6	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×

*1 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.
*2 This network is inaccessible through an RCPU or LCPU in relay station No. 1.
*3 This network is inaccessible through an LCPU in relay station No. 1.
*4 Only Universal model QCPU is applicable.
*5 Use an intelligent function module (FX5-CCLIEF) as an intelligent device station to connect to the CC-Link IE Field Network.
*6 This CPU is applicable only when it is connected through the built-in Ethernet port of the RCPU.
This CPU is not applicable when it is connected through the Ethernet port of the RJ71EN71.
*7 The routing parameter cannot be set for an FX5CPU, and therefore the networks on which the CPU is not located are inaccessible.

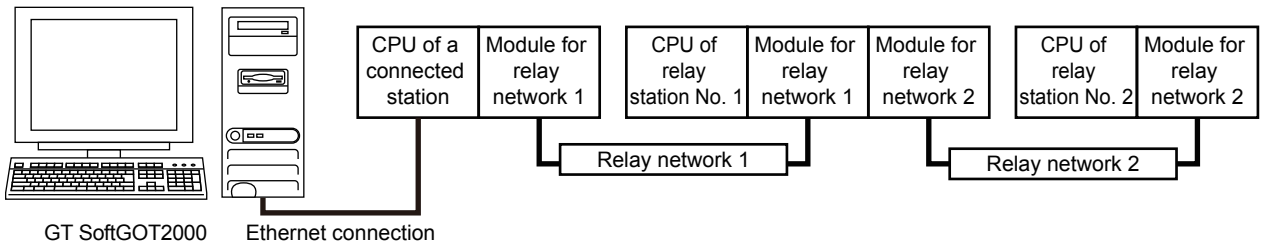
■Connecting with LHCPU

Only the connected station can be accessed.

■Connecting with QCPU or Q series Motion CPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
QCPU *1, QSCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q) *2	QS	Q (A)	Qn A	A	FX 5	MI 5		R	LH	L	Q (Q) *2	QS	Q (A)	Qn A	A	FX 5	MI 5
○	MNET/ 10(H)	×	×	×	○	○	○	○	○ *3	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○ *3	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○	○	×	×	×	×	×
○	Ethernet	×	×	○	○	○	×	○	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○ *3	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○	○	×	×	×	×	×
○	CC IE Cont	×	×	×	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○	○	×	×	×	×	×
○	CC IE Field	×	×	○	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○	○	×	×	×	×	×

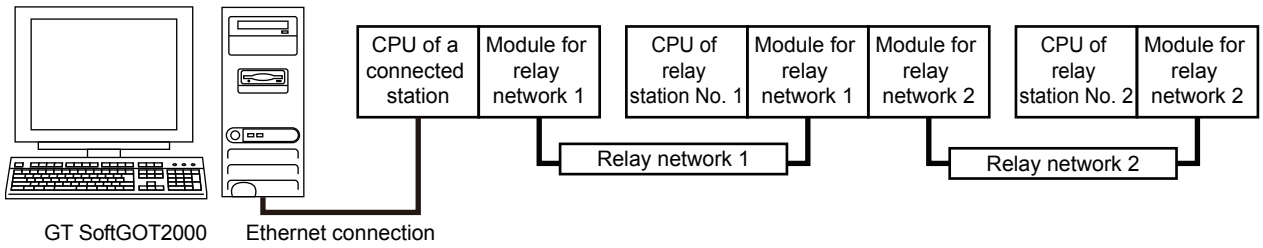
*1 Only the PLC CPU area (CPU No.1) is applicable for Q170MCPU and Q170MSCPU.
*2 CNC C70 on other networks cannot be monitored.
*3 AnNCPU cannot be monitored.

■Connecting with LCPU

This connection is available only when routing parameters can be set on the PLC side.

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



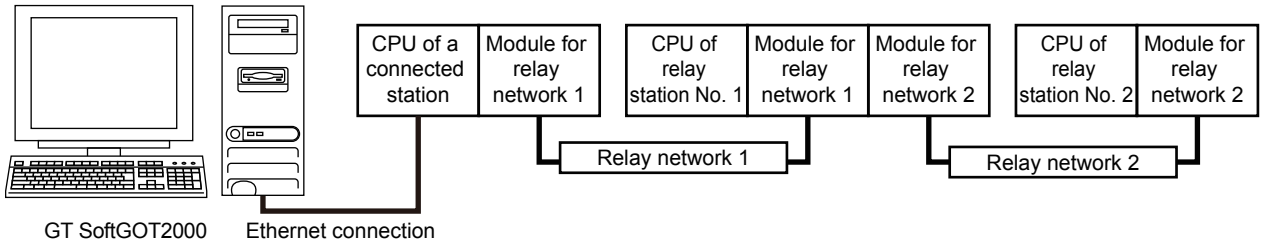
○: Accessible, ×: Not accessible

Connected station	Relay station																				
LCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS	Q (A)	Qn A	A	FX 5	MI 5		R	LH	L	Q (Q)	QS	Q (A)	Q nA	A	FX 5	MI 5
○	Ethernet	×	×	○	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○	○	×	×	×	×	×
○	CC IE Field	×	×	○	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○	○	×	×	×	×	×

■Connecting with QnACPU or MELDAS C6/C64

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

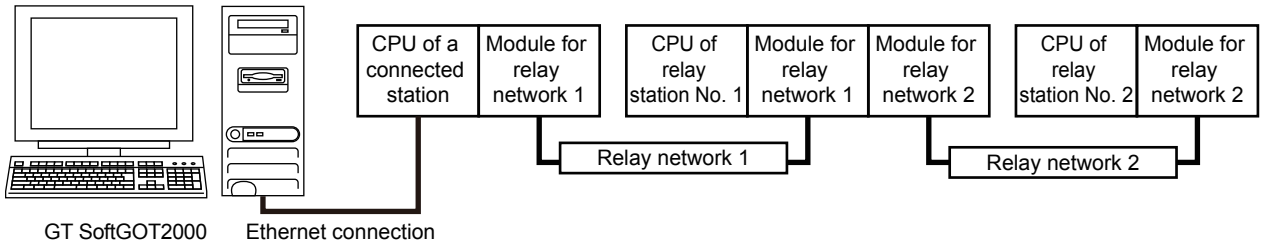
Connected station	Relay station																				
QnACPU, MELDAS C6*	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2									
		R	LH	L	Q (Q)	QS	Q (A)	QnA *1	A	FX5	MI5		R	LH	L	Q (Q)	QS	Q (A)	QnA *1	A	FX5	MI5
○	MNET/ 10(H)	×	×	×	×	×	×	○	×	×	×	MNET/ 10(H)	×	×	×	×	×	×	○	×	×	×
												Ethernet	×	×	×	×	×	×	○	×	×	×
○	Ethernet	×	×	×	×	×	×	○	×	×	×	MNET/ 10(H)	×	×	×	×	×	×	○	×	×	×
												Ethernet	×	×	×	×	×	×	○	×	×	×

*1 CNC C70 on other networks cannot be monitored.

■Connecting with FX5CPU

For the correspondence of the illustration and the table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
FX5CPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS	Q (A)	QnA	A	FX5	MI5		R	LH	L	Q (Q)	QS	Q (A)	QnA	A	FX5	MI5
○	CC IE Field	×	×	×	×	×	×	×	×	○ *1	×	CC IE Field	×	×	×	×	×	×	×	×	×	×

*1 Use an intelligent function module (FX5-CCLIEF) as an intelligent device station to connect to the CC-Link IE Field Network.

■Connecting with FX5-ENET or FX5-ENET/IP

Only the connected station can be accessed.

■Connecting with ACPU

Only the connected station can be accessed.

■Connecting with FXCPU

The stations set in [Connected Ethernet Controller Setting] of GT Designer3 can be accessed.

■Connecting with a MELIPC

Only the connected station can be accessed.

■Connecting with the robot controller (CR800-D, CRnD-700, CR750-D, CR751-D)

Only the connected station can be accessed.

■Connecting with the robot controller (CR800-Q)

For the connection through the Ethernet port built in CR800-Q (Q172DSRCPU), only the connected station can be accessed. To establish connection in other configurations, access the controller through a CPU in the multiple CPU system as shown below.

Controller			Relay CPU
Robot controller	CR800-Q	Q172DSRCPU	QnUDECPU, QnUDVCPU, QnUDEHCPU

■Connecting with a servo amplifier

A servo amplifier is accessible through one of the following connected stations.

Motion CPU in the multiple CPU system

Simple motion module

CC-Link IE Field Network Master/Local Module

For the details of the system configuration, refer to the following.

☞ Page 360 Servo amplifier connection (via Motion controller or Simple Motion module)

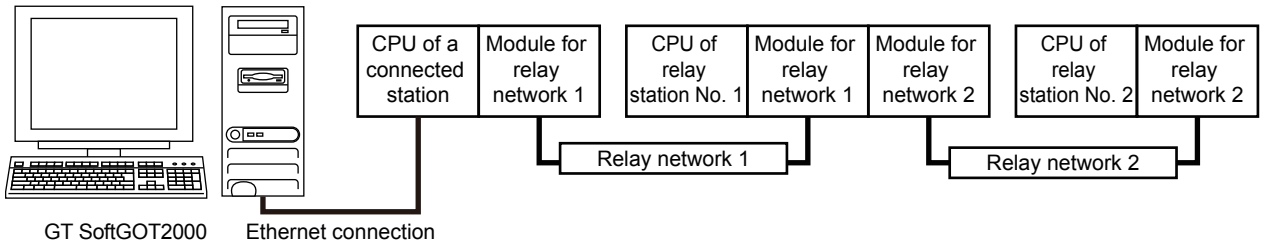
☞ Page 363 Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)

■Connecting with the CC-Link IE Field Network Ethernet adapter module

Only the other stations on the CC-Link IE Field network via a CC-Link IE Field Network Ethernet adapter module can be accessed.

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
NZ2GF-ETB	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS	Q (A)	QnA	A	FX5	MI5		R	LH	L	Q (Q)	QS	Q (A)	QnA	A	FX5	MI5
×	CC IE Field	×	×	○	○	○	×	×	×	×	×	CC IE Field	×	×	○	○	○	×	×	×	×	×

Point

• Host in the Ethernet connection

Although the MELSECNET/H, MELSECNET/10, and CC-Link connections use the GOT as the host station, the Ethernet connection uses the station (Ethernet module) specified in [Connected Ethernet Controller Setting] of GT Designer3 as the host station.

• Precautions for using the redundant system

For the following connection types, do not set an RCPU or QCPU redundant system as a relay station. Doing so causes GT SoftGOT2000 not to switch the monitoring target automatically when system switching occurs.

A timeout error occurs due to failed monitoring.

MELSECNET/10, MELSECNET/H connection

CC-Link IE Controller Network connection

CC-Link IE Field Network connection

• When system switching occurs due to a cable disconnection

For the MELSECNET/H, MELSECNET/10, or CC-Link connection, the GOT is handled as the host station. When system switching occurs due to a cable disconnection, GT SoftGOT2000 can monitor the control system through the tracking cable, but cannot monitor the controllers on a different network through the redundant system.

■Various settings

For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.

☞ Page 227 Ethernet Connection

Direct CPU connection (RS-232, USB), serial communication connection

When GT SoftGOT2000 is connected to a station by the direct CPU connection (RS-232, USB) or the serial communication connection, the range of relay stations accessible by GT SoftGOT2000 via the connected station is shown below.

Point

• When monitoring other networks (Routing parameter setting)

To monitor other networks, setting of routing parameters is required.

For the setting of the routing parameters, refer to the reference manual of the network connected.

• Monitoring the devices of other stations on the network

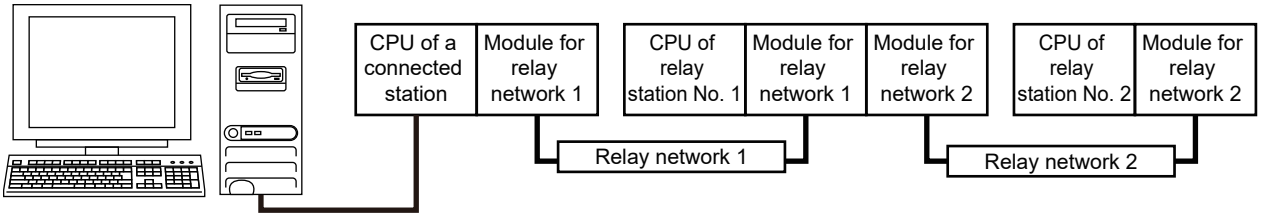
Monitoring devices, such as D and M, of a station on another network slows the display processing.

When monitoring devices of other stations, monitor the devices that are assigned to the link relay (B) or link register (W) with the network parameter.

■Connecting with RCPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
RCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX5 *6	MI 5		R	L H	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX5 *6	MI 5
○	Ethernet	○	×	○	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4		×	×	×	×	×
○	CC IE Cont	○	×	×	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Field	○	×	○	○	○	×	×	×	× *5	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×

*1 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.

*2 This network is inaccessible through an RCPU or LCPU in relay station No. 1.

*3 This network is inaccessible through an LCPU in relay station No. 1.

*4 Only Universal model QCPU is applicable.

*5 Use an intelligent function module (FX5-CCLIEF) as an intelligent device station to connect to the CC-Link IE Field Network.

*6 The routing parameter cannot be set for an FX5CPU, and therefore the networks on which the CPU is not located are inaccessible.

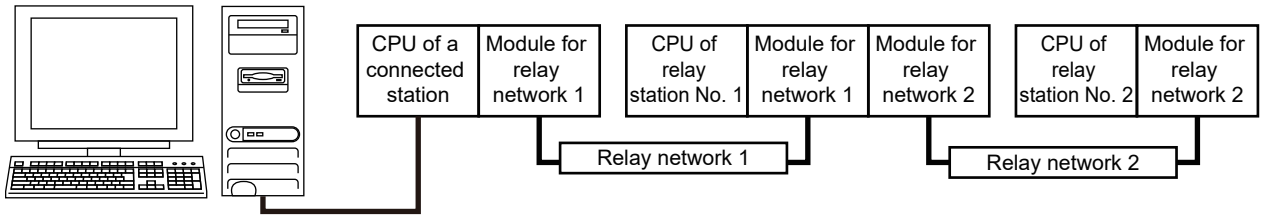
■Connecting with LHCPU

Only the connected station can be accessed.

■Connecting with QCPU or Q series Motion CPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
QCPU, QSCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS	Q (A)	Qn A	A *3	FX5	MI 5		R	L H	L	Q (Q)	QS	Q (A)	Qn A	A *3	FX5	MI 5
○ *2	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	×	×	×	×	×	×
○ *2	Ethernet	×	×	○	○	○	×	○	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	×	×	×	×	×	×
○ *2	CC IE Cont	×	×	×	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	×	×	×	×	×	×
○ *2	CC IE Field	×	×	○	○ *1	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	×	×	×	×	×	×

*1 Only Universal model QCPU is applicable.

*2 When QSCPU is connected by USB, access to other stations or other PLCs is unavailable.

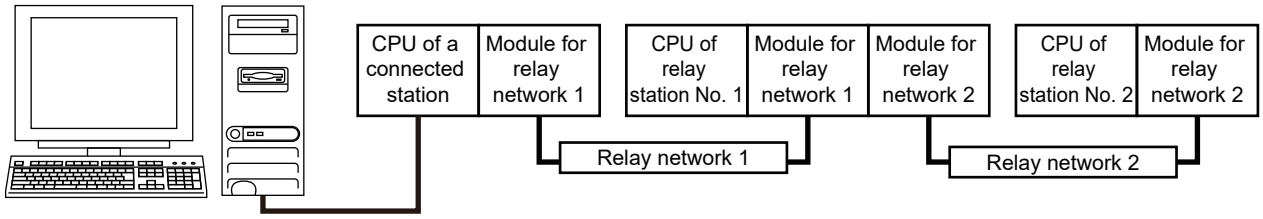
*3 Depending on the CPU type, the access range is different.
Refer to the following table.
○: Accessible, ×: Not accessible, ▲: Accessible when the connected station is a control station

Connected station	Relay network 1		Relay network 2	
	AnA(AnN)CPU	AnUCPU	AnA(AnN)CPU	AnUCPU
QCPU	▲	○	×	○

■Connecting with LCPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
LCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS	Q (A)	QnA	A	FX5	MI5		R	LH	L	Q (Q)	QS	Q (A)	QnA	A	FX5	MI5
○	Ethernet	×	×	○	○	○	×	×	×	×	×	MNET/10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont *2	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	×	×	×	×	×	×
○	CC IE Field	×	×	○	○ *1	○	×	×	×	×	×	MNET/10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont *2	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	×	×	×	×	×	×

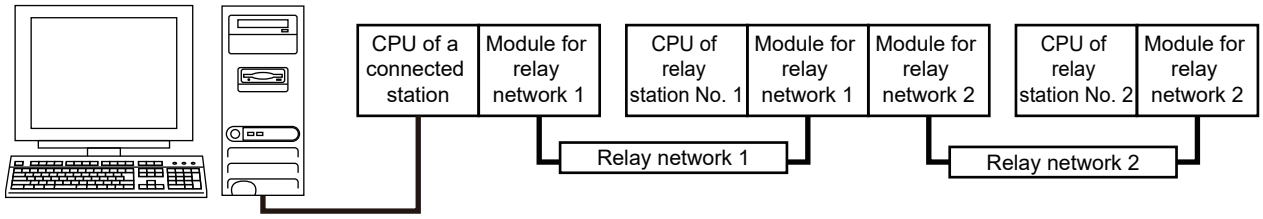
*1 Only Universal model QCPU is applicable.

*2 This network is accessible only through a QCPU in relay station No. 1.

■Connecting with QnACPU or MELDAS C6/C64

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
QnACPU, MELDAS C6*	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS	Q (A)	QnA, C6	A	FX 5	MI 5		R	L H	L	Q (Q)	QS	Q (A)	QnA, C6	A	FX5	MI 5
○	MNET/10	×	×	×	×	×	×	○	×	×	×	MNET/10	×	×	×	×	×	×	○	×	×	×
												MNET(II)	×	×	×	×	×	×	×	×	×	×
												Ethernet	×	×	×	×	×	×	○	×	×	×
○	MNET(II) *1	×	×	×	×	×	×	○ *2	○	×	×	MNET/10	×	×	×	×	×	×	×	×	×	×
												MNET(II)	×	×	×	×	×	×	×	×	×	×
												Ethernet	×	×	×	×	×	×	×	×	×	×
○	Ethernet	×	×	×	×	×	×	○	×	×	×	MNET/10	×	×	×	×	×	×	○	×	×	×
												MNET(II)	×	×	×	×	×	×	×	×	×	×
												Ethernet	×	×	×	×	×	×	○	×	×	×

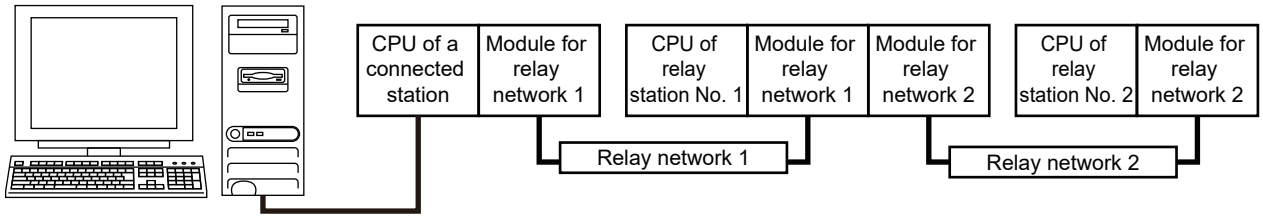
*1 Only the link relay device or link register device assigned to the network parameter can be monitored.
Depending on the type of the connected station, the access range is different.
For a master station, its local stations can be monitored.
For a local station, only its master station can be monitored.
For the master station on the third hierarchy, the master station on the second hierarchy and the local stations on the third hierarchy can be monitored.
For the details of the data link system, refer to the following.
☞ Page 165 Access range in the data link system (MELSECNET/B, (II))

2 MELDAS C6 is inaccessible.

■Connecting with ACPU or QCPU (A mode)

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
ACPU, QCPU (A mode)	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS	Q (A)	Q nA	A	FX5	MI5		R	L H	L	Q (Q)	QS	Q (A)	Q nA	A	FX5	MI5
○	MNET/10 *1	×	×	×	×	×	○	×	○	×	×	MNET/ 10(H)	×	×	×	×	×	○	×	○	×	×
												MNET(II)	×	×	×	×	×	×	×	×	×	×
○	MNET(II) *2	×	×	×	×	×	○	○	○	×	×	MNET/ 10(H)	×	×	×	×	×	×	×	×	×	×
												MNET(II)	×	×	×	×	×	×	×	×	×	×

*1 Depending on the CPU type, the access range is different.
Refer to the following table.
○: Accessible, ×: Not accessible, ▲: Accessible when the connected station is a control station, △: Accessible when the monitored CPU is in a control station

Connected station	Relay network 1		Relay network 2	
	AnA(AnN)CPU	AnUCPU	AnA(AnN)CPU	AnUCPU
AnA(AnN)CPU	×	△	×	×
AnUCPU	▲	○	×	○

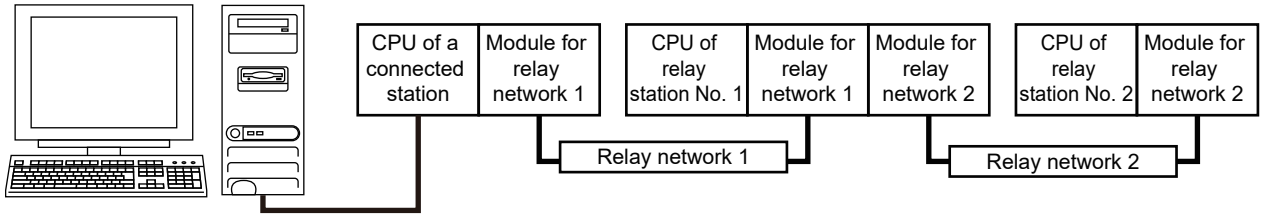
*2 Only the link relay device or link register device assigned to the link parameter can be monitored.
Depending on the type of the connected station, the access range is different.
For a master station, its local stations can be monitored.
For a local station, only its master station can be monitored.
For the master station on the third hierarchy, the master station on the second hierarchy and the local stations on the third hierarchy can be monitored.
For the details of the data link system, refer to the following.
☞ Page 165 Access range in the data link system (MELSECNET/B, (II))

■Connecting with FX5CPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range

The FX5CPU is accessible by the direct CPU connection (RS-232, USB) only.



○: Accessible, ×: Not accessible

Connected station	Relay station																				
FX5CPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS	Q (A)	QnA	A	FX 5	MI 5		R	L H	L	Q (Q)	QS	Q (A)	QnA	A	FX 5	MI5
○	CC IE Field	×	×	×	×	×	×	×	×	○ *1	×	CC IE Field	×	×	×	×	×	×	×	×	×	×

*1 Use an intelligent function module (FX5-CCLIEF) as an intelligent device station to connect to the CC-Link IE Field Network.

■Connecting with FXCPU

Only the connected CPU can be accessed.

■Connecting with a CNC (CNC C80, CNC C70) or robot controller (CRnQ-700, CR750-Q, CR751-Q, CR800-Q)

Access the controller through a CPU in the multiple CPU system as shown below.

Controller			Relay CPU
CNC C80		R16NCCPU-S1	RCPU
CNC C70		Q173NCCPU	QnUCPU
Robot controller	CRnQ-700	Q172DRCPU	
	CR750-Q		
	CR751-Q		
	CR800-Q	Q172DSRCPU	QnUDECPU, QnUDVCPU, QnUDEHCPU

■Connecting with a servo amplifier

A servo amplifier is accessible through one of the following connected stations.

Motion CPU in the multiple CPU system

Simple motion module

CC-Link IE Field Network Master/Local Module

For the details of the system configuration, refer to the following.

☞ Page 360 Servo amplifier connection (via Motion controller or Simple Motion module)

☞ Page 363 Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)

■Connecting with remote I/O stations in the MELSECNET/H network system

When connected to the remote I/O station of the MELSECNET/H network system, the GT SoftGOT2000 can monitor the PLC CPU of the master station.

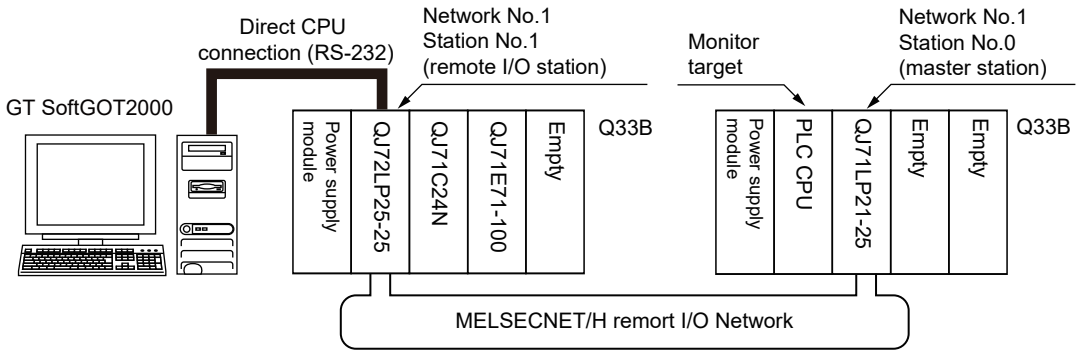
When connecting the GT SoftGOT2000 to the remote I/O station, use the following connection methods.

Point

Connection to remote I/O station of MELSECNET/B, (II) or /10

The GT SoftGOT2000 cannot be connected to the remote I/O station on the MELSECNET/B, (II) data link system and MELSECNET/10 network system.

Connect the GT SoftGOT2000 to the remote I/O station on the MELSECNET/H network system.



• Network modules in a remote I/O station

The network units (QJ72LP25-25, QJ72LP25G, QP72BR15) of the remote I/O station are handled as PLC CPU.

Connect the GT SoftGOT2000 to the RS-232 interface of the network unit.

For the details of the cable and others required for connection with the network module, refer to the following.

☞ Page 299 Connection cable

• Display of objects

Specify a type including MELSEC-Q (including multiple), or MELSEC-QnU for the controller type on GT Designer3.

Then, specify [[NW No.] (Network No. of the remote I/O network) to 1, and specify [Station No.] (Master station) to 0.] as the monitoring target in the network setting of the device setting dialog.

The GT SoftGOT2000 monitors stations on the MELSECNET/H network with the transient transmission.

Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU.

For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GT SoftGOT2000 can monitor link devices B and W of the host station set in the MELSECNET/H network.

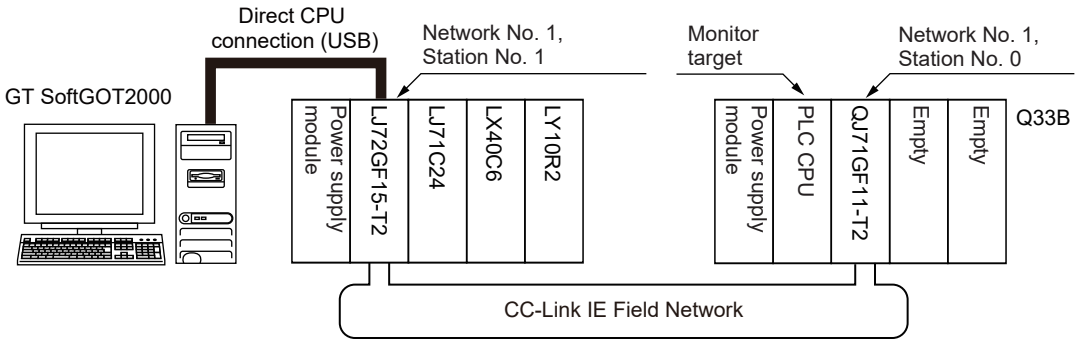
For the settings required for the PLC CPU, refer to the following.

📖IQ corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

■Connecting with a head module in the CC-Link IE Field Network

When connected to the head module of the CC-Link IE Field Network, the GT SoftGOT2000 can monitor the PLC CPU of the master station and local stations.

When connecting the GT SoftGOT2000 to the head module, use the following connection methods.



• Head module

GT SoftGOT2000 monitors a head module (RJ72GF15-T2 or LJ72GF15-T2) as a PLC CPU.

For cables required for connection with the head module and other details, refer to the following.

☞ Page 299 Connection cable

• Display of objects

Specify a type including MELSEC-QnU for the controller type on GT Designer3. Then, specify [NW No.] (Network No. of the CC-Link IE Field Network) to 1, and specify [Station No.] (Master station) to 0.] as the monitoring target in the network setting of the device setting dialog.

The GT SoftGOT2000 monitors stations on the CC-Link IE Field Network with the transient transmission.

Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU.

For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GT SoftGOT2000 can monitor link devices B and W of the host station set in the CC-Link IE Field Network.

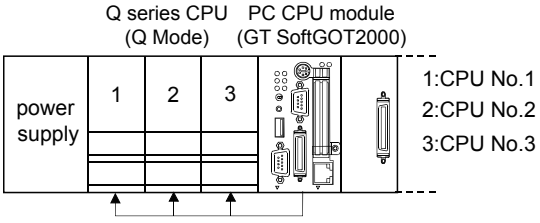
For the settings required for the PLC CPU, refer to the following.

📖MELSEC-L CC-Link IE Field Network Head Module User's Manual

Bus connection

When the multiple CPU system is created, the PC CPU module can access the other CPUs on the same main base unit.

The PC CPU module cannot access CPUs on the other main base units.



Point

• When monitoring other networks (Routing parameter setting)

To monitor other networks, configure the routing parameter setting.

For the routing parameter setting, refer to the reference manual of the network connected.

• Monitoring the devices of other stations on the network

Monitoring devices, such as D and M, of a station on another network slows the display processing.

When monitoring devices of other stations, monitor the devices that are assigned to the link relay (B) or link register (W) with the network parameter.

MELSECNET/H connection, MELSECNET/10 connection

When GT SoftGOT2000 is connected to a station in the MELSECNET/H or MELSECNET/10 network, the range accessible by GT SoftGOT2000 via the station is shown below.

The GT SoftGOT2000 is regarded as a normal station and monitors the control station and all normal stations on the network.

If the monitoring target is a PLC CPU within a multiple CPU system, CPU No. 1 to CPU No. 4 can be monitored.

When monitoring devices of other stations, monitoring of all devices is possible in the PLC CPU to be accessed.

☞ Page 164 When using MELSECNET/10 connection

Point

• When monitoring other networks (Routing parameter setting)

To monitor other networks, configure the routing parameter setting.

For the routing parameter setting, refer to the following.

📖MELSECNET/H Interface Board User's Manual

Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

• Monitoring the devices of other stations on the network

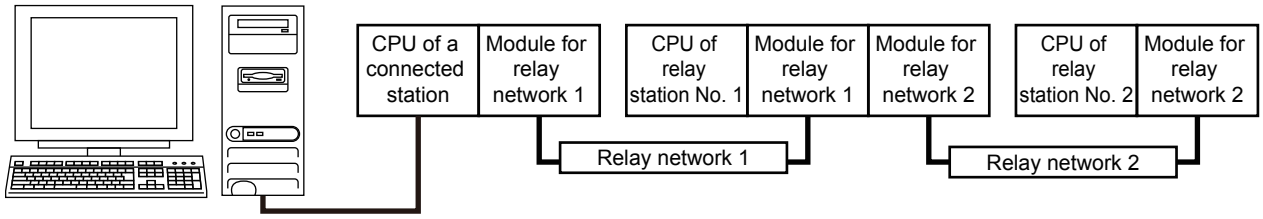
Monitoring devices, such as D and M, of a station on another network slows the display processing.

When monitoring devices of other stations, monitor the devices that are assigned to the link relay (B) or link register (W) with the network parameter.

■Connecting with QCPU or Q series Motion CPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

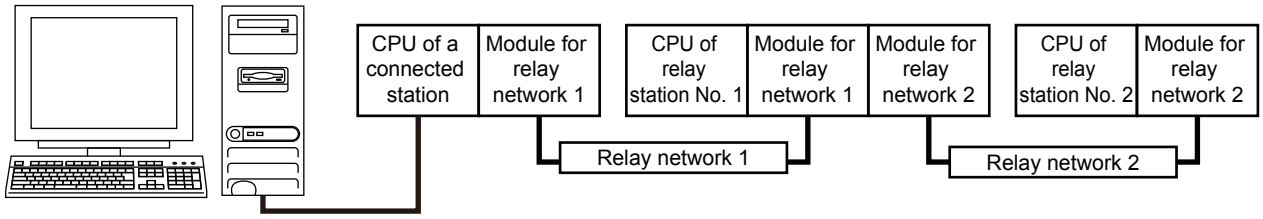
Connected station	Relay station																				
QCPU *2, QSCPU *3	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q) *5	QS *3	Q (A)	QnA, C6	A	FX 5	MI 5		R	L H	L	Q (Q) *5	QS *3	Q (A)	QnA, C6	A	FX 5	MI 5
○	MNET/ 10(H)	×	×	×	○	○	○	○ *4	○	×	×	MNET/ 10(H)	×	×	×	○	○	○	○ *4	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *6	×	×	×	○	○	×	×	×	×	×
												CC IE Field *6	×	×	○	○ *1	○	×	×	×	×	×
○	Ethernet	×	×	○	○	○	×	○	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○ *4	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *6	×	×	×	○	○	×	×	×	×	×
												CC IE Field *6	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Cont	×	×	×	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont *6	×	×	×	○	○	×	×	×	×	×
												CC IE Field *6	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Field	×	×	○	○ *1	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont *6	×	×	×	○	○	×	×	×	×	×
												CC IE Field *6	×	×	○	○ *1	○	×	×	×	×	×

*1 Only Universal model QCPU is applicable.
*2 Only the PLC CPU area (CPU No.1) is applicable for Q170MCPU and Q170MSCPU.
*3 The routing parameter cannot be set for a QSCPU, and therefore the GOT cannot access the networks on which the CPU is not located.
4 MELDAS C6 is not applicable.
*5 CNC C70 on other networks cannot be monitored.
*6 This network is accessible only through a QCPU in relay station No. 1.

■Connecting with QnACPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

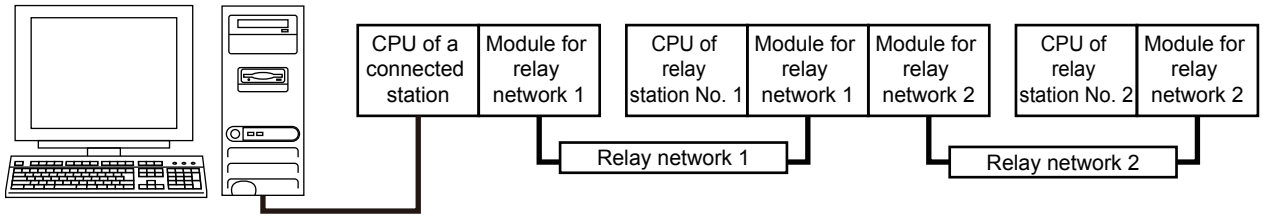
Connected station	Relay station																				
QnACPU *1	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS *2	Q (A)	QnA, C6 *3	A	FX 5	MI 5		R	L H	L	Q (Q)	QS *2	Q (A)	QnA, C6 *3	A	FX 5	MI 5
○	MNET/10	×	×	×	○	○	○	○ *1	○	×	×	MNET/ 10(H)	×	×	×	○	○	○	○ *1	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *4	×	×	×	○	○	×	×	×	×	×
												CC IE Field *4	×	×	○	○ *5	○	×	×	×	×	×
○	Ethernet	×	×	○	○	○	×	○	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○ *1	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *4	×	×	×	○	○	×	×	×	×	×
												CC IE Field *4	×	×	○	○ *5	○	×	×	×	×	×

1 MELDAS C6 is not applicable.
*2 The routing parameter cannot be set for a QSCPU, and therefore the GOT cannot access the networks on which the CPU is not located.
*3 CNC C70 on other networks cannot be monitored.
*4 This network is accessible only through a QCPU in relay station No. 1.
*5 Only Universal model QCPU is applicable.

■Connecting with ACPU or QCPU (A mode)

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
ACPU, QCPU (A mode)	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX5	MI5		R	L H	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX5	MI5
○	MNET/10	×	×	×	○	○	○	×	○	×	×	MNET/10	×	×	×	○	○	○	×	○	×	×
												CC IE Cont	×	×	×	○ *2	○ *2	×	×	×	×	×
												CC IE Field	×	×	○ *2	○ *2*3	○ *2	×	×	×	×	×

*1 The routing parameter cannot be set for a QSCPU, and therefore the GOT cannot access the networks on which the CPU is not located.
*2 This network is accessible only through a QCPU in relay station No. 1.
*3 Only Universal model QCPU is applicable.

■Connecting with the robot controller (CR800-Q)

Access the controller through a CPU in the multiple CPU system as shown below.

Controller			Relay CPU
Robot controller	CR800-Q	Q172DSRCPU	QnUDECPU, QnUDVCPU, QnUDEHCPU

CC-Link IE Controller Network connection

The following shows the access range via the connected station in a configuration in which GT SoftGOT2000 and a station are connected by CC-Link IE Controller Network.

The GT SoftGOT2000 is regarded as a normal station and monitors the control station and all normal stations on the network.

If the monitoring target is a PLC CPU within a multiple CPU system, CPU No. 1 to CPU No. 4 can be monitored.

When monitoring devices of other stations, monitoring of all devices is possible in the PLC CPU to be accessed.

☞ Page 164 When using MELSECNET/10 connection

Point

• When monitoring other networks (Routing parameter setting)

To monitor other networks, setting of routing parameters is required.

For the routing parameter setting, refer to the following.

📖CC-Link IE Controller Network Interface Board User's Manual

📖MELSEC-Q CC-Link IE Controller Network Reference Manual

• Monitoring the devices of other stations on the network

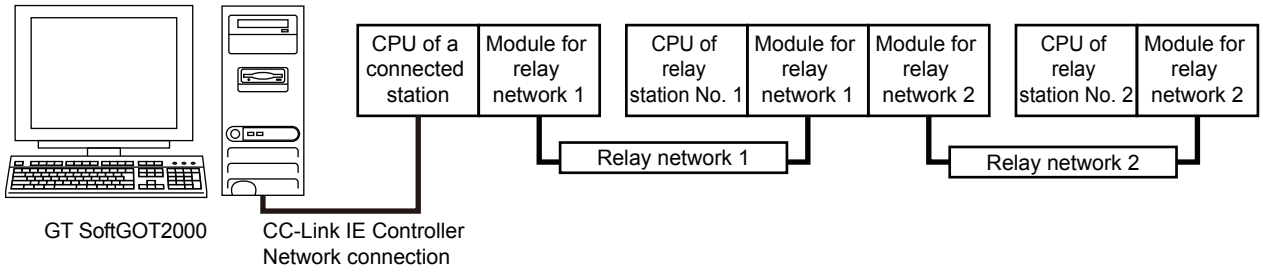
Monitoring devices, such as D and M, of a station on another network slows the display processing.

When monitoring devices of other stations, monitor the devices that are assigned to the link relay (B) or link register (W) with the network parameter.

■Connecting with RCPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

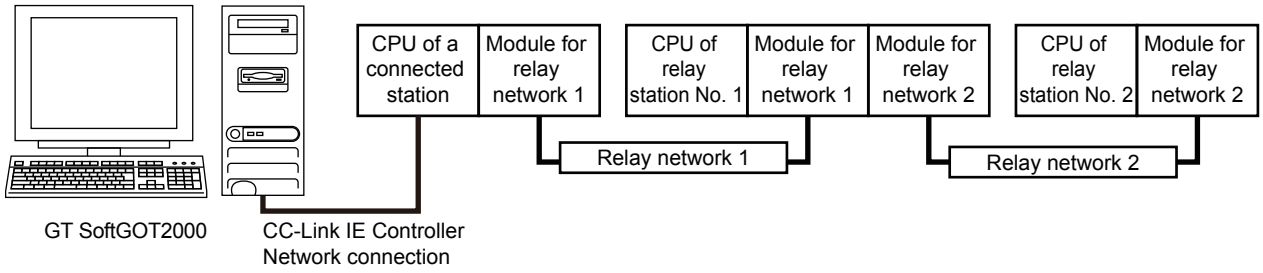
Connected station	Relay station																				
RCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS *1	Q (A)	QnA, C6	A	FX5	MI5		R	LH	L	Q (Q)	QS *1	Q (A)	QnA, C6	A	FX5	MI5
○	Ethernet	○	×	○	○	○	×	×	×	×	×	MNET/10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Cont	○	×	×	○	○	×	×	×	×	×	MNET/10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Field	○	×	○	○	○	×	×	×	×	×	MNET/10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×

*1 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.
*2 This network is inaccessible through an RCPU or LCPU in relay station No. 1.
*3 This network is inaccessible through an LCPU in relay station No. 1.
*4 Only Universal model QCPU is applicable.

■Connecting with QCPU or Q series Motion CPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
QCPU, QSCPU *2	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	L H	L	Q (Q) *4	QS *2	Q (A)	QnA, C6	A	FX 5	MI 5		R	L H	L	Q (Q) *4	QS *2	Q (A)	QnA, C6	A	FX 5	MI 5
○	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field *5	×	×	○	○ *1	○	×	×	×	×	×
○	Ethernet	×	×	○ *3	○	○	×	○	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Cont	×	×	×	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field *5	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Field	×	×	○	○ *1	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×

*1 Only Universal model QCPU is applicable.
*2 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.
*3 LCPU is accessible only when QJ71E71-100, QJ71E71-B2, or QJ71E71-B5 is used.
(Built-in Ethernet port QCPU is inapplicable.)
*4 CNC C70 on other networks cannot be monitored.
*5 This network is accessible only through a QCPU in relay station No. 1.

■Connecting with a servo amplifier

A servo amplifier is accessible through one of the following connected stations.

Motion CPU in the multiple CPU system

Simple motion module

CC-Link IE Field Network Master/Local Module

For the details of the system configuration, refer to the following.

☞ Page 360 Servo amplifier connection (via Motion controller or Simple Motion module)

☞ Page 363 Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)

■Connecting with the robot controller (CR800-Q)

Access the controller through a CPU in the multiple CPU system as shown below.

Controller			Relay CPU
Robot controller	CR800-Q	Q172DSRCPU	QnUDECPU, QnUDVCPU, QnUDEHCPU

CC-Link IE Field Network connection

When GT SoftGOT2000 is connected to a station in the CC-Link IE Filed Network, the range accessible by GT SoftGOT2000 via the station is shown below.

The GT SoftGOT2000 is regarded as a normal station and monitors the control station and all normal stations on the network.

If the monitoring target is a PLC CPU within a multiple CPU system, CPU No. 1 to CPU No. 4 can be monitored.

When monitoring devices of other stations, monitoring of all devices is possible in the PLC CPU to be accessed.

☞ Page 164 When using MELSECNET/10 connection

Point

• When monitoring other networks (Routing parameter setting)

To monitor other networks, setting of routing parameters is required.

For the setting of the routing parameters, refer to the reference manual of the network connected.

📖MELSEC-L CC-Link IE Field Network Master/Local Module User's Manual

• Monitoring the devices of other stations on the network

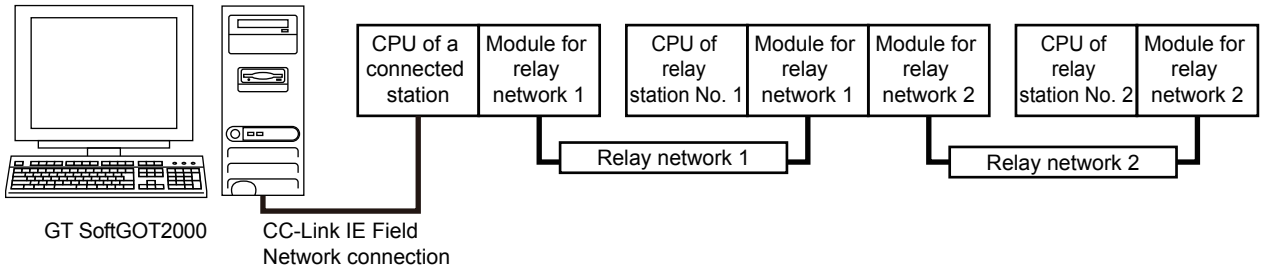
Monitoring devices, such as D and M, of a station on another network slows the display processing.

When monitoring devices of other stations, monitor the devices that are assigned to the link relay (B) or link register (W) with the network parameter.

■Connecting with RCPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible ×: Not accessible

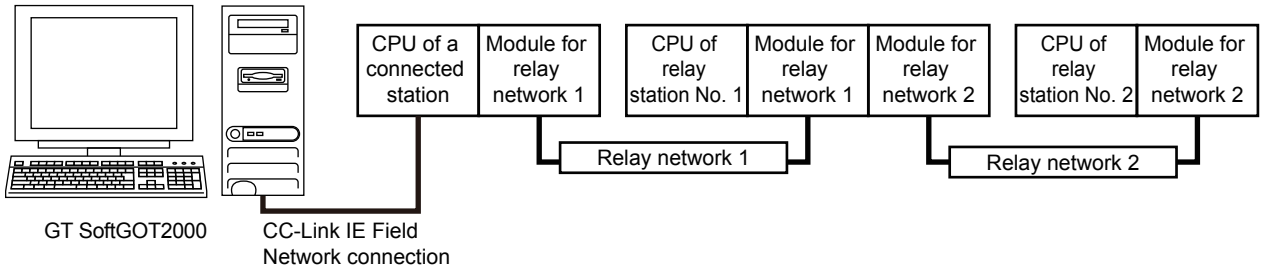
Connected station	Relay station																				
RCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX5	MI5		R	LH	L	Q (Q)	QS *1	Q (A)	Qn A	A	FX5	MI5
○	Ethernet	○	×	○	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Cont	○	×	×	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×
○	CC IE Field	○	×	○	○	○	×	×	×	×	×	MNET/ 10(H) *2	×	×	×	○	○	×	×	×	×	×
												Ethernet	○	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	○	×	×	○	○	×	×	×	×	×
												CC IE Field	○	×	○	○ *4	○	×	×	×	×	×

*1 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.
*2 This network is inaccessible through an RCPU or LCPU in relay station No. 1.
*3 This network is inaccessible through an LCPU in relay station No. 1.
*4 This network is inaccessible only when the CPU of relay station No. 1 is an LCPU.

■Connecting with QCPU or Q series Motion CPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

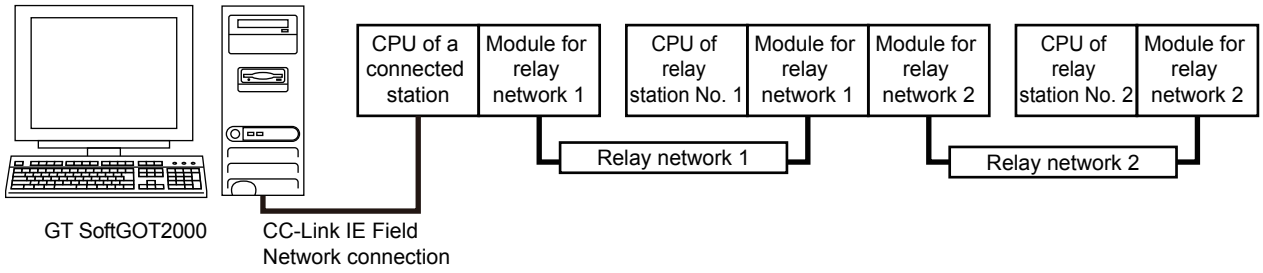
Connected station	Relay station																				
QCPU *1*2, QSCPU *3	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q) *4	QS *3	Q (A)	Qn A	A	FX 5	MI 5		R	LH	L	Q (Q) *4	QS *3	Q (A)	Qn A	A	FX 5	MI 5
○	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field *5	×	×	○	○ *1	○	×	×	×	×	×
○	Ethernet	×	×	○	○	○	×	○	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Cont	×	×	×	○	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Field	×	×	○	○ *1	○	×	×	×	×	×	MNET/ 10(H)	×	×	×	○	○	○	○	○	×	×
												Ethernet	×	×	○	○	○	×	○	×	×	×
												CC IE Cont *5	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×

*1 Only Universal model QCPU is applicable.
*2 Only the PLC CPU area (CPU No.1) is applicable for Q170MCPU and Q170MSCPU.
*3 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.
*4 CNC C70 on other networks cannot be monitored.
*5 This network is accessible only through a QCPU in relay station No. 1.

■Connecting with LCPU

For how to refer to the illustration and table, refer to the following.

☞ Page 136 Access range



○: Accessible, ×: Not accessible

Connected station	Relay station																				
LCPU	Relay network 1	CPU of relay station No. 1										Relay network 2	CPU of relay station No. 2								
		R	LH	L	Q (Q)	QS *2	Q (A)	QnA, C6	A	FX 5	MI 5		R	LH	L	Q (Q)	QS *2	Q (A)	QnA, C6	A	FX 5	MI 5
○	Ethernet	×	×	○	○	○	×	×	×	×	×	MNET/ 10(H) *3	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×
○	CC IE Field	×	×	○	○ *1	○	×	×	×	×	×	MNET/ 10(H) *3	×	×	×	○	○	×	×	×	×	×
												Ethernet	×	×	○	○	○	×	×	×	×	×
												CC IE Cont *3	×	×	×	○	○	×	×	×	×	×
												CC IE Field	×	×	○	○ *1	○	×	×	×	×	×

*1 Only Universal model QCPU is applicable.
*2 GT SoftGOT2000 cannot access other networks because the routing parameter cannot be set for QSCPU.
*3 This network is accessible only through a QCPU in relay station No. 1.

Point

• Precautions for using the redundant system

For the following connection types, do not set an RCPU or QCPU redundant system as a relay station. Doing so causes GT SoftGOT2000 not to switch the monitoring target automatically when system switching occurs.

A timeout error occurs due to failed monitoring.

MELSECNET/10, MELSECNET/H connection

CC-Link IE Controller Network connection

CC-Link IE Field Network connection

• When system switching occurs due to a cable disconnection

When system switching occurs due to a cable disconnection, GT SoftGOT2000 can monitor the control system through the tracking cable, but cannot monitor the controllers on a different network through the redundant system.

■Connecting with a MELIPC

Only the connected station can be accessed.

■Connecting with a servo amplifier

A servo amplifier is accessible through one of the following connected stations.

Motion CPU in the multiple CPU system

Simple motion module

CC-Link IE Field Network Master/Local Module

For the details of the system configuration, refer to the following.

☞ Page 360 Servo amplifier connection (via Motion controller or Simple Motion module)

☞ Page 363 Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)

■Connecting with the robot controller (CR800-Q)

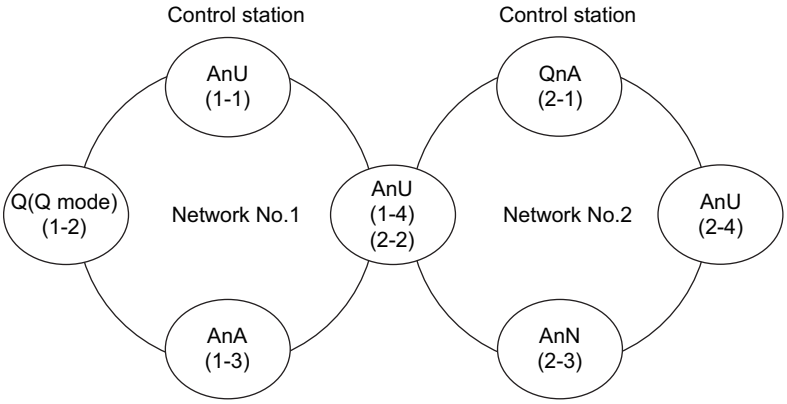
Access the controller through a CPU in the multiple CPU system as shown below.

Controller			Relay CPU
Robot controller	CR800-Q	Q172DSRCPU	QnUDECPU, QnUDVCPU, QnUDEHCPU

System setting examples

The following shows an example of the monitor accessible range of other stations and setting method of monitor devices.

When using the direct CPU connection (RS-232, USB) or serial communication connection (without the data link system)



■Monitor accessible range of devices (other than B or W) of other stations or other networks

Specify the accessing network No. or station as shown in the following table.

To monitor the connected station (host station), and devices B and W assigned to network parameters, specify the host station.

To monitor another station (Devices other than B and W) or another network, specify the target station (Network No. and station No.).

Station connected to GT SoftGOT2000		Station to be accessed							
		Network No.1				Network No.2			
		AnU (1-1)	Q (Q mode) (1-2)	AnA (1-3)	AnU (1-4)	QnA (2-1)	AnU (2-2)	AnN (2-3)	AnU (2-4)
AnU	(1-1)	○	×	○	○	×	○	×	×
		Host	—	Other (1-3)	Other (1-4)	—	Other (2-2)	—	—
Q (Q mode)	(1-2)	○	○	×	○	○	○	×	○
		Other (1-1)	Host	—	Other (1-4)	Other (2-1)	Other (2-2)	—	Other (2-4)
AnA	(1-3)	○	×	○	×	×	×	×	×
		Other (0-0)	—	Host	—	—	—	—	—
AnU	(1-4)	○	×	×	○	×	○	×	×
	(2-2)	Other (1-1)	—	—	Host	—	Host	—	—
QnA	(2-1)	×	×	×	×	○	×	×	×
		—	—	—	—	Host	—	—	—
AnN	(2-3)	×	×	×	×	×	×	○	×
		—	—	—	—	—	—	Host	—
AnU	(2-4)	×	×	×	×	×	○	×	○
		—	—	—	—	—	Other (2-2)	—	Host

How to read the table
Upper line: Accessibility
○: Accessible
×: Not accessible
Lower line: Network settings
Host
Other (Network No. - Station number)

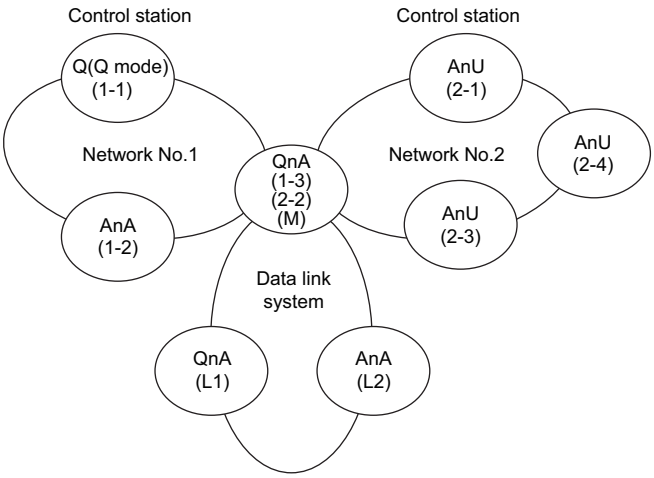
Point

Monitoring link device B or W

To monitor devices B and W assigned to network parameters, specify the host station even though these devices have been assigned to other stations.

Otherwise, the display speed will be reduced.

When using the direct CPU connection (RS-232, USB) or serial communication connection (with the data link system)



■Monitor accessible range of devices (other than B or W) of other stations or other networks

Specify the accessing network No. or station as shown in the following table.

To monitor B or W of the connected station (Host station) assigned with a network parameter, specify the host station.

To monitor another station (Devices other than B or W) or another network, specify the station (network No. and station No.).

Station connected to GT SoftGOT2000		Station to be accessed									
		Network No.1			Network No.2				Data link system		
		QnA (1-1)	AnA (1-2)	QnA (1-3)	AnU (2-1)	QnA (2-2)	AnU (2-3)	AnU (2-4)	QnA (M)	QnA (L1)	AnA (L2)
Q (Q mode)	(1-1)	○	○	○	○	○	○	○	○	×	×
		Host	Other (1-2)	Other (1-3)	Other (2-1)	Other (2-2)	Other (2-3)	Other (2-4)	Other (1-3) or Other (2-2)	—	—
AnA	(1-2)	×	○	×	×	×	×	×	×	×	×
		—	Host	—	—	—	—	—	—	—	—
QnA	(1-3)	○	×	○	○	○	○	○	○	×	○
	(2-2)	Other (1-1)	—	Host	Other (2-1)	Host	Other (2-3)	Other (2-4)	Host	—	Other (0-2) *1
	(M)										
AnU	(2-1)	×	×	×	○	×	○	○	×	×	×
		—	—	—	Host	—	Other (2-3)	Other (2-4)	—	—	—
AnU	(2-3)	×	×	×	○	×	○	○	×	×	×
		—	—	—	Other (2-1)	—	Host	Other (2-4)	—	—	—
AnU	(2-4)	×	×	×	○	×	○	○	×	×	×
		—	—	—	Other (2-1)	—	Other (2-3)	Host	—	—	—
QnA	(L1)	×	×	×	×	×	×	×	×	○	×
		—	—	—	—	—	—	—	—	Host	—
AnA	(L2)	×	×	×	×	×	×	×	×	×	○
		—	—	—	—	—	—	—	—	—	Host

*1 When monitoring the data link system, set the network No. to 0.

How to read the table
Upper line: Accessibility
○: Accessible
×: Not accessible
Lower line: Network settings
Host
Other (Network No. - Station number)

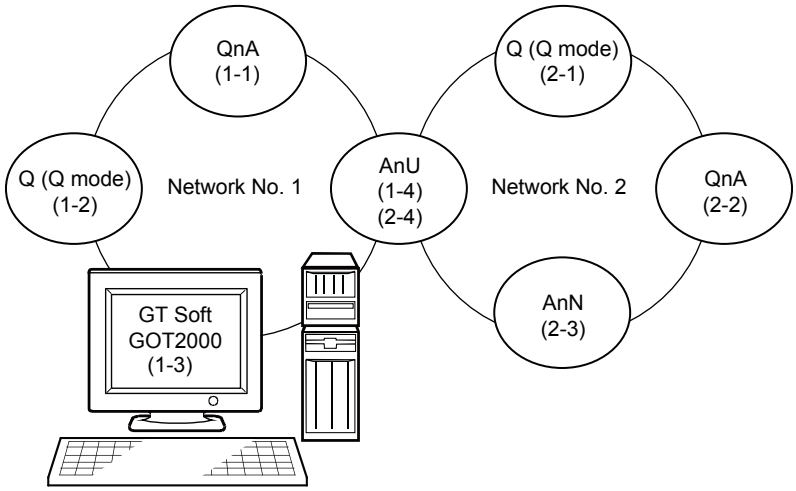
Point

Monitoring link device B or W

To monitor devices B and W assigned to network parameters, specify the host station even though these devices have been assigned to other stations.

Otherwise, the GOT takes a long time to display data.

When using MELSECNET/10 connection



■Monitor access range for other station devices (other than B and W)

○: Accessible, ×: Not accessible

Station connected to GT SoftGOT2000	Station to be accessed							
	Network No.1				Network No.2			
	QnA (1-1)	Q (Q mode) (1-2)	GT SoftGOT2000 (1-3)	AnU (1-4)	Q (Q mode) (2-1)	QnA (2-2)	AnN (2-3)	AnU (2-4)
GT SoftGOT2000 (1-3)	○	○	—	○	○	○	×	○

■Designating network No. and station number for setting monitor device

• Monitoring devices B and W that are allocated in the network parameter

NW No.: 1, Station number: Host

For monitoring devices B and W that are allocated by the link parameter, use the local device number if designating devices allocated to another station.

Otherwise, the display speed will be reduced.

• Monitoring other stations (Devices other than B and W)

Station connected to GT SoftGOT2000	Station to be accessed			
	QnA (1-1)	Q (Q mode) (1-2)	GT SoftGOT2000 (1-3)	AnU (1-4)
SoftGOT2000 (1-3)	1, Other (1)	1, Other (2)	—	1, Other (4)

How to read the table

1, Other (2)

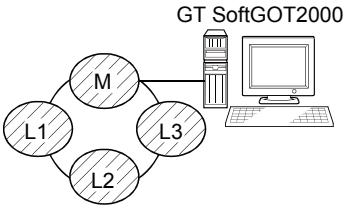
↑ ↑

NW No. Station number

Access range in the data link system (MELSECNET/B, (II))

Direct CPU connection (RS-232), serial communication connection

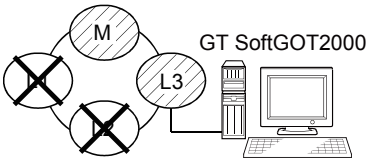
■When connecting to the master station



Local stations can be monitored.

However, when a QnACPU is used as the PLC CPU of the local station, the devices other than B and W assigned to the network parameters cannot be monitored.

■When connecting to a local station

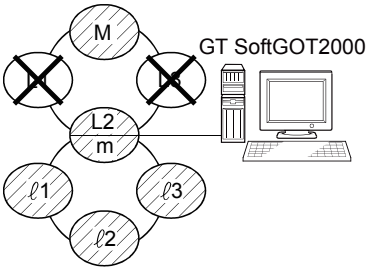


The master station can be monitored.

However, when a QnACPU is used as the PLC CPU of the master station, the devices other than B and W assigned to the link parameters cannot be monitored.

Other local stations cannot be monitored.

■When connecting to the master station on the third hierarchy



The master station on the second hierarchy and local stations on the third hierarchy can be monitored.

However, when a QnACPU is used as the PLC CPU of the master station, the devices other than B and W assigned to the network parameters cannot be monitored.

Local stations on the second hierarchy cannot be monitored.

■When connecting to ACPU or QnACPU

Only other stations with the same PLC CPU type of the connected station can be monitored.

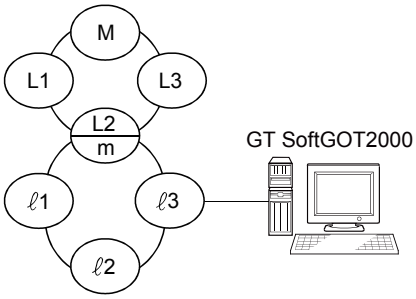
Monitoring devices of other stations

If the GOT monitors the devices of other stations on the data link system, the GOT takes a considerably long time to display data.

Monitor link relay (B) and link register (W) assigned to the network parameters.

Setting method of monitor device

The following example describes the method of setting the network No. and the station numbers when setting monitor devices .



■Monitoring the connected station (Host station) and devices B and W assigned to the network parameters

Specify the host station.

To monitor devices B and W assigned to network parameters, specify the host station even though these devices have been assigned to other stations.

Otherwise, the display speed will be reduced.

■Monitoring devices of other stations

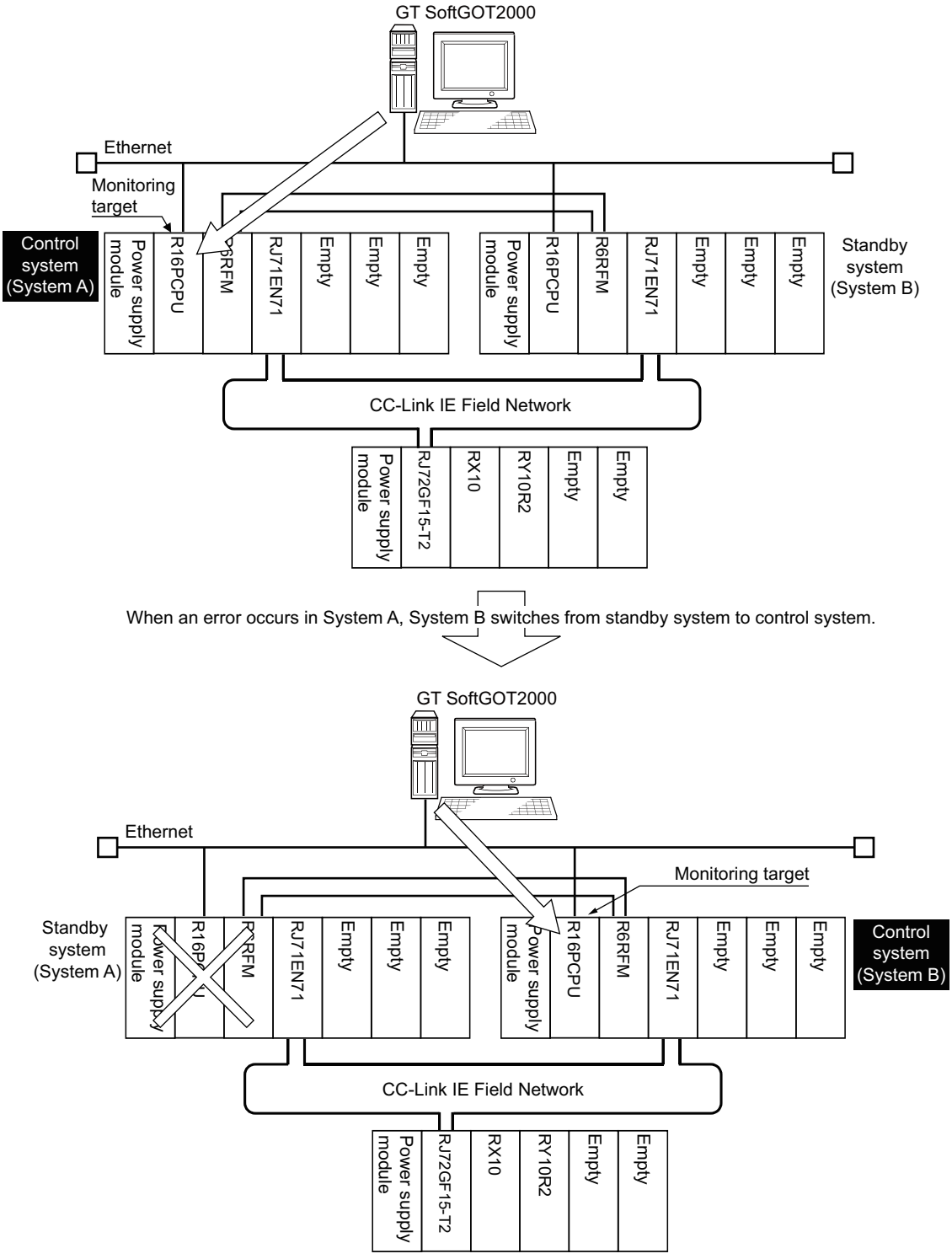
Network No.: 0, Station number: Refer to the following table.

Setting of the station No.

Station connected to GT SoftGOT2000	Station to be accessed						
	M	L1	L2 m	L3	ℓ1	ℓ2	ℓ3
M	Host	Other 1	Other 2	Other 3	—	—	—
L1	Other 0	Host	—	—	—	—	—
L2 m	Other 0	—	Host	—	Other 1	Other 2	Other 3
L3	Other 0	—	—	Host	—	—	—
ℓ1	—	—	Other 0	—	Host	—	—
ℓ2	—	—	Other 0	—	—	Host	—
ℓ3	—	—	Other 0	—	—	—	Host

3.4 How to Monitor the Redundant System (RCPU)

You can monitor a redundant system on GT SoftGOT2000 by specifying the control system and the standby system.
When system switching occurs in the redundant system, the standby system takes over the control to continue the system operation.
GT SoftGOT2000 switches the monitoring target automatically upon system switching.
To achieve this behavior, configure the relevant settings on GT Designer3.
☞ Page 219 MELSEC redundant setting



Point

Module configuration when a SIL2 process CPU is used

To configure a redundant system using a SIL process CPU, mount a SIL2 function module (R6PSFM) and a redundant function module (R6RFM) next to the SIL2 process CPU on the base unit.

Make sure to mount a SIL2 process CPU, SIL2 function module, and redundant function module on the base unit in that order.

The following lists the connection types available for the redundant system (RCPU).

Connection type	Connection destination	Reference
Direct CPU connection (USB)	Built-in USB port RCPU	☞ Page 169 Monitoring using the direct CPU connection (USB) (Built-in USB port RCPU)
	CC-Link IE Field Network head module	☞ Page 173 Monitoring using the direct CPU connection (USB) (Remote head module)
Ethernet connection	Built-in Ethernet port RCPU	☞ Page 179 Built-in Ethernet port RCPU
	Ethernet module	☞ Page 181 Ethernet module
	Ethernet module in a remote I/O station on the CC-Link IE Field Network	☞ Page 189 Accessing the Ethernet module
	Ethernet module mounted on the redundant extension base unit	☞ Page 197 Accessing the Ethernet module
CC-Link IE Controller Network connection	CC-Link IE Controller Network module	☞ Page 185 Monitoring using the CC-Link IE Field Network connection
CC-Link IE Field Network connection	CC-Link IE Field Network module	☞ Page 183 Monitoring using the CC-Link IE Controller Network connection
Serial communication connection	Serial communication module	☞ Page 195 Monitoring using the serial communication connection
	Serial communication module in a remote I/O station on the CC-Link IE Field Network	☞ Page 191 Accessing the serial communication module
	Serial communication module mounted on the redundant extension base unit	☞ Page 198 Accessing the serial communication module

For details of PLC CPUs that can be monitored in each connection method of GT SoftGOT2000, refer to the following.

☞ Page 114 Controllers that can be monitored by connection type

For the configuration of the redundant system (RnPCPU), refer to the following.

📖MELSEC iQ-R Module Configuration Manual

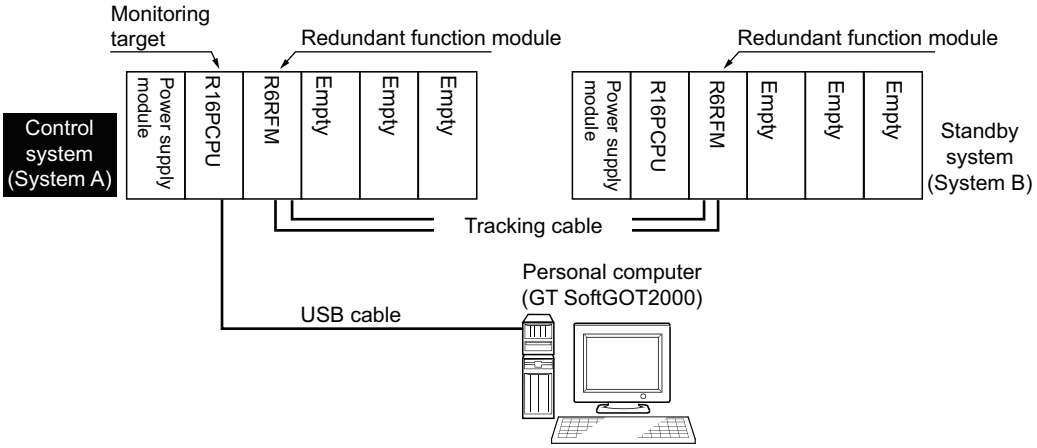
Monitoring using the direct CPU connection (USB) (Built-in USB port RCPU)

This section explains how to monitor a redundant system by connecting GT SoftGOT2000 and a PLC with a USB cable.

Redundant system (host station)

■System configuration example

The following shows a configuration example of monitoring the redundant system (host station).



■Connection method

Connect the USB port of an RCPU and the personal computer (GT SoftGOT2000) directly with a USB cable.

For the details of the connection method, refer to the following.

☞ Page 297 Direct CPU connection (RS-232, USB)

■Setting on GT SoftGOT2000

Configure the settings as shown below.

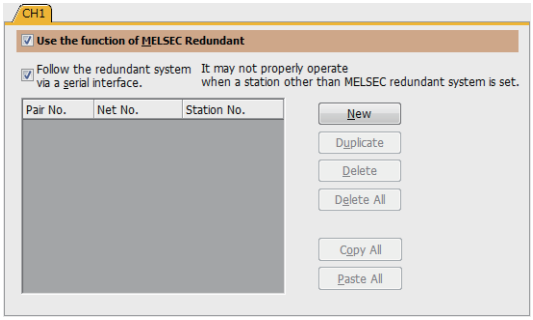
Setting item		Settings
Communication Setup	Connection	[USB]
	Type	[MELSEC iQ-R]

For the setting method, refer to the following.

☞ Page 79 [USB]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Select [Follow the redundant system via a serial interface.]. Setting a pair of PLCs to be monitored is unnecessary. According to the above system configuration example, configure the setting as shown below. • [Follow the redundant system via a serial interface.]: Selected  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify a PLC (host station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Host] • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

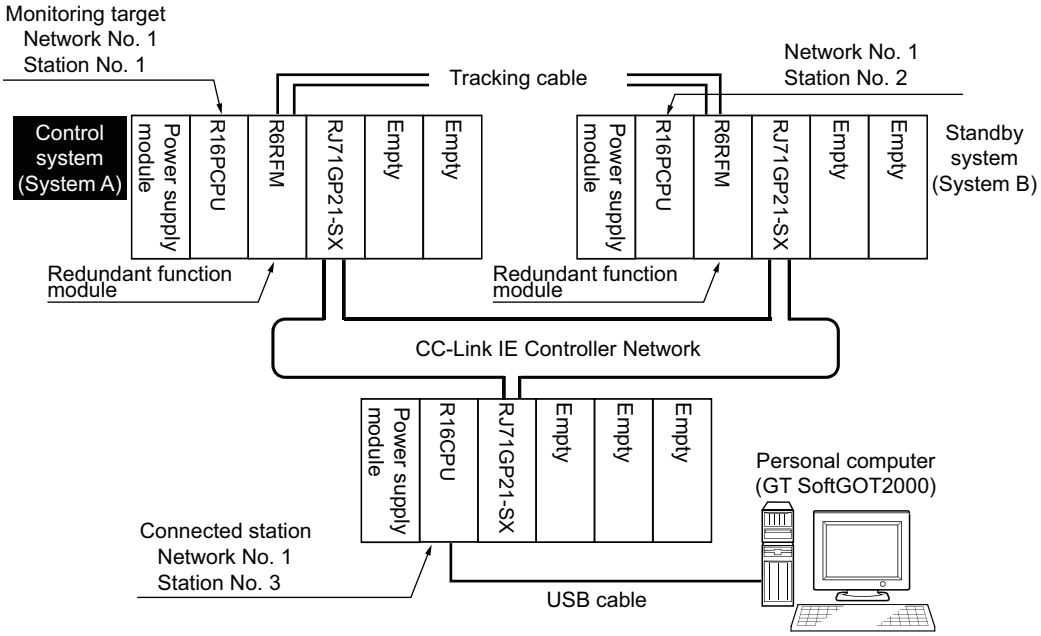
For the setting method, refer to the following.

📖GX Works3 Operating Manual

Redundant system (another station)

■System configuration example

The following shows a configuration example of monitoring the redundant system (another station).



■Connection method

Connect the USB port of a PLC (connected station) and the personal computer (GT SoftGOT2000) directly with a USB cable.

For the details of the connection method, refer to the following.

☞ Page 297 Direct CPU connection (RS-232, USB)

■Setting on GT SoftGOT2000

Configure the settings as shown below.

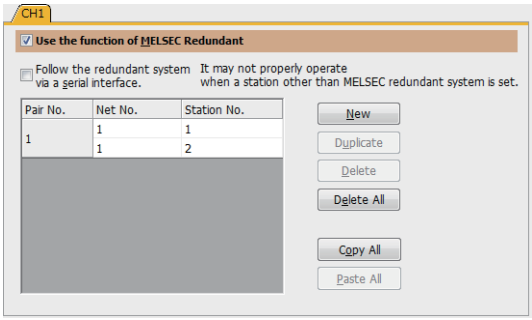
Setting item		Settings
Communication Setup	Connection	[USB]
	Type	[MELSEC iQ-R]

For the setting method, refer to the following.

☞ Page 79 [USB]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 1 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 2 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 1 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

📖GX Works3 Operating Manual

Monitoring using the direct CPU connection (USB) (Remote head module)

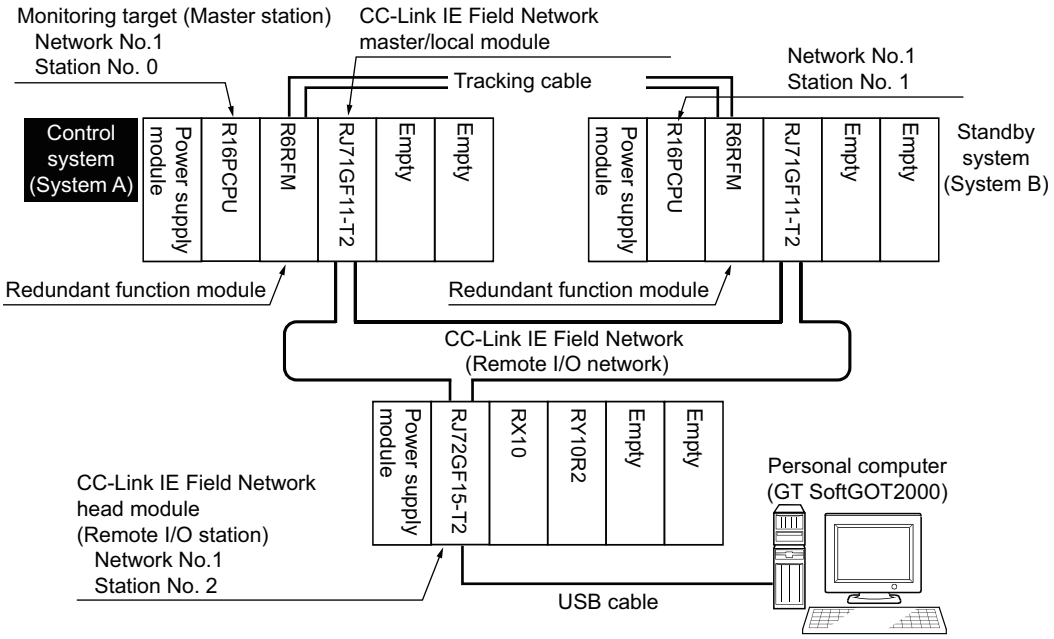
This section explains how to monitor a redundant system on the CC-Link IE Field Network by connecting GT SoftGOT2000 and a CC-Link IE Field Network head module with a USB cable.

In this section, the CC-Link IE Field Network head module is abbreviated as the remote head module.

Redundant system (master station)

■System configuration example

The following shows a configuration example of monitoring the redundant system (master station).



■Connection method

Connect the remote head module in a remote I/O station and the personal computer (GT SoftGOT2000) directly with a USB cable.

For the details of the connection method, refer to the following.

☞ Page 297 Direct CPU connection (RS-232, USB)

■Setting on GT SoftGOT2000

Configure the settings as shown below.

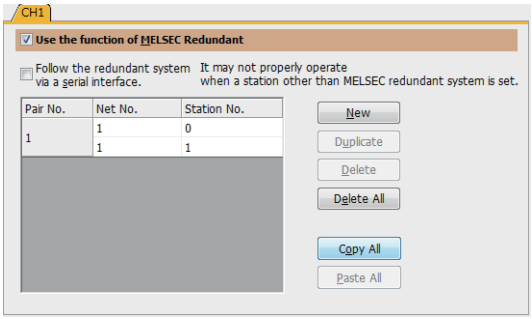
Setting item		Settings
Communication Setup	Connection	[USB]
	Type	[MELSEC iQ-R]

For the setting method, refer to the following.

☞ Page 79 [USB]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 1 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

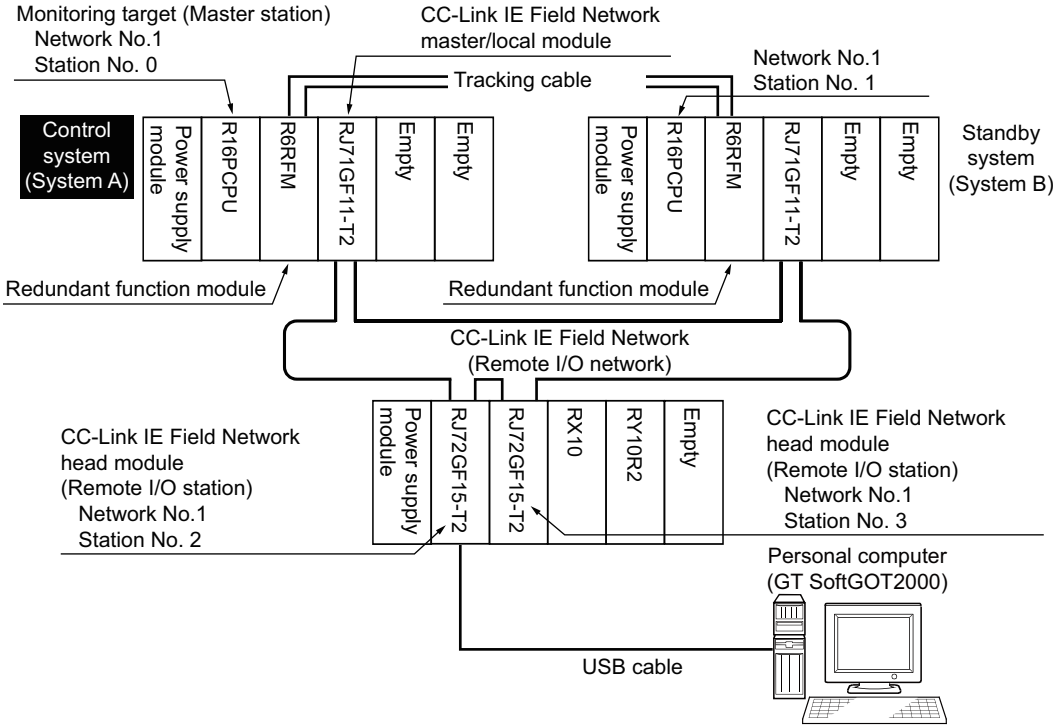
For the setting method, refer to the following.

📖GX Works3 Operating Manual

Redundant system comprising two remote head modules

■System configuration example

The following shows a configuration example of monitoring the redundant system comprising two remote head modules.



■Connection method

Connect the remote head module in a remote I/O station and the personal computer (GT SoftGOT2000) directly with a USB cable.

For the details of the connection method, refer to the following.

☞ Page 297 Direct CPU connection (RS-232, USB)

■Setting on GT SoftGOT2000

Configure the settings as shown below.

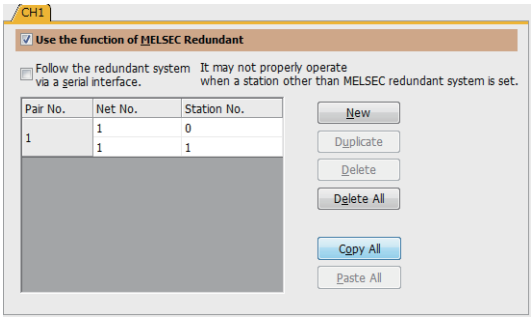
Setting item		Settings
Communication Setup	Connection	[USB]
	Type	[MELSEC iQ-R]

For the setting method, refer to the following.

☞ Page 79 [USB]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 1 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

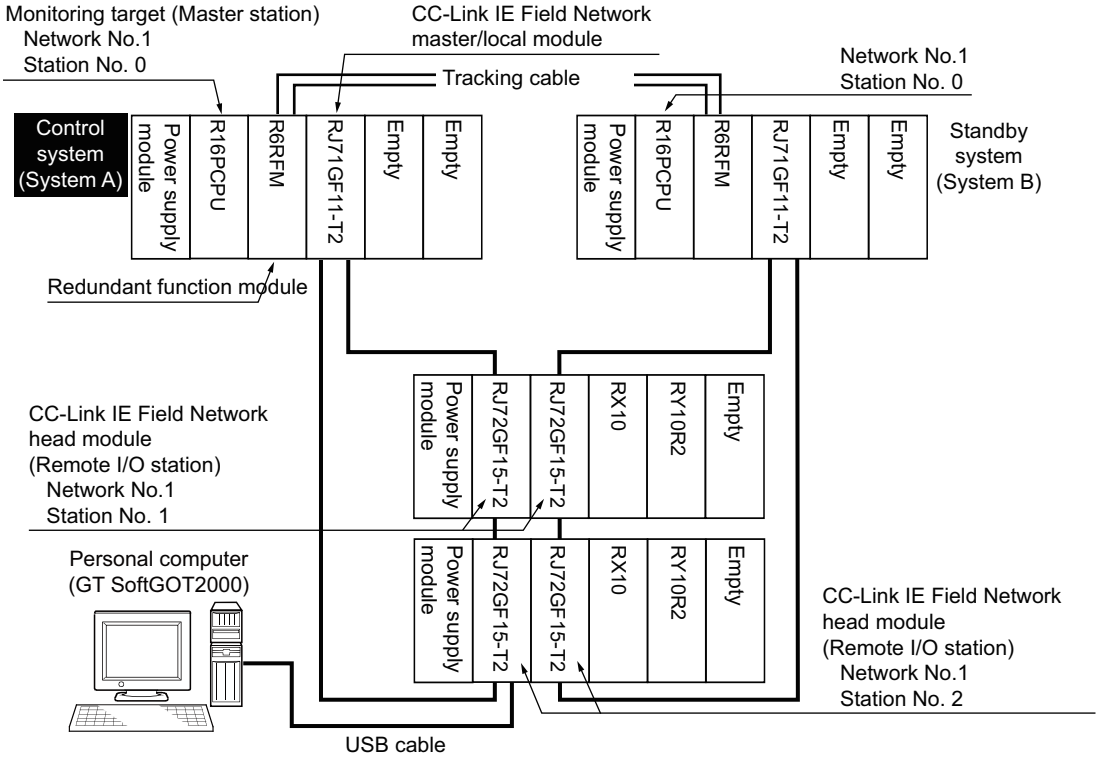
For the setting method, refer to the following.

GX Works3 Operating Manual

Redundant system using two network lines

■System configuration example

The following shows a configuration example of monitoring the redundant system using two network lines.



■Connection method

Connect the remote head module in a remote I/O station and the personal computer (GT SoftGOT2000) directly with a USB cable.

For the details of the connection method, refer to the following.

☞ Page 297 Direct CPU connection (RS-232, USB)

■Setting on GT SoftGOT2000

Configure the settings as shown below.

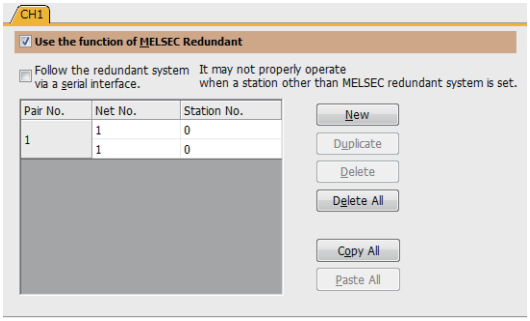
Setting item		Settings
Communication Setup	Connection	[USB]
	Type	[MELSEC iQ-R]

For the setting method, refer to the following.

☞ Page 79 [USB]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 0 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

GX Works3 Operating Manual

Monitoring using the Ethernet connection

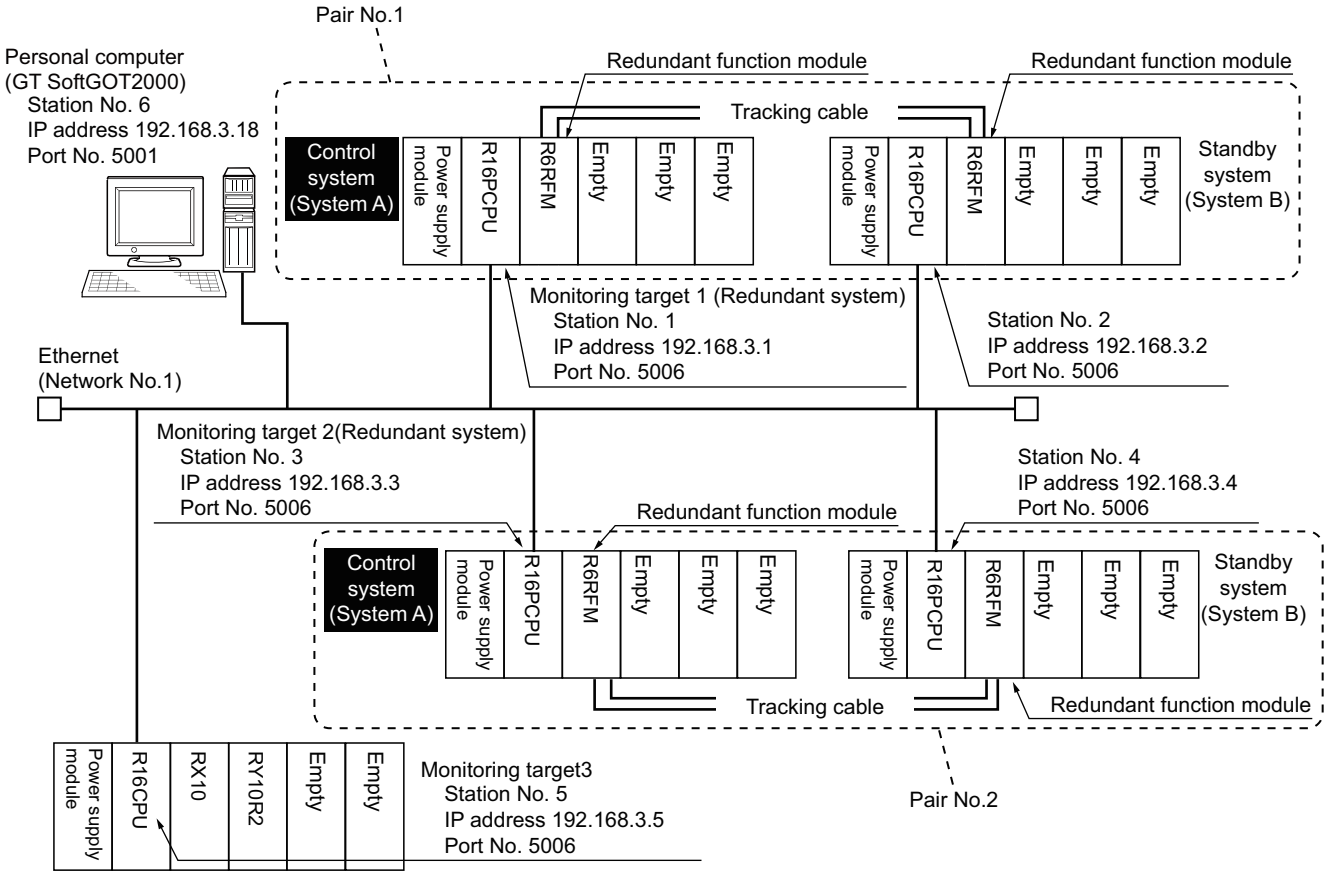
This section explains how to monitor a redundant system on the Ethernet network.

Built-in Ethernet port RCPU

The following explains how to monitor a redundant system by accessing the built-in Ethernet port RCPU in the redundant system.

■System configuration example

The following shows a configuration example of monitoring multiple redundant systems from one GT SoftGOT2000 module.



■Connection method

Connect the personal computer (GT SoftGOT2000) to the Ethernet network on which the target redundant systems reside.

For the details of the connection method, refer to the following.

☞ Page 227 Ethernet Connection

■Setting on GT SoftGOT2000

Configure the settings as shown below.

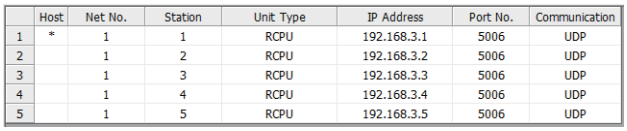
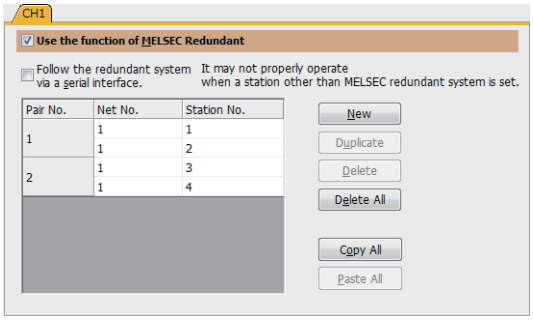
Setting item		Settings
Communication Setup	Connection	[Ethernet]
	Type	[MITSUBISHI ELECTRIC]

For the setting method, refer to the following.

☞ Page 83 [Ethernet]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	Connected Ethernet Controller Setting	Specify the PLCs (control system and standby system) in the redundant system. To also monitor controllers other than the redundant system, specify the controllers as well. According to the above system configuration example, configure the setting as shown below.  Host: * / Net No. / Station / Unit Type / IP Address / Port No. / Communication 1: 1, 1, RCPU, 192.168.3.1, 5006, UDP 2: 1, 2, RCPU, 192.168.3.2, 5006, UDP 3: 1, 3, RCPU, 192.168.3.3, 5006, UDP 4: 1, 4, RCPU, 192.168.3.4, 5006, UDP 5: 1, 5, RCPU, 192.168.3.5, 5006, UDP
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 1 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 2 for [Station No.] • Pair No. 2 (upper row): 1 for [Net No.], 3 for [Station No.] • Pair No. 2 (lower row): 1 for [Net No.], 4 for [Station No.]  CH1 Use the function of MELSEC Redundant Follow the redundant system via a serial interface. It may not properly operate when a station other than MELSEC redundant system is set. Pair No. / Net No. / Station No. 1: 1, 1 1, 2 2: 1, 3 1, 4 New Duplicate Delete Delete All Copy All Paste All For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)	Host station	Specify a PLC that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Host] • [Control System/Standby System]: [Control System]
	Other stations	Specify a PLC that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 1 to 3 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the standby system (system B), select [Not Use] for [Use of Control System IP Address] in the redundant setting.

If [Use] is selected, the GOT cannot switch the monitoring target automatically when system switching occurs.

For the setting method, refer to the following.

📖GX Works3 Operating Manual

■Precautions

For the precautions for the Ethernet connection, refer to the following.

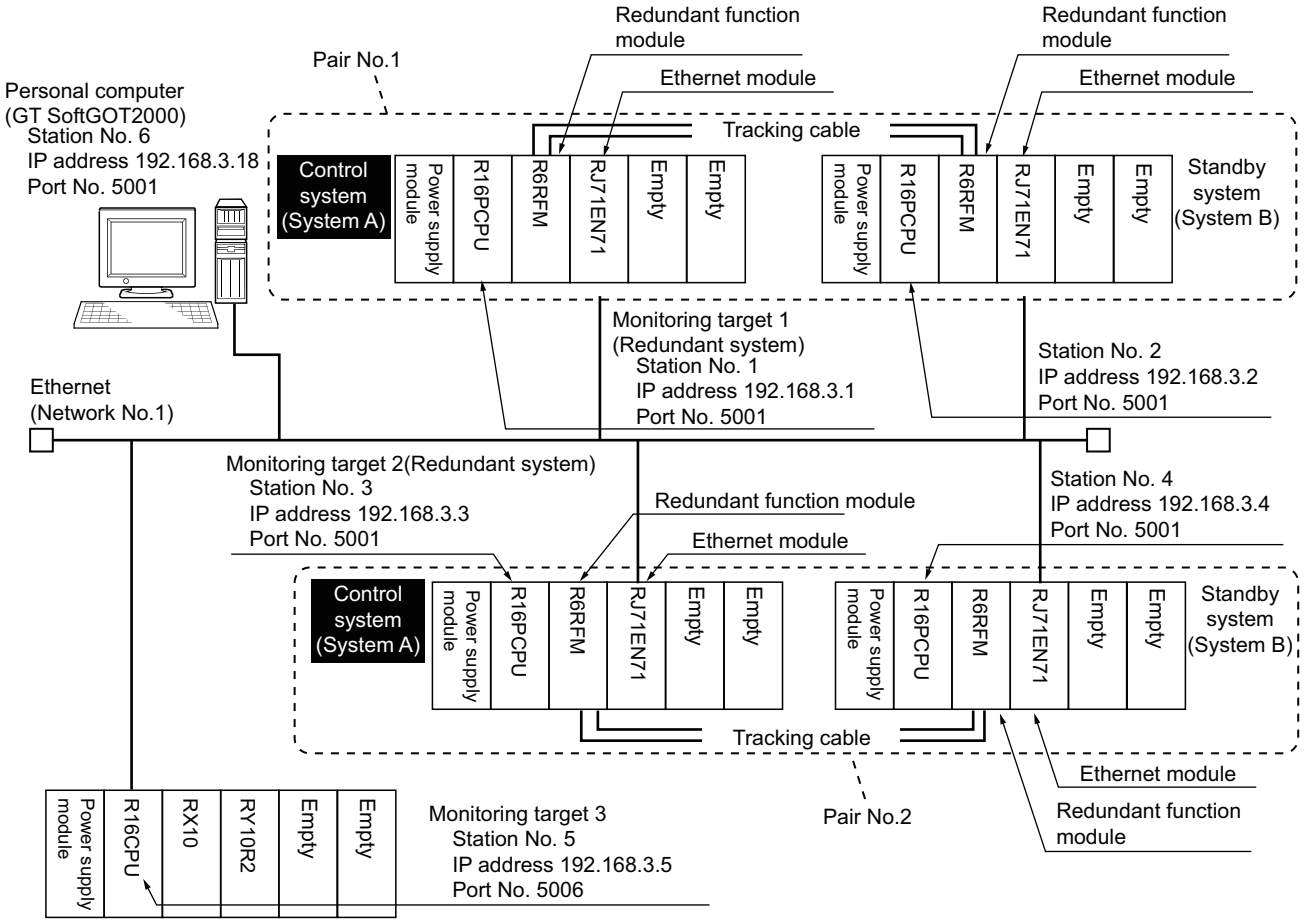
☞ Page 296 Precautions

Ethernet module

The following explains how to monitor a redundant system by accessing the Ethernet module in the redundant system.

■System configuration example

The following shows a configuration example of monitoring multiple redundant systems from one GT SoftGOT2000 module.



■Connection method

Connect the personal computer (GT SoftGOT2000) to the Ethernet network on which the target redundant systems reside.

For the details of the connection method, refer to the following.

☞ Page 227 Ethernet Connection

■Setting on GT SoftGOT2000

Configure the settings as shown below.

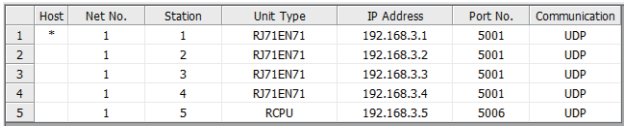
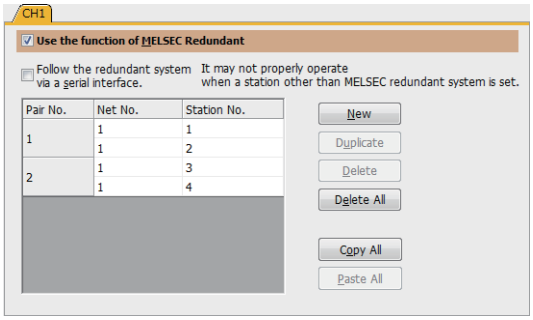
Setting item		Settings
Communication Setup	Connection	[Ethernet]
	Type	[MITSUBISHI ELECTRIC]

For the setting method, refer to the following.

☞ Page 83 [Ethernet]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	Connected Ethernet Controller Setting	Specify the PLCs (control system and standby system) in the redundant system. To also monitor controllers other than the redundant system, specify the controllers as well. According to the above system configuration example, configure the setting as shown below.  Host: *; Net No.: 1; Station: 1; Unit Type: RJ71EN71; IP Address: 192.168.3.1; Port No.: 5001; Communication: UDP Host: ; Net No.: 1; Station: 2; Unit Type: RJ71EN71; IP Address: 192.168.3.2; Port No.: 5001; Communication: UDP Host: ; Net No.: 1; Station: 3; Unit Type: RJ71EN71; IP Address: 192.168.3.3; Port No.: 5001; Communication: UDP Host: ; Net No.: 1; Station: 4; Unit Type: RJ71EN71; IP Address: 192.168.3.4; Port No.: 5001; Communication: UDP Host: ; Net No.: 1; Station: 5; Unit Type: RCPU; IP Address: 192.168.3.5; Port No.: 5006; Communication: UDP
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 1 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 2 for [Station No.] • Pair No. 2 (upper row): 1 for [Net No.], 3 for [Station No.] • Pair No. 2 (lower row): 1 for [Net No.], 4 for [Station No.]  CH1 Use the function of MELSEC Redundant Follow the redundant system via a serial interface. It may not properly operate when a station other than MELSEC redundant system is set. Pair No. / Net No. / Station No. 1: 1, 1 / 1, 2 2: 1, 3 / 1, 4 New Duplicate Delete Delete All Copy All Paste All For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)	Host station	Specify a PLC that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Host] • [Control System/Standby System]: [Control System]
	Other stations	Specify a PLC that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 1 to 3 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the standby system (system B), select [Not Use] for [Use of Control System IP Address] in the redundant setting.

If [Use] is selected, the GOT cannot switch the monitoring target automatically when system switching occurs.

For the setting method, refer to the following.

📖GX Works3 Operating Manual

■Precautions

For the precautions for the Ethernet connection, refer to the following.

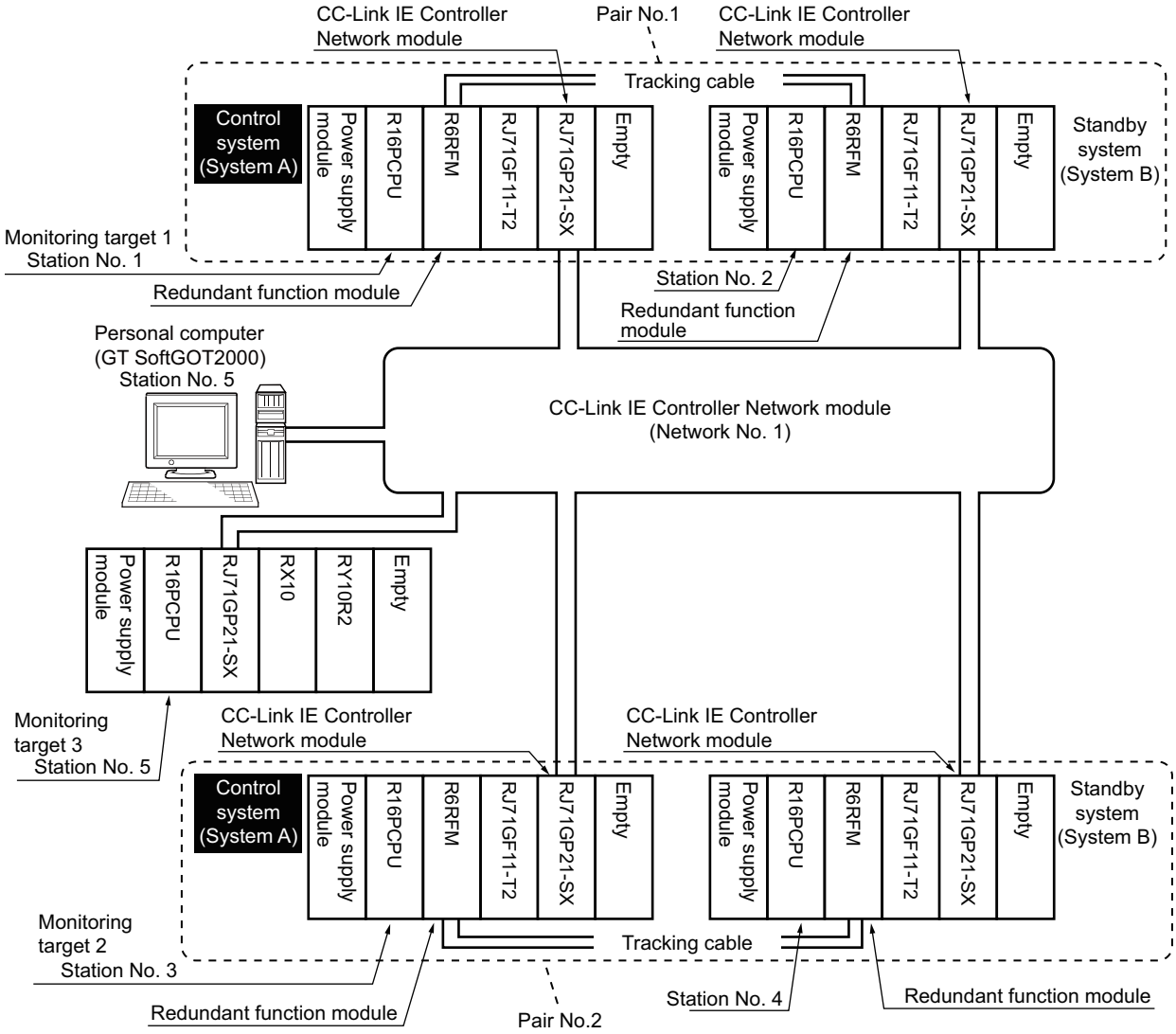
☞ Page 296 Precautions

Monitoring using the CC-Link IE Controller Network connection

This section explains how to monitor a redundant system on the CC-Link IE Controller Network.

System configuration example

The following shows a configuration example of monitoring multiple redundant systems from one GT SoftGOT2000 module.



Connection method

Connect GT SoftGOT2000 to the CC-Link IE Controller Network by using the CC-Link IE Controller Network interface board.

For the details of the connection method, refer to the following.

☞ Page 320 CC-Link IE Controller Network Connection

Setting on GT SoftGOT2000

Configure the settings as shown below.

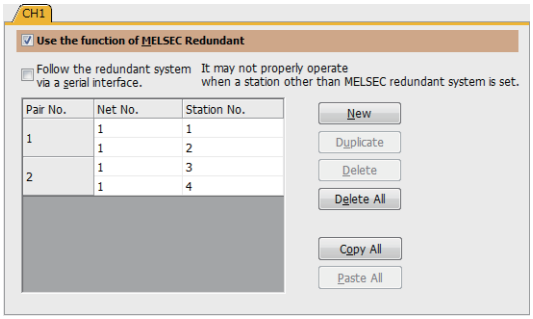
Setting item		Settings
Communication Setup	Connection	[CC IE Control]
	Type	CC-Link IE Controller Network interface board ([1st module] to [4th module])

For the setting method, refer to the following.

☞ Page 82 [CC IE Control] or [CC IE Field]

Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 1 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 2 for [Station No.] • Pair No. 2 (upper row): 1 for [Net No.], 3 for [Station No.] • Pair No. 2 (lower row): 1 for [Net No.], 4 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 1 or 3 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

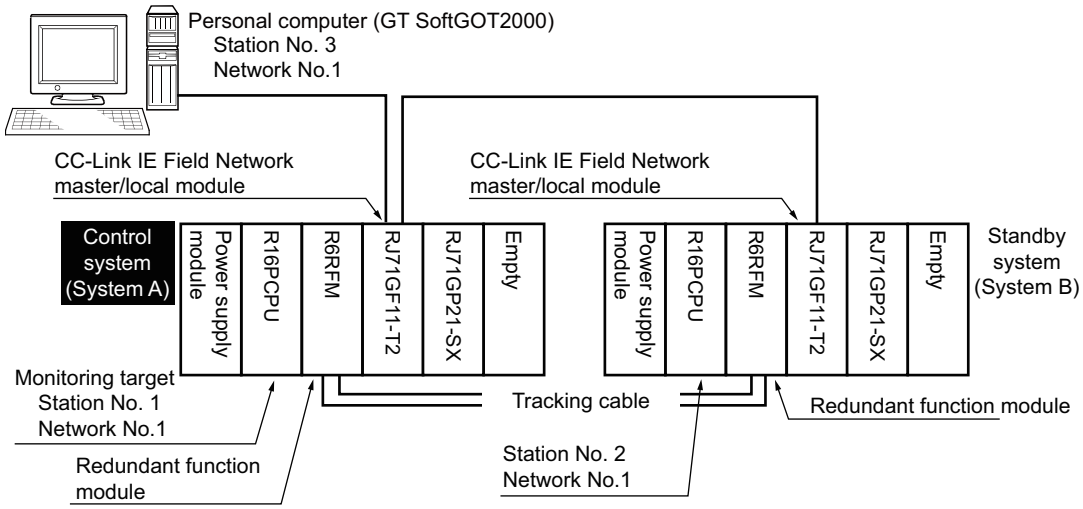
GX Works3 Operating Manual

Monitoring using the CC-Link IE Field Network connection

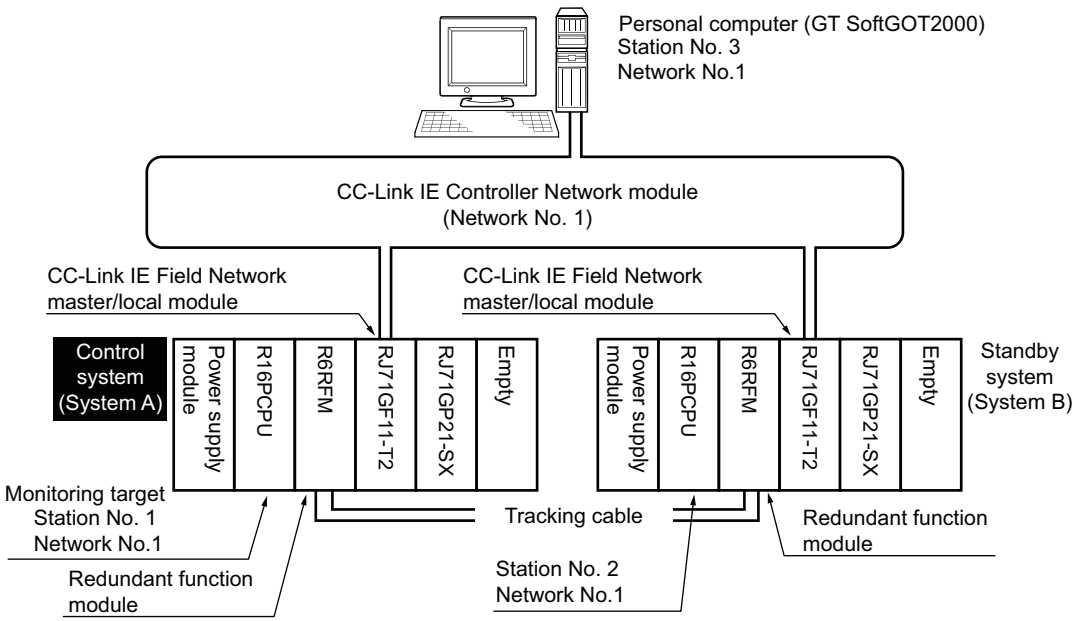
This section explains how to monitor a redundant system on the CC-Link IE Field Network.

The system configuration varies with the connection of the CC-Link IE Field Network.

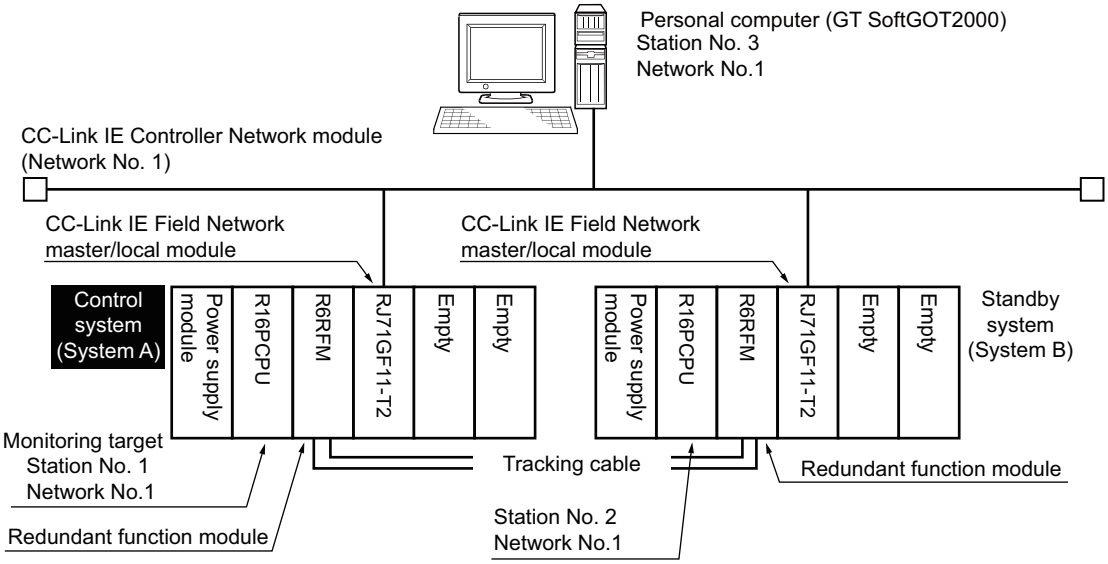
Line connection



Ring connection



Star connection

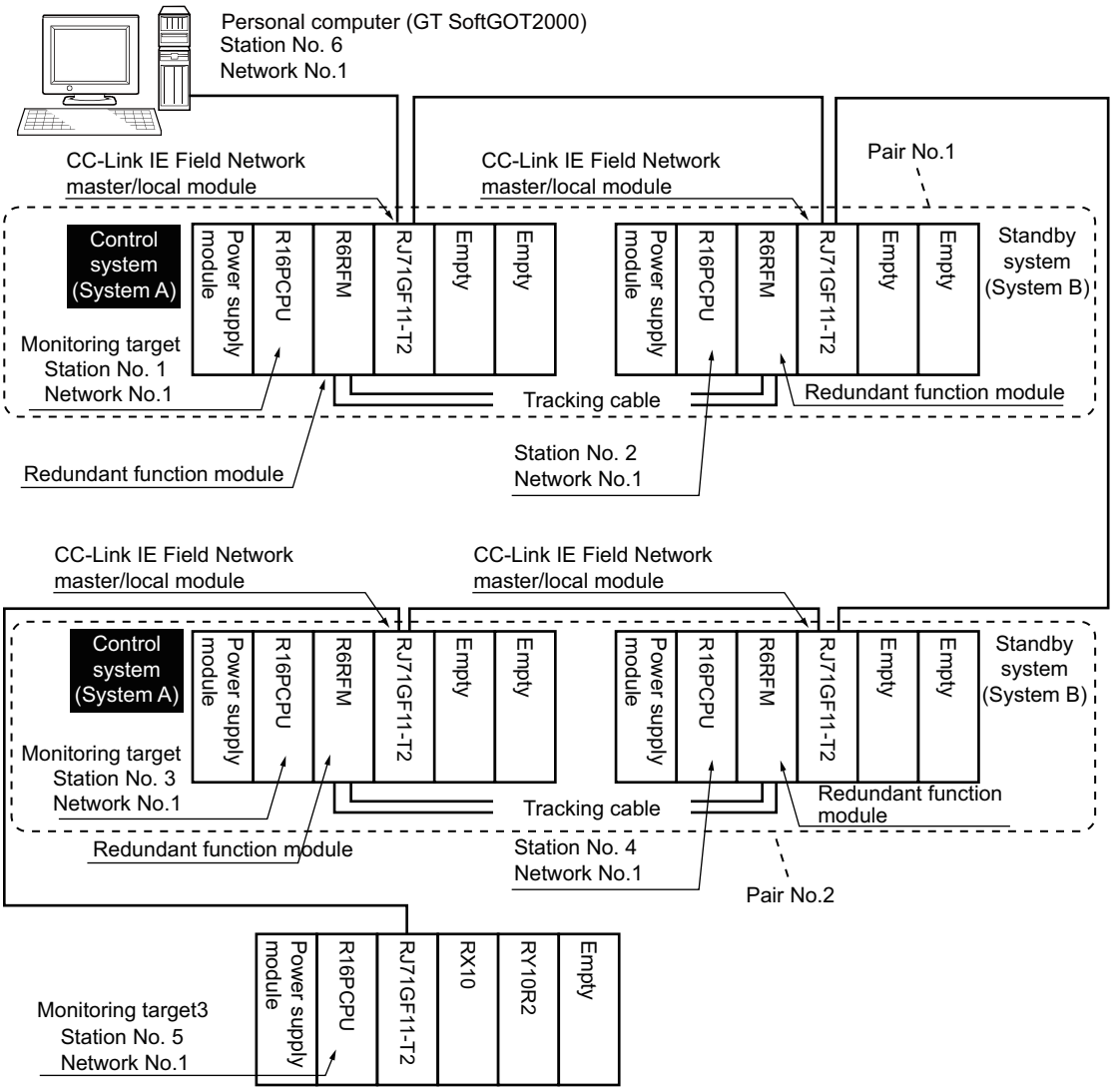


System configuration example

The following shows a configuration example of monitoring multiple redundant systems on the line-connected CC-Link IE Field Network from one GT SoftGOT2000 module.

Monitoring the redundant system on the ring-connected or star-connected network is also available.

The settings on GT SoftGOT2000 and GT Designer3 are the same as those for monitoring the redundant system on the line-connected network.



Connection method

Connect GT SoftGOT2000 to the CC-Link IE Field Network by using the CC-Link IE Field Network interface board.

For the details of the connection method, refer to the following.

☞ Page 320 CC-Link IE Controller Network Connection

Setting on GT SoftGOT2000

Configure the settings as shown below.

Setting item		Settings
Communication Setup	Connection	[CC IE Field]
	Type	CC-Link IE Field Network interface board ([1st module] to [4th module])

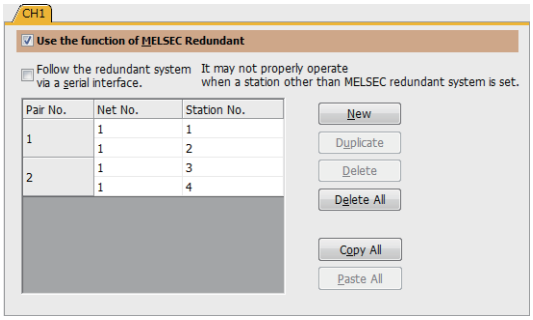
*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

☞ Page 82 [CC IE Control] or [CC IE Field]

Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 1 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 2 for [Station No.] • Pair No. 2 (upper row): 1 for [Net No.], 3 for [Station No.] • Pair No. 2 (lower row): 1 for [Net No.], 4 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 1 or 3 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

GX Works3 Operating Manual

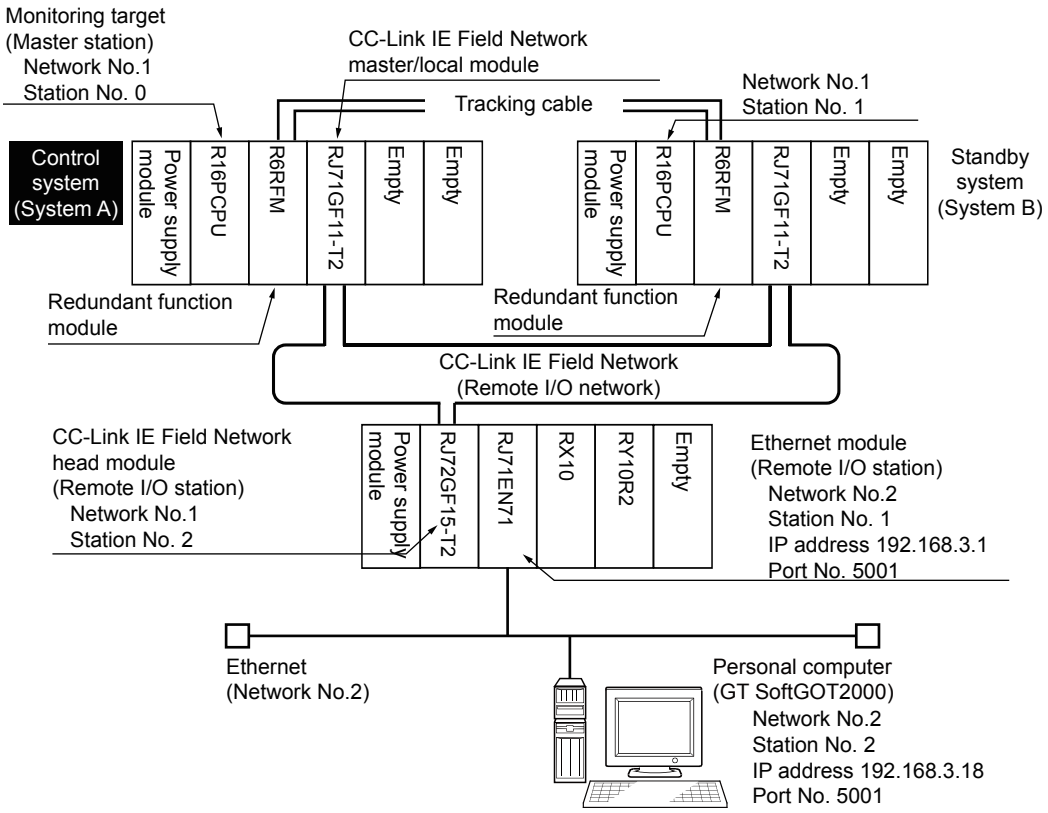
Monitoring through a remote I/O station on the CC-Link IE Field Network

This section explains how to monitor a redundant system through a remote I/O station on the CC-Link IE Field Network.
GT SoftGOT2000 accesses the Ethernet module or serial communication module in the remote I/O station.

Accessing the Ethernet module

■System configuration example

The following shows a configuration example of monitoring the redundant system through the Ethernet module in a remote I/O station.



■Connection method

Connect the Ethernet module in a remote I/O station and the personal computer (GT SoftGOT2000) by the Ethernet connection.

For the details of the connection method, refer to the following.

☞ Page 227 Ethernet Connection

■Setting on GT SoftGOT2000

Configure the settings as shown below.

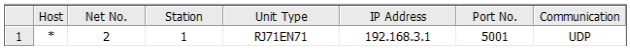
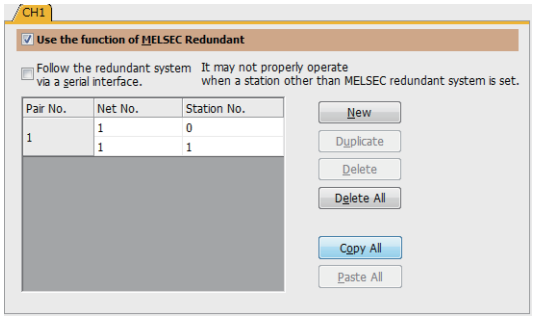
Setting item		Settings
Communication Setup	Connection	[Ethernet]
	Type	[MITSUBISHI ELECTRIC]

For the setting method, refer to the following.

☞ Page 83 [Ethernet]

■Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	Connected Ethernet Controller Setting	Set an Ethernet module as the relay station. According to the above system configuration example, configure the setting as shown below.  Host: * / Net No.: 2 / Station: 1 / Unit Type: RJ71EN71 / IP Address: 192.168.3.1 / Port No.: 5001 / Communication: UDP
	Routing Information	To monitor a PLC on another network, set the routing information. According to the above system configuration example, configure the setting as shown below. • [Transfer Net No.]: 1 • [Relay Net No.]: 2 • [Relay Station No.]: 1
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 1 for [Station No.]  CH1 Use the function of MELSEC Redundant Follow the redundant system via a serial interface. It may not properly operate when a station other than MELSEC redundant system is set. Pair No. / Net No. / Station No. 1 / 1 / 0 1 / 1 New Duplicate Delete Delete All Copy All Paste All For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

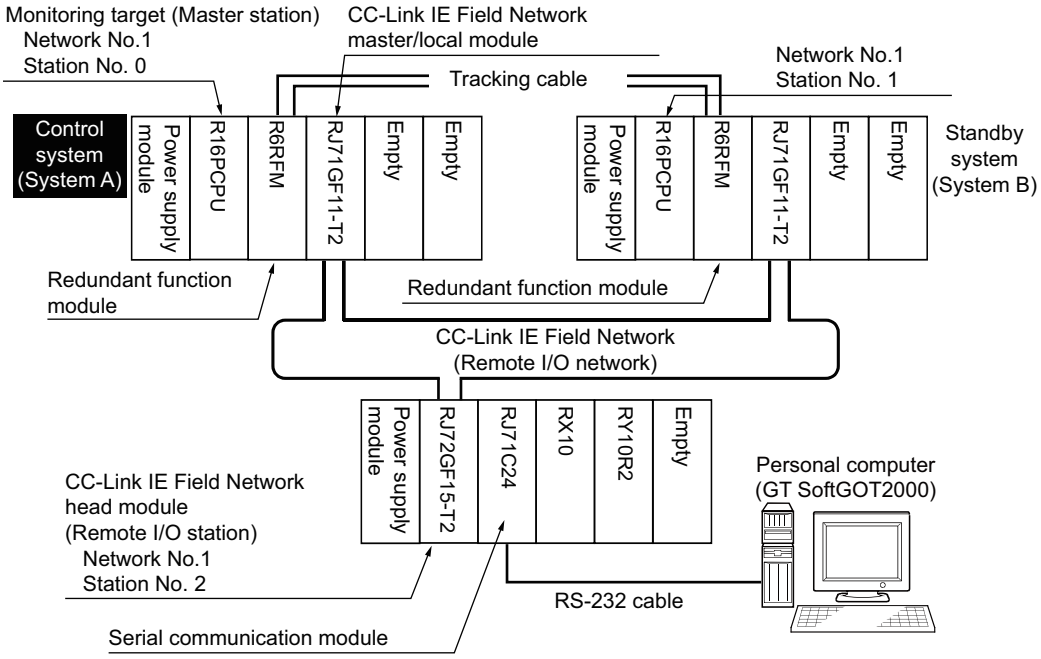
📖GX Works3 Operating Manual

Accessing the serial communication module

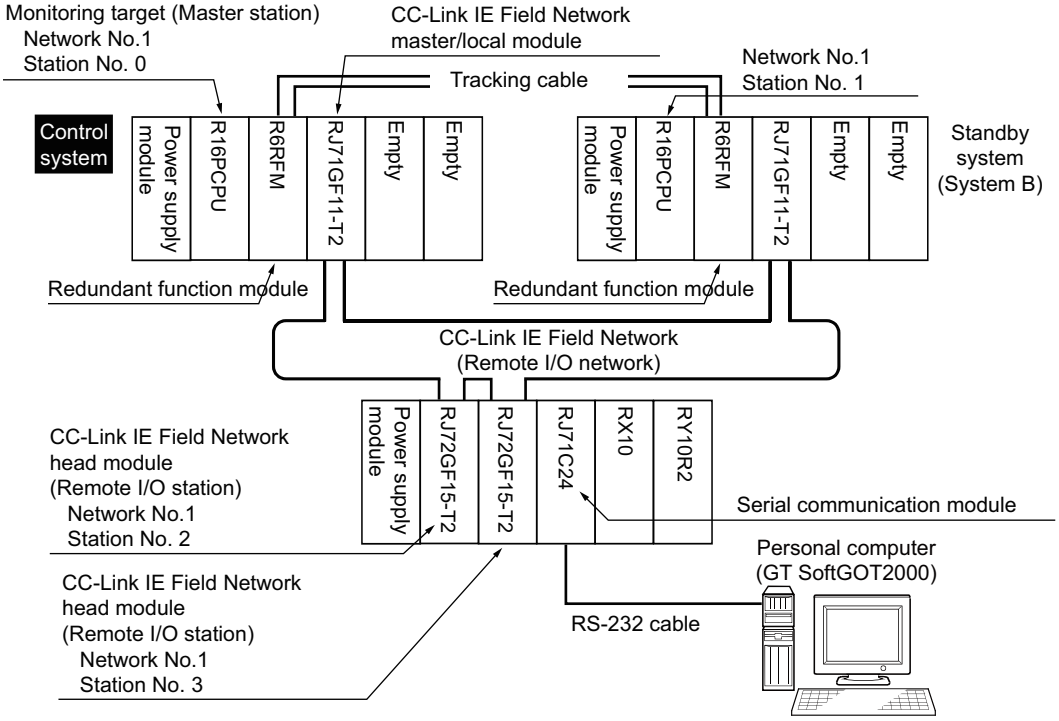
The following shows how to monitor a redundant system through the serial communication module in a remote I/O station.

■System configuration example

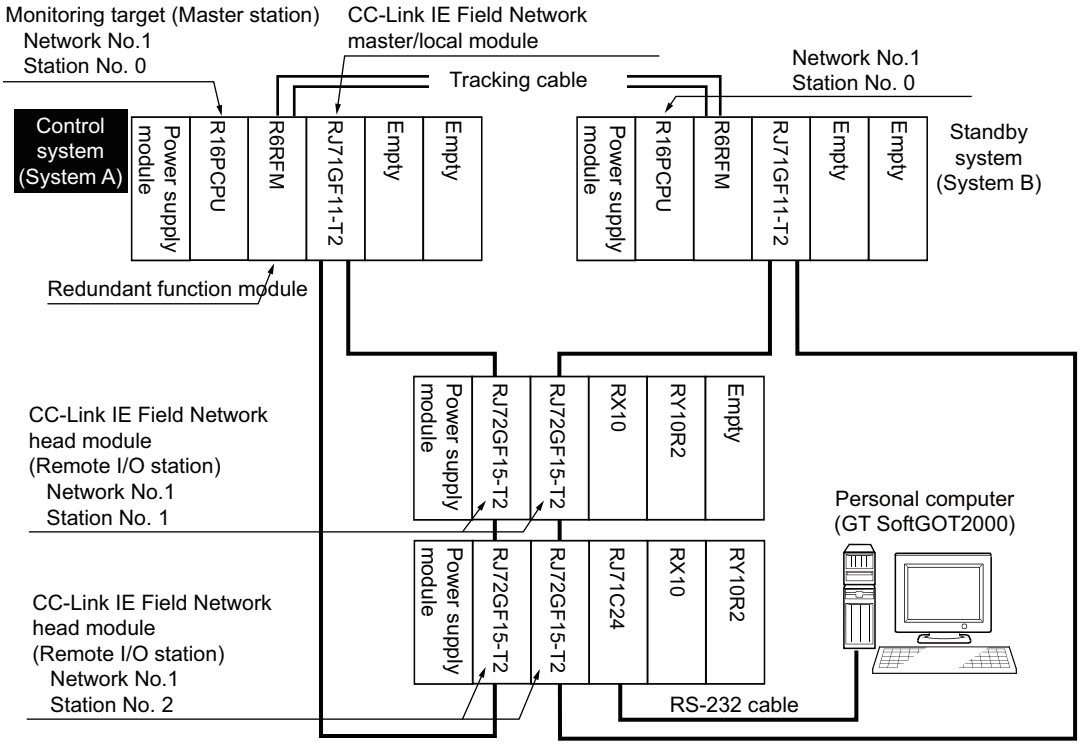
The following shows a configuration example of monitoring the redundant system (master station).



The following shows a configuration example of monitoring the redundant system comprising two remote head modules.



The following shows a configuration example of monitoring the redundant system using two network lines.



■Connection method

Connect the serial communication module in a remote I/O station and the personal computer (GT SoftGOT2000) with an RS-232 cable.

For the details of the connection method, refer to the following.

☞ Page 306 Serial Communication Connection

■Setting on GT SoftGOT2000

Configure the settings as shown below.

Setting item		Settings
Communication Setup	Connection	[C24]
	Type	[RJ71C24]

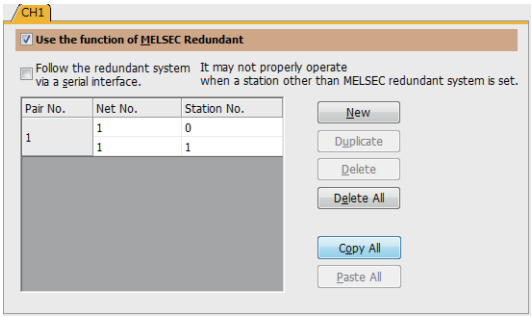
For the setting method, refer to the following.

☞ Page 80 [C24]

■Setting on GT Designer3

• Redundant system (master station) or redundant system comprising two remote head modules

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 1 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

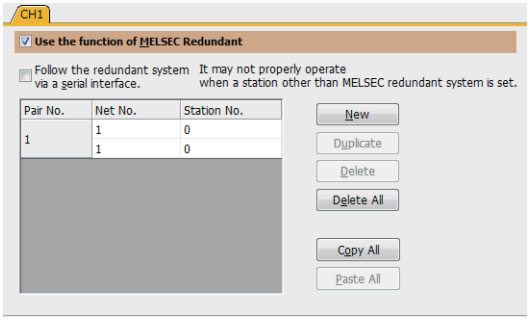
*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

• Redundant system using two network lines

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 0 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

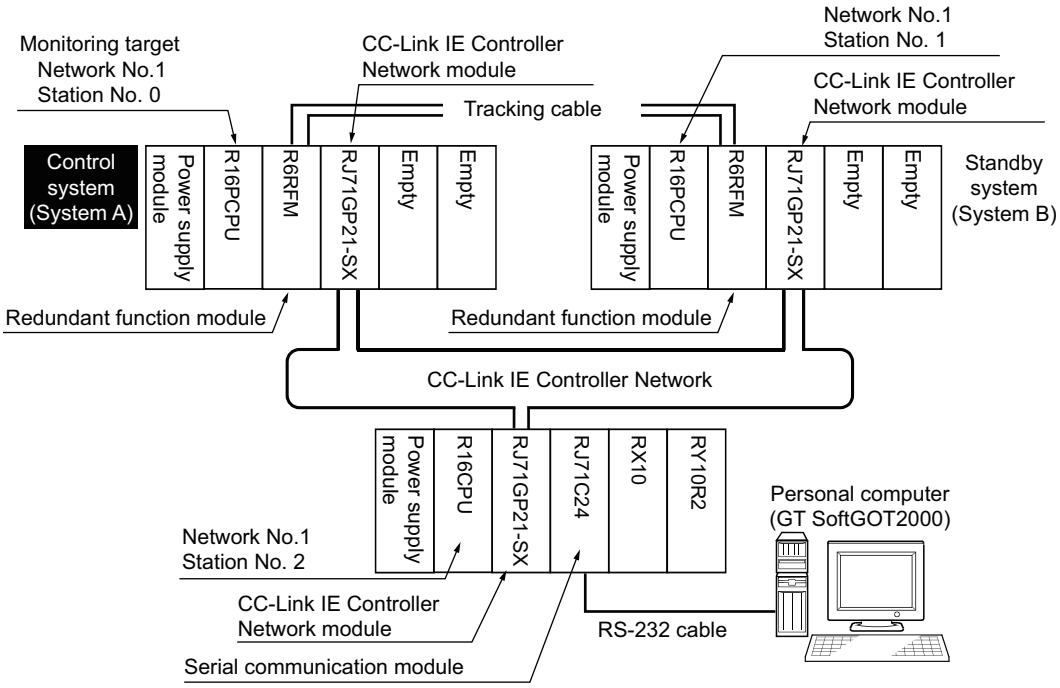
📖GX Works3 Operating Manual

Monitoring using the serial communication connection

This section explains how to monitor a redundant system (another station) by using the serial communication connection.

System configuration example

The following shows a configuration example of monitoring the redundant system (another station) through a serial communication module.



Connection method

Connect the serial communication module and the personal computer (GT SoftGOT2000) with an RS-232 cable.

For the details of the connection method, refer to the following.

☞ Page 306 Serial Communication Connection

Setting on GT SoftGOT2000

Configure the settings as shown below.

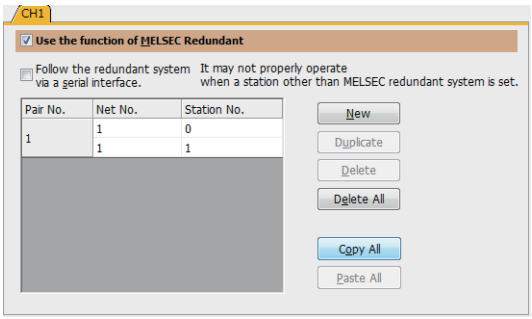
Setting item		Settings
Communication Setup	Connection	[C24]
	Type	[RJ71C24]

For the setting method, refer to the following.

☞ Page 80 [C24]

Setting on GT Designer3

Configure the settings as shown below.

Setting item		Settings
Controller Setting	Controller Type	[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
	MELSEC Redundant	Set a pair of PLCs to be monitored. According to the above system configuration example, configure the setting as shown below. • Pair No. 1 (upper row): 1 for [Net No.], 0 for [Station No.] • Pair No. 1 (lower row): 1 for [Net No.], 1 for [Station No.]  For the setting method, refer to the following. ☞ Page 219 MELSEC redundant setting
Device setting (Network setting)		Specify the PLC (another station) that performs control in the redundant system. *1 According to the above system configuration example, configure the setting as shown below. • [CPU No.]: 1 • [Host] or [Other]: [Other] • [Network No.]: 1 • [Station No.]: 0 • [Control System/Standby System]: [Control System]

*1 Monitoring devices of the standby system is also available.
To monitor devices of the standby system, select [Standby System] for [Control System/Standby System].

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Setting on the PLC side (GX Works3)

The setting of the redundant system must be configured on GX Works3.

For the setting method, refer to the following.

GX Works3 Operating Manual

Monitoring through a module on the redundant extension base unit

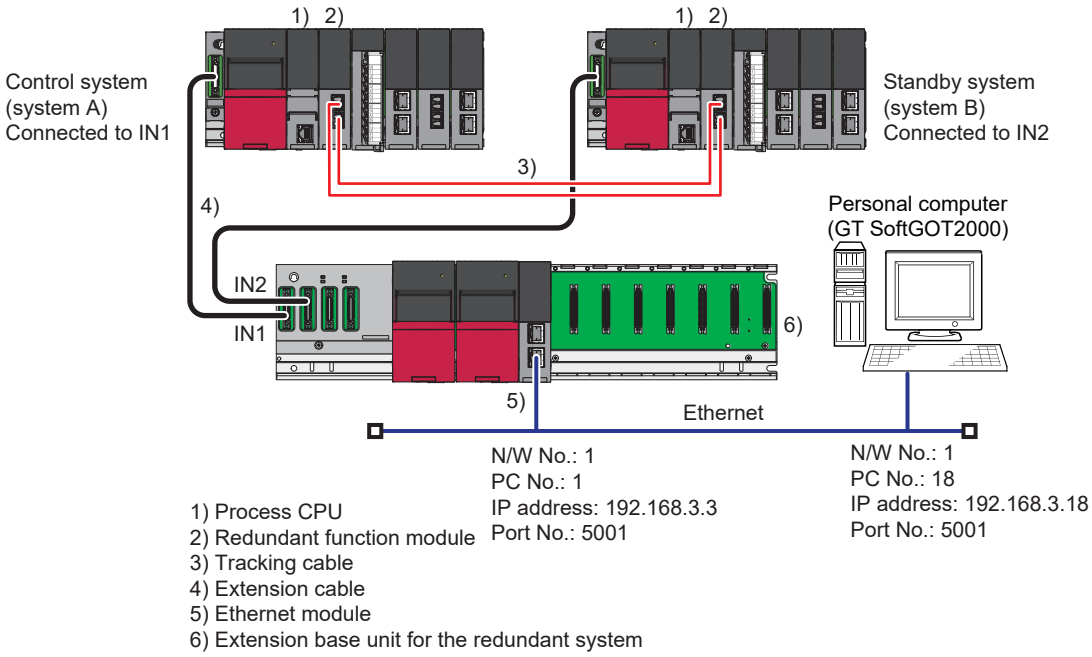
The following shows how to monitor a redundant CPU system through the Ethernet module or the serial communication module mounted on the redundant extension base unit.

☞ Page 197 Accessing the Ethernet module
☞ Page 198 Accessing the serial communication module

Accessing the Ethernet module

■System configuration example

The following shows a configuration example of monitoring the redundant CPU system through the Ethernet module mounted on the redundant extension base unit.



1) Process CPU
2) Redundant function module
3) Tracking cable
4) Extension cable
5) Ethernet module
6) Extension base unit for the redundant system

■Connection method

Connect the Ethernet module mounted on the redundant extension base unit to the personal computer (GT SoftGOT2000) with the Ethernet connection.

For the details of the connection method, refer to the following.

☞ Page 227 Ethernet Connection

■Setting on GT SoftGOT2000

Configure the settings as shown below.

Setting item		Settings
Communication Setup	Connection	[Ethernet]
	Type	[MITSUBISHI ELECTRIC]

For the setting method, refer to the following.

☞ Page 83 [Ethernet]

■GT Designer3 and PLC (GX Works3) settings

No redundant setting is required.

Connect the devices to an Ethernet module.

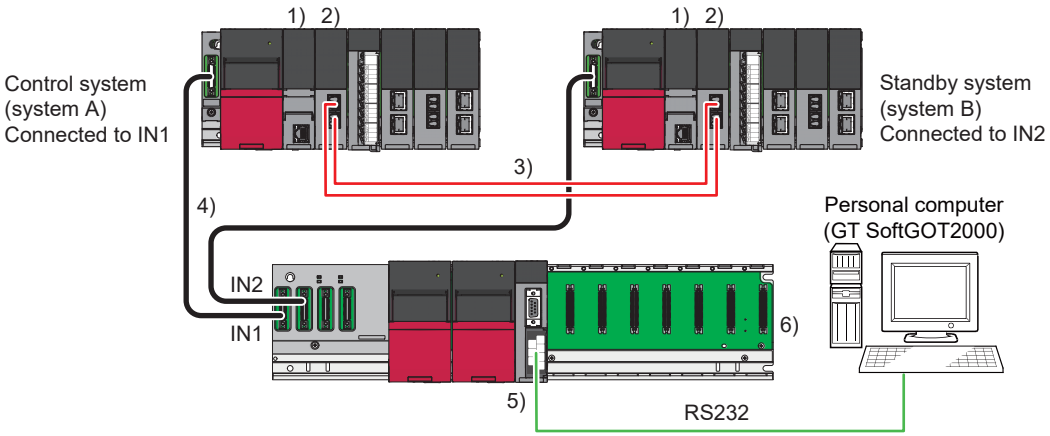
For the setting method, refer to the following.

☞ Page 227 Ethernet Connection

Accessing the serial communication module

■System configuration example

The following shows a configuration example of monitoring the redundant CPU system through the serial communication module mounted on the redundant extension base unit.



1) Process CPU
2) Redundant function module
3) Tracking cable
4) Extension cable
5) Serial communication module
6) Extension base unit for the redundant system

■Connection method

Connect the Ethernet module mounted on the redundant extension base unit to the personal computer (GT SoftGOT2000) with the RS-232 cable.

For the details of the connection method, refer to the following.

☞ Page 306 Serial Communication Connection

■Setting on GT SoftGOT2000

Configure the settings as shown below.

Setting item		Settings
Communication Setup	Connection	[C24]
	Type	[RJ71C24]

For the setting method, refer to the following.

☞ Page 80 [C24]

■GT Designer3 and PLC (GX Works3) settings

No redundant setting is required.

Connect the devices to a serial communication module.

For the setting method, refer to the following.

☞ Page 306 Serial Communication Connection

Precautions

Precautions for system switching

System switching may cause the communication route from GT SoftGOT2000 to the redundant system to be changed as shown below.

■System switching by a user-created sequence program

GT SoftGOT2000 does not change the communication route to monitor the control system after system switching.
No system alarm occurs.

■System switching due to cable disconnection or other accidental causes

GT SoftGOT2000 changes the communication route to monitor the control system after system switching.
A system alarm occurs. (Error code 450, "Path has changed or timeout occurred in redundant system.")

Precautions for the configuration and operation mode of a redundant system

In the following cases, a redundant system cannot be monitored normally, and a system alarm occurs. (Error code 451, "MELSEC redundant system settings and current config. do not match.")
The MELSEC redundant setting is inconsistent with the actual redundant system configuration.
The redundant system does not operate in the backup mode.

Precautions for changing the MELSEC redundant setting

When you change the MELSEC redundant setting, make sure to restart GT SoftGOT2000.
Otherwise, the new MELSEC redundant setting is not reflected to GT SoftGOT2000.

Precautions for monitoring controllers other than a redundant system when the MELSEC redundant setting is configured

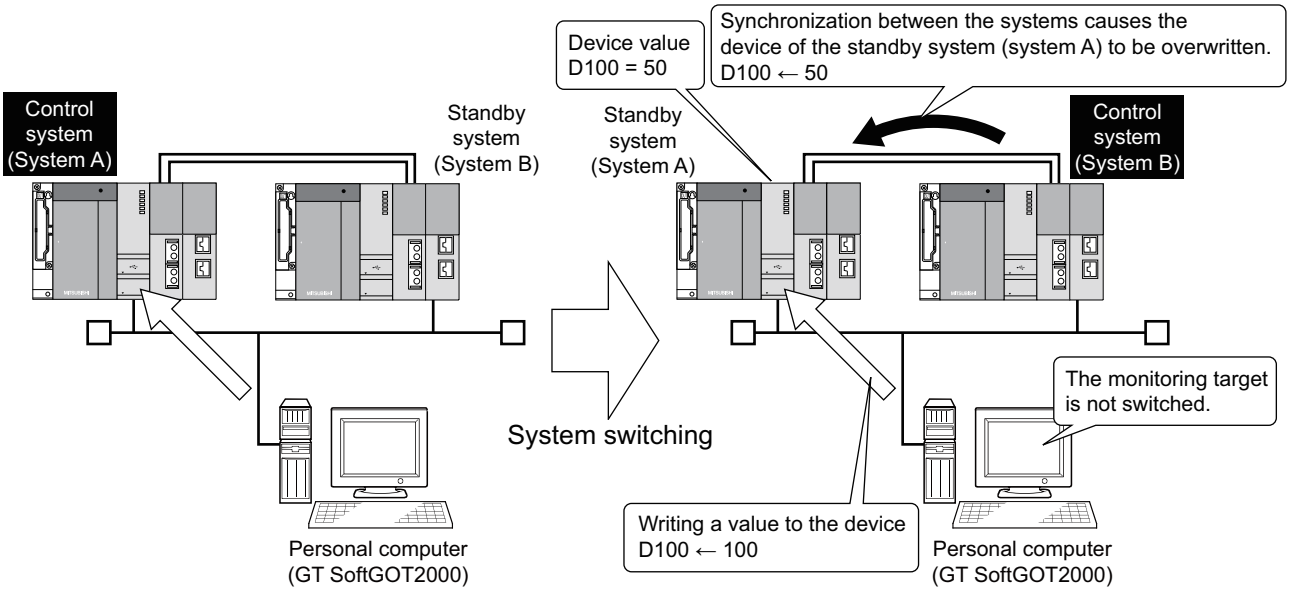
Even if controllers other than a redundant system are set as a pair in the MELSEC redundant setting, GT SoftGOT2000 is started without errors and operates normally.
However, if an error (such as power-off or communication timeout) occurs in the station that is specified in the MELSEC redundant setting, GT SoftGOT2000 may not behave according to the setting.

Precautions for monitoring a redundant system without configuring the MELSEC redundant setting

Without the MELSEC redundant setting, GT SoftGOT2000 does not switch the monitoring target automatically when system switching occurs in the redundant system.

Even if GT SoftGOT2000 writes data to a device of the standby system after system switching, the written data is not reflected to the device because the standby system synchronizes to the control system.

As GT SoftGOT2000 has written data to the device of the standby system successfully, a specific system alarm does not occur. (Error code 315, "Device writing error. Correct device.")



Using a script to switch the monitoring target at system switching

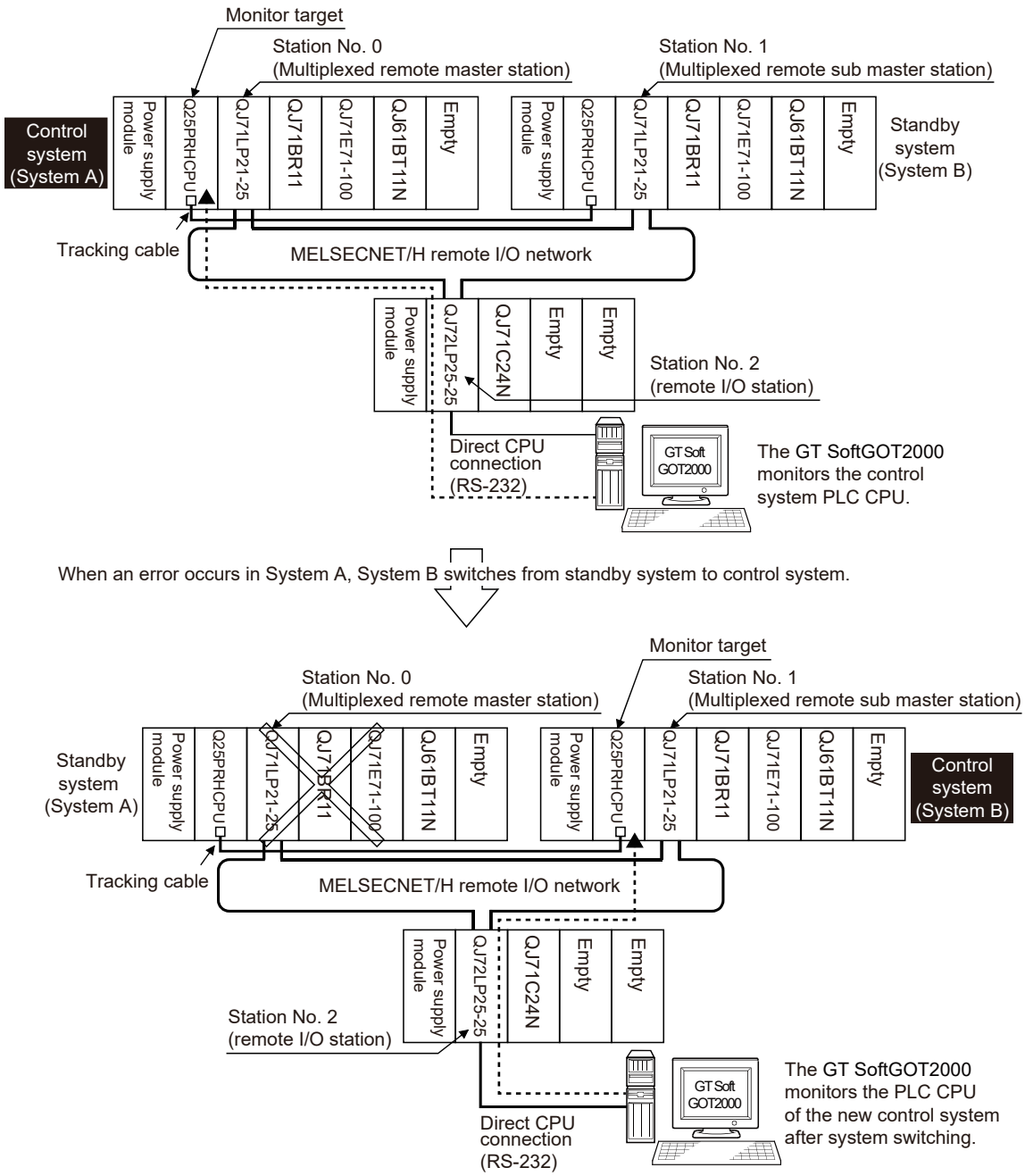
When monitoring the redundant system (RCPU), do not use a script to switch the monitoring target at system switching.

Doing so causes GT SoftGOT2000 to monitor the control system after system switching incorrectly.

3.5 How to Monitor the Redundant System (QCPU)

You can monitor a redundant system on GT SoftGOT2000 by specifying the control system and the standby system.
When system switching occurs in the redundant system, the standby system takes over the control to continue the system operation.
GT SoftGOT2000 switches the monitoring target automatically upon system switching.
To achieve this behavior, configure the relevant settings on GT Designer3.

☞ Page 219 MELSEC redundant setting

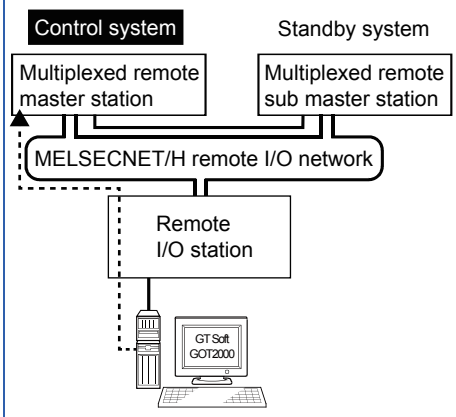
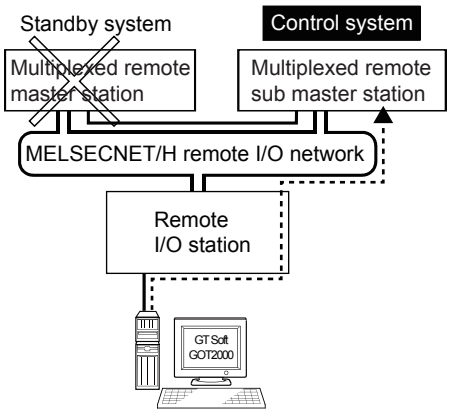
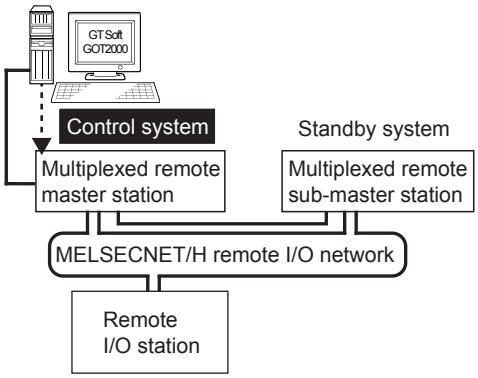
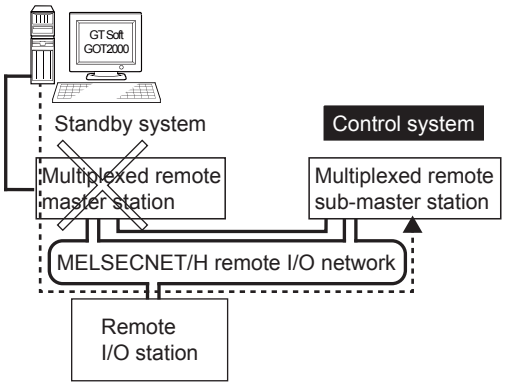
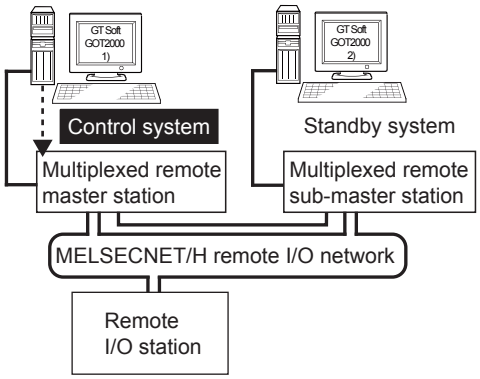
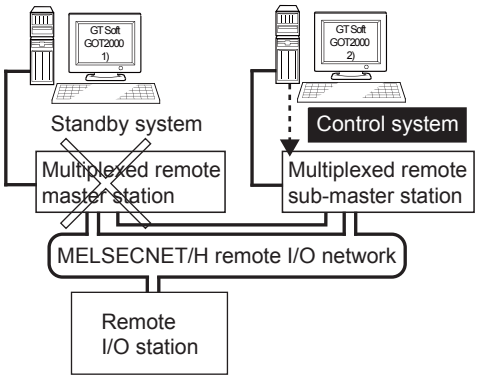


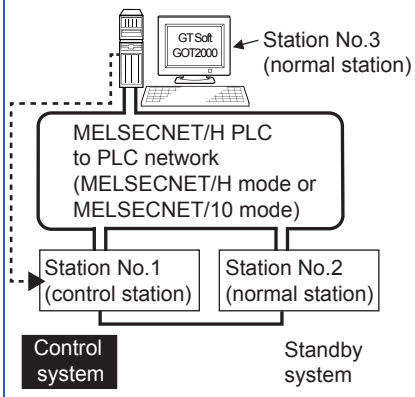
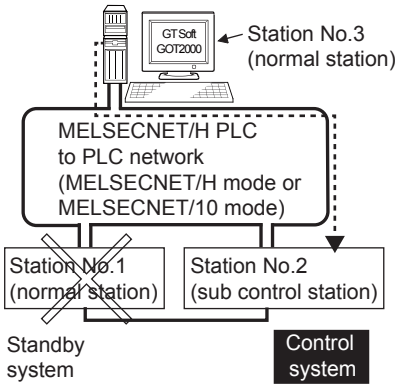
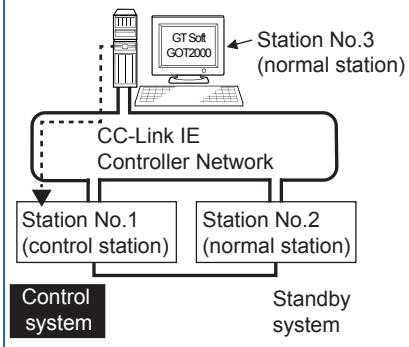
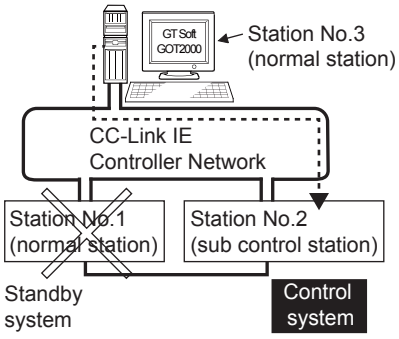
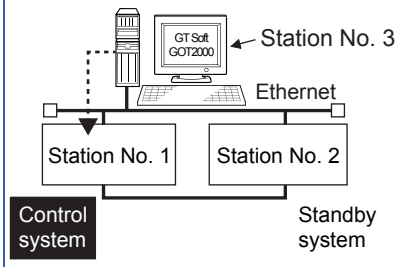
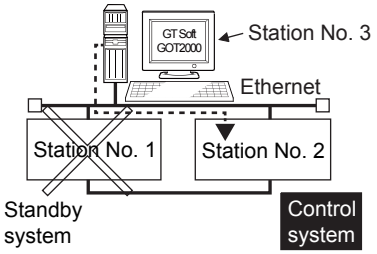
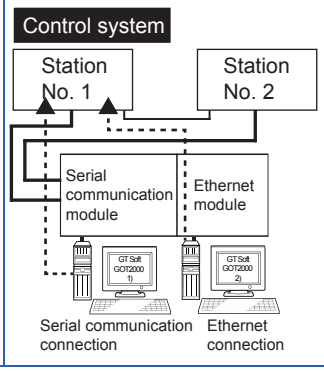
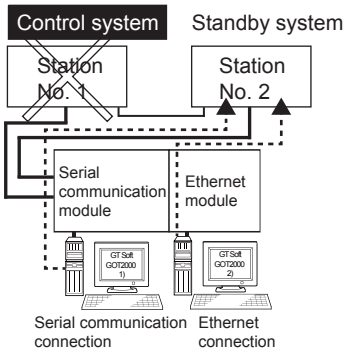
The following lists the connection types available for the redundant system (QCPU).

Connection type		Reference
Connection to remote I/O station in MELSECNET/H network system		☞ Page 206 Connection to remote I/O station in MELSECNET/H network system
Direct CPU connection (RS-232, USB)		☞ Page 207 Direct CPU connection (RS-232, USB)
MELSECNET/H connection, MELSECNET/10 connection (Network system)		☞ Page 214 MELSECNET/H and MELSECNET/10 connections (network systems)
CC-Link IE Controller Network connection (Network system)		☞ Page 215 CC-Link IE Controller Network connection (network system)
Ethernet connection		☞ Page 216 Ethernet connection
Connection to the redundant type extension base unit	Serial communication connection (Serial communication module mounted on the redundant type extension base unit)	☞ Page 217 Serial communication connection (Serial communication module mounted on the redundant type extension base unit)
	Ethernet connection (Ethernet module mounted on the redundant type extension base unit)	☞ Page 218 Ethernet connection (Ethernet module mounted on the redundant type extension base unit)

For details of PLC CPUs that can be monitored in each connection method of GT SoftGOT2000, refer to the following.
☞ Page 114 Controllers that can be monitored by connection type

The following table shows the features of each connection method.

Connection type	Before system switching	After system switching
• Direct CPU connection (RS-232) (Remote I/O station of MELSECNET/H network system)		 The monitoring target is automatically changed to the control system PLC CPU.
• Direct CPU connection (RS-232, USB)		 The MELSEC redundant setting enables GT SoftGOT2000 to monitor the control system after system switching automatically. *1
	 Monitor the PLC CPU of the control system by GT SoftGOT2000 1).	 Monitor the PLC CPU of the control system by GT SoftGOT2000 2).

Connection type	Before system switching	After system switching
• MELSECNET/H connection, MELSECNET/10 connection (Network system)		 The MELSEC redundant setting enables GT SoftGOT2000 to monitor the control system after system switching automatically. *2
• CC-Link IE Controller Network connection (Network system)		 The MELSEC redundant setting enables GT SoftGOT2000 to monitor the control system after system switching automatically. *2
• Ethernet connection		 The MELSEC redundant setting enables GT SoftGOT2000 to monitor the control system after system switching automatically. *2
• Serial communication connection (Serial communication module mounted on the redundant type extension base unit) • Ethernet connection (Ethernet module mounted on the redundant type extension base unit)		

*1 To monitor the control system after system switching without the MELSEC redundant setting, disconnect the cable from the PLC that goes on standby, and then connect the cable to the PLC that takes over the control.

*2 To monitor the control system after system switching without the MELSEC redundant setting, refer to the following.

☞ Page 221 Switch the monitor target to the control system using the script function

Point

Precautions for monitoring a redundant system

• System switching in the redundant system may cause a system alarm on the GOT.

When the MELSEC redundant setting is configured: Error code 450, "Path has changed or timeout occurred in redundant system."

When the MELSEC redundant setting is not configured: Error code 402, "Communication timeout. Confirm communication pathway or modules."

However, even if the error occurs, the GT SoftGOT2000 automatically resumes monitoring and there are no problems in the monitoring operation.

• The system alarm is displayed when the system is switched due to cable disconnection etc. (when the path is changed).

The system alarm is not displayed when the system is switched by the user.

• Without the MELSEC redundant setting, GT SoftGOT2000 does not switch the monitoring target automatically when system switching occurs in the redundant system.

When the GT SoftGOT2000 is connected to the standby system, data written to a device are overwritten by the data of the control system, failing to be reflected.

In this case, when data are written to a device in the standby system normally, the system alarm "315 Device writing error.

Correct device." is not detected.

• Do not check-mark the [Comm. Error Dialog] in [Communication Setup] from [Online], for GT SoftGOT2000.

If [Comm. Error Dialog] is checked, a communication error dialog appears and the monitor stops when some error occurs in the communication path.

☞ Page 74 Setting the Communication Method

• To monitor the redundant system (QCPU) by using the MELSECNET/H connection, the QCPU must have function version D or later and a serial number starting with 07102 or later.

Also, use GX Developer of Version 8.29F or later.

• If a system switching occurs while an extended function such as a sequence program monitor is being used, a message saying [Unable to communicate with CPU.] appears.

• For the MELSECNET/H connection or MELSECNET/10 connection, if the control station on the MELSECNET/H network or MELSECNET/10 network fails and is taken over by a station other than the redundant system (QCPU), a timeout occurs as a system alarm on the GOT.

If this occurs, the monitor display speed may slow down.

• In the direct CPU connection (RS-232, USB), GT SoftGOT2000 fails to automatically change the monitoring target in the following cases.

When the power supply to the CPU where the GT SoftGOT2000 is connected is OFF

When the cable connecting the GT SoftGOT2000 with the CPU is broken

When the tracking is disabled

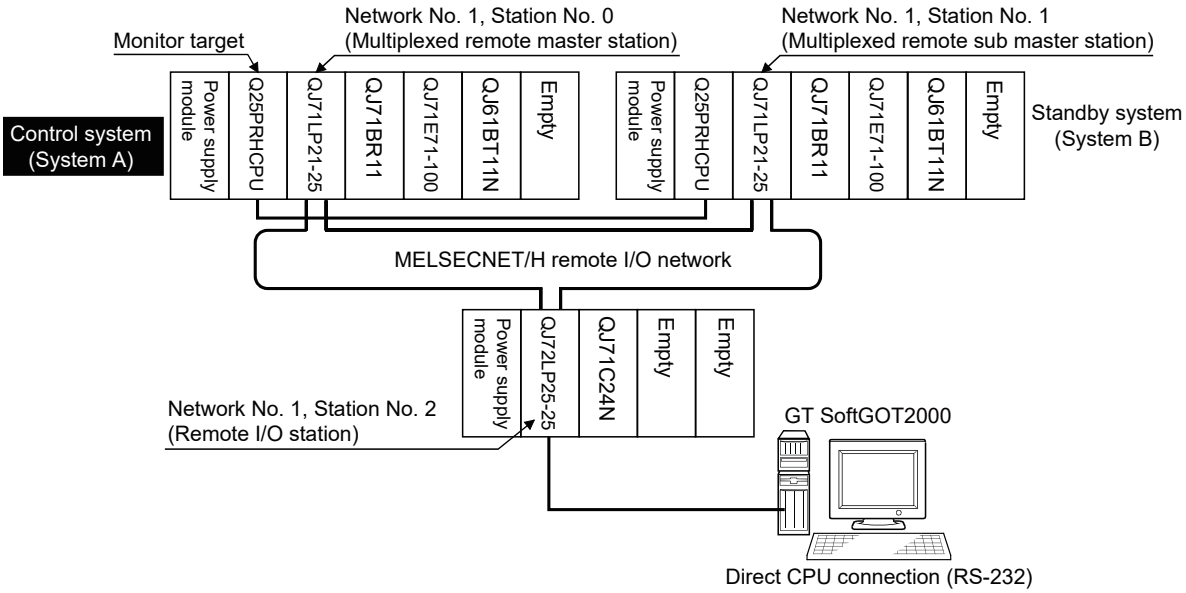
• Even if the MELSEC redundant setting is configured for a system without redundancy, GT SoftGOT2000 is started without errors and operates normally.

However, if an error (such as power-off or communication timeout) occurs in the station that is specified in the MELSEC redundant setting, GT SoftGOT2000 may not behave according to the setting.

Connection to remote I/O station in MELSECNET/H network system

This section explains the direct CPU connection (RS-232) used to connect GT SoftGOT2000 and the remote I/O station of the MELSECNET/H network system.

The following shows an example of connecting the GT SoftGOT2000 to the remote I/O station of the MELSECNET/H network system.



Connection method

Connect the GT SoftGOT2000 to the RS-232 interface of the network module (QJ72LP25-25, QJ72LP25G, QJ72BR15) on the remote I/O station of the MELSECNET/H network system.

Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Host	Host
	Remote master station	Other (NW No. 1 (network No. of remote I/O network), Station No. 0 (master station))
MELSEC Redundant		Do not set the item.

In this case, the GT SoftGOT2000 monitoring is performed by transient transmission of the MELSECNET/H network system. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU.

For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GT SoftGOT2000 can monitor link devices B and W of the host station set in the MELSECNET/H network.

Switching the monitoring target when system switching occurs in the redundant system

When the system switching occurs, the multiplexed remote sub master station switched to the control system takes over the master operation of MELSECNET/H.

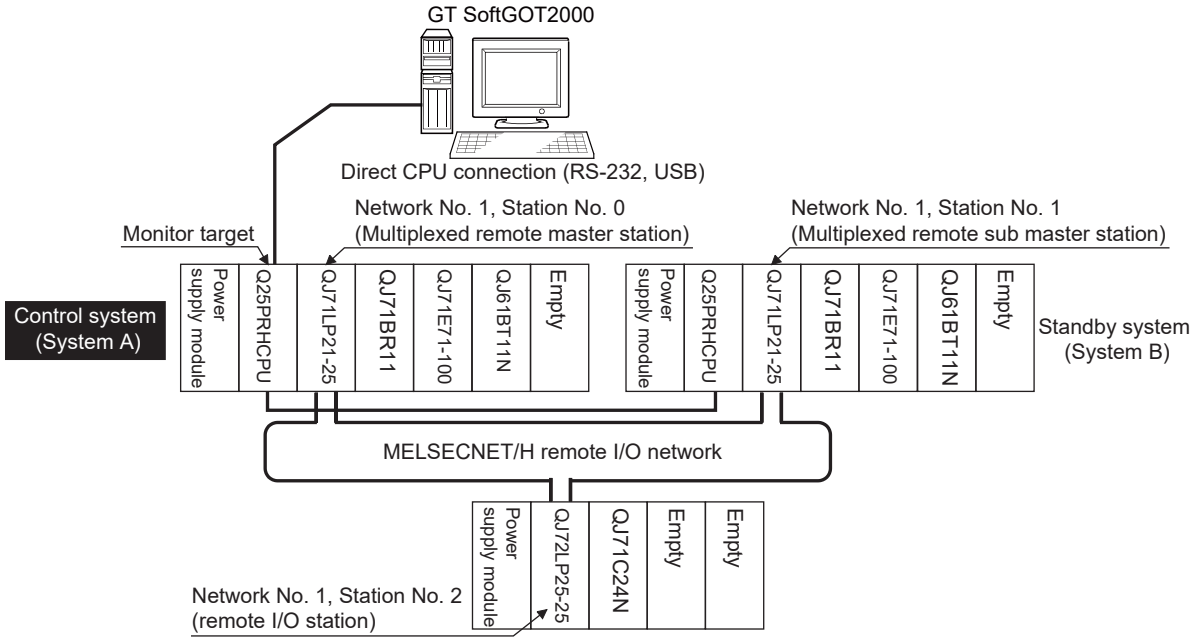
Since the GT SoftGOT2000 monitors the master station, the monitoring target is automatically changed to the PLC CPU that is operating as the master.

Direct CPU connection (RS-232, USB)

This section describes the direct CPU connection (RS-232, USB) used to connect GT SoftGOT2000 and a PLC CPU in the redundant system.

For the direct CPU connection (RS-232, USB), use one or two GT SoftGOT2000.

When using one GT SoftGOT2000



■Connection method

Connect GT SoftGOT2000 to the control system CPU module (Q12PRHCPU, Q25PRHCPU) of the redundant system using an RS-232 cable or USB cable.

■Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Host	Host
MELSEC Redundant		☞ Page 219 MELSEC redundant setting

■Switching the monitoring target when system switching occurs in the redundant system

When system switching occurs, the standby PLC (another station) takes over the host station operation.

Since the GT SoftGOT2000 monitors the control system, the monitoring target is automatically changed to other station.

Point

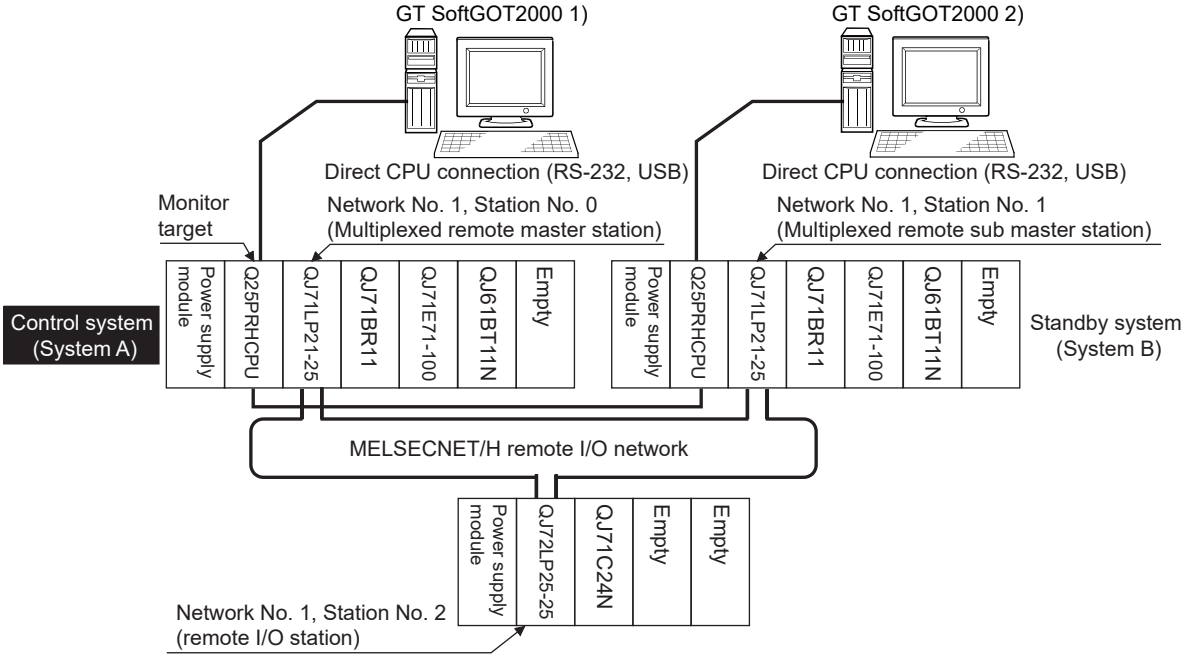
When monitoring the control system without configuring the MELSEC redundant setting

Without the MELSEC redundant setting, GT SoftGOT2000 cannot switch the monitoring target automatically when system switching occurs. Therefore, even after system switching, GT SoftGOT2000 still monitors the PLC (host station).

As a contermeasure, change the cable connection from the PLC CPU in the previous control system to the control system after system switching.

When using two GT SoftGOT2000

Connect a GT SoftGOT2000 module to each PLC to monitor the control system after system switching.



■Connection method

Connect GT SoftGOT2000 and the PLCs (Q12PRHCPU, Q25PRHCPU) of the control system and standby system in the redundant system using an RS-232 cable or USB cable.

■Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Host	Host
MELSEC Redundant		Do not set the item.

■Switching the monitoring target when system switching occurs in the redundant system

When the system switching occurs, the GT SoftGOT2000 cannot change the monitor target automatically in response to the system switching.

The GT SoftGOT2000 that is connected to the control system CPU module after system switching continues the monitoring. Different from the case using one GT SoftGOT2000, no cable reconnection is required.

Point

To monitor the control system after system switch automatically with one GT SoftGOT2000 module, configure the MELSEC redundant setting.

☞ Page 219 MELSEC redundant setting

Precautions for connecting a PLC in the redundant system by the direct CPU connection (RS-232, USB) without configuring the MELSEC redundant setting

As the GT SoftGOT2000 monitors exclusively the PLC CPU that is directly connected to, the monitor target cannot be changed in response to the system switching of the redundant system.

To change the target monitor in response to the system switching, change the target of the connection cable between the GT SoftGOT2000 and PLC CPU to the other PLC CPU, or configure the system using GT SoftGOT2000 connected to each PLC CPU.

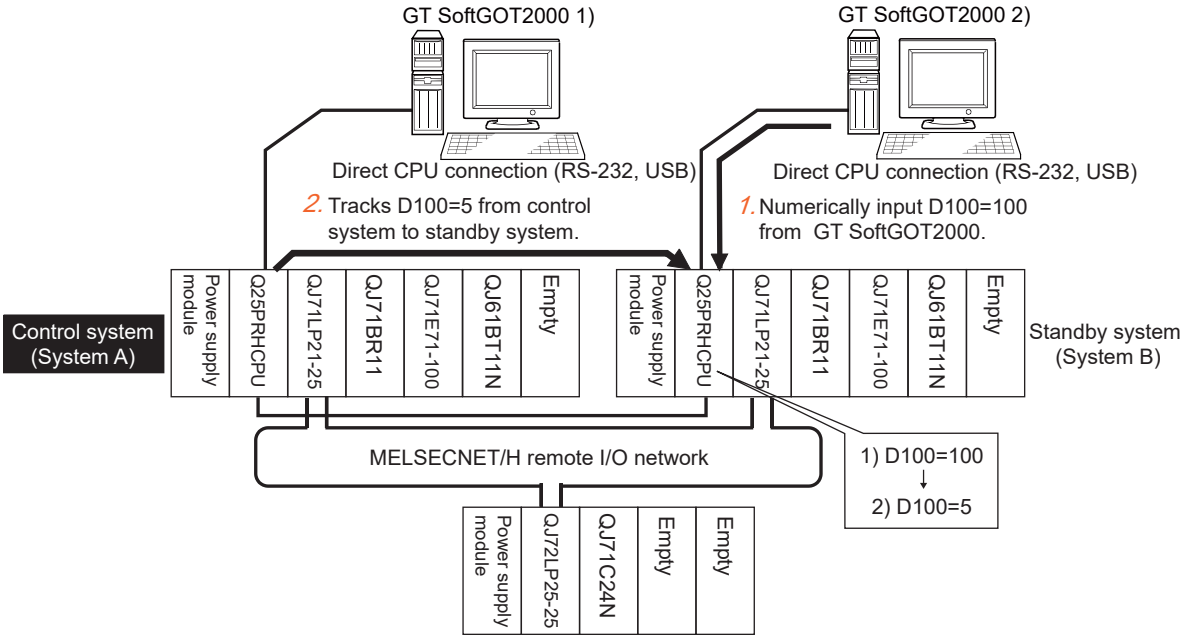
In direct CPU connection (RS-232, USB), when monitoring a PLC in the redundant system, only the PLC that is directly connected to the GT SoftGOT2000 can be monitored.

When connected to the standby system PLC CPU, the writing of the GT SoftGOT2000 to a device in the connected PLC CPU is not reflected.

Design a monitor screen that disables writing to the standby system.

In the redundant system, the tracking function transfers device data from control system to standby system.

When the tracking function is enabled, the device value of the standby system PLC CPU is overwritten by the device value transferred from the control system to the standby system even if the GT SoftGOT2000 writes to the standby system PLC CPU (Numerical input, Ascii input, Script, Recipe, or others).



As countermeasures to the above, perform the following.

Set a monitor screen indicating that the standby system PLC CPU is connected to GT SoftGOT2000.

To display such a screen when connecting GT SoftGOT2000 to the standby system PLC CPU, use special relay SM1515 (Control status identification flag) of the PLC CPU.

(When SM1515 is off, the standby system PLC CPU is connected.)

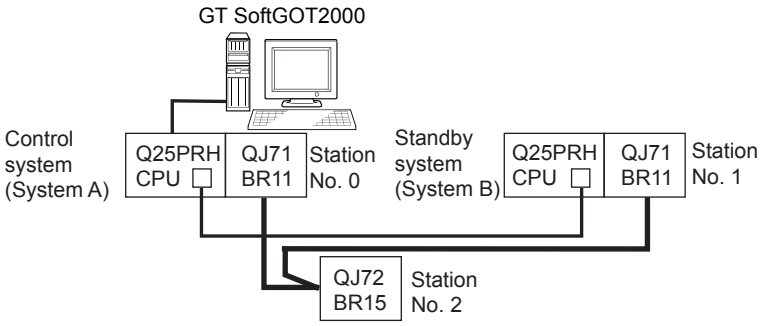
Control the operation of each object by SM1515, which is set for the operation condition.

For the screen switching device, use a GT SoftGOT2000 internal device.

If a device of the PLC CPU is used, the trigger action may be disabled since the device data is transferred by the tracking function of the redundant system.

The following diagram shows an example of screen setting using SM1515.

System configuration example: when using one GT SoftGOT2000

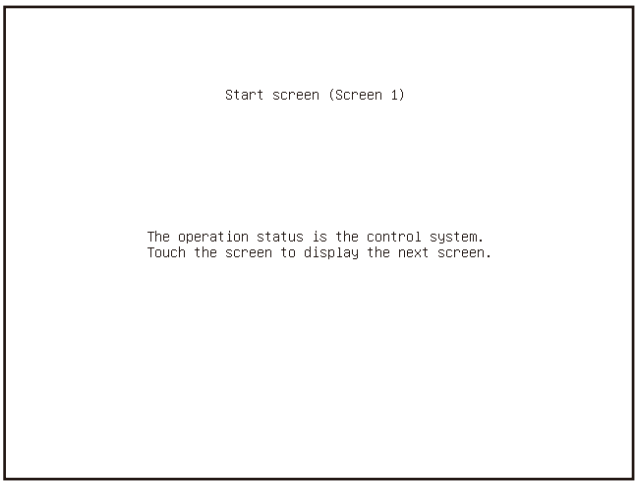


Create a monitor screen on the base screen 1 that performs the following operations for when connecting a GT SoftGOT2000 to control system and standby system.

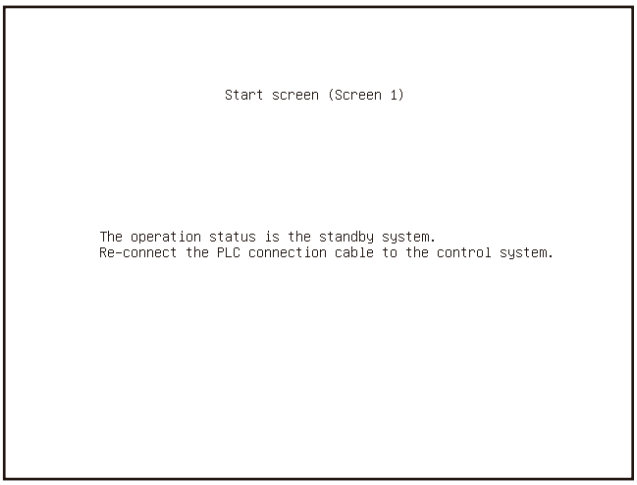
1) When connecting to the control system, the monitor screen displays a message calling a touch switch operation, by which the screen switches to the next screen.

2) When connecting to the standby system, the monitor screen displays a message calling the reconnection of the connection cable.

1) When connecting to the control system



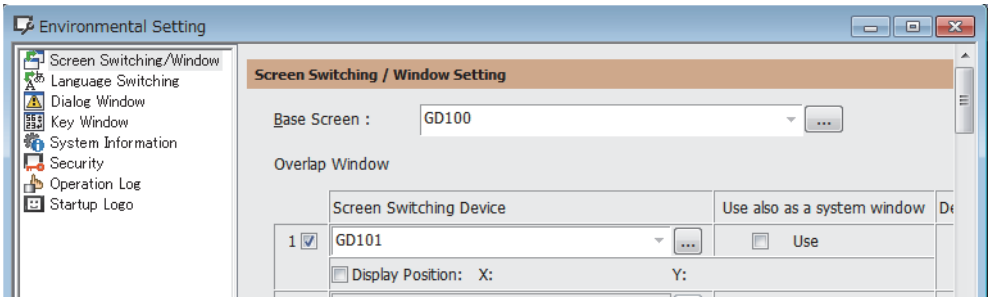
2) When connecting to the standby system



1. Set the screen switching device of the base screen.

Choose [Common] → [GOT Environmental Setting] → [Screen Switching/Window], and set the internal device GD100 as the base screen switching device.

(Do not use PLC CPU devices for the screen switching device. The trigger action may be disabled since the device data is transferred by the tracking function of the redundant system.)

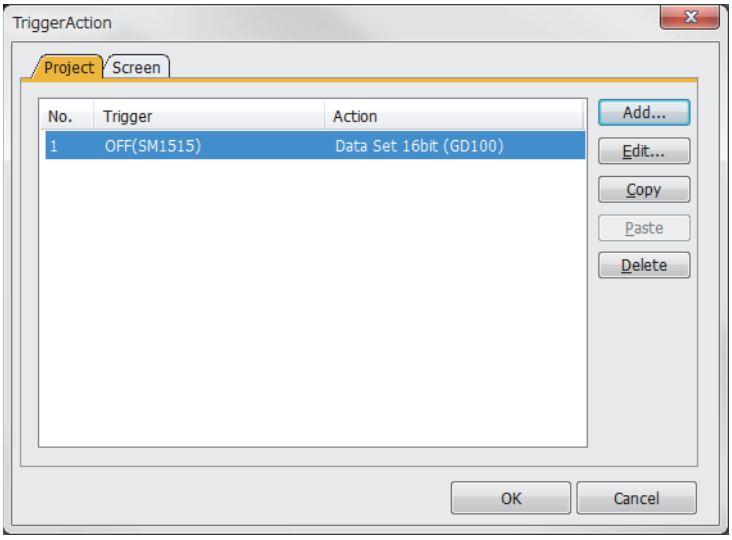


2. Set the trigger action.

Make the setting so that the base screen 1 is displayed when the connected PLC CPU is standby system (SM1515 = OFF) in the project specified by selecting [Common] → [Trigger Action].

Condition 1 : SM1515 (while OFF) ← When the SM1515 is OFF, the connected PLC CPU is the standby system.
Operation : GD100=1 ← The screen switches to the base screen 1.

Create the trigger action in the project of the [Project] tab.



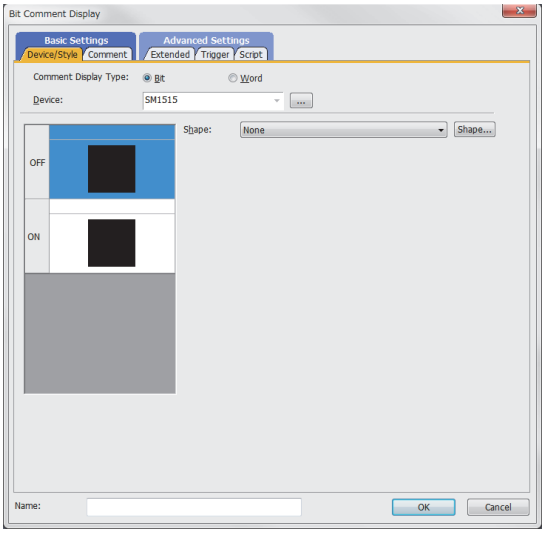
3. Set the comment display on the base screen 1.

Set a comment to be displayed on the base screen 1 depending on the system status (ON/OFF of the SM1515) of the connected PLC CPU using the Comment Display (Bit).

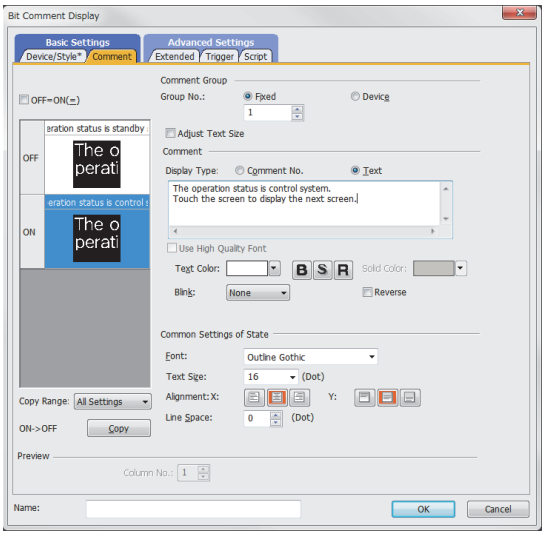
Select [Object] → [Comment Display] → [Bit Comment] and set Comment Display (Bit).

Dvice/Style tab
Device : SM1515
Shape : None
Comment tab : Basic Comment
Comment Display Type Text (ON) : The operation status is control system.
Touch the screen to display the next screen.
Comment Display Type Text (OFF) : The operation status is standby system.
Reconnect the PLC connection cable to the control system CPU.

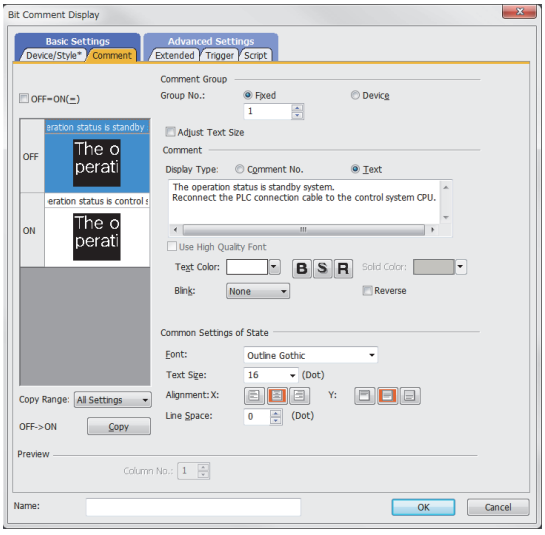
1) [Dvice/Style] tab screen



2) [Comment] tab screen (ON status)



3) [Comment] tab screen (OFF status)



4. Set the touch switches on the base screen 1.

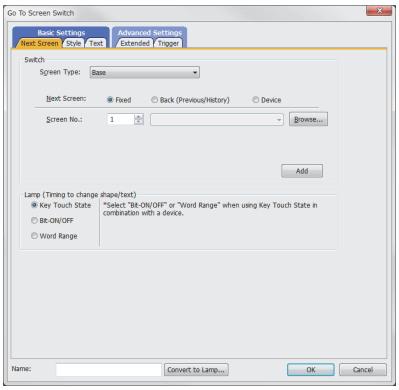
By using the go to screen switch function, set a touch switch for shifting the screen to the next screen with a screen touch, when the connected PLC CPU is the control system (SM1515 is ON).

Select [Object] → [Switch] → [Go To Screen Switch] and set the screen switching function.

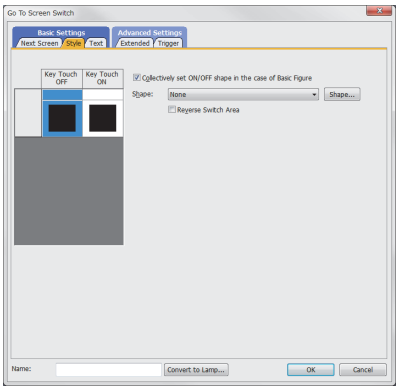
Set the same size for the touch switch as the base screen size so that touching any place of the screen enables the switch operation.

Next Screen tab
Screen Type : Base
Go To Screen : Fixed 2
Style tab
Display Style : None (Shape)
Trigger tab
Trigger Type : ON
Trigger Device : SM1515

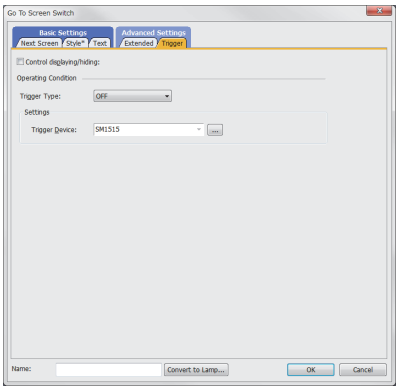
1) [Next Screen] tab screen



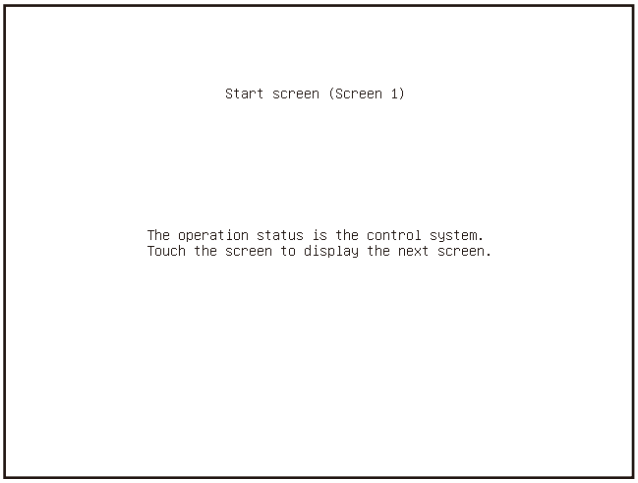
2) [Style] tab screen



3) [Trigger] tab screen



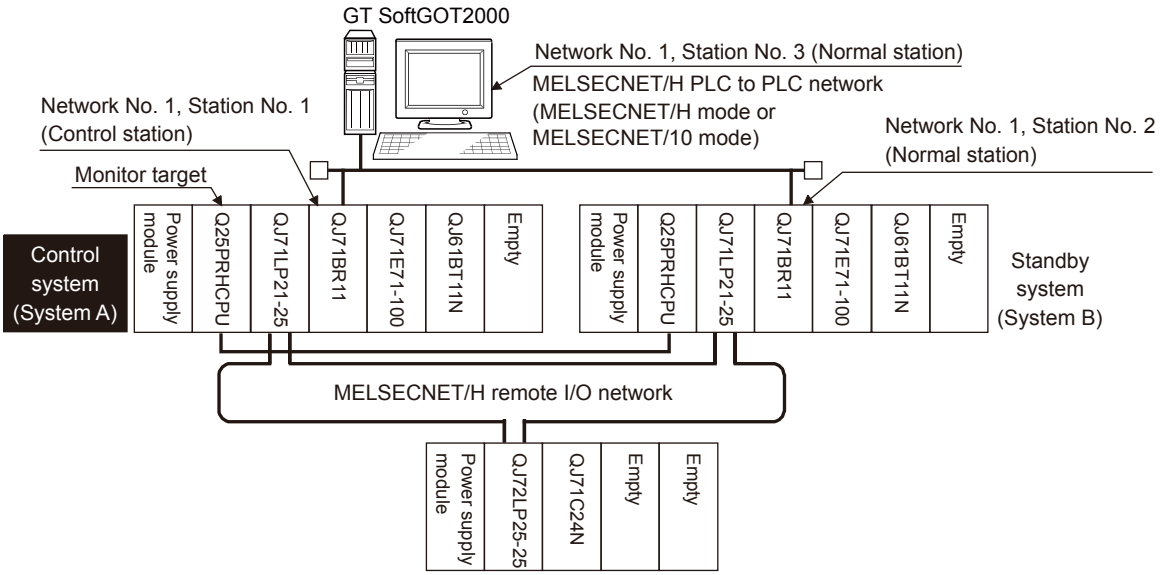
The following shows the created base screen 1.



MELSECNET/H and MELSECNET/10 connections (network systems)

This section explains the MELSECNET/H and MELSECNET/10 connections (network systems) that connect the GT SoftGOT2000 to the MELSECNET/H and MELSECNET/10 network system.

The following provides an example of connecting the GT SoftGOT2000 set as a normal station to the MELSECNET/ H network system.



Connection method

Connect the MELSECNET/H network system to the GT SoftGOT2000.

Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Other station	Other (NW No. 1 (network No. of PLC to PLC network), Station No. ** (** indicates the station number of the control system. Station No. 1, in the above example))
MELSEC Redundant		☞ Page 219 MELSEC redundant setting

Monitoring target change when system switching occurs in a redundant system

When system switching occurs, the network module station No. 2 changes from the normal station to the sub control station and takes over the control of the MELSECNET/H network system.

Since the GT SoftGOT2000 monitors the control system, the monitoring target is automatically changed to the network module station No. 2.

Point

When monitoring the control system without configuring the MELSEC redundant setting

When system switching occurs, the network module station No. 2 changes from the normal station to the sub control station and takes over the control of the MELSECNET/H network system.

Since the GT SoftGOT2000 monitors the station of the specified station number, the monitoring target cannot be changed to the station No. 2 in response to the system switching.

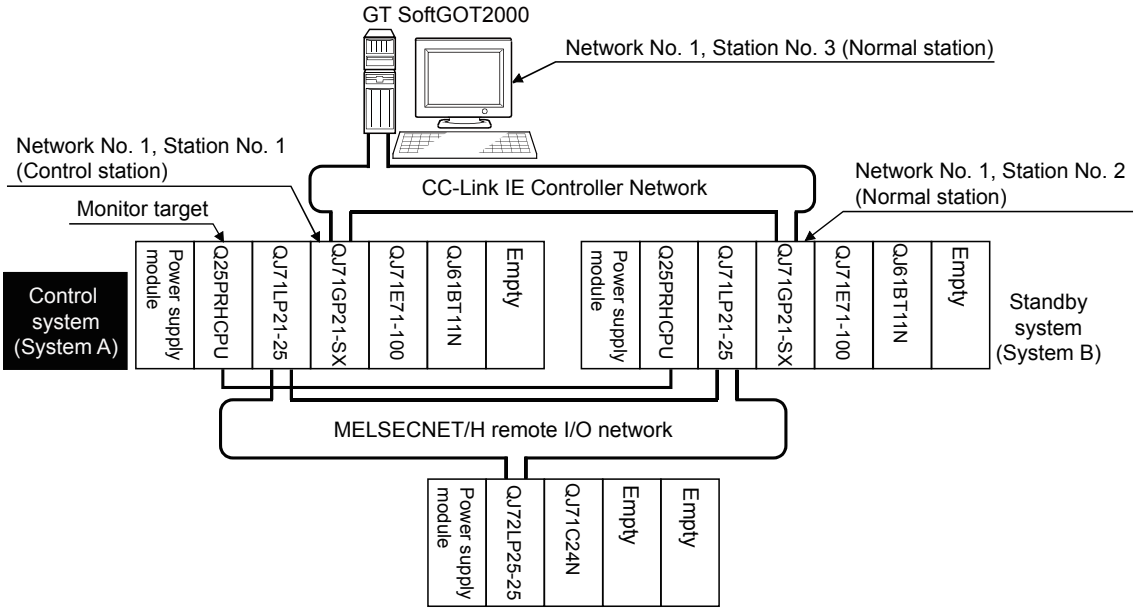
As a countermeasure, create a screen to monitor the PLC CPU of the control system by switching the station numbers between System A and System B using the script function.

☞ Page 221 Switch the monitor target to the control system using the script function

CC-Link IE Controller Network connection (network system)

This section explains the CC-Link IE Controller Network connection (network system) that connects the GT SoftGOT2000 to the CC-Link IE Controller Network.

The following shows an example of connecting the GT SoftGOT2000 set as a normal station to the CC-Link IE Controller Network.



Connection method

Connect the GT SoftGOT2000 to the CC-Link IE Controller Network.

Setting on GT Designer3

Set GT Designer3 as described below.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Other station	Other (NW No.1 (Network No. of CC-Link IE Controller Network), Station No. ** (** indicates the station number of the control system. Station No. 1 in the above example))
MELSEC Redundant		☞ Page 219 MELSEC redundant setting

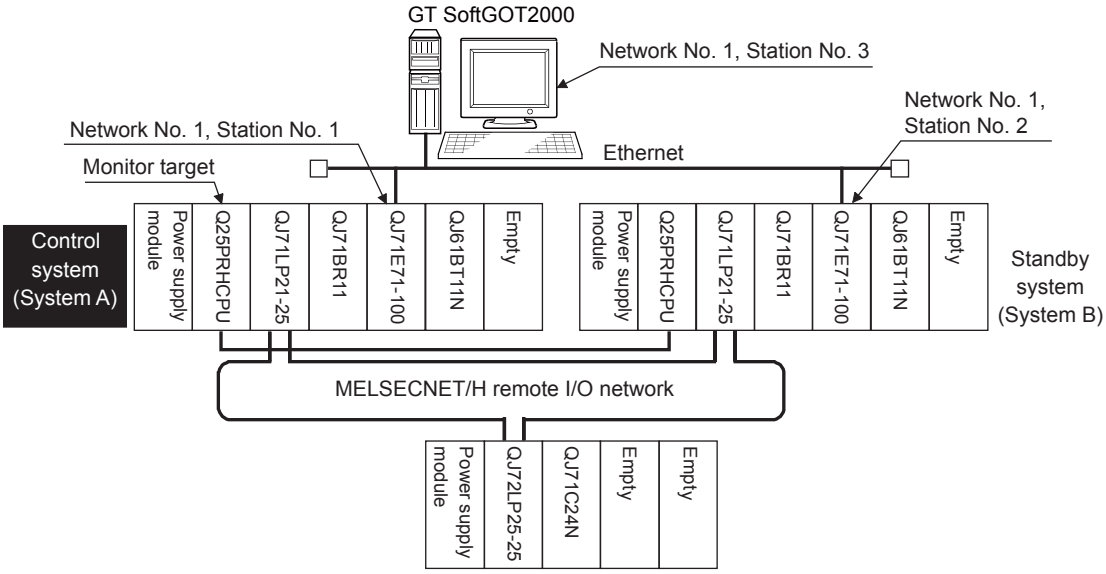
Switching the monitoring target when system switching occurs in the redundant system

When system switching occurs, the network module station No.2 changes from a normal station to the sub control station, and the system with the module takes over the control of the CC-Link IE Controller Network as the control system.

Since the GT SoftGOT2000 monitors the control system, the monitoring target is automatically changed to the network module station No. 2.

Ethernet connection

This section explains the Ethernet connection that connects the GT SoftGOT2000 to the Ethernet network system.
The following shows an example of connecting the GT SoftGOT2000 to the Ethernet network.



Connection method

Connect the Ethernet network system to the GT SoftGOT2000.

Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Host	Host
	Other station	Other (NW No. 1 (network No. of Ethernet), Station No. ** (** indicates the station number of the control system. Station No. 1, in the above example))
MELSEC Redundant		☞ Page 219 MELSEC redundant setting

Switching the monitoring target when system switching occurs in the redundant system

When system switching occurs, Ethernet module station No. 2 takes over the control of the Ethernet network system as the control system.
Since the GT SoftGOT2000 monitors the control system, he monitoring target is automatically changed to the Ethernet module station No. 2.

Precautions

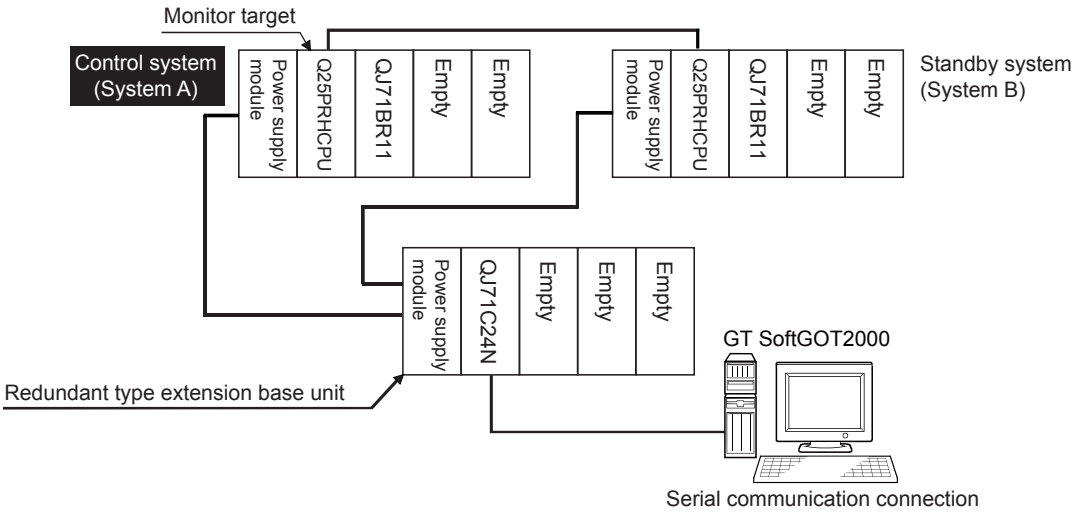
For the precautions for the Ethernet connection, refer to the following.
☞ Page 296 Precautions

Connection to the redundant type extension base unit

Serial communication connection (Serial communication module mounted on the redundant type extension base unit)

This section explains the serial communication connection for connecting the GT SoftGOT2000 to the serial communication module mounted on the redundant type extension base unit.

The following shows an example of connecting GT SoftGOT2000 to the serial communication module mounted on the redundant type extension base unit.



■Connection method

Connect the GT SoftGOT2000 to the serial communication module (QJ71C24N) mounted on the redundant type extension base unit.

■Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Host	Host
MELSEC Redundant		Do not set the item.

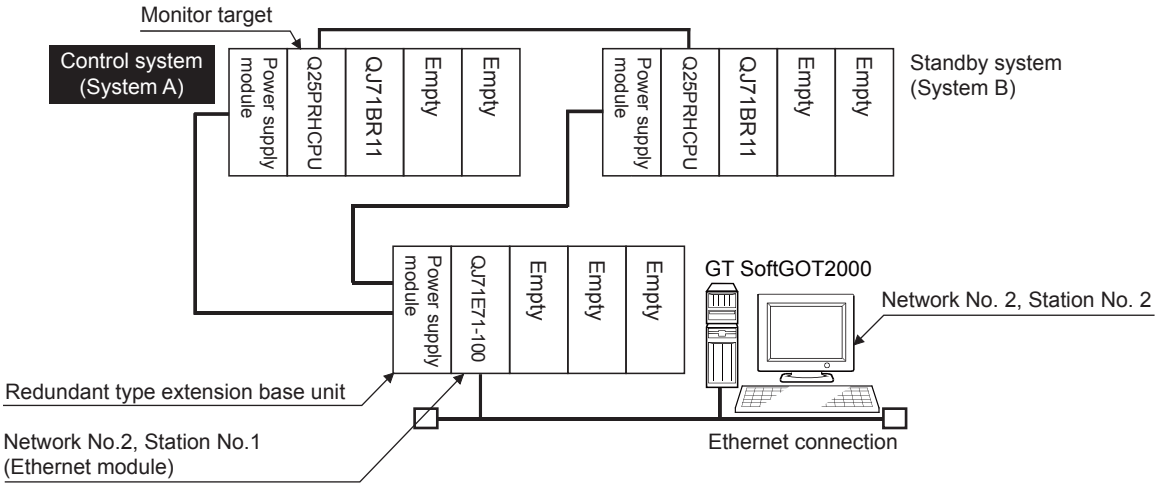
■Switching the monitoring target when system switching occurs in the redundant system

When the system switching occurs, the GT SoftGOT2000 automatically changes the monitoring target to the PLC CPU switched to the control system.

Ethernet connection (Ethernet module mounted on the redundant type extension base unit)

This section explains the Ethernet connection for connecting the GT SoftGOT2000 to the Ethernet module mounted on the redundant type extension base unit.

The following shows an example of connecting the GT SoftGOT2000 to the Ethernet module mounted on the redundant type extension base unit.



■Connection method

Connect the GT SoftGOT2000 to the Ethernet module (QJ71E71-100, QJ71E71-B5, QJ71E71-B2, LJ71E71-100) mounted on the redundant type extension base unit.

■Setting on GT Designer3

Set GT Designer3 as follows.

Setting item		Settings
Controller Type		[MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700]
Device setting (Network setting)	Other station	Other (NW No.2 (Network No. of Ethernet), Station No.** (** indicates the station No. of the Ethernet module. Station No.1 in the above example))
MELSEC Redundant		Do not set the item.

■Switching the monitoring target when system switching occurs in the redundant system

When the system switching occurs, the GT SoftGOT2000 automatically changes the monitoring target to the PLC CPU switched to the control system.

■Precautions

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

MELSEC redundant setting

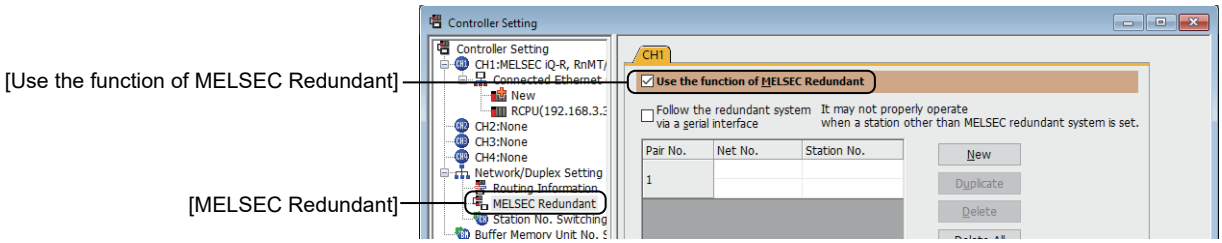
This section explains how to configure settings in GT Designer3 to enable GT SoftGOT2000 to switch the monitoring target automatically when system switching occurs in a redundant system.
For the details of GT Designer3, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual

Point

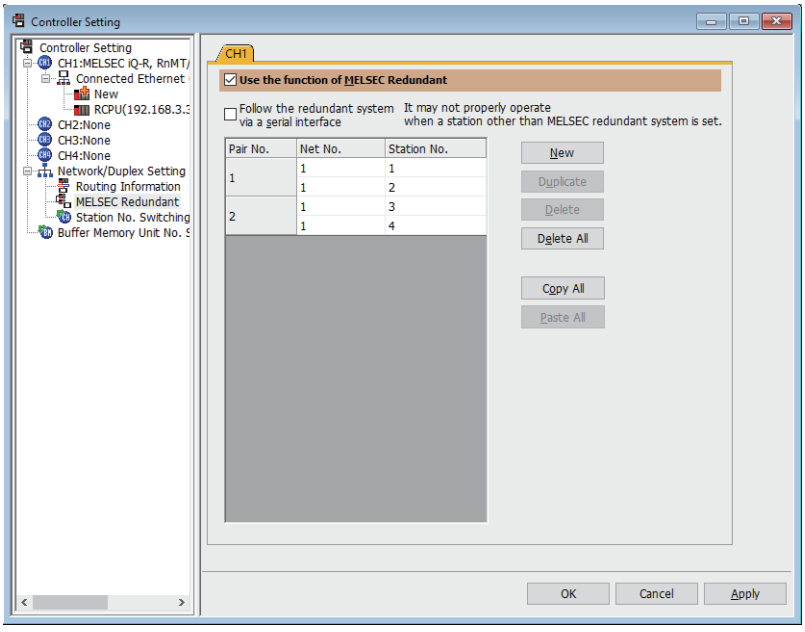
Before configuring the MELSEC redundant setting
In the MELSEC redundant setting, do not specify a station outside the redundant system.

1. Select [Common] → [Controller Setting] from the menu.
2. The [Controller Setting] window appears.

Select [MELSEC Redundant] from the setting tree, and select [Use the function of MELSEC Redundant].



3. Configure the MELSEC redundant setting.



Item	Description
[Follow the redundant system via a serial interface.]	Automatically switches the monitoring target upon system switching if the redundant system is connected to the GOT by the serial connection.
[Pair No.] *1	Pair number of the MELSEC redundant setting. The numbers are assigned automatically starting from 1.
[Net No.]	Set the network Nos. for each pair No. The upper row is for the setting of the first redundant CPU. The setting range is [1] to [239]. The lower row is for the setting of the second redundant CPU. The network No. of the second redundant CPU is the same as the one for the first CPU.
[Station No.]	Set the station numbers of the redundant CPUs for each pair No. The upper row is for the setting of the first redundant CPU. The setting range is [0] to [120]. The lower row is for the setting of the second redundant CPU. The setting range is [0] to [120].
[New]	Adds the pair No. setting below the bottom row in the list.

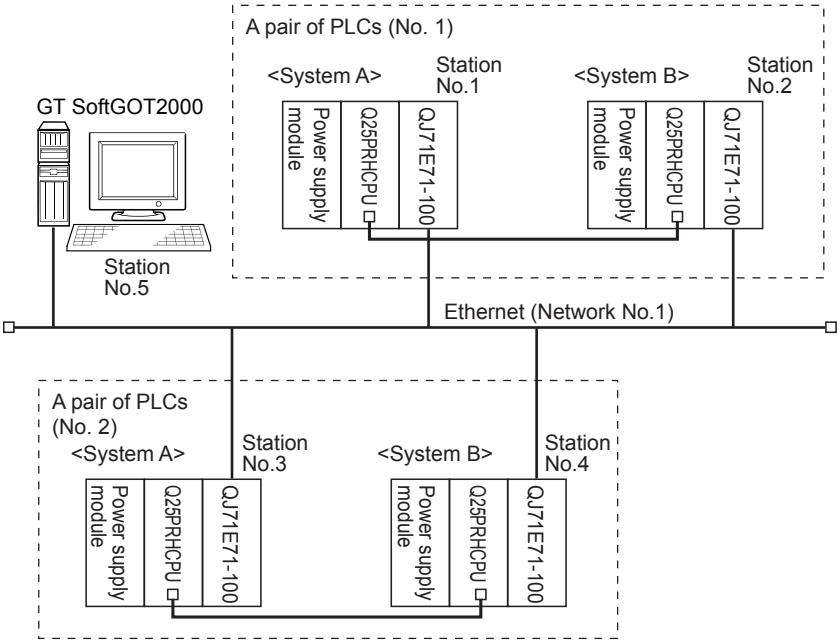
Item	Description
[Duplicate]	Duplicates a selected pair No. setting below the bottom row in the list.
[Delete]	Deletes a selected pair No. setting.
[Delete All]	Deletes all the pair No. settings.
[Copy All]	Copies all the pair No. settings in the list of the selected tab. Use this button to utilize the settings for other channels.
[Paste All]	Pastes the copied settings to the list. The existing settings are overwritten.

*1 For details of *1, refer to the explanation below.

*1 Pair number

[Pair No.] displays a number that is assigned to a pair of PLCs in a redundant system.

Example: Ethernet connection (Pair No. 1 and Pair No. 2)



Point

Precautions for the MELSEC redundant setting

When configuring the MELSEC redundant setting, note the following.

In the MELSEC redundant setting, set the station numbers for a pair according to the system configuration.

Some system configurations require adjacent station numbers to be set for system A and system B.

Make sure that both stations specified in the MELSEC redundant setting have a Redundant CPU or Process CPU (redundant mode).

If either station does not have such a CPU, GT SoftGOT2000 cannot switch the monitoring target automatically when system switching occurs.

For the MELSECNET/H connection, MELSECNET/10 connection, or Ethernet connection, check the station number of the network module and then configure the MELSEC redundant setting.

If the actual station number of the network module is not specified in the MELSEC redundant setting, GT SoftGOT2000 cannot switch the monitoring target automatically when system switching occurs.

When monitoring the redundant system (host station) by using the Ethernet connection, make sure to configure the pair number setting in the MELSEC redundant setting so that GT SoftGOT2000 switches the monitoring target automatically upon system switching.

The setting of [Follow the redundant system via a serial interface.] in the MELSEC redundant setting is invalid for the Ethernet connection.

Switch the monitor target to the control system using the script function

This section explains how to use the script function to switch the monitoring target (station number) automatically upon system switching while the MELSEC redundant setting is not configured.
This method is usable for the MELSECNET/H connection.
The script executes the station number switching function or screen switching function.
The following shows the advantages and disadvantages of the station number switching function and screen switching function.

Function	Advantage	Disadvantage
Station number switching function	The monitor screens for Station No. 1 (control system) and Station No. 2 (standby system) can be created on one screen.	Some objects do not allow the station number to be switched.
Screen switching function	All objects can be used since monitor screens are created for each station number.	Monitor screens must be created separately for Station No. 1 (control system) and Station No. 2 (standby system).

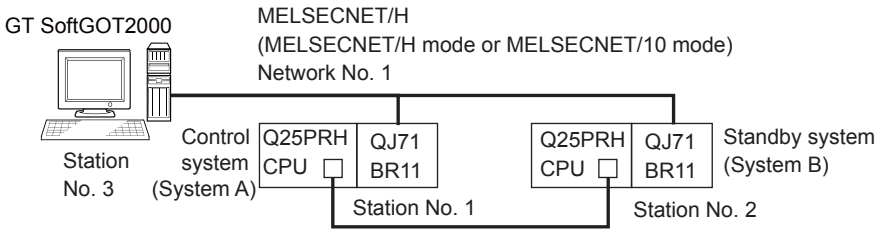
The following explains how to use each function.

Method for using the station number switching function

As a feature of this function, monitor screens for Station No. 1 (control system) and Station No. 2 (standby system) can be created on one screen.
If the system switching occurs, the GT SoftGOT2000 can change the monitoring target to the control system PLC CPU on the same monitor screen.
To achieve this, the script of the GT SoftGOT2000 monitors the special relay SM1515 (Control system identification flag) of the PLC CPU and stores the station number of the latest control system into the station number switching device.
Restrictions: Some objects do not allow the station number to be switched.
GT Designer3 (GOT2000) Screen Design Manual

■Setting method

<System configuration example>

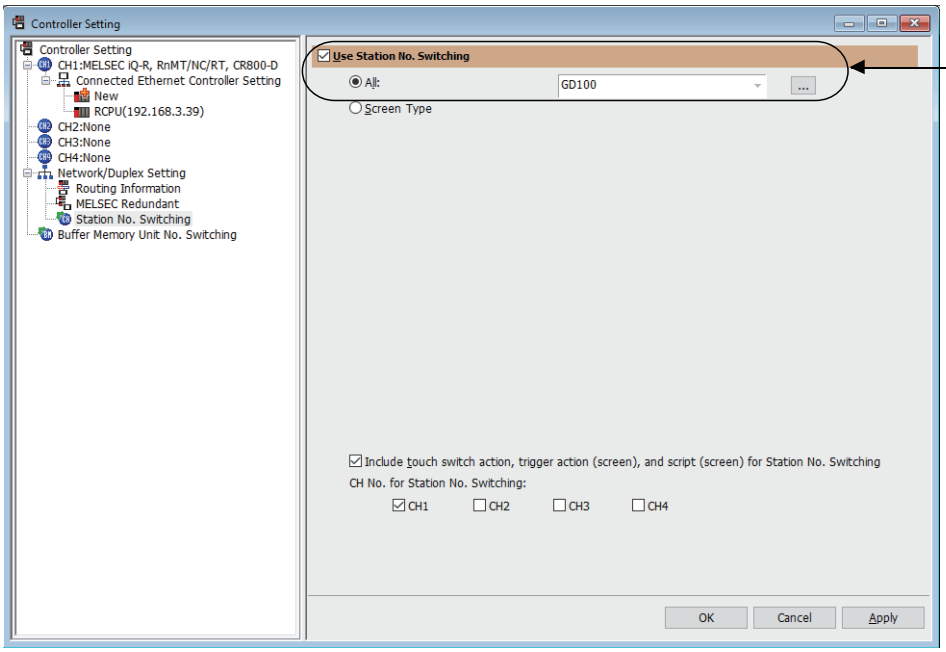


Connected module	Network No.	Station No.
MELSECNET/H network module of control system	1	1
MELSECNET/H network module of standby system		2
GT SoftGOT2000 connected to MELSECNET/H network		3

1. Set the station number switching device.

Select [Common] → [Controller Setting] → [Station No. Switching], and set the internal device GD100 as the station number switching device. (Do not use PLC CPU devices for the screen switching device.

The trigger action may be disabled since the device data is transferred by the tracking function of the redundant system.)

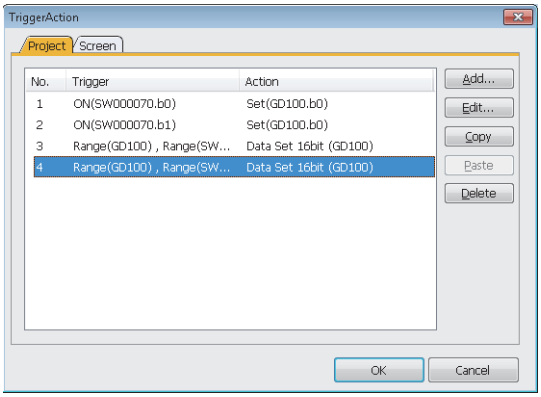


Set here.

2. Set the trigger action.

Make the settings so that the station number is switched when the faulty station information (SW70) of MELSECNET/H turns ON in the project specified by selecting [Common] → [Trigger Action].

Condition 1: SW70.b0 (while ON) ← When b0 is ON, Station No. 1 is abnormal. Operation: GD100=2 ← Station No. is changed to 2.
Condition 1: SW70.b1 (while ON) ← When b1 is ON, Station No. 2 is abnormal. Operation: GD100=1 ← Station No. is changed to 1.
Condition 1: GD100==0 ← The value of the Station No. changing device is 0. Condition 2: SW56<=2 ← The current control station is a redundant CPU. Operation: GD100=SW56 ← Station No. is changed to a current control station.
Condition 1: GD100==0 ← The value of the Station No.changing device is 0. Condition 2: SW56>2 ← The current control station is not a redundant CPU. Operation: GD100=1 ← Station No. is changed to a current control station in normal condition.

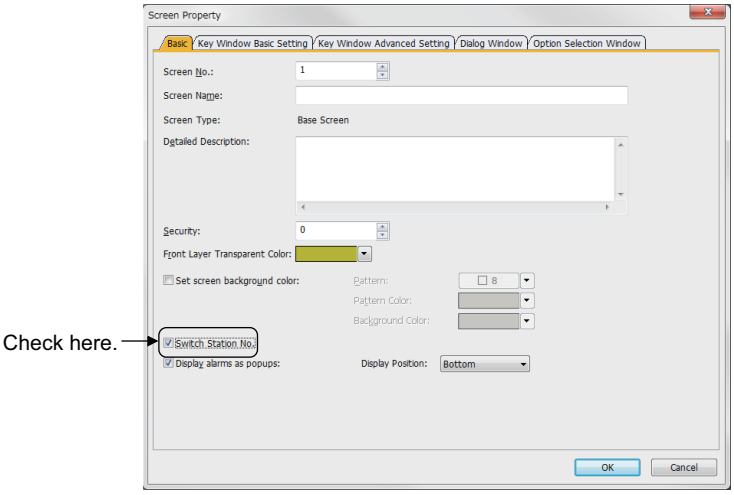


3. Create a monitor screen.

In the device setting (network setting) of each object, set Network No. 1 and Station No. 1 of the control system.

4. Enable the station No. switching function.

Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog. On the [Basic] tab, select [Switch Station No.] to enable the station No. switching function.



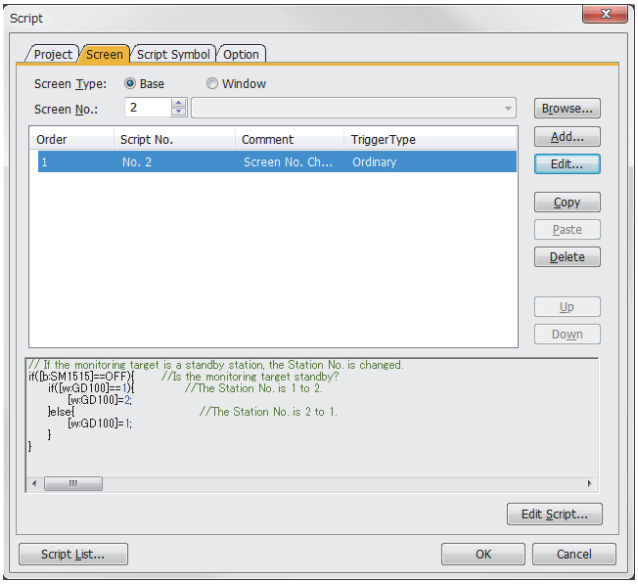
5. Change the station number switching device value in the script.

By selecting [Common] → [Script] → [Script], create a script for each monitor screen that checks the SM1515 status of the current monitor station, and if it is OFF (standby system), changes the station number switching device value.

Set the trigger type of the script as [Ordinary] or [Sampling(about 3s)].

```
// If the monitoring target is a standby station, the Station No. is changed.
if([b:SM1515]==OFF){      //Is the monitoring target standby?
if([w:GD100]==1){         //The Station No. is 1 to 2.
[w:GD100]=2;
}else{                    //The Station No. is 2 to 1.
[w:GD100]=1;
}
}
```

Set the created script for each screen on the [Screen] tab.



Point

Setting for the trigger action function

For the trigger action function, hexadecimal numbers cannot be used.

To use the trigger action function, set the N/W No. and the station No. of the PLC CPU in [Unsigned BIN].

(For the trigger action function, set [Unsigned BIN] for [Device Write].)

Example:

When Net No.: 1 and Station No.: 1 (0101H)

Set "257".

When Net No.: 10 and Station No.: 10 (0A0AH)

Set "2570".

Point

When a redundant system is only connected to the MELSECNET/H network, SW56 (Current control station) can be set as the station number switching device.

In this case, even if the system switching occurs, GT SoftGOT2000 always monitors the station number that is currently the control station.

Method for using the screen changing function

As a feature of this function, monitor screens are created for each station number.

When the system switching occurs, the GT SoftGOT2000 can change the monitoring target to the control system PLC CPU on the other monitor screen.

To achieve this, the script of the GT SoftGOT2000 monitors the special relay SM1515 (Control system identification flag) of the PLC CPU and stores the screen number corresponding to the latest station number of the control system into the screen switching devices.

Precautions:

There are the following 8 different screen switching devices.Set the screen switching devices for all screens to be used.

Base screen switching device

Overlap window 1 switching device

Overlap window 2 switching device

Overlap window 3 switching device

Overlap window 4 switching device

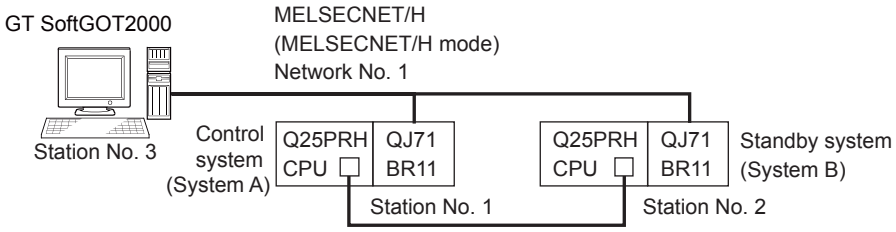
Overlap window 5 switching device

Superimpose window 1 switching device

Superimpose window 2 switching device

■Setting method

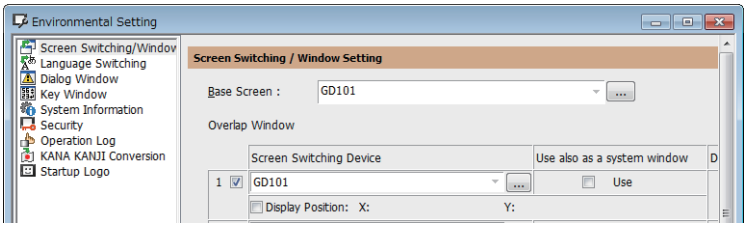
<System configuration example>



Connected module	Network No.	Station No.
MELSECNET/H network module of control system	1	1
MELSECNET/H network module of standby system		2
GT SoftGOT2000 connected to MELSECNET/H network		3

1. Set the screen switching device of the base screen.

Select [Common] → [GOT Environmental Setting] → [Screen Switching/Window], and set the internal device GD100 as the base screen switching device.



2. Set the trigger action.

Set the trigger action so that the station number is switched when the faulty station information (SW70) of MELSECNET/H turns ON in the project specified by selecting [Common] → [Trigger Action].

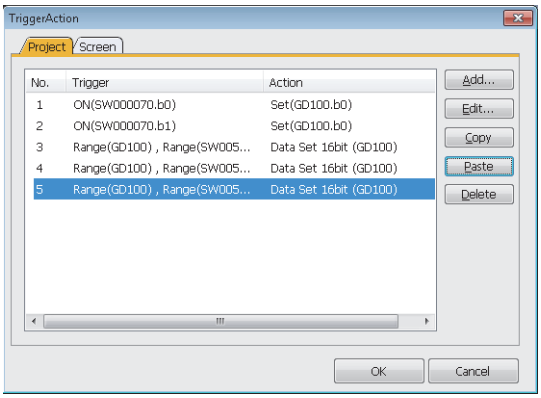
Condition 1: SW70.b0 (while ON) ← Station No. 1 is abnormal.
Condition 2: GD100<100
Operation: GD100= GD100+100 ← Station No. is changed to 2.

Condition 1: SW70.b1 (while ON) ← Station No. 2 is abnormal.
Condition 2: GD100>100
Operation: GD100= GD100-100 ← Station No. is changed to 1.

Condition 1: GD100==0 ← The value of the screen changing device is 0.
Condition 2: SW56==1 ← The current control station is Station No. 1.
Operation: GD100=2 ← Screen No. is changed to 2 (for Station No. 1).

Condition 1: GD100==0 ← The value of the screen changing device is 0.
Condition 2: SW56==2 ← The current control station is Station No. 2.
Operation: GD100=102 ← Screen No. is changed to 102 (for Station No. 2).

Condition 1: GD100==0 ← The value of the screen changing device is 0.
Condition 2: SW56>2 ← The current control station is not a redundant CPU.
Operation: GD100=2 ← Screen No. is changed to 2 (for Station No. 1).



3. Set monitor screens.

Create a monitor screen with each object whose network setting is Station No. 1 on Screen No. 2 to 3.

Create a monitor screen with each object whose network setting is Station No. 2 on Screen No. 102 to 103.

4. Change the screen switching device value in the script.

By selecting [Common] → [Script] → [Script], create a script for each monitor screen that checks the SM1515 status of the current monitor station, and if it is OFF (standby system), changes the station number switching device value.

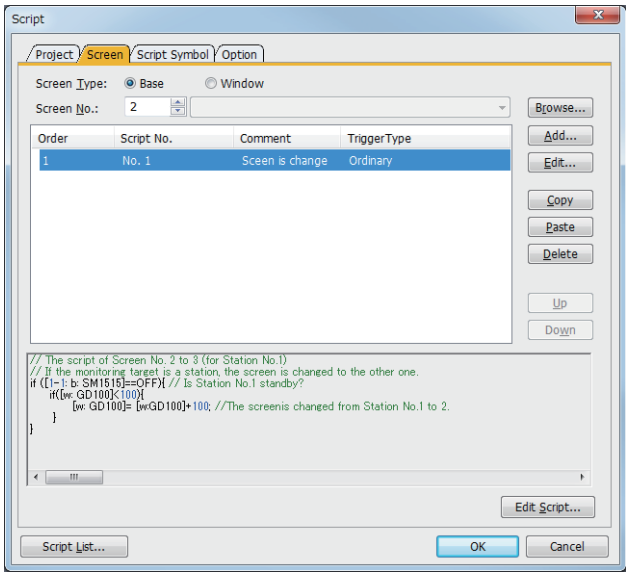
Set the trigger type of the script as [Ordinary] or [Sampling(about 3s)].

Screen scripts

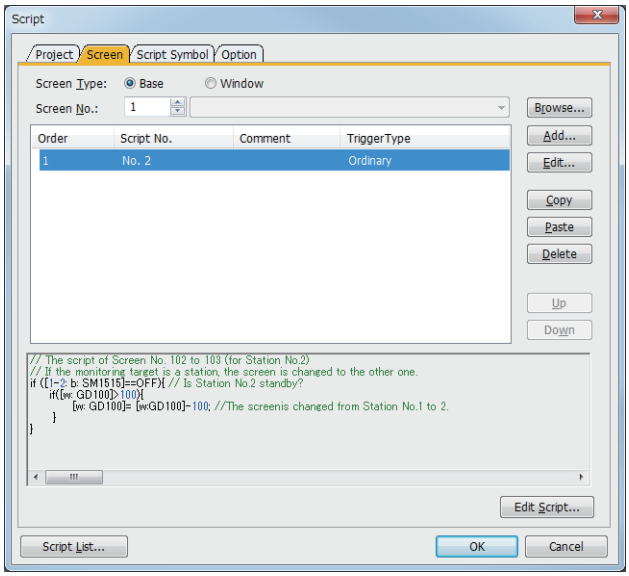
```
// The script of Screen No. 2 to 3 (for Station No.1)
// If the monitoring target is a standby station, the screen is changed to the other one.
if ([1-1: b: SM1515]==OFF){
//Is Station No.1 standby?
if([w: GD100]<100){
[w: GD100]= [w: GD100]+100;
//The screen is changed from Station No.1 to 2.
}
    }
```

```
// The script of Screen No. 102 to 103 (for Station No.2)
// If the monitoring target is a standby station, the screen is changed to the other one.
if ([1-2: b: SM1515]==OFF){
//Is Station No.2 standby?
if([w: GD100]>100){
[w: GD100]= [w: GD100]-100;
//The screen is changed from Station No.2 to 1.
}
    }
```

Script screen of Screen No. 2 (for Station 1)



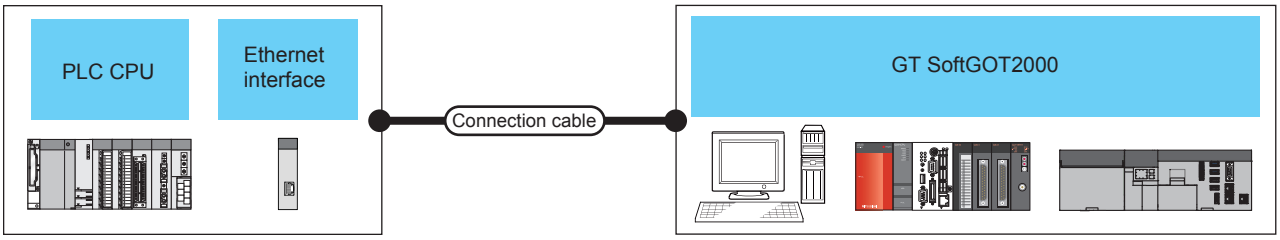
Script screen of Screen No. 102 (for Station 2)



3.6 Ethernet Connection

System configuration

Direct connection



PLC				Connection cable *4	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Ethernet interface		Communication type					
RCPU*12	Built-in Ethernet port*5	RnCPU RnPCPU RnSFCPU RnPSFCPU RnENCPU*11*13	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	UDP: 119 TCP: 17	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
	Ethernet module	RJ71EN71					UDP: 119*3 TCP: 17*3	
	CC-Link IE TSN master/local module*8	RJ71GN11-T2					UDP: 119*3 TCP: 17*3	
	CC-Link IE TSN Plus master/local module*8	RJ71GN11-EIP*10						
	Motion module*8	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW					UDP: 64 TCP: 64	128
LHCPU	Built-in Ethernet port*5	LnHCPU					UDP: 119 TCP: 17	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
FX5CPU	Built-in Ethernet port*5	FX5U FX5UC FX5UJ FX5S					8	128
	Ethernet module	FX5-ENET FX5-ENET/IP					UDP: 32 (16 or less recommended) TCP: 32 (16 or less recommended)	
	CC-Link IE TSN master/local module*8*14	FX5-CCLGN-MS					8	
	Motion module*8*9	FX5-40SSC-G FX5-80SSC-G					8	

PLC				Connection cable *4	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Ethernet interface		Communication type					
LCPU	Built-in Ethernet port*5	LnCPU LnCPU-P L26CPU-BT L26CPU-PBT	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	UDP: 16 TCP: 16	UDP: 63 (16 or less recommended) TCP: 63 (16 or less recommended)
	Ethernet module	LJ71E71-100					UDP: 63 TCP: 17	
QCPU (Q mode)	Built-in Ethernet port*5	QnUDECPU QnUDEHCPU QnUDVCPU					UDP: 16 TCP: 16	UDP: 63 (16 or less recommended) TCP: 63 (16 or less recommended)
	Ethernet module	QJ71E71 QJ71E71-B2 QJ71E71-B5					UDP: 63 TCP: 17	
		QJ71E71-100						
QCPU (A mode)	Ethernet module	AJ71E71-S3 A1SJ71E71-B2-S3 A1SJ71E71-B5-S3 AJ71E71N-T AJ71E71N-B5 AJ71E71N-B2 AJ71E71N3-T AJ71E71N-B5T A1SJ71E71N-T A1SJ71E71N-B2 A1SJ71E71N-B5 A1SJ71E71N-B5T A1SJ71E71N3-T					UDP: 8 TCP: -	UDP: 63 (4 or less recommended) TCP: -
QnACPU	Ethernet module	AJ71QE71 AJ71QE71-B5 AJ71QE71N-T AJ71QE71N-B2 AJ71QE71N-B5 AJ71QE71N-B5T AJ71QE71N3-T A1SJ71QE71-B2 A1SJ71QE71-B5 A1SJ71QE71N-T A1SJ71QE71N-B2 A1SJ71QE71N-B5 A1SJ71QE71N-B5T A1SJ71QE71N3-T						
ACPU	Ethernet module	AJ71E71-S3 A1SJ71E71-B2-S3 A1SJ71E71-B5-S3 AJ71E71N-T AJ71E71N-B5 AJ71E71N-B2 AJ71E71N3-T AJ71E71N-B5T A1SJ71E71N-T A1SJ71E71N-B2 A1SJ71E71N-B5 A1SJ71E71N-B5T A1SJ71E71N3-T						
FXCPU *2	Ethernet module	FX3U-ENET FX3U-ENET-ADP					4	128
		FX3U-ENET-L					2	

PLC					Connection cable *4	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name		Ethernet interface		Communication type					
C Controller module	MELSEC iQ-R series	Built-in Ethernet port	R12CCPU-V	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	1	128
		Ethernet module	RJ71EN71					UDP: 119 *3 TCP: 17 *3	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
		CC-Link IE TSN master/ local module *8	RJ71GN11-T2					UDP: 64 *3 TCP: 64 *3	128
		Motion module *8	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW					UDP: 64 TCP: 64	
	Q series	Built-in Ethernet port	Q24DHCCPU-V Q24DHCCPU-VG Q24DHCCPU-LS Q26DHCCPU-LS					16	
			Q12DCCPU-V					Basic mode: 1 Extended mode: 16	
		Ethernet module	QJ71E71 QJ71E71-B2 QJ71E71-B5					UDP: 63 TCP: 17	UDP: 63 (16 or less recommended) TCP: 63 (16 or less recommended)
			QJ71E71-100						
MELSEC WinCPU *8	MELSEC iQ-R series	Built-in Ethernet port *5	R102WCPU-W					UDP: 119 TCP: 17	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
		CC-Link IE TSN master/ local module *8	RJ71GN11-T2					UDP: 64 *3 TCP: 64 *3	

PLC					Connection cable *4	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name		Ethernet interface		Communication type					
Motion CPU	MELSEC iQ-R series	Built-in Ethernet port*5	RnMTCPU	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	UDP: 16*6 TCP: 16*6	128
		Ethernet module	RJ71EN71					UDP: 119 TCP: 17	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
	Q series	Built-in Ethernet port*5	Q17nDSCPU Q170MCPU*1 Q170MSCPU*1 Q170MCPU-S1*1 Q170MSCPU-S1*1					16	128
		Ethernet module	QJ71E71 QJ71E71-B2 QJ71E71-B5					UDP: 63 TCP: 17	UDP: 63 (16 or less recommended) TCP: 63 (16 or less recommended)
			QJ71E71-100						
	A series	Ethernet module	AJ71E71-S3 A1SJ71E71-B2-S3 A1SJ71E71-B5-S3 AJ71E71N-T AJ71E71N-B5 AJ71E71N-B2 AJ71E71N3-T AJ71E71N-B5T A1SJ71E71N-T A1SJ71E71N-B2 A1SJ71E71N-B5 A1SJ71E71N-B5T A1SJ71E71N3-T					UDP: 8 TCP: -	UDP: 63 (4 or less recommended) TCP: -
NC	CNC C80	Built-in Ethernet port*7	R16NCCPU-S1	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	8	128
		Ethernet module	RJ71EN71					UDP: 119*3 TCP: 17*3	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
	CNC C70	Built-in Ethernet port*7	Q173NCCPU					16	128
		Ethernet module	QJ71E71 QJ71E71-B2 QJ71E71-B5					UDP: 63 TCP: 17	UDP: 63 (16 or less recommended) TCP: 63 (16 or less recommended)
			QJ71E71-100						
	MELDAS	Ethernet module	FCU6-EX875 FCA C6 FCA C64					128	128

PLC					Connection cable *4	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name		Ethernet interface		Communication type					
Robot controller	MELSEC iQ-R series	Built-in Ethernet port	CR800-R(R16RTCPU)	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	UDP: 16 TCP: 16	128
			CR800-D					1	
		Ethernet module	RJ71EN71					UDP: 119*3 TCP: 17*3	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)
	Q series	Built-in Ethernet port*5	CRnD-700 CR750-D CR751-D					1	128
			CR800-Q(Q172DSRCPU)					8 (1 recommended)	
		Ethernet module	QJ71E71 QJ71E71-B2 QJ71E71-B5					UDP: 63 TCP: 17	UDP: 63 (16 or less recommended) TCP: 63 (16 or less recommended)
			QJ71E71-100						
CC-Link IE Field Network head module		Built-in Ethernet port	RJ72GF15-T2					UDP: 64 TCP: 64	128
CC-Link IE Field Network Ethernet adapter module		Built-in Ethernet port	NZ2GF-ETB					UDP: 1 TCP: 1	

*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU, Q170MSCPU, Q170MCPU-S1, and Q170MSCPU-S1 can be accessed.

*2 The required conversion adapter and function extension board vary with the combination of an FXCPU and an Ethernet module. The following shows the combinations.

Ethernet module	CPU	Conversion adapter, function extension board
FX3U-ENET-L FX3U-ENET	FX3UC FX3GC	FX2NC-CNV-IF FX3UC-1PS-5V
FX3U-ENET-ADP	FX3U FX3UC-32MT-LT(-2)	FX3U-CNV-BD FX3U-422-BD FX3U-232-BD
	FX3G	FX3G-CNV-ADP
	FX3S	FX3S-CNV-ADP

*3 The number of personal computers for one port.

*4 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*5 For the applicable CPUs, refer to the following.
☞ Page 234 Ethernet interface

*6 The total number of personal computers used for UDP and TCP must be 16.

*7 Ethernet is connected to Display I/F.

*8 Only available to GT SoftGOT2000 (Multiple channels).

*9 The connectable PLC CPUs are FX5U and FX5UC.

*10 Connect the module to P1 of RJ71GN11-EIP via a hub.

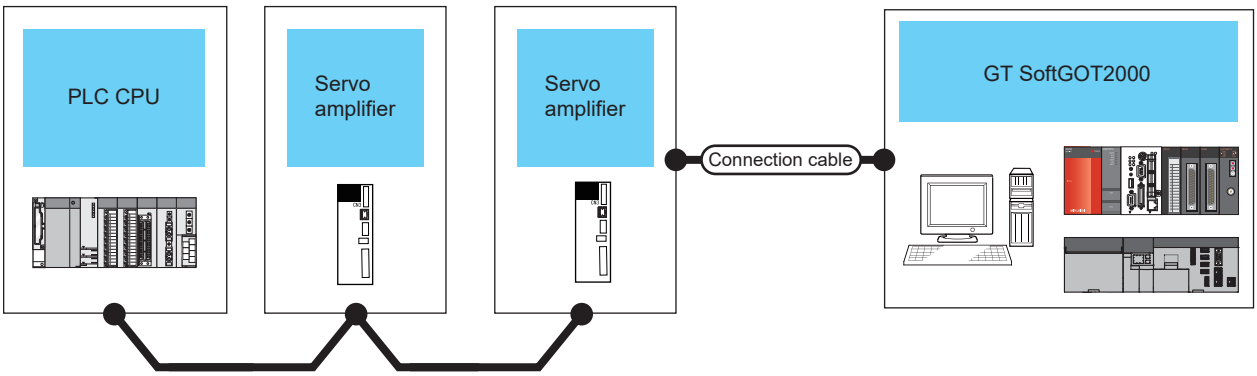
*11 Only GT SoftGOT2000 (Multiple channels) supports the connection in the multiple CPU system.

*12 For connection to RnENCPU No. 2 or later in the multiple CPU system, the firmware version of the RnENCPU must be 14 or later.

*13 For connection to Motion module No. 2 or later in the multiple CPU system, the firmware version of the RnENCPU must be 10 or later.

*14 The connectable PLC CPUs are FX5U, FX5UC, and FX5UJ.

Connection via a servo amplifier



PLC		Servo amplifier		connection cable*1	Max. distance	GT SoftGOT2000*2	Number of connectable devices
Series	Communication type	Model name	Connection type				
MELSEC iQ-R series*3 C Controller module (MELSEC iQ-R series) MELSEC iQ-L series MELSEC iQ-F series*3 MELSEC-Q (Q mode)*4 MELSEC-L*4	CC-Link IE Field Network Basic	MR-J5-□G MR-J5-□G-RJ MR-J5D1-□G4 MR-JET-□G	Ethernet	Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher (double shielded, STP), straight cable	100 m (Maximum segment length)	Windows-compatible personal computer PC CPU module MELIPC	One GT SoftGOT2000 module for one servo amplifier

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T, ANSI/TIA/EIA-568-B (category 5e) standard.

*2 For the settings in GT SoftGOT2000, refer to the following.
☞ Page 236 Controller setting

*3 Use a PLC whose firmware version is as shown below.

Series	Model name	Applicable firmware version
MELSEC iQ-R series	R00CPU R01CPU R02CPU	From the first product
	R04CPU R08CPU R16CPU R32CPU R120CPU	25 or later
	R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU	
MELSEC iQ-F series	FX5U FX5UC FX5UJ FX5S	1.040 or later

*4 Use a PLC with a serial number starting with a 5-digit number as shown below.

Series	Model name	Applicable version
MELSEC-Q (Q mode)	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU	PLCs having a serial number starting with 18112 or later

Series	Model name	Applicable version
MELSEC-L	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT	PLCs having a serial number starting with 18112 or later

Ethernet interface

The following shows connectable Built-in Ethernet port CPUs, Ethernet modules, and Ethernet boards/cards.

Built-in Ethernet port CPU, Ethernet module

Item		Model name
RCPU	Built-in Ethernet port CPU	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU, R16MTCPU, R32MTCPU, R64MTCPU, R08PCPU, R16PCPU, R32PCPU, R120PCPU, R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU, R08PSFCPU *6, R16PSFCPU *6, R32PSFCPU *6, R120PSFCPU *6, R04ENCPU *5, R08ENCPU *5, R16ENCPU *5, R32ENCPU *5, R120ENCPU *5, CNC C80(R16NCCPU-S1)
	Ethernet module	RJ71EN71
	CC-Link IE TSN master/ local module *7	RJ71GN11-T2
	CC-Link IE TSN Plus master/local module*7	RJ71GN11-EIP
	Motion module *7	RD78G4, RD78G8, RD78G16, RD78G32, RD78G64, RD78GHV, RD78GHW
LHCPU	Built-in Ethernet port CPU	L04HCPU, L08HCPU, L16HCPU, L32HCPU
QCPU (Q mode)	Built-in Ethernet port CPU	Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU, Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU
	Ethernet module	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100
QCPU (A mode)		AJ71E71-S3, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, AJ71E71N-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N3-T, AJ71E71N-B5T, A1SJ71E71N-T, A1SJ71E71N-B2, A1SJ71E71N-B5, A1SJ71E71N-B5T, A1SJ71E71N3-T
C Controller module (MELSEC iQ-R series)	Built-in Ethernet port CPU	R12CCPU-V
	Ethernet module	RJ71EN71
	CC-Link IE TSN master/ local module *7	RJ71GN11-T2
	Motion module *7	RD78G4, RD78G8, RD78G16, RD78G32, RD78G64, RD78GHV, RD78GHW
C Controller module (Q series)	Built-in Ethernet port CPU	Q12DCCPU-V, Q24DHCCPU-V, Q24DHCCPU-LS, Q26DHCCPU-LS, Q24DHCCPU-VG
	Ethernet module	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100
MELSECWinCPU (MELSEC iQ-R series)*7*9	Built-in Ethernet port CPU	R102WCPU-W
	CC-Link IE TSN master/ local module *7	RJ71GN11-T2
MELSEC-QS	Ethernet module	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100
QnACPU		AJ71QE71, AJ71QE71-B5, AJ71QE71N-T, AJ71QE71N-B2, AJ71QE71N-B5, AJ71QE71N-B5T, AJ71QE71N3-T, A1SJ71QE71-B2, A1SJ71QE71-B5, A1SJ71QE71N-T, A1SJ71QE71N-B2, A1SJ71QE71N-B5, A1SJ71QE71N-B5T, A1SJ71QE71N3-T
ACPU		AJ71E71-S3, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, AJ71E71N-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-B2, AJ71E71N3-T, AJ71E71N-B5T, A1SJ71E71N-T, A1SJ71E71N-B2, A1SJ71E71N-B5, A1SJ71E71N-B5T, A1SJ71E71N3-T
LCPU	Built-in Ethernet port CPU	L02CPU, L06CPU, L26CPU, L26CPU-BT, L02CPU-P, L06CPU-P, L26CPU-P, L26CPU-PBT
	Ethernet module	LJ71E71-100
Motion CPU (MELSEC iQ-R series)		RJ71EN71
Motion CPU (Q series)*1		QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100
Motion CPU (A series)		AJ71E71-S3, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, AJ71E71N-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-B2, AJ71E71N3-T, AJ71E71N-B5T, A1SJ71E71N-T, A1SJ71E71N-B2, A1SJ71E71N-B5, A1SJ71E71N-B5T, A1SJ71E71N3-T
CC-Link IE Field Network head module		RJ72GF15-T2
CC-Link IE Field Network Ethernet adapter module		NZ2GF-ETB
CNC C80	Built-in Ethernet port CPU	R16NCCPU-S1
	Ethernet module	RJ71EN71
CNC C70	Built-in Ethernet port CPU	Q173NCCPU
	Ethernet module	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100
CR800-R(R16RTCPU)	Built-in Ethernet port CPU	R16RTCPU
	Ethernet module	RJ71EN71

Item		Model name
MELSEC iQ-F	Built-in Ethernet port CPU	FX5U, FX5UC, FX5UJ, FX5S
	Ethernet module	FX5-ENET *8, FX5-ENET/IP *8
	Motion module *7	FX5-40SSC-G, FX5-80SSC-G
	CC-Link IE TSN master/ local module *7	FX5-CCLGN-MS
FXCPU		FX3U-ENET-L*2, FX3U-ENET*2, FX3U-ENET-ADP*3*4
CR800-Q (Q172DSRCPU)	Built-in Ethernet port CPU	Q172DSRCPU
	Ethernet module	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100

*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.
*2 To use the FX3U-ENET-L or FX3U-ENET with the FX3UC, the FX2NC-CNV-IF or FX3UC-1PS-5V is required.
*3 To use FX3U-ENET-ADP, FX3U-CNV-BD, FX3U-422-BD, or FX3U-232-BD is required.
*4 Supported by the basic unit with Version 3.10. or later.
*5 The Ethernet port built in the CPU (port CPU P1 or port P2) is usable.
*6 Mount a SIL2 function module (R6PSFM) and a redundant function module (R6RFM) next to a SIL2 process CPU on the base unit.
*7 Supported by GT SoftGOT2000 (Multiple channels) only.
*8 Use firmware version 1.100 or later for the FX5-ENET and FX5-ENET/IP.
Use firmware version 1.240 or later for the FX5U, FX5UC, and FX5UJ that support the FX5-ENET or FX5-ENET/IP.
*9 To connect with a CC-Link IE TSN master/local module, use firmware version 02 for the MELSECWinCPU (MELSEC iQ-R series).

Ethernet board/card

Applicable Ethernet bords/cards are shown in the following.

Manufacturer	Model name	Remarks
3COM	EthernetLink III LAN PC Card	Ethernet board/card
-	Ethernet board built in the personal computer as standard	Ethernet board

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

Controller setting

☞ Page 237 When using Built-in Ethernet port RCPU (one-to-one connection, multi-connection)
☞ Page 241 When using Ethernet module for RCPU
☞ Page 246 When using Built-in Ethernet port LHCPU (one-to-one connection, multi-connection)
☞ Page 249 When using Built-in Ethernet port MELSEC iQ-F (one-to-one connection, multi-connection)
☞ Page 252 When using Ethernet module for FX5CPU
☞ Page 255 When using Built-in Ethernet port QCPU (one-to-one connection, multi-connection)
☞ Page 260 When using Ethernet module for QCPU
☞ Page 265 When using Built-in Ethernet port LCPU (one-to-one connection, multi-connection)
☞ Page 268 When using C Controller module
☞ Page 271 When using MELSECWinCPU (MELSEC iQ-R series)
☞ Page 274 When using Ethernet module (QnA series)
☞ Page 279 When using Ethernet module (A series)
☞ Page 283 When using Ethernet module (FX series)
☞ Page 288 When using CNC C70 (Q17nNCCPU)
☞ Page 291 When using CC-Link IE Field Network Ethernet adapter module

Point

Ethernet connection

• Before Ethernet connection

Read the manual for the Ethernet module to be used thoroughly and understand it fully before setting up the Ethernet connection.

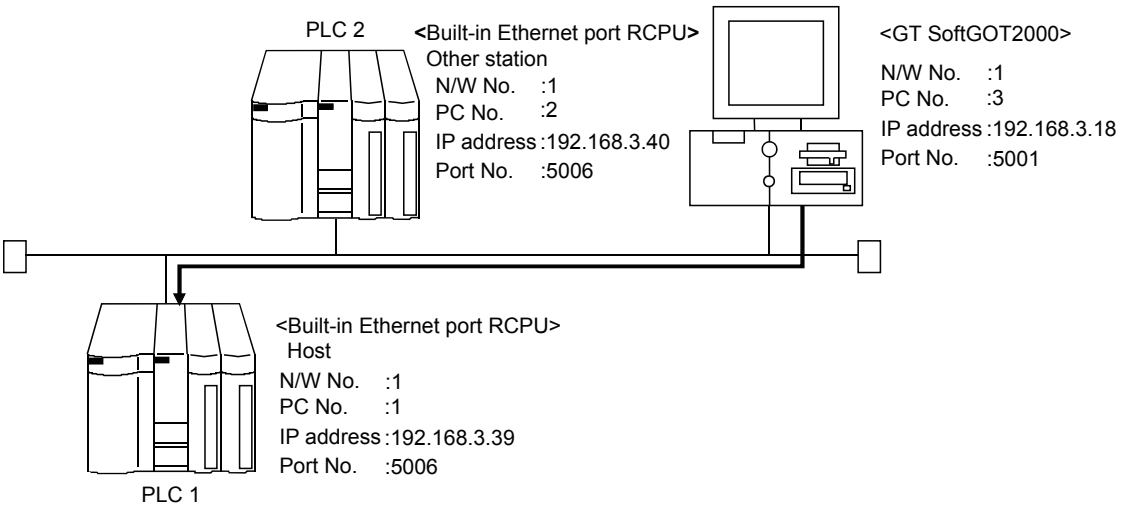
• Time-out error

If many devices (including GT SoftGOT2000) are connected, line traffic may become dense, causing a time-out error.

If a time-out error occurs, reduce the number of connected devices or increase the time-out value in the Communication Setup of GT SoftGOT2000.

When using Built-in Ethernet port RCPU (one-to-one connection, multi-connection)

The setting items and precautions are shown below for communicating GT SoftGOT2000 to Built-in Ethernet port RCPU.
The explanations are given using the following system configuration to monitor the host station.
When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT2000.

☞ Page 239 Settings in GT Designer3

■Before setting

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.

· Use a switching hub.

· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

· Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models				
R00CPU	R01CPU	R02CPU	R04CPU	R08CPU
R16CPU	R32CPU	R120CPU	R16MTCPU	R32MTCPU
R64MTCPU	R08PCPU *1	R16PCPU *1	R32PCPU *1	R120PCPU *1
R08SFCPU	R16SFCPU	R32SFCPU	R120SFCPU	R08PSFCPU *2
R16PSFCPU *2	R32PSFCPU *2	R120PSFCPU *2	R04ENCPU	R08ENCPU
R16ENCPU	R32ENCPU	R120ENCPU	CNC C80 (R16NCCPU-S1)	CR800-R (R16RTCPU)

*1 The MELSEC redundant system is configurable by mounting the redundant function module (R6RFM).
*2 Mount a SIL2 function module (R6PSFM) and a redundant function module (R6RFM) next to a SIL2 process CPU on the base unit.

■Setting on GX Works3 (Module parameter setting)

Configure the Built-in Ethernet port setting in a target module parameter (only when multiple modules are connected).

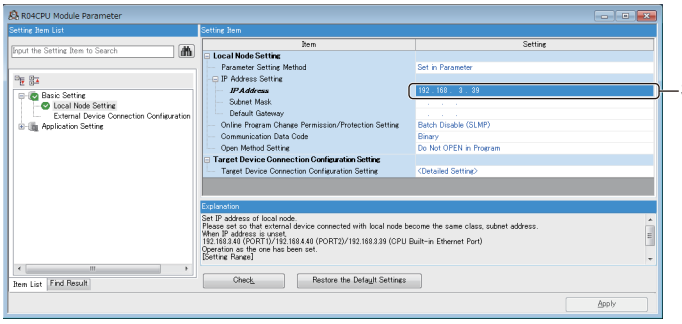
To make communications with GX Works3, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

Set the other items according to the system used.

For the details of the settings, refer to the following.

📖GX Works3 Operating Manual

Set the IP address for PLC1 in [IP Address].



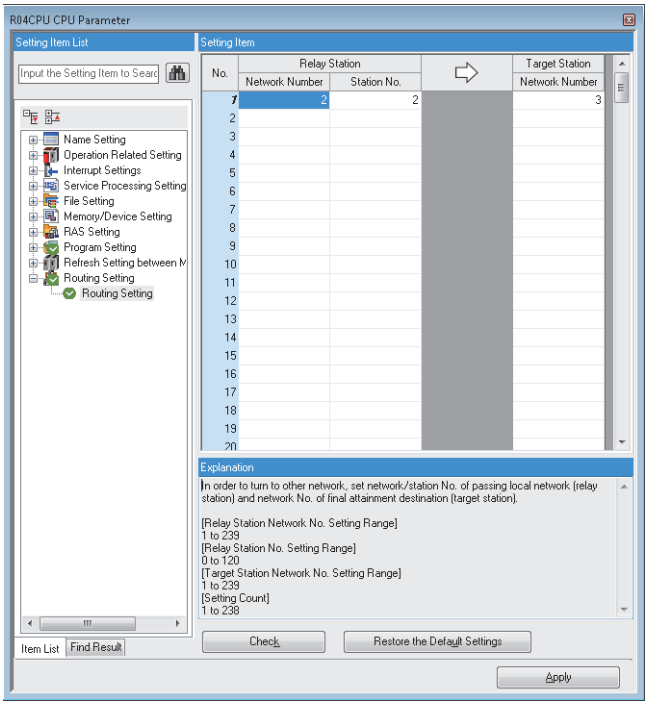
Set the IP address of PLC1.

■Routing Parameter Setting

Up to 64 network numbers are settable for a target station.

However, you cannot set duplicate network numbers for one target station.

The GOT (host station) can access other networks that have the network numbers specified in the routine parameter setting.



Item	Range
[Relay Station Network No.]	[1] to [239]
[Relay Station No.]	[0] to [120]
[Target Station Network No.]	[1] to [239]

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 239 Settings in GT Designer3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 40

Reply from 192.168.3.40:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 40

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

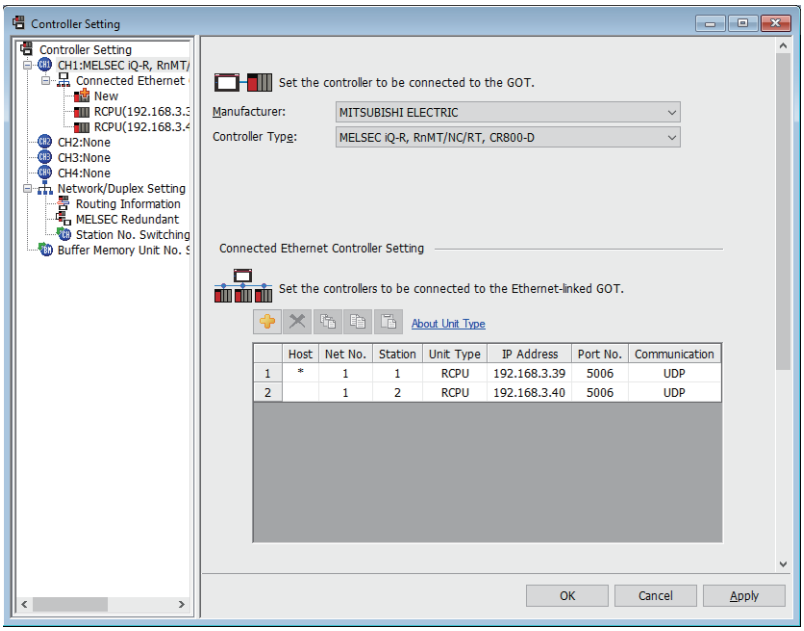
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120] (When [Unit Type] is set to [RCPU] or [MELIPC]) [0] to [120] (When [Unit Type] is set to [RJ71GN11-T2/RD78G(H)]) *3
[Unit Type]	Select the type of the target Ethernet module.	[RCPU] *1, [MELIPC] *2, [RJ71GN11-T2/RD78G(H)]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

*1 To monitor CNC C80 (R16NCCPU-S1), select [RnNCCPU] for [Unit Type].

*2 If you select [MELIPC], set [Controller Type] to [MELIPC].

*3 When 0 is set in [Station], GT SoftGOT2000 (Multiple channels) can access the master station on the CC-Link IE TSN network.

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

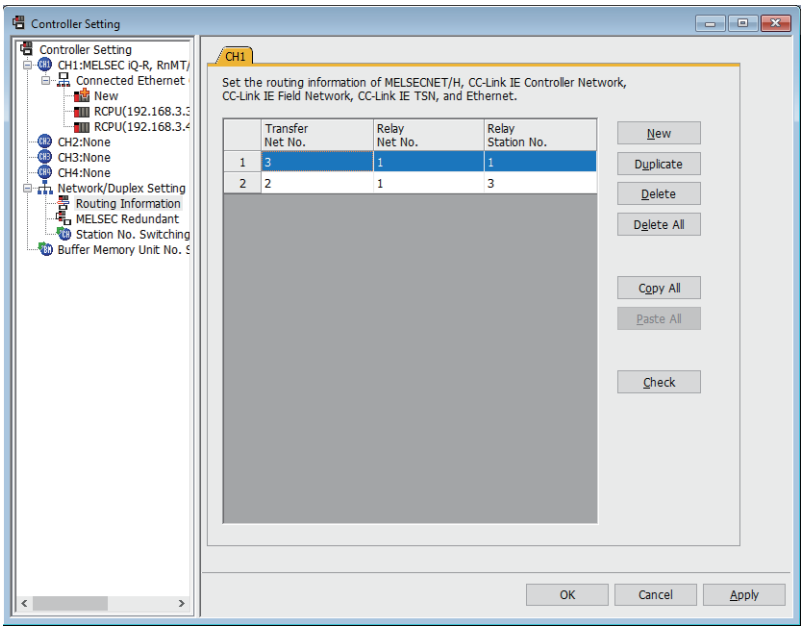
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

MELSEC iQ-R Ethernet User's Manual (Application)



Item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 238 Routing Parameter Setting

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

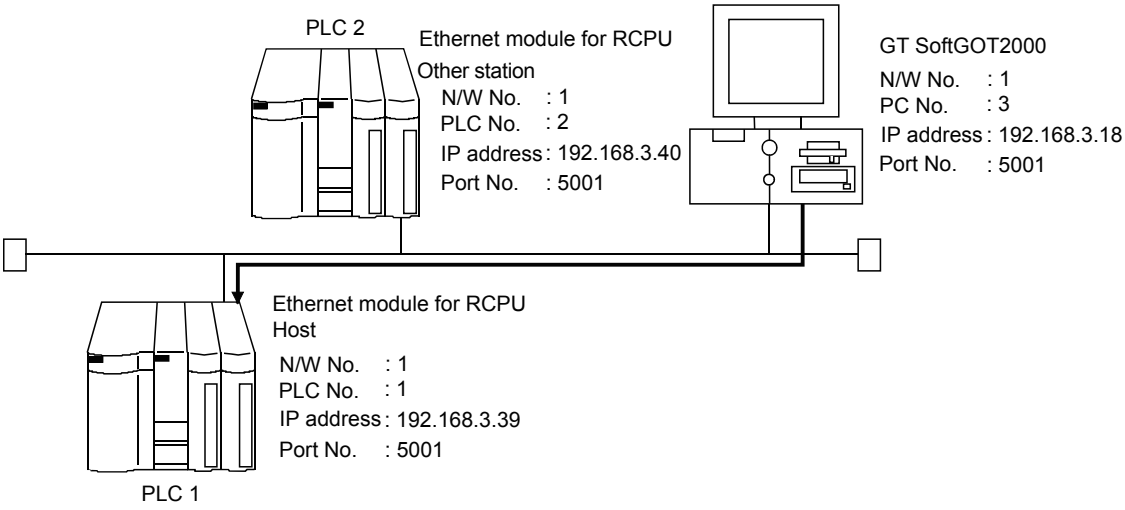
☞ Page 83 [Ethernet]

When using Ethernet module for RCPU

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the PLC CPU via the Ethernet module.

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module for RCPU and GT SoftGOT2000.

☞ Page 244 Settings in GT Designer3

■Before setting

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Module	Model name
Ethernet module	RJ71EN71(E-CCIE), RJ71EN71(E-E)
CC-Link IE TSN master/local module *1	RJ71GN11-T2
CC-Link IE TSN Plus master/local module*1	RJ71GN11-EIP
Motion module *1	RD78G4, RD78G8, RD78G16, RD78G32, RD78G64, RD78GHV, RD78GHW

*1 The following shows the connectable PLC CPUs and firmware versions that support the connection with each module.

Model	Firmware version			
	Connecting to RJ71GN11-T2	Connecting to RJ71GN11-EIP	Connecting to RD78G4, RD78G8, RD78G16, RD78G32, or RD78G64	Connecting to RD78GHV or RD78GHW
R00CPU	11 or later	29 or later	12 or later	14 or later
R01CPU				
R02CPU				
R04CPU	43 or later	62 or later	44 or later	46 or later
R08CPU				
R16CPU				
R32CPU				
R120CPU				
R04ENCPU				
R08ENCPU				
R16ENCPU				
R32ENCPU				
R120ENCPU				
R08SFCPU	20 or later	Unavailable	21 or later	21 or later
R16SFCPU				
R32SFCPU				
R120SFCPU				

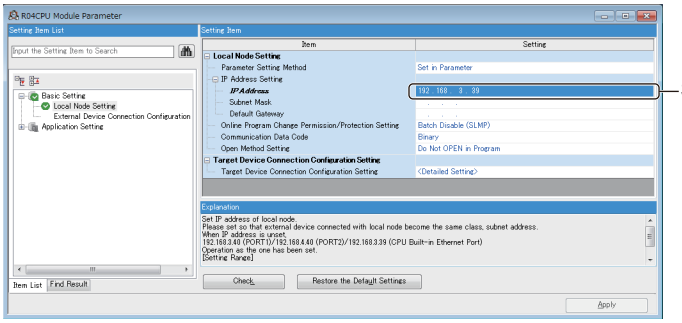
■Setting on GX Works3 (Module parameter setting)

Configure the Ethernet module (MELSEC iQ-R series) setting in a target module parameter (only when multiple modules are connected).

For the details of the settings, refer to the following.

📖GX Works3 Operating Manual

Set the IP address for PLC1 in [IP Address].



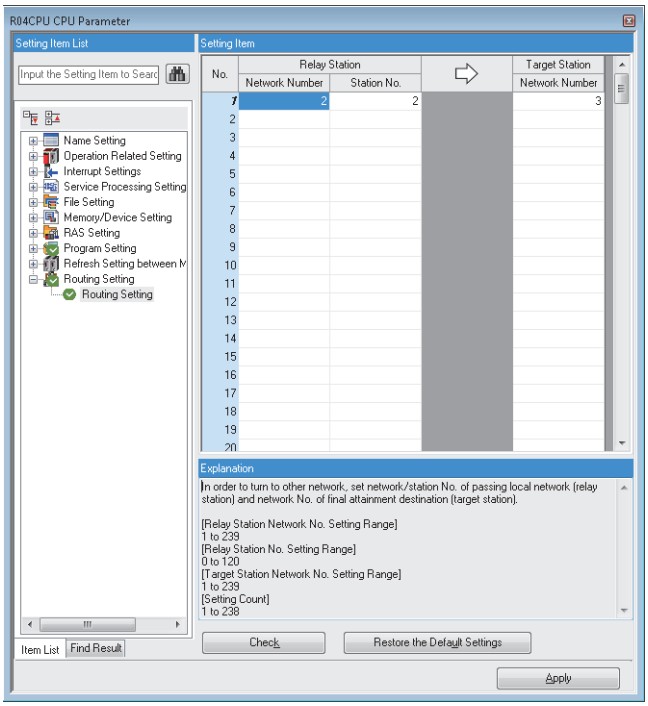
Set the IP address of PLC1.

■Routing Parameter Setting

Up to 64 network numbers are settable for a target station.

However, you cannot set duplicate network numbers for one target station.

The GOT (host station) can access other networks that have the network numbers specified in the routine parameter setting.



Item	Range
[Relay Station Network No.]	[1] to [239]
[Relay Station No.]	[0] to [120]
[Target Station Network No.]	[1] to [239]

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 244 Settings in GT Designer3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 40

Reply from 192.168.3.40:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 40

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

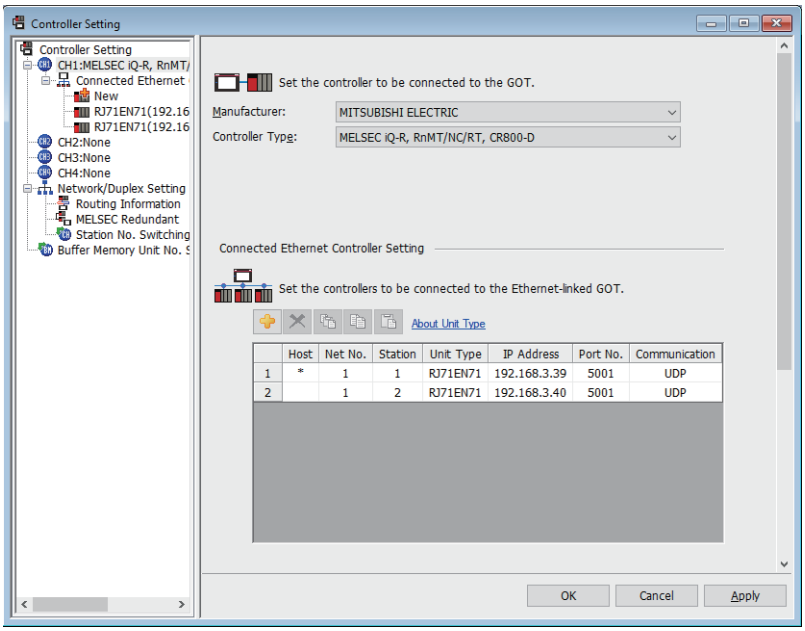
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120] (When [Unit Type] is set to [RJ71EN71]) [0] to [120] (When [Unit Type] is set to [RJ71GN11-T2/RD78G(H)]) *1
[Unit Type]	Select the type of the target Ethernet module.	[RJ71EN71], [RJ71GN11-T2/RD78G(H)]*2
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5001], [5002]
[Communication]	Displays the communication method.	[UDP] (for port No. 5001), [TCP] (for port No. 5002)

*1 When 0 is set in [Station], the master station of CC-Link IE TSN can be accessed with GT SoftGOT2000 (Multiple channels).

*2 When using the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP), set [Unit Type] to [RJ71GN11-T2/RD78G(H)].

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

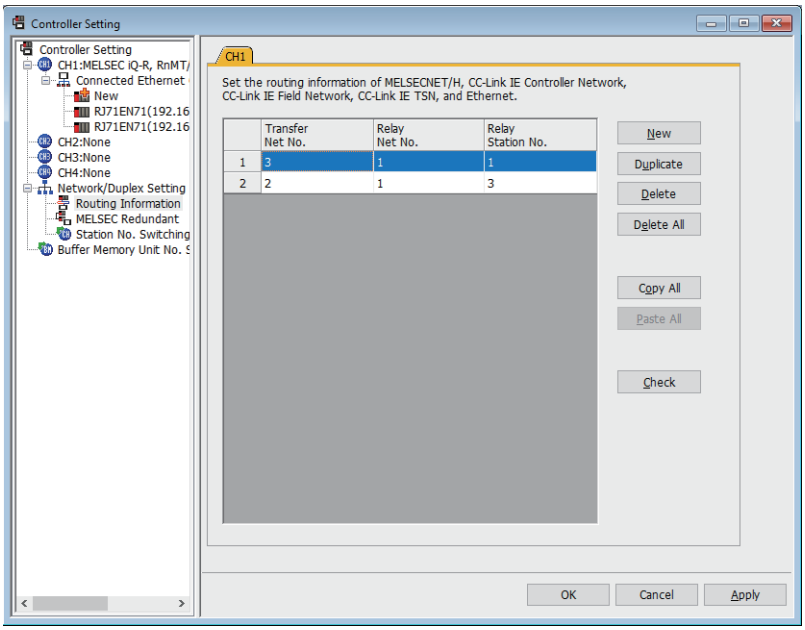
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

MELSEC iQ-R Ethernet User's Manual (Application)



Item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 243 Routing Parameter Setting

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

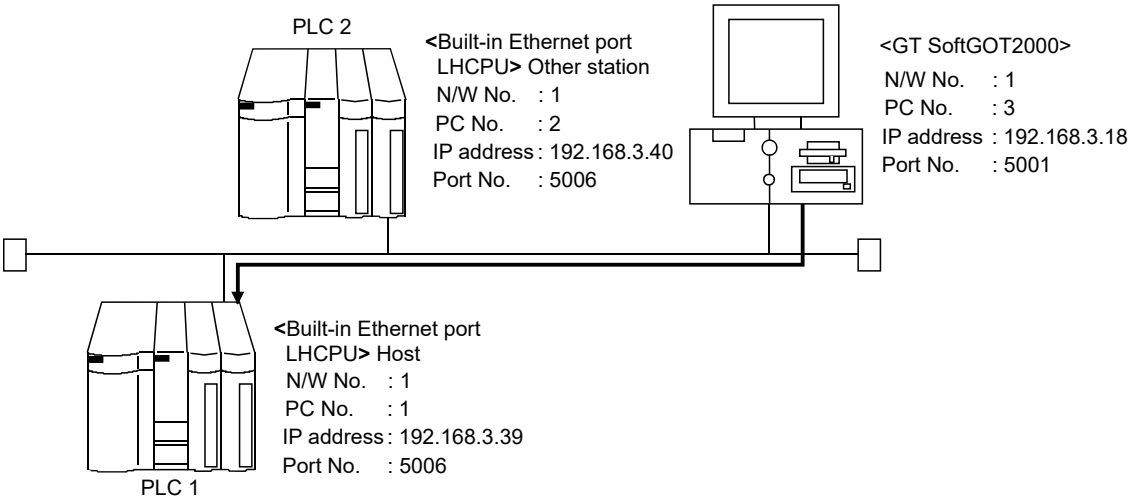
☞ Page 83 [Ethernet]

When using Built-in Ethernet port LHCPU (one-to-one connection, multi-connection)

The following shows the setting items and precautions for communication from GT SoftGOT2000 via a Built-in Ethernet port LHCPU.

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the CPU module and GT SoftGOT2000.

☞ Page 248 Settings in GT Designer3

■Before setting

• Precautions for monitoring

The CPUs on other networks cannot be monitored.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

◇Use a switching hub.

◇Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

◇Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models		
L04HCPU	L08HCPU	L16HCPU
L32HCPU		

■Setting on GX Works3 (Module parameter setting)

Configure the Built-in Ethernet port setting in a target module parameter (only when multiple modules are connected).

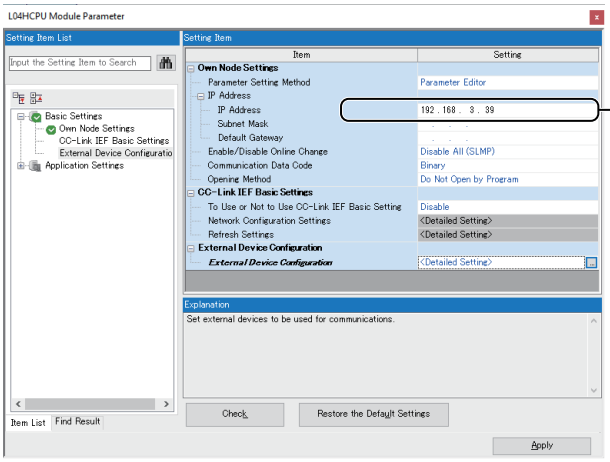
To make communications with GX Works3, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

Set the other items according to the system used.

For the details of the settings, refer to the following.

GX Works3 Operating Manual

Set the IP address for PLC1 in [IP Address].



■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>Ping 192. 168. 3. 39

Reply from 192.168.3.39: bytes=32 time<1ms TTL=32

When connections are not good

C:\>Ping 192. 168. 3. 39

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

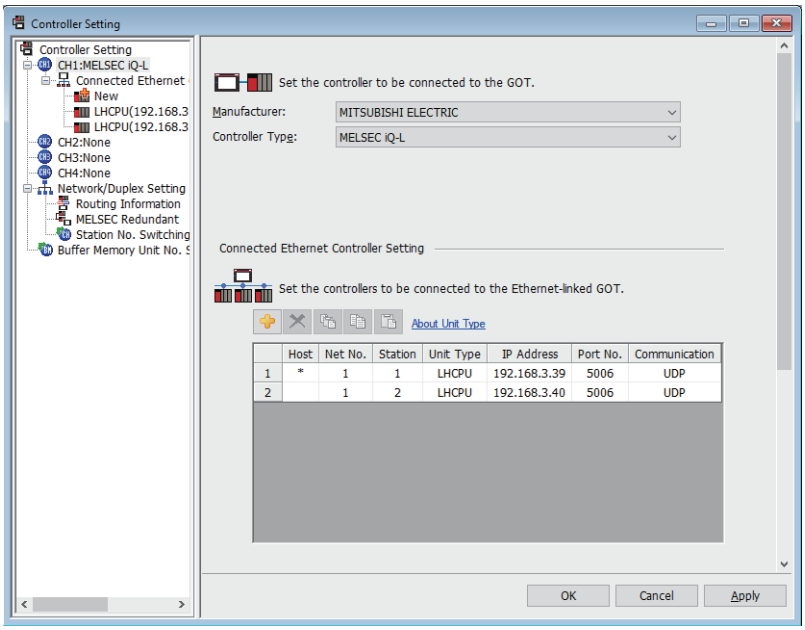
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120]
[Unit Type]	Select the type of the target Ethernet module.	[LHCPU]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

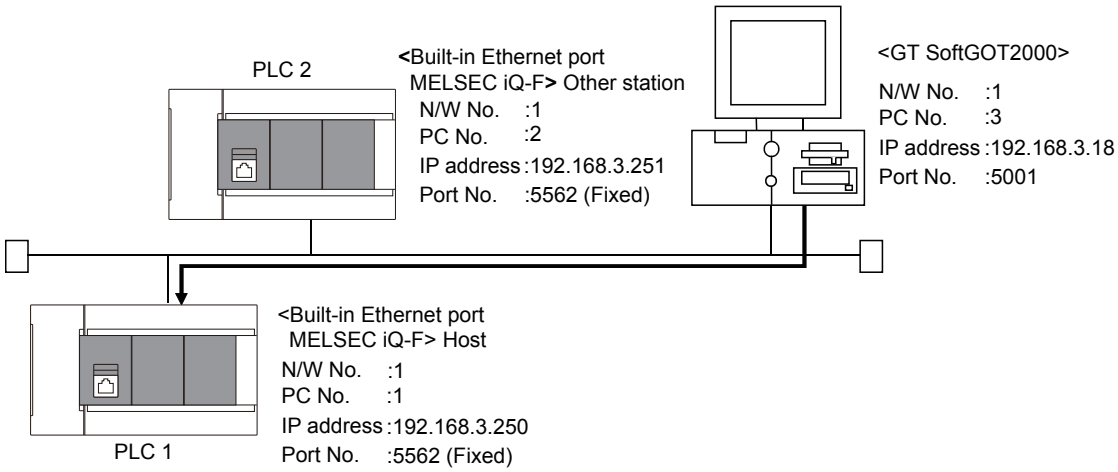
☞ Page 83 [Ethernet]

When using Built-in Ethernet port MELSEC iQ-F (one-to-one connection, multi-connection)

The following shows the setting items and precautions for communication from GT SoftGOT2000 via a Built-in Ethernet port MELSEC iQ-F.

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the CPU module and GT SoftGOT2000.

☞ Page 251 Settings in GT Designer3

■Before setting

• Precautions for monitoring

The CPUs on other networks cannot be monitored.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models			
FX5U	FX5UC	FX5UJ	FX5S

■Setting on GX Works3 (Module parameter setting)

Configure the Built-in Ethernet port setting in a target module parameter (only when multiple modules are connected).

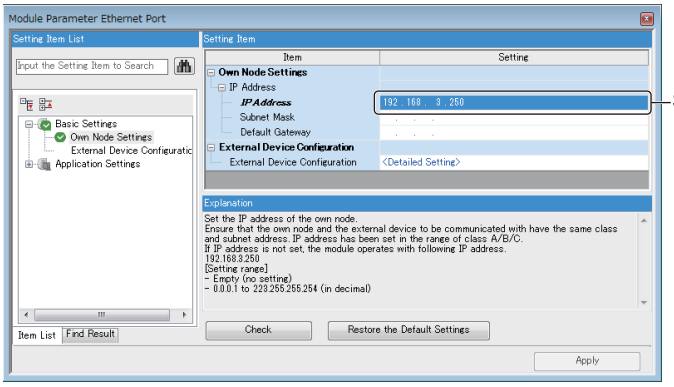
To make communications with GX Works3, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

Set the other items according to the system used.

For the details of the settings, refer to the following.

GX Works3 Operating Manual

Set the IP address for PLC1 in [IP Address].



■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 251

Reply from 192.168.3.251:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 251

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

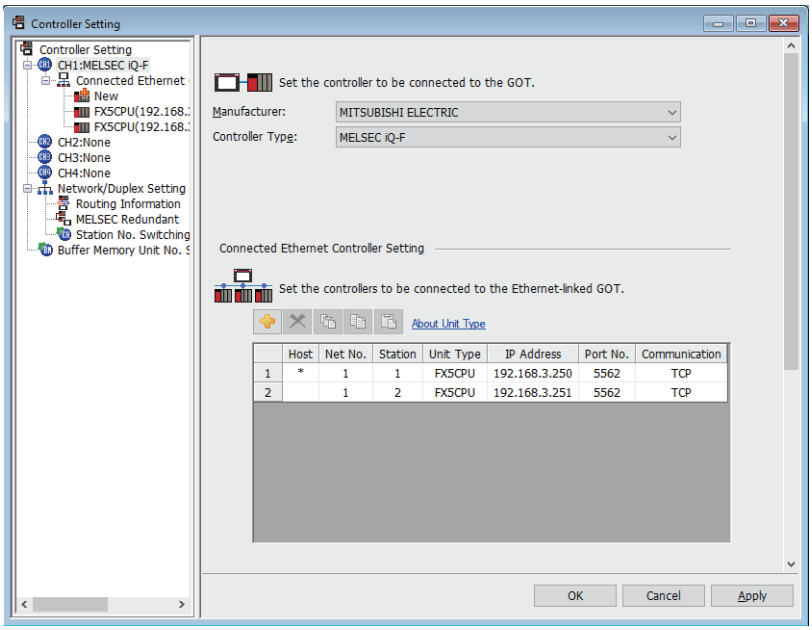
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120]
[Unit Type]	Select the type of the target Ethernet module.	[FX5CPU]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5562]
[Communication]	Displays the communication method.	[TCP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

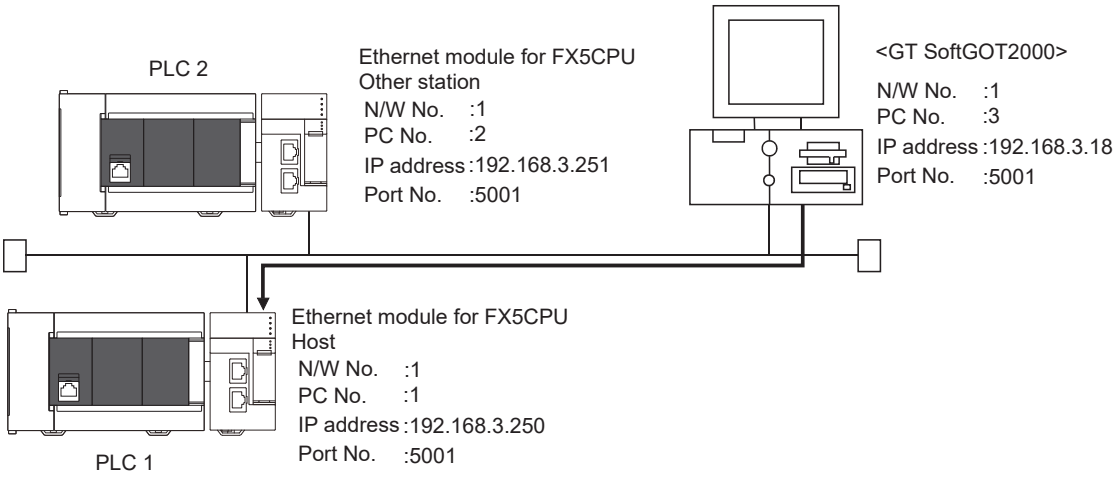
When using Ethernet module for FX5CPU

The following shows the setting items and precautions for communication from GT SoftGOT2000 via an Ethernet module for FX5CPU.

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.

Example) Connection via the FX5-CCLGN-MS



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the CPU module and GT SoftGOT2000.

☞ Page 254 Settings in GT Designer3

■Before setting

• Precautions for monitoring

The CPUs on other networks cannot be monitored.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

• Use a switching hub.

• Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

• Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Module	Model name
Ethernet module	FX5-ENET, FX5-ENET/IP
Motion module	FX5-40SSC-G, FX5-80SSC-G
CC-Link IE TSN master/local module	FX5-CCLGN-MS

■Setting on GX Works3 (Module parameter setting)

Configure the Ethernet module (MELSEC iQ-F series) setting in a target module parameter (only when multiple modules are connected).

To make communications with GX Works3, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

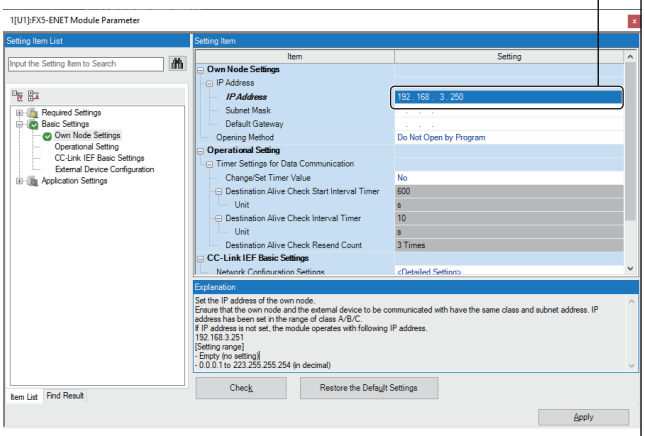
Set the other items according to the system used.

For the details of the settings, refer to the following.

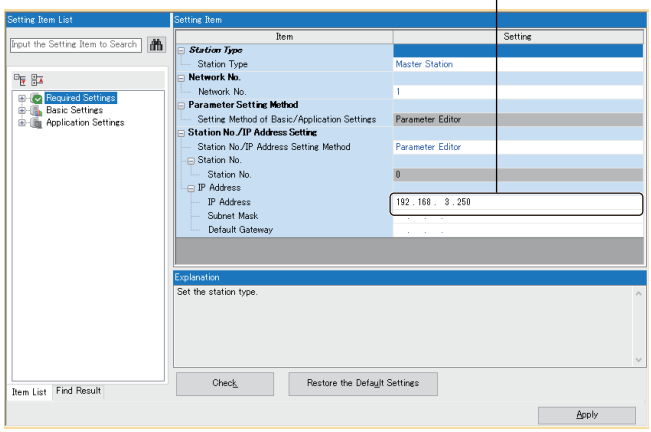
GX Works3 Operating Manual

Set the IP address for PLC1 in [IP Address].

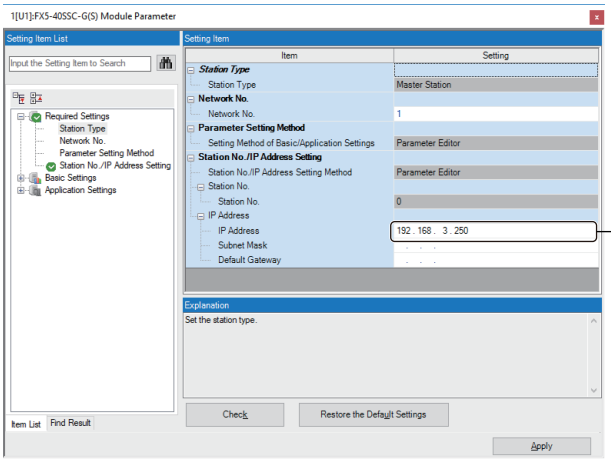
Set the IP address of PLC1.



When connecting GT SoftGOT2000 to the FX5-ENET or FX5-ENET/IP



When connecting GT SoftGOT2000 to the FX5-CCLGN-MS



When connecting GT SoftGOT2000 to the FX5-40SSC-G or FX5-80SSC-G

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 251

Reply from 192.168.3.251:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 251

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

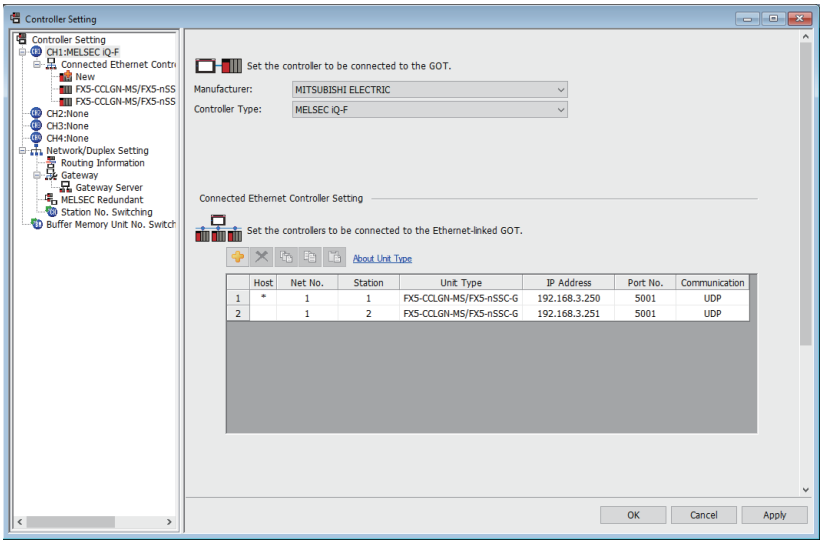
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	*1
[Unit Type]	Select the type of the target Ethernet module.	[FX5-CCLGN-MS/FX5-nSSC-G], [FX5-ENET]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	*1
[Communication]	Displays the communication method.	*1

*1 The following shows the setting range.

[Unit Type]	[Station]	[Port No.]	[Communication]
[FX5-CCLGN-MS/FX5-nSSC-G]	[0] to [120]	[5001]	[UDP]
		[5554]	[TCP]
[FX5-ENET]	[1] to [120]	[5554]	[TCP]
		[5555]	[UDP]

■Setting on GT SoftGOT2000

Communication setup

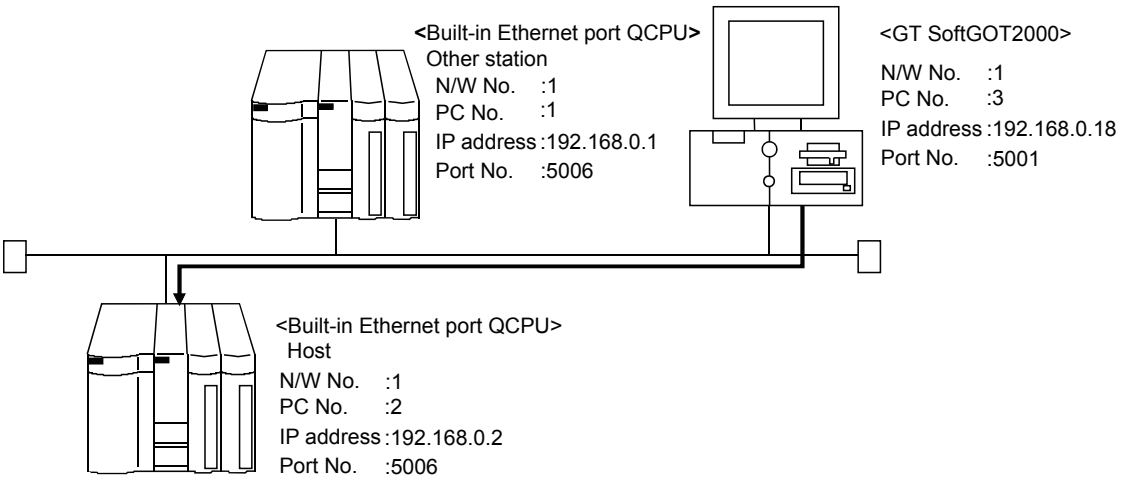
Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

When using Built-in Ethernet port QCPU (one-to-one connection, multi-connection)

The setting items and precautions are shown below for communicating GT SoftGOT2000 to Built-in Ethernet port QCPU.
This section explains the system configuration to monitor the host as shown below.
When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT2000.

☞ Page 258 Settings in GT Designer3

■Before setting

• Monitoring the CPUs on other networks

Monitoring the CPUs on other networks requires the routing parameter to be set.

Refer to the following for how to set the routing parameters.

☞ Page 257 Routing Parameter Setting

☞ Page 258 Settings in GT Designer3

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

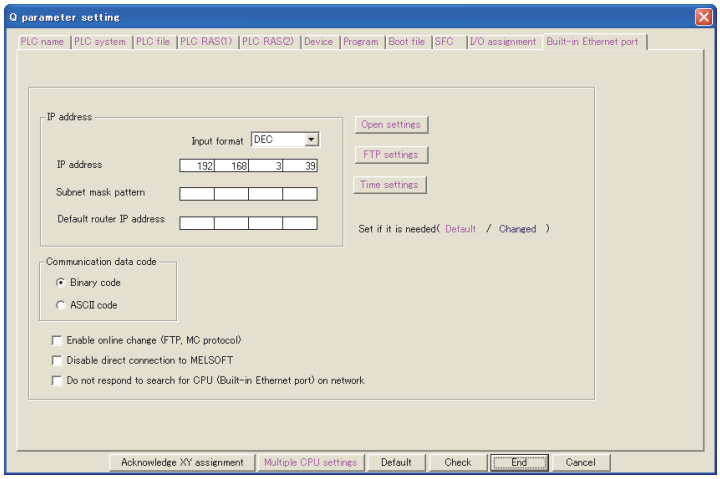
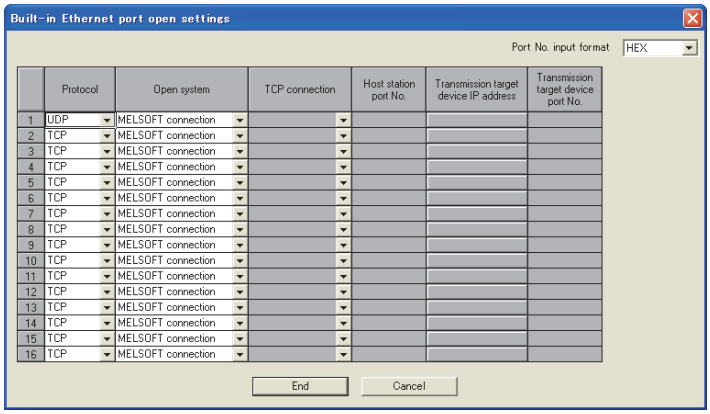
Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models				
Q03UDECPU	Q04UDEHCPU	Q06UDEHCPU	Q10UDEHCPU	Q13UDEHCPU
Q20UDEHCPU	Q26UDEHCPU	Q50UDEHCPU	Q100UDEHCPU	
Q03UDVCPU	Q04UDVCPU	Q06UDVCPU	Q13UDVCPU	Q26UDVCPU

■Setting on GX Works2/GX Developer (Q parameter setting)

Set the Built-in Ethernet port for the Q parameter setting. (multi-connection only)

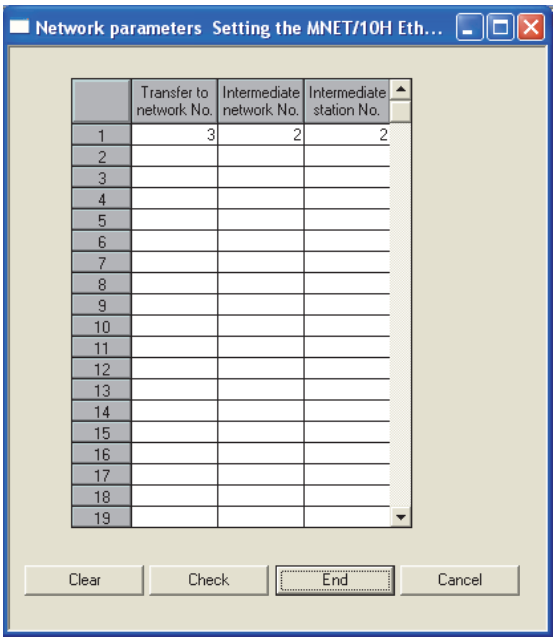
Item	Setting Screen Examples
[Built-in Ethernet port setting]	
[Open settings]	 To make communications with GX Works2/GX Developer, ask the person in charge of the network about the IP address setting to confirm, and set the IP address. Set the other items according to the specifications of the nodes or applications connected to an Ethernet module.

■Routing Parameter Setting

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.



Item	Range
[Transfer Network No.]	[1] to [239]
[Relay Network No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 258 Settings in GT Designer3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

The ping test can also be performed with GX Developer (SW6D5C-GPPW 6.01B or later).

For details of the ping test, refer to the following.

📖GX Developer Version□ Operating Manual

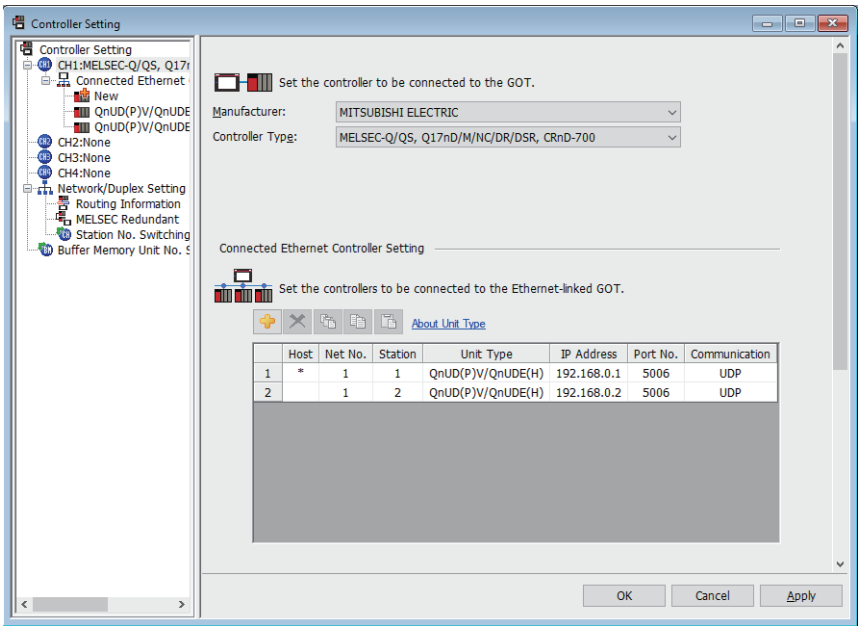
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[QnUD(P)V/QnUDEH]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

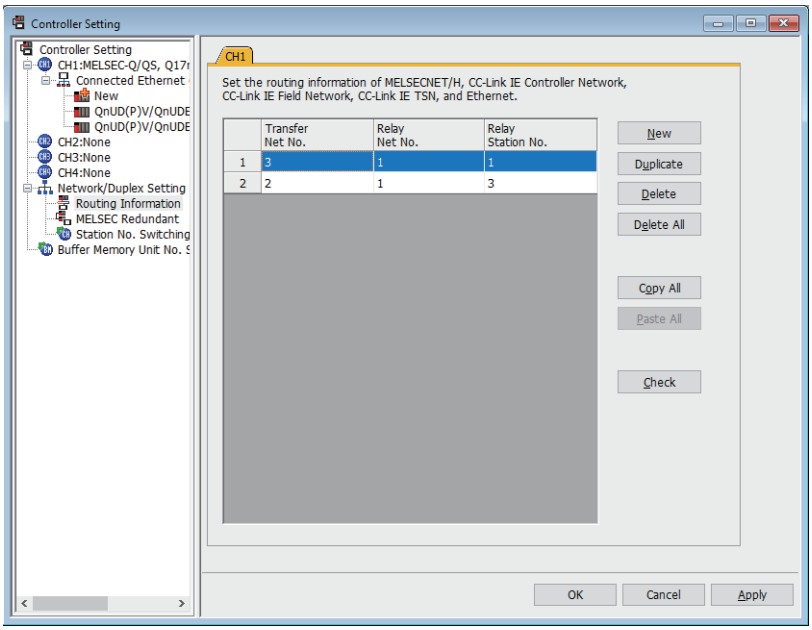
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

Q Corresponding Ethernet Interface Module User's Manual (Application)



Item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

Page 257 Routing Parameter Setting

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

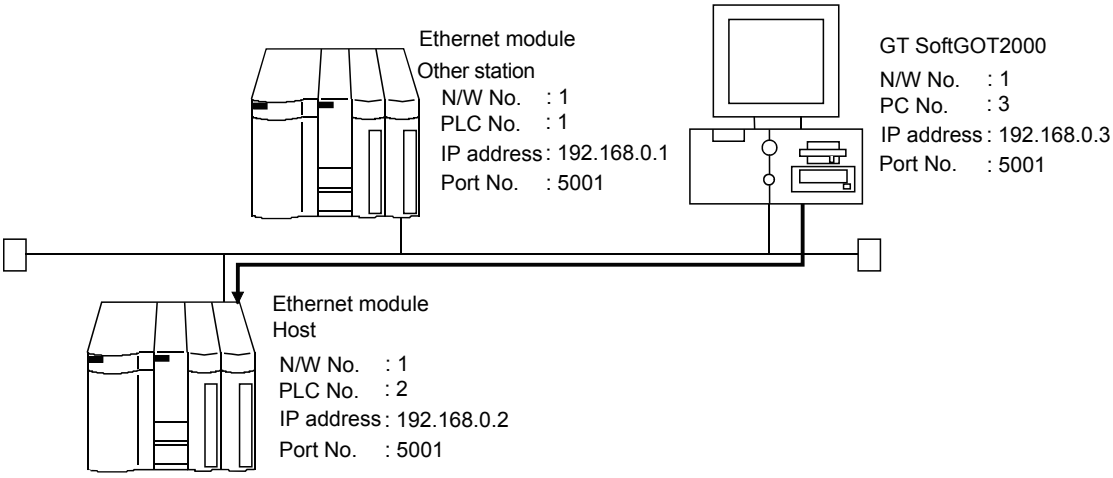
Page 83 [Ethernet]

When using Ethernet module for QCPU

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the PLC CPU via the Ethernet module.

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT2000.

☞ Page 263 Settings in GT Designer3

■Before setting

• Monitoring the CPUs on other networks

Monitoring the CPUs on other networks requires the routing parameter to be set.

For the routing parameter setting, refer to the following.

☞ Page 262 Routing Parameter Setting

☞ Page 263 Settings in GT Designer3

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

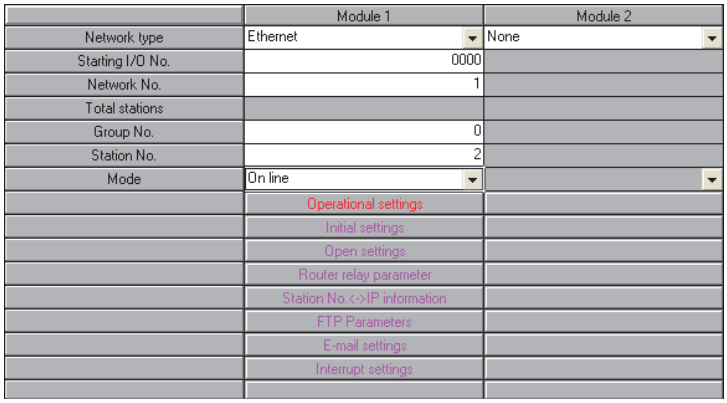
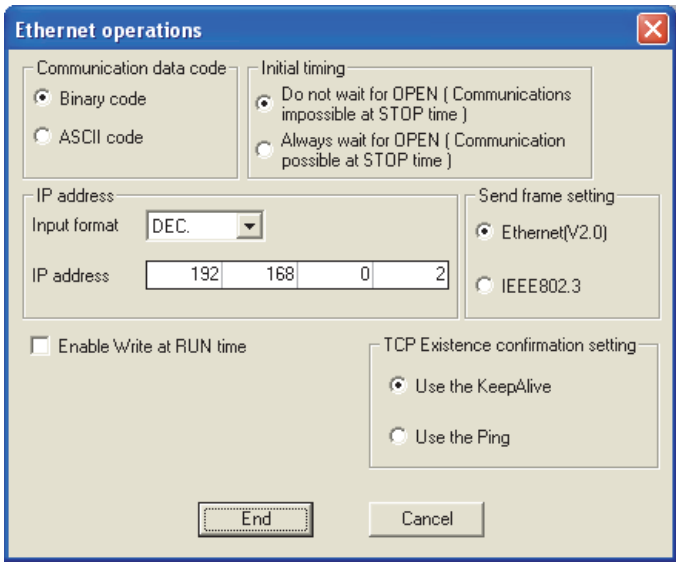
■Compatible models

Compatible models				
QJ71E71-100,	QJ71E71-B5,	QJ71E71-B2,	QJ71E71,	LJ71E71-100

■Setting on GX Works2/GX Developer (Network parameter setting)

Parameter setting can be made from the MELSECNET/ETHERNET network parameter setting screen.

Set the network type, first I/O No., network No., group No., station number, mode and operation setting.

Item	Setting Screen Examples
[Ethernet Parameters]	
[Operation Setting]	

To make communications with GX Works2/GX Developer, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

Set the other items according to the specifications of the nodes or applications connected to an Ethernet module compatible with QCPU or LCPU.

The following are the operation setting items that can be set on GX Works2 or GX Developer.

[Communication data code]: The binary code or ASCII code is available.

[Initial timing]: Communications can be made from GX Works2 or GX Developer even when the PLC CPU is in the STOP status.

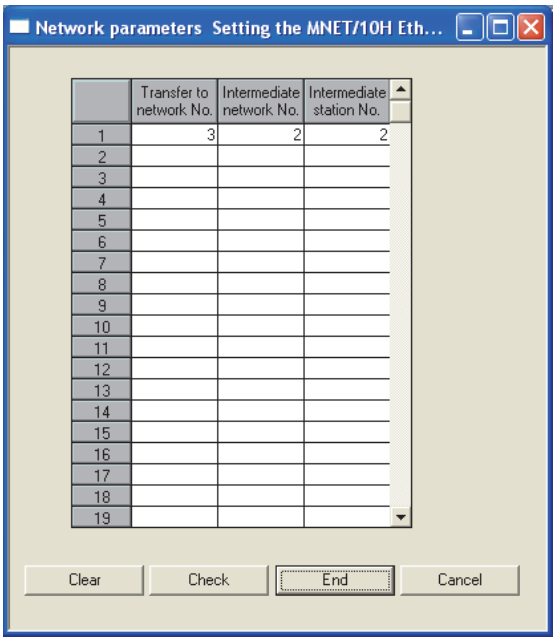
[Enable Write at RUN time]: The online change or device test can be performed with GX Works2 or GX Developer.

■Routing Parameter Setting

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.



Item	Range
[Transfer Network No.]	[1] to [239]
[Relay Network No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 263 Settings in GT Designer3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

The ping test can also be performed with GX Developer (SW6D5C-GPPW 6.01B or later).

For details of the ping test, refer to the following.

GX Developer Version□ Operating Manual

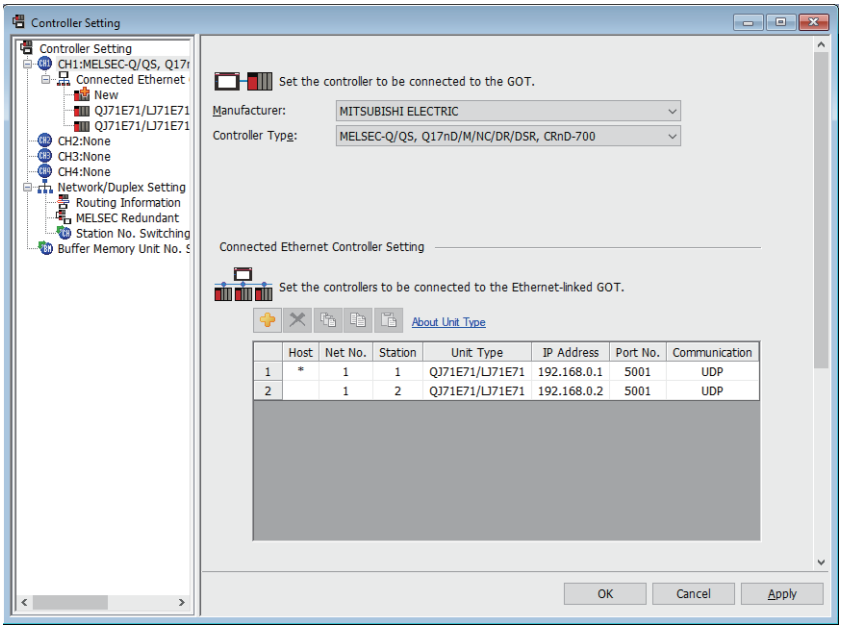
- Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[QJ71E71/LJ71E71]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5001], [5002]
[Communication]	Displays the communication method.	[UDP] (for port No. 5001), [TCP] (for port No. 5002)

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

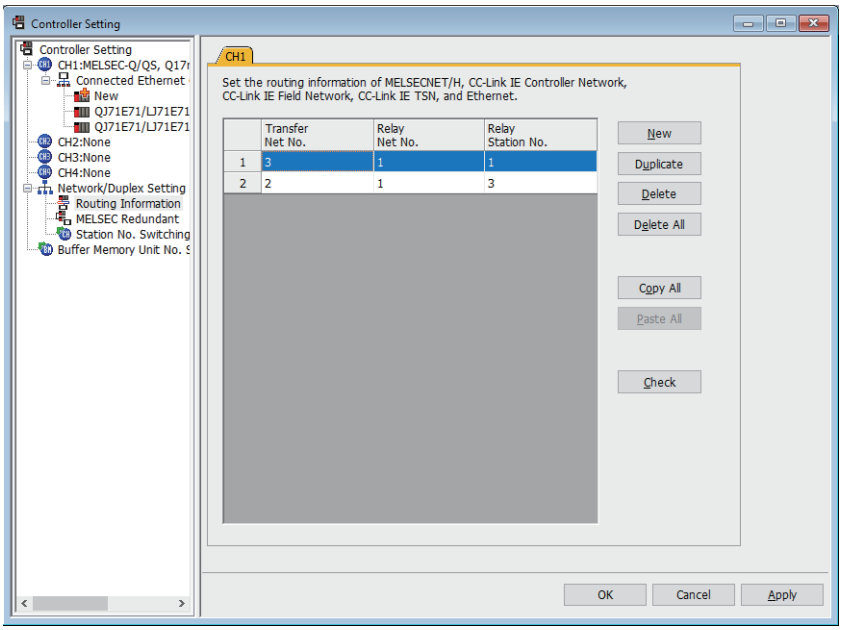
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

📖Q Corresponding Ethernet Interface Module User's Manual (Application)



Item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 262 Routing Parameter Setting

■Setting on GT SoftGOT2000

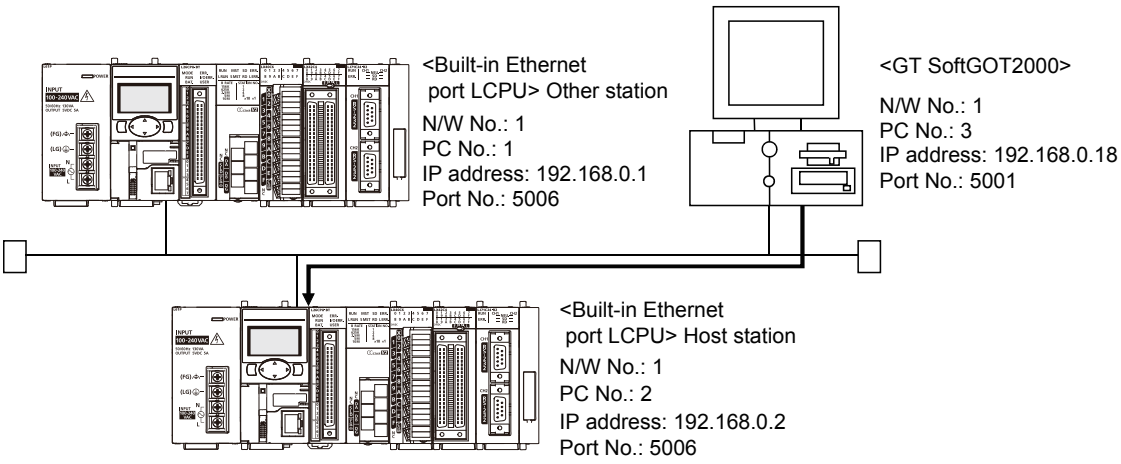
Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

When using Built-in Ethernet port LCPU (one-to-one connection, multi-connection)

The setting items and precautions are shown below for communicating GT SoftGOT2000 to Built-in Ethernet port LCPU.
This section explains the system configuration to monitor the host as shown below.
When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the CPU module and GT SoftGOT2000.

☞ Page 267 Settings in GT Designer3

■Before setting

• Precautions for monitoring

The CPUs on other networks cannot be monitored.

• Precautions for communication

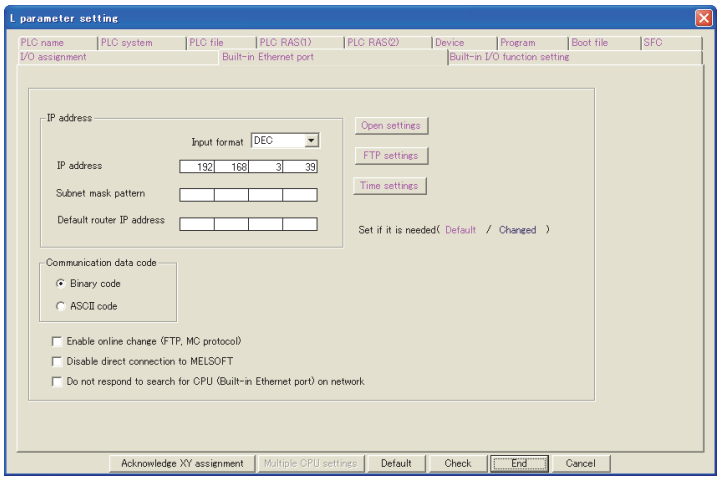
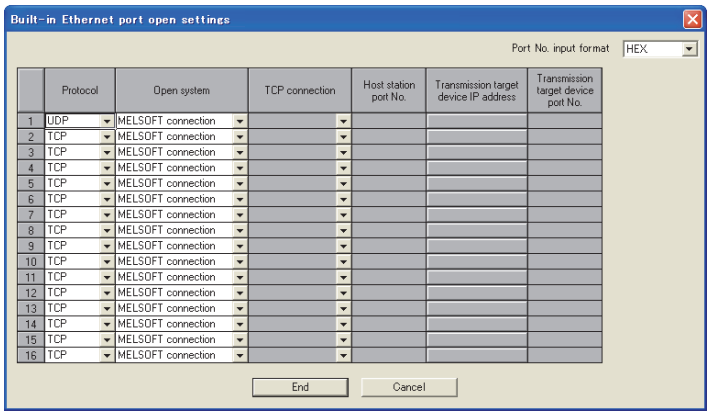
When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.
Use a switching hub.
Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different sstation number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models				
L02CPU,	L06CPU,	L26CPU,	L26CPU-BT,	L02CPU-P,
L06CPU-P,	L26CPU-P,	L26CPU-PBT		

■Setting on GX Works2/GX Developer (L parameter setting)

Set the Built-in Ethernet port for the L parameter setting. (multi-connection only)

Item	Setting Screen Examples
[Built-in Ethernet port setting]	 To make communications with GX Works2/GX Developer, ask the person in charge of the network about the IP address setting to confirm, and set the IP address. Set the other items according to the specifications of the nodes or applications connected to an Ethernet module.
[Open settings]	

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

The ping test can also be performed with GX Developer (SW6D5C-GPPW 6.01B or later).

For details of the ping test, refer to the following.

GX Developer Version□ Operating Manual

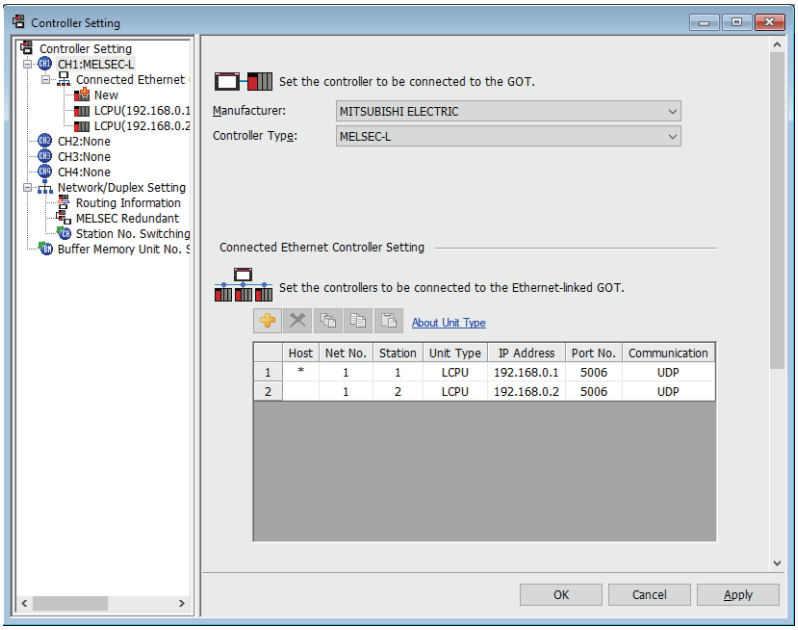
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[LCPU]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

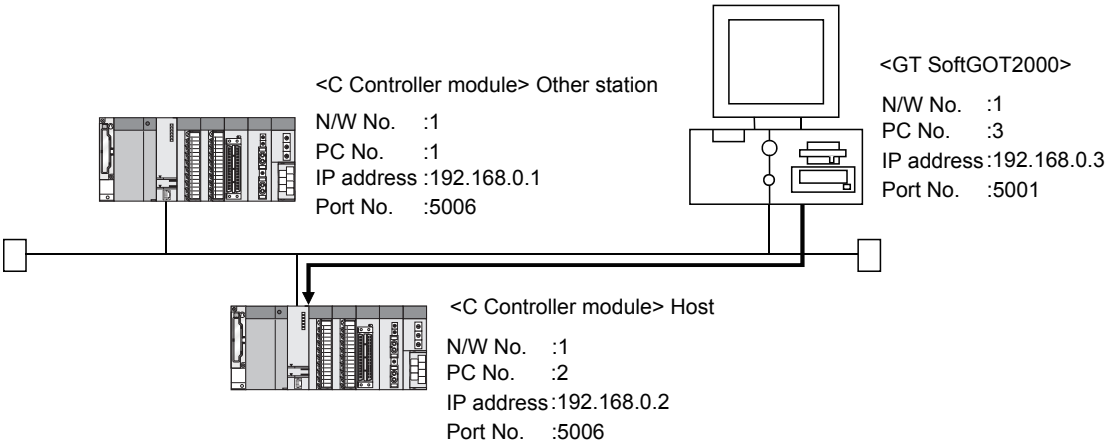
☞ Page 83 [Ethernet]

When using C Controller module

For communications with GT SoftGOT2000 via C Controller module, setting items and precautions are described below.

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of C Controller module and GT SoftGOT2000.

☞ Page 270 Settings in GT Designer3

■Before setting

• Precautions for monitoring

GT SoftGOT2000 cannot monitor CPUs on the other networks.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models				
R12CCPU-V,	Q12DCCPU-V,	Q24DHCCPU-V,	Q24DHCCPU-LS	Q26DHCCPU-LS

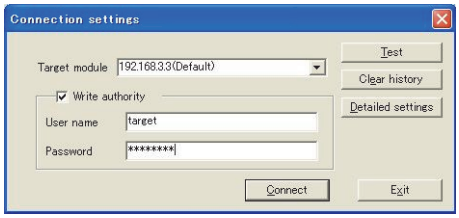
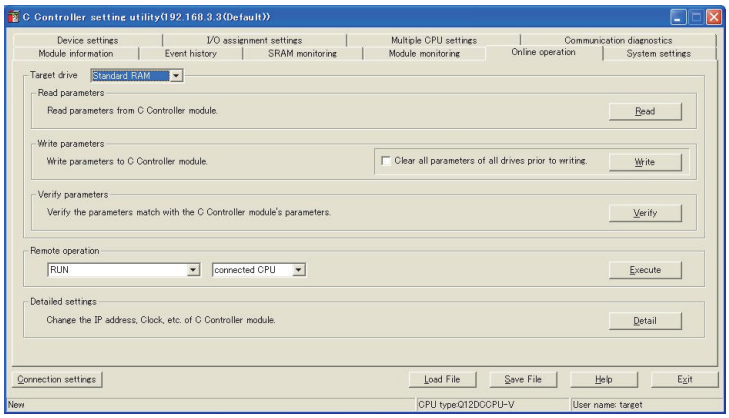
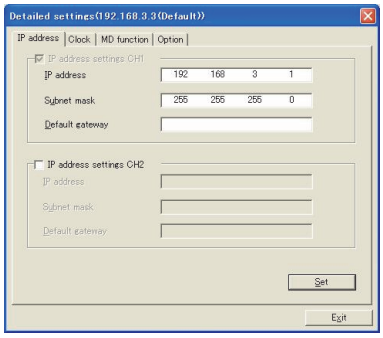
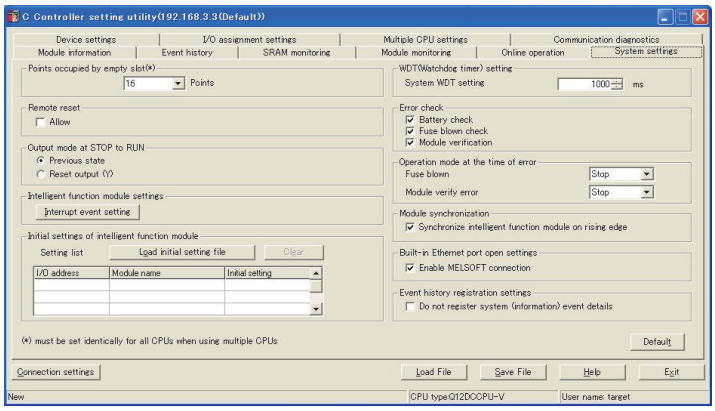
■Setting on C Controller module setting utility (Parameter setting)

Set the parameter on C Controller module setting utility.

Use SW3PVC-CCPU-J Ver.3.05F or later for the C Controller module setting utility.

For details of the C Controller module setting utility, refer to the following manual.

📖 C Controller Module User's Manual (Utility Operation, Programming)

Item	Setting Screen Examples
[Connection settings]	 If the IP address of the C controller module has been changed, input the changed IP address or host name. If the account of the C controller module has been changed, input the changed user name and password.
[Online operation]	
[Detailed settings]	
[System settings]	

■Setting on personal computer

Set the IP address.

■Communications check

• Ping test

When C Controller module is ready for communications, execute the Ping command with the command prompt of Windows.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

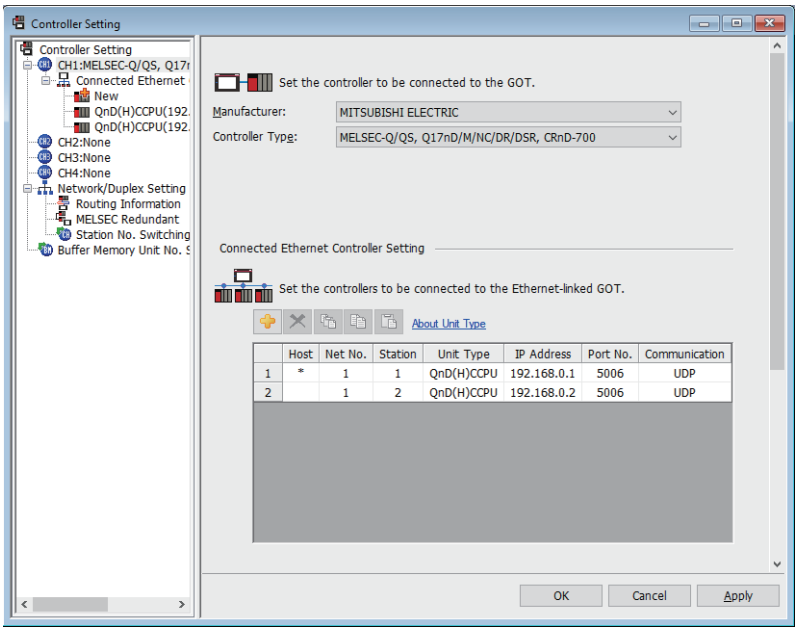
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target C Controller module.	[1] to [239] *1
[Station]	Set the station number of the target C Controller module.	[1] to [120] (when [RnCCPU/RnWCPU] is selected for [Unit Type]) *2 [1] to [64] (when [QnD(H)CCPU] is selected for [Unit Type]) *2
[Unit Type]	Select the type of the target C Controller module.	[RnCCPU/RnWCPU] [QnD(H)CCPU]
[IP Address]	Set the IP address of the target C Controller module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target C Controller module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

*1 Set the same value as that of GOT Net No.

*2 Set a value different from that of the GOT PLC No. and the PLC No. of other PLCs on the same network.

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

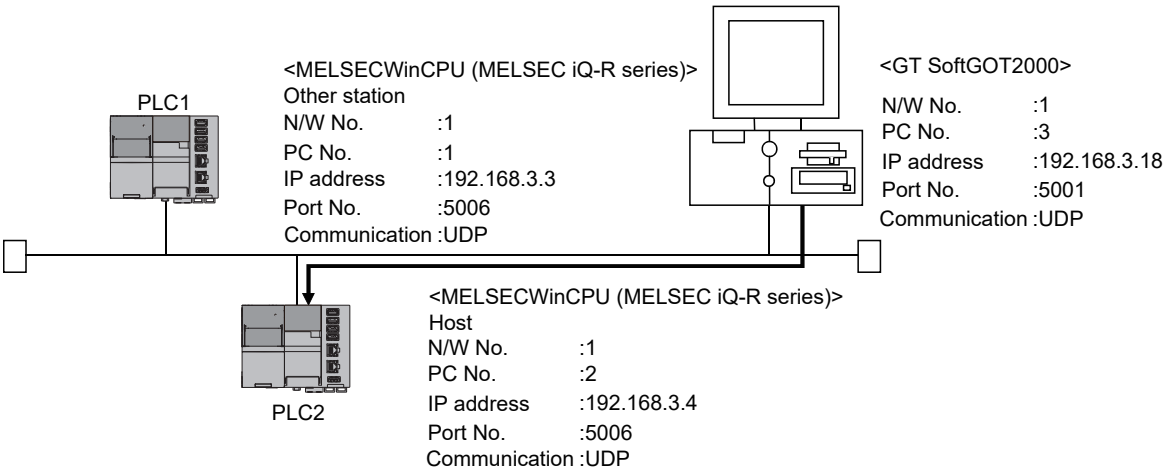
When using MELSECWinCPU (MELSEC iQ-R series)

Supported by GT SoftGOT2000 (Multiple channels) only.

The following shows the setting items and precautions for communication from GT SoftGOT2000 via a MELSECWinCPU (MELSEC iQ-R series).

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the MELSECWinCPU (MELSEC iQ-R series) and GT SoftGOT2000.

☞ Page 273 Settings in GT Designer3

■Before setting

• Precautions for monitoring

The CPUs on other networks cannot be monitored.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

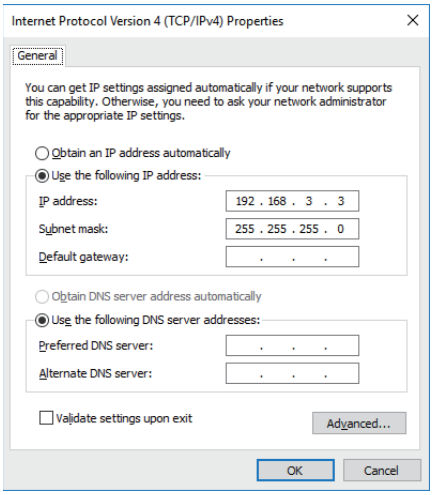
Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models
R102WCPU-W

■[Internet Protocol Version 4 (TCP/IPv4) Properties]

The communication settings of the MELSECWinCPU (MELSEC iQ-R series) can be configured from [Internet Protocol Version 4 (TCP/IPv4) Properties] of Windows installed on the MELSECWinCPU (MELSEC iQ-R series).



○: Required, ×: Not required

Item*1	Set value		Setting (with GT SoftGOT2000 connected)
	1	2	
[IP address]	192.168.3.3	192.168.3.4	○
[Subnet mask]	255.255.255.0	255.255.255.0	○
[Default gateway]	-	-	×
[Preferred DNS server]	-	-	×
[Alternate DNS server]	-	-	×

*1 Set an IP address which corresponds to the CH number used for connection with GT SoftGOT2000.

■Firewall setting

To connect with the MELSECWinCPU (MELSEC iQ-R series), configure the firewall setting.

For the details, refer to the following.

📖MELSEC iQ-R MELSECWinCPU Module User's Manual

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 3

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

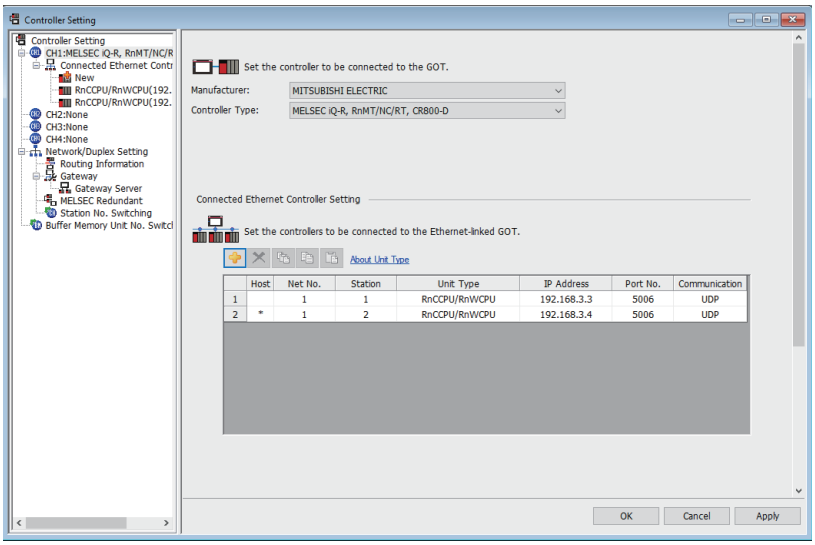
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target MELSECWinCPU (MELSEC iQ-R series).	[1] to [239]*1
[Station]	Set the network number of the target MELSECWinCPU (MELSEC iQ-R series).	[1] to [120]*2
[Unit Type]	Select the type of the target MELSECWinCPU (MELSEC iQ-R series).	[RnCCPU/RnWCPU]
[IP Address]	Set the IP address of the target MELSECWinCPU (MELSEC iQ-R series).	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target MELSECWinCPU (MELSEC iQ-R series).	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

*1 Set the same value as that of GOT Net No.

*2 Set a value different from that of the GOT PLC No. and the PLC No. of other PLCs on the same network.

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

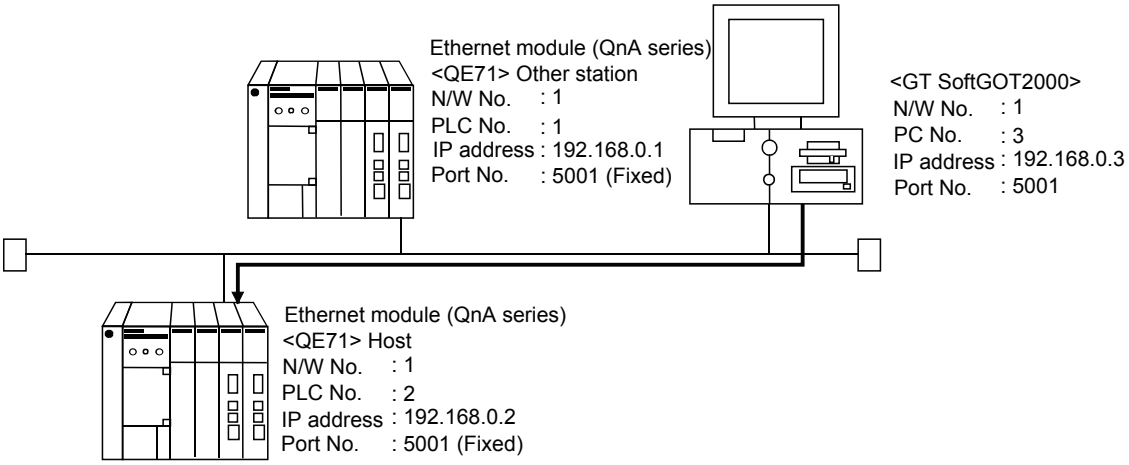
☞ Page 83 [Ethernet]

When using Ethernet module (QnA series)

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the PLC CPU via the Ethernet module (QnA series).

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT2000.

☞ Page 277 Settings in GT Designer3

■Before setting

• Monitoring the CPUs on other networks

Monitoring the CPUs on other networks requires the routing parameter to be set.

For the routing parameter setting, refer to the following.

☞ Page 276 Routing Parameter Setting

☞ Page 277 Settings in GT Designer3

• Precautions for communication

Only communications within the same segment are applicable.

No communications via a router or gateway can be monitored.

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models *1				
AJ71QE71N3-T,	AJ71QE71N-B5,	AJ71QE71N-B2,	AJ71QE71N-T,	AJ71QE71N-B5T,
AJ71QE71,	AJ71QE71-B5,	A1SJ71QE71N3-T,	A1SJ71QE71N-B5,	A1SJ71QE71N-B2,
A1SJ71QE71N-T,	A1SJ71QE71N-B5T,	A1SJ71QE71-B5,	A1SJ71QE71-B2	

*1 When using AJ71QE71, AJ71QE71-B5, A1SJ71QE71-B2 or A1SJ71QE71-B5, use a module or PLC CPU of function version B or later.

■Ethernet module (QnA series) switch settings

Operation mode setting switch: 0 (online)

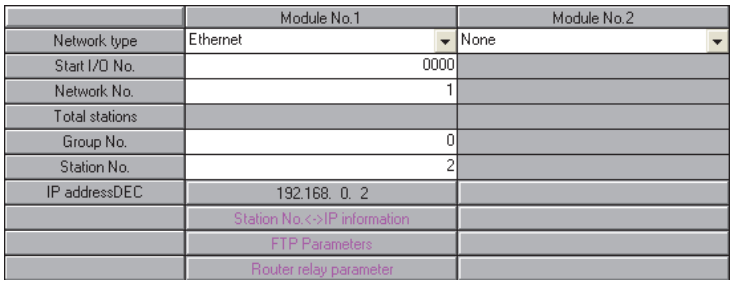
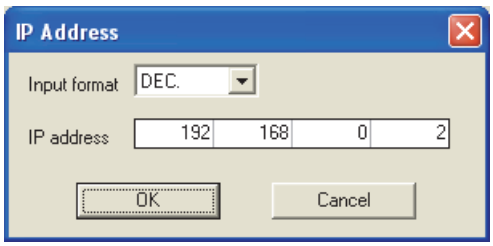
Automatic start mode: SW3 ON

When SW3 is ON, initial processing is performed independently of Y19 (initial processing request). Communications are also enabled if the CPU module is stopped.

For the initial processing using Y19 (initial processing request), create the program for initial processing while referring to the "For QnA Ethernet Interface Module User's Manual".

■Setting on GX Works2/GX Developer (Network parameter setting)

On the MELSECNET/Ethernet setting screen of network parameter, set the network type, starting I/O No., network No., group No., station number and IP address.

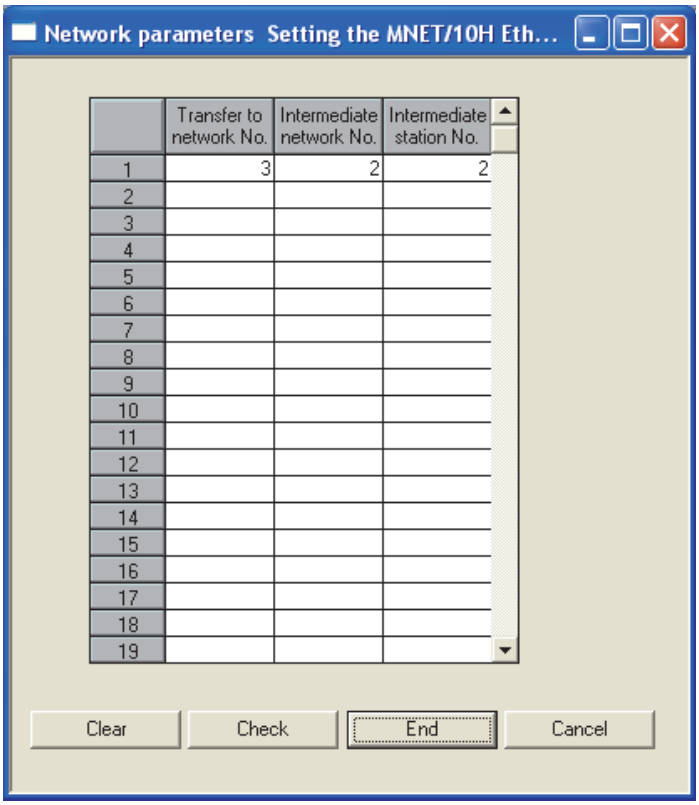
Item	Setting screen example
[Ethernet Parameters]	
[IP Address Setting]	

■Routing Parameter Setting

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.



Item	Range
[Transfer Network No.]	[1] to [239]
[Relay Network No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 277 Settings in GT Designer3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

The ping test can also be performed with GX Developer (SW6D5C-GPPW 6.01B or later).

For details of the ping test, refer to the following.

GX Developer Version□ Operating Manual

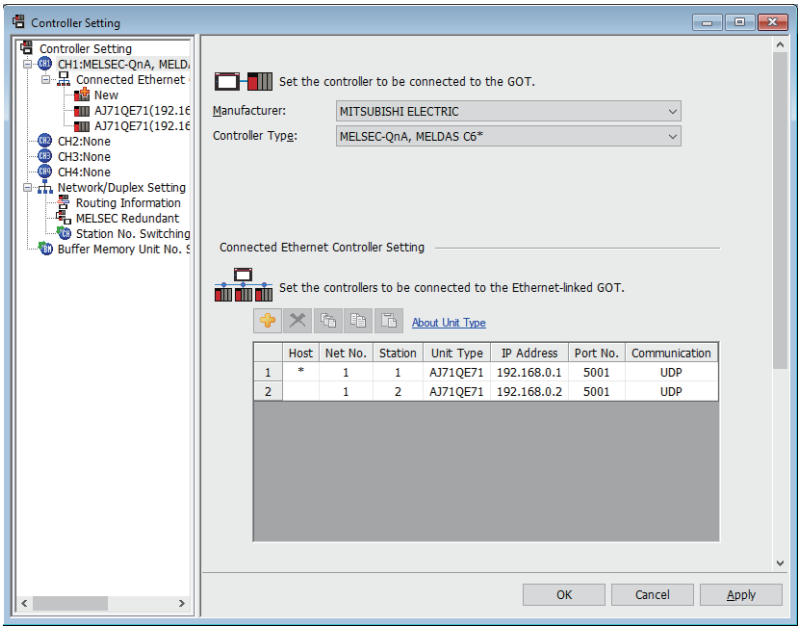
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[AJ71QE71]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5001]
[Communication]	Displays the communication method.	[UDP]

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

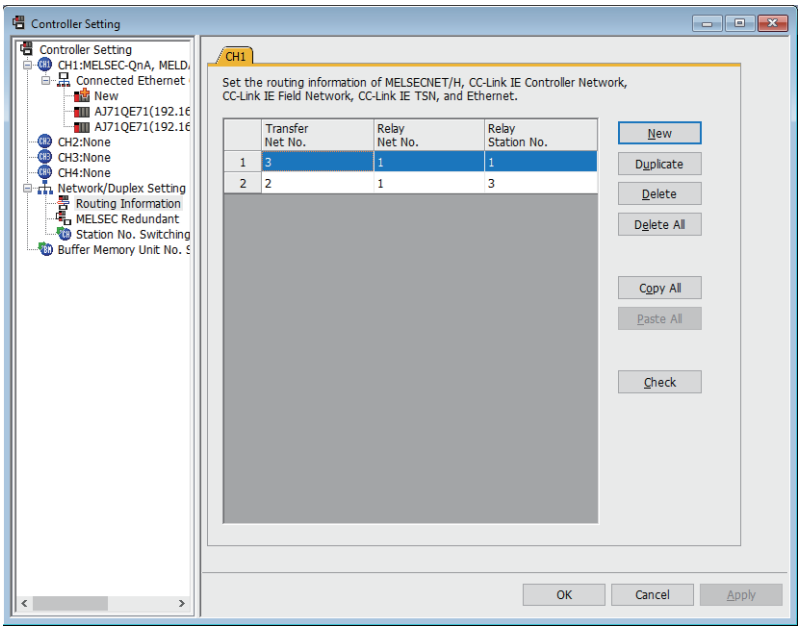
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

For QnA Ethernet Interface Module User's Manual



Item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 276 Routing Parameter Setting

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

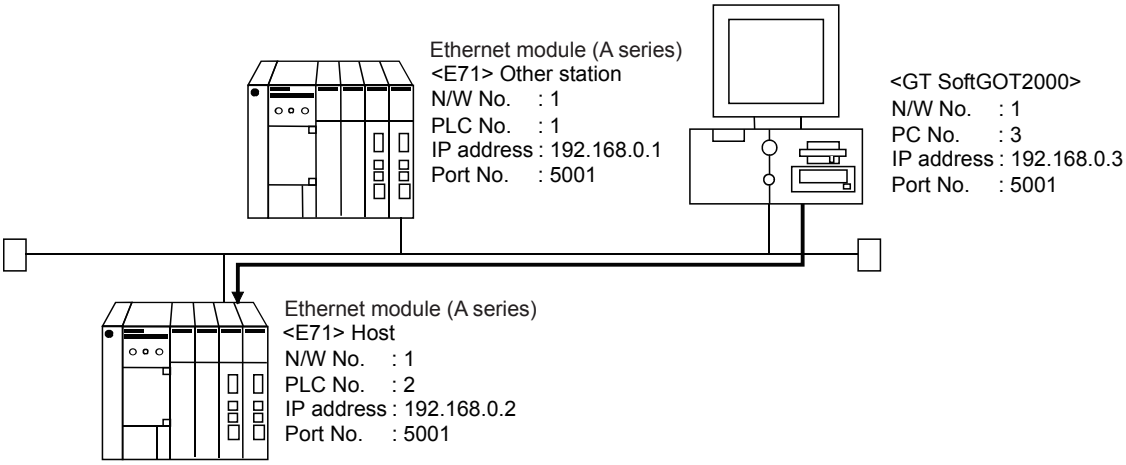
☞ Page 83 [Ethernet]

When using Ethernet module (A series)

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the PLC CPU via the Ethernet module (A series).

This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

The N/W No. and PLC No. to be specified for Ethernet connection to the E71 should be those set as desired on GT Designer3.

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT2000.

☞ Page 282 Settings in GT Designer3

The following shows the procedure for performing communications via E71.

■Before setting

• Monitoring precautions

The connection target cannot be monitored via MELSECTNET/10 or MELSECNET/H.

• Communication precautions

Only communications within the same segment can be monitored.

No communications via a router or gateway can be monitored.

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models				
AJ71E71N3-T,	AJ71E71N-B5,	AJ71E71N-B2,	AJ71E71N-T,	AJ71E71N-B5T,
AJ71E71-S3,	A1SJ71E71N3-T,	A1SJ71E71N-B5,	A1SJ71E71N-B2,	A1SJ71E71N-T,
A1SJ71E71N-B5T,	A1SJ71E71-B5-S3,	A1SJ71E71-B2-S		

■E71 switch settings

Switch		AJ71E71N3-T,AJ71E71N-B5,AJ71E71N-B2,AJ71E71N-T,AJ71E71N-B5T,AJ71E71-S3,A1SJ71E71N3-T,A1SJ71E71N-B5,A1SJ71E71N-B2,A1SJ71E71N-T,A1SJ71E71N-B5T	A1SJ71E71-B2-S3, A1SJ71E71-B5-S3
Operation mode setting switch		0 (Online mode)	0 (Online mode)
Exchange condition setting switch	Data code setting	SW2 OFF (Binary code)	SW2 OFF (Binary code)
	CPU exchange timing setting	SW7 ON (Online change enabled)	SW3 ON (Online change enabled)

■Sequence programs

Initial processing and communication line open processing sequence programs are needed.

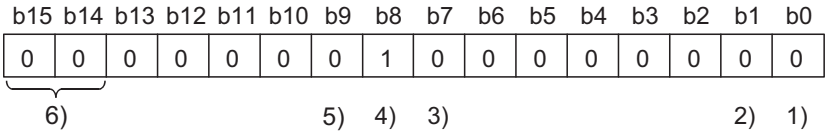
Necessary communication parameters and sequence program examples are given below.

• Communication parameters

The following are the communication parameter setting examples for the host side.

Setting item	Set value
Application setting *1	100_H
IP address of E71	192.168.0.2
E71 port number	5001
IP address of other node	$FFFFFFFF_H$
Other node port number *2	$FFFF_H$

*1 Value specified for application setting
The user can change the settings of 1), 2) and 3).
4), 5) and 6) are fixed settings.
The following shows details of the application setting.

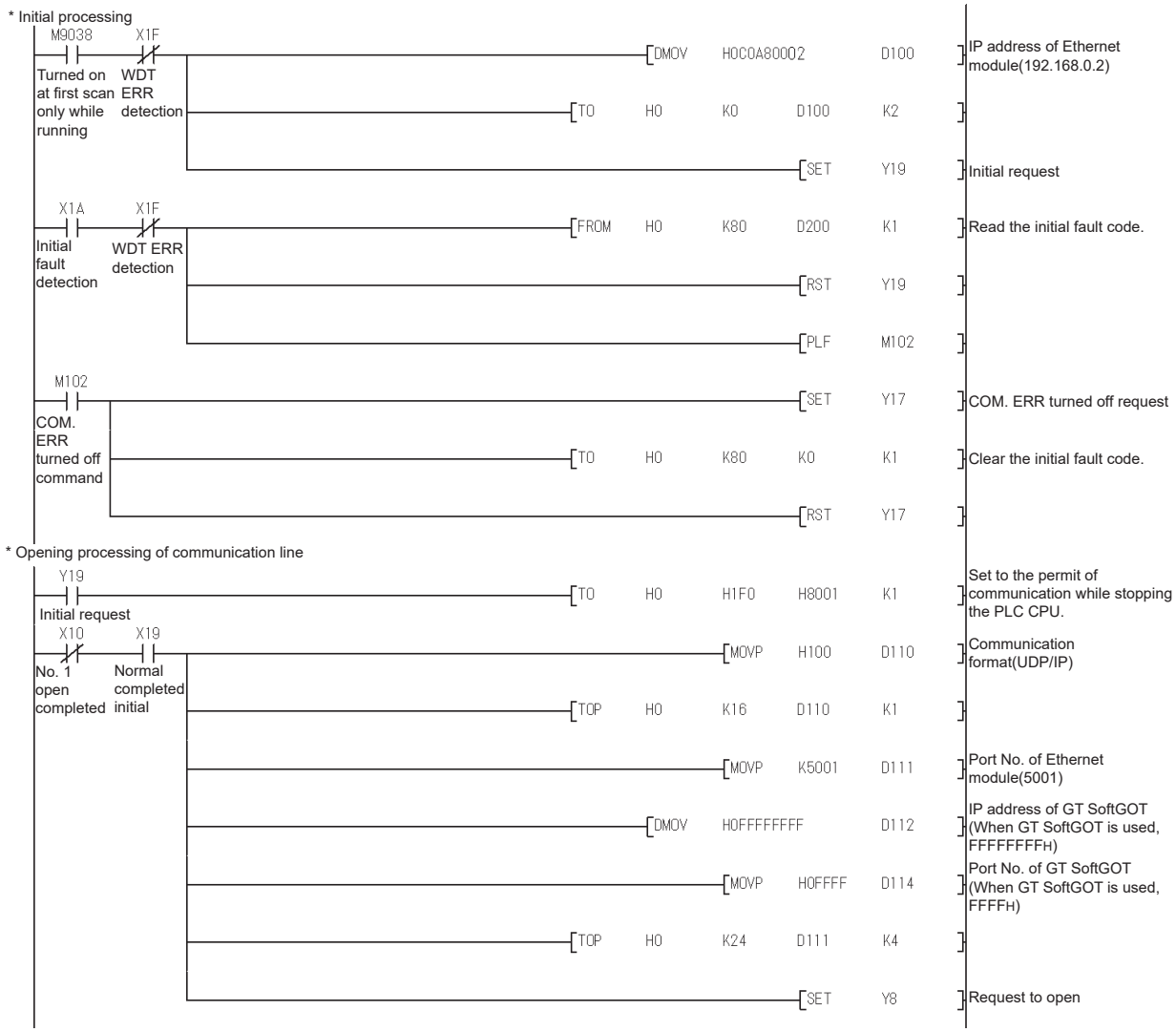


1): Fixed buffer application
0: For send/no communication
1: For receive
2): Existence check
0: No
1: Yes
3): Paring open
0: No
1: Yes
4): Communication system (Set to 1: UDP/IP)
0: TCP/IP
1: UDP/IP
5): Fixed buffer communication (Set to 0: With procedure)
0: With procedure
1: Without procedure
6): Open system (Set to 00: Active, UDP/IP)
00: Active, UDP/IP
10: Unpassive
11: Fullpassive

*2 The other node port number is a fixed setting.
The user can change the other settings.

• Sequence program

In a communications-ready status, the E71's RUN LED comes on and RDY LED flickers.



■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

The ping test can also be performed with GX Developer (SW6D5C-GPPW 6.01B or later).

For details of the ping test, refer to the following.

GX Developer Version□ Operating Manual

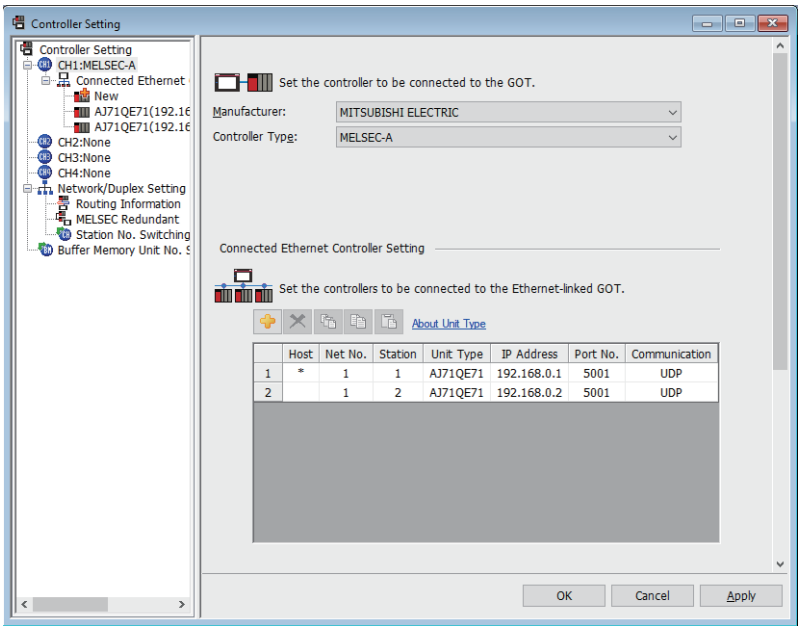
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[AJ71QE71]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[1024] to [65534]
[Communication]	Displays the communication method.	[UDP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

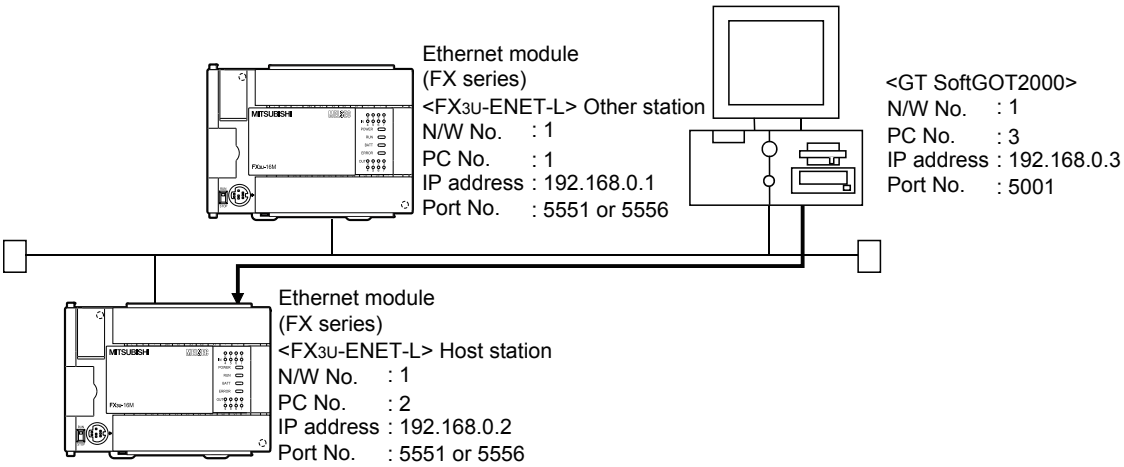
When using Ethernet module (FX series)

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the PLC CPU via the Ethernet module (FX series).

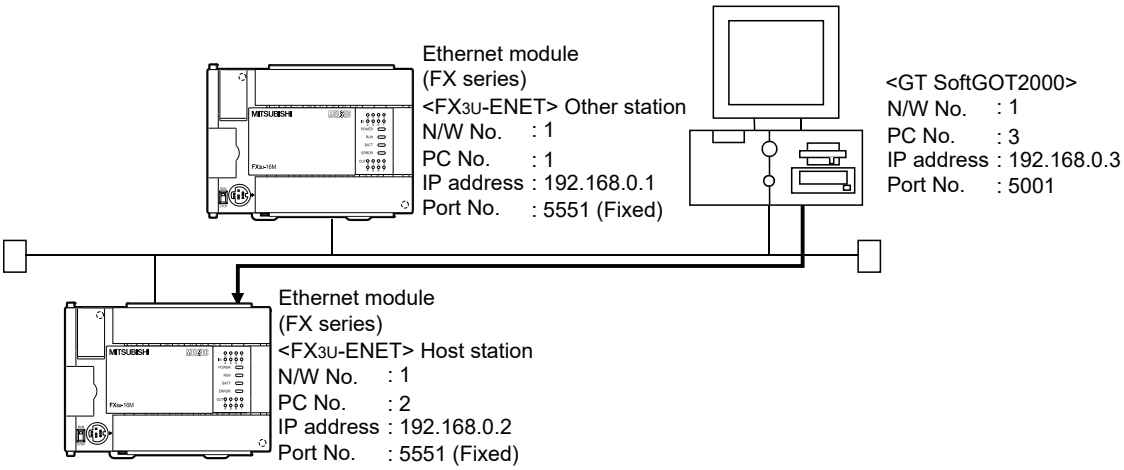
This section explains the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.

• For FX3U-ENET-L



• For FX3U-ENET



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT2000.

☞ Page 287 Settings in GT Designer3

■Before setting

• Precautions for monitoring

The CPUs on other networks cannot be monitored.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models		
FX3U-ENET-L	FX3U-ENET	FX3U-ENET-ADP

■Setting with FX Configurator-EN-L or FX Configurator-EN (Network parameter setting)

Set the Ethernet parameter using FX Configurator-EN-L or FX Configurator-EN.

To use FX Configurator-EN-L, GX-Developer Ver.8.88S or later is required.

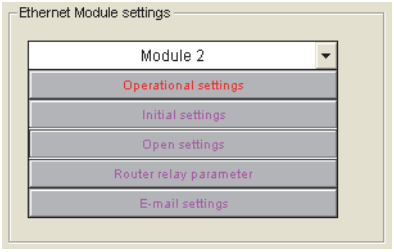
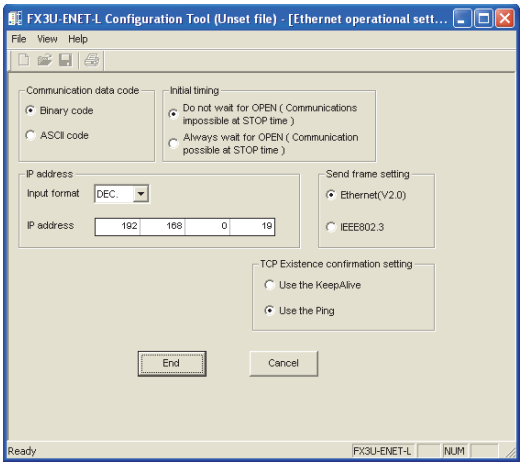
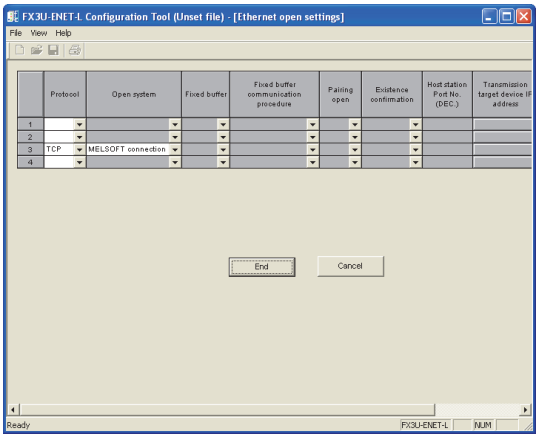
For the details of the FX Configurator-EN-L, refer to the following manual.

FX Configurator-EN-L Operation Manual

To use FX Configurator-EN, GX-Developer Ver.8.25B or later is required.

For the details of the FX Configurator-EN, refer to the following manual.

FX Configurator-EN Operation Manual

Item	Setting Screen Examples
[Ethernet Module settings]	 Set the Ethernet station No. in the Ethernet module setting. Set the station No. of the Ethernet module not to overlap with the station No. of GT SoftGOT2000.
[Operation settings]	 Since the port No. 5551 is used, the operation, regardless of the settings, is as follows. • Communication data code setting: [Binary code] • Initial timing: [Always wait for OPEN] (Communication is applicable while stopping the PLC CPU.)
[Open settings]	

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on Windows.

When connections are OK

C:\>ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

You can run a ping test using FX Configurator-EN-L or FX Configurator-EN.

For details of the ping test, refer to the following.

📖FX Configurator-EN-L Operation Manual

📖FX Configurator-EN Operation Manual

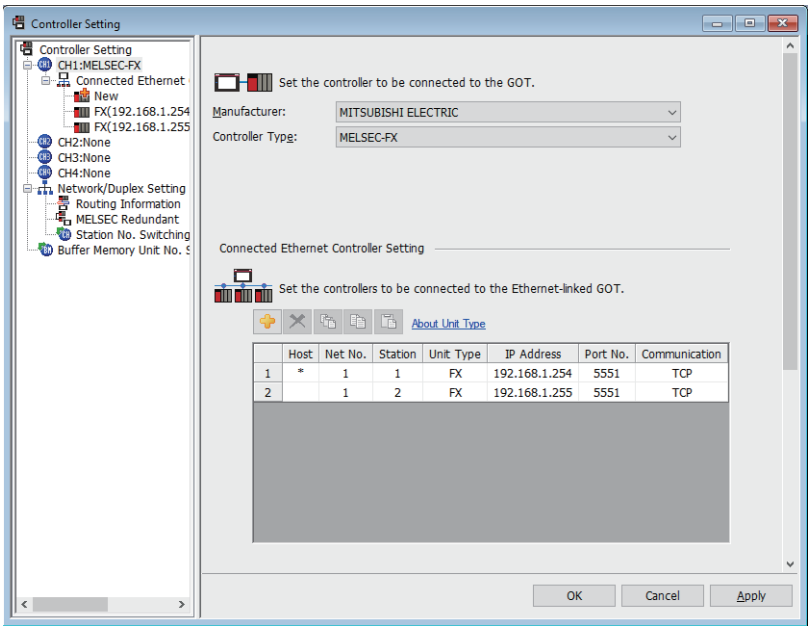
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[FX]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	FX3U-ENET-L, FX3U-ENET: [5551] FX3U-ENET-ADP: [5556]
[Communication]	Displays the communication method.	[TCP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

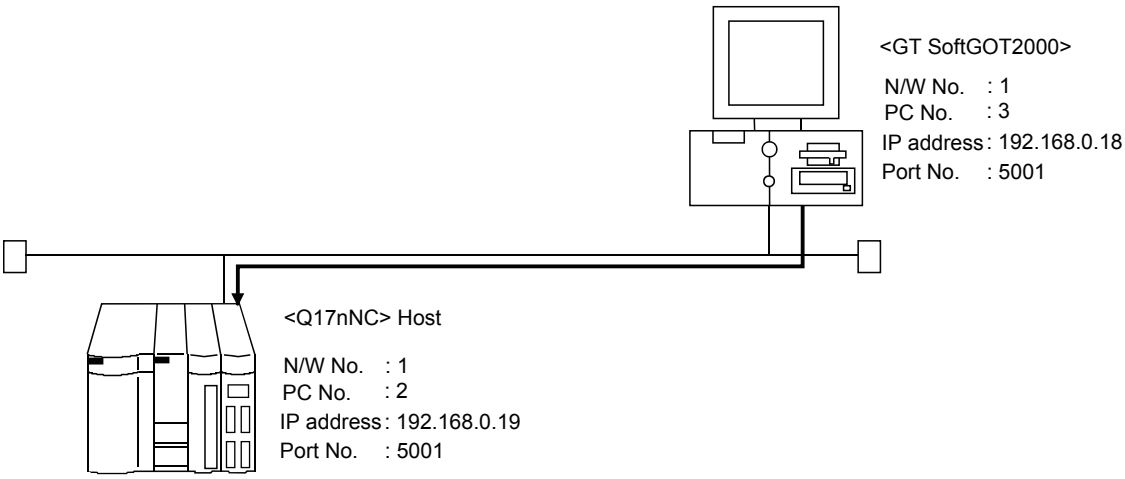
For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

When using CNC C70 (Q17nNCCPU)

For communications with GT SoftGOT2000 via the Display I/F of the CNC C70, setting items and precautions are described below.

This section explains the system configuration to monitor the host as shown below.



Point

Before creating Display I/F connection

• Display I/F connection

For the Display I/F connection, read the following manual carefully, and fully understand the details.

C70 Setup Manual

• Setting items

Refer to the following for how to set the Net No., IP address, and port No. of the CNC C70 and GT SoftGOT2000.

Page 290 Settings in GT Designer3

■Before setting

• Precautions for monitoring

GT SoftGOT2000 cannot monitor CPUs on the other networks.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

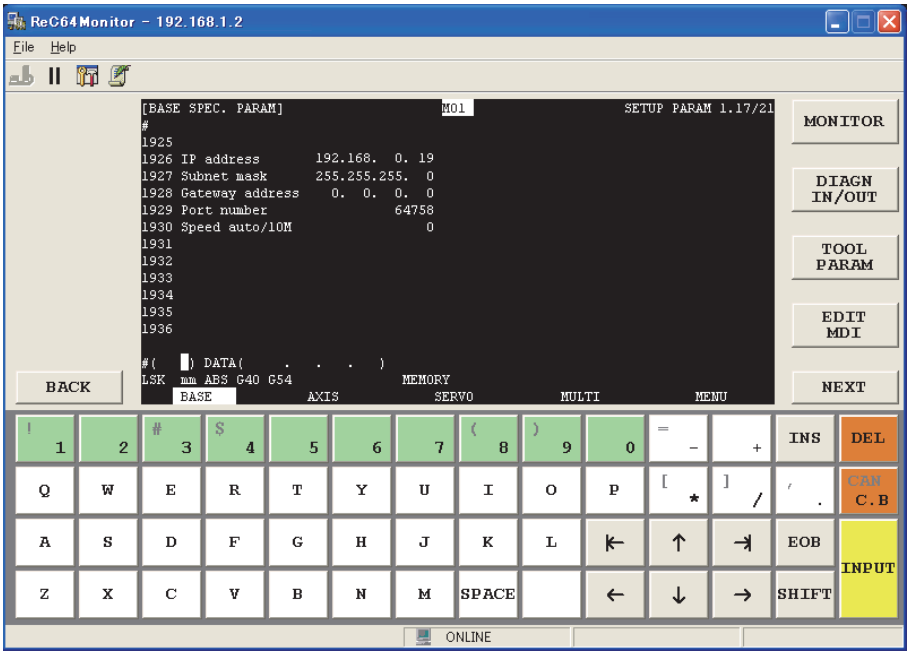
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models
Q173NCCPU

■Setting with remote monitor tool (IP address setting)



Item	Setting	Setting (with GOT connected)
[IP address]	[192.168.0.19]	○
[Subnet mask]	[255.255.255.0]	○
[Gateway address]	[0.0.0.0]	○
[Port number]	[64758]	○
[Speed auto/10M]	[0]	○

○: Required △ : Set if necessary ×: Not required

■Setting on personal computer

Set the IP address.

■Communication check

• Ping test

The INIT.LED of the CNC C70 turns on when the CNC C70 is ready for communications.

When the CNC C70 is ready for communications, execute the Ping command with the command prompt of Windows.

When the Ping test is verified

C:\>Ping 192. 168. 0. 19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 19

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

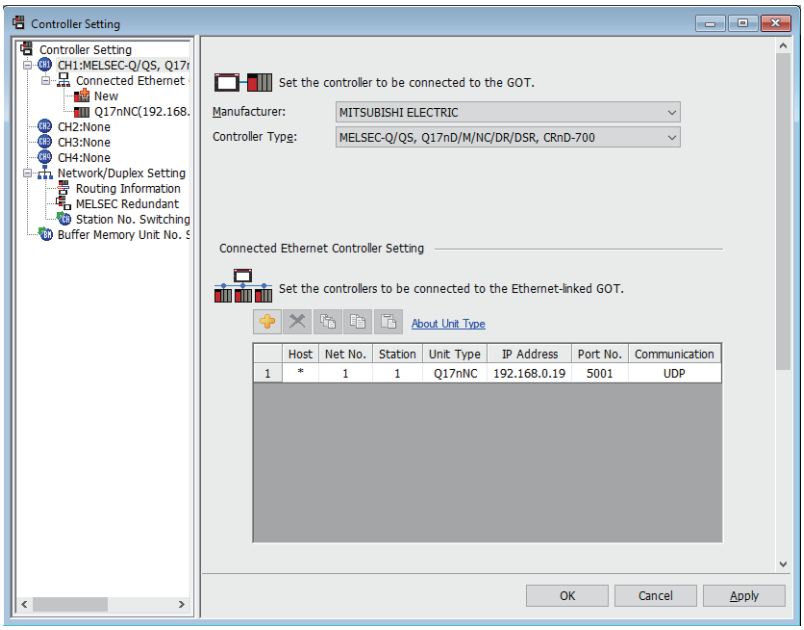
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[Q17nNC]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5001], [5002]
[Communication]	Displays the communication method.	[UDP] (for port No. 5001), [TCP] (for port No. 5002)

■Setting on GT SoftGOT2000

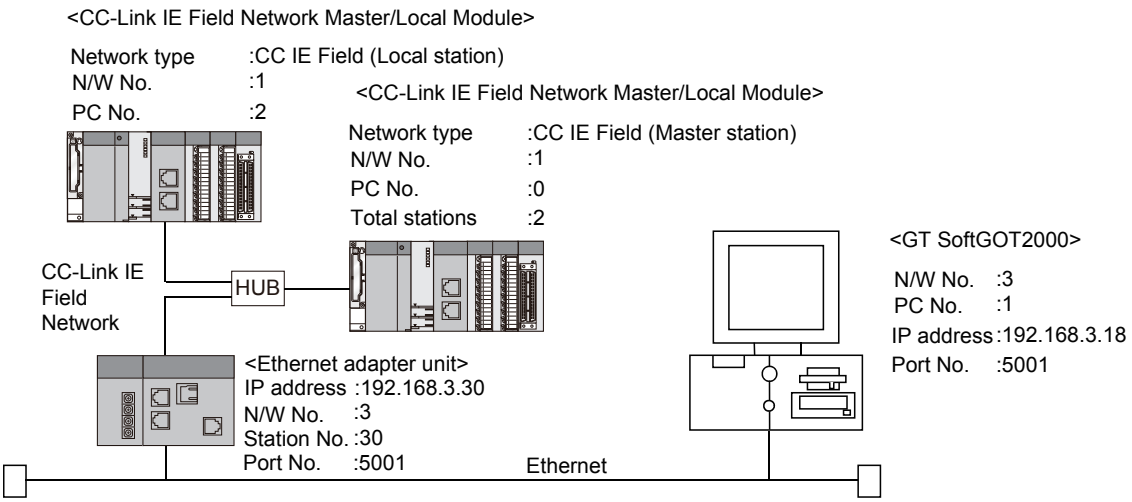
Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

When using CC-Link IE Field Network Ethernet adapter module

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the PLC CPU via the CC-Link IE Field Network Ethernet adapter module.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the CC-Link IE Field Network Ethernet adapter module and GT SoftGOT2000.

☞ Page 294 Settings in GT Designer3

The following shows the procedure for communicating GT SoftGOT2000 to the PLC CPU via the CC-Link IE Field Network Ethernet adapter module.

■Before setting

• Precautions for monitoring

The GOT cannot monitor the host station.

• Monitoring the CPUs on other networks

Monitoring the CPUs on other networks requires the routing parameter to be set.

For the routing parameter setting, refer to the following.

☞ Page 292 Routing Parameter Setting

☞ Page 294 Settings in GT Designer3

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

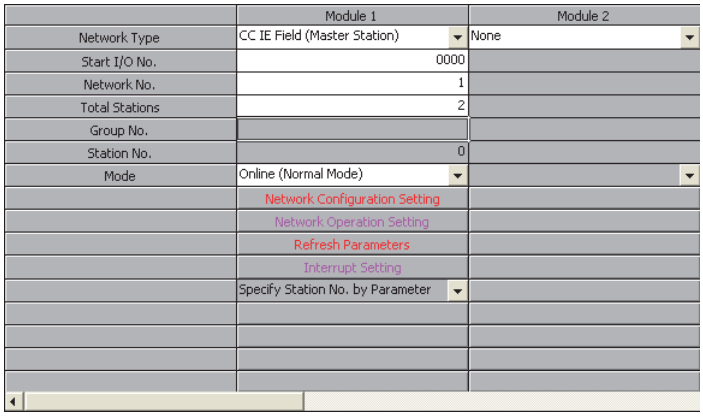
■Compatible models

Compatible models
NZ2GF-ETB

■Setting on GX Works2/GX Developer (Network parameter setting)

Parameter setting can be made from the Ethernet/CC IE/MELSECNET network parameter setting screen.

Set the network type, network No., total stations and station number.

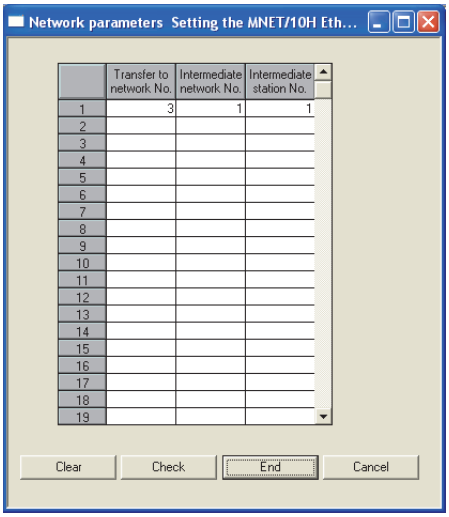
Item	Setting Screen Examples
[Ethernet parameter]	

■Routing Parameter Setting

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.



Setting item	Range
[Transfer Network No.]	[1] to [239]
[Relay Network No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

For the setting, refer to the following.

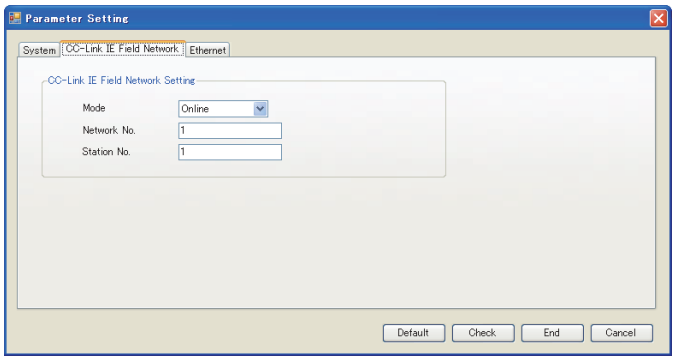
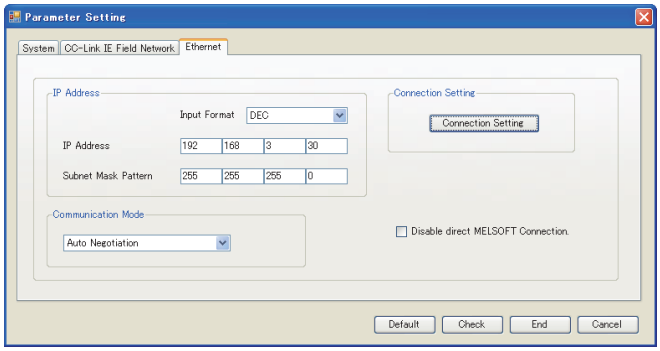
☞ Page 294 Settings in GT Designer3

■Parameter setting

Set the parameter with the Ethernet adapter unit setting tool.

For details of the Ethernet adapter unit setting tool, refer to the following manual.

CC-Link IE Field Network Ethernet Adapter Module User's Manual

Item	Setting Screen Examples
[CC-Link IE Field Network Setting]	 For the network No., set the same value as the setting on the PLC side. For the station No., set a value other than the setting on the PLC side.
[Ethernet Setting]	 Set the IP address within the following range. 192.168.3.30 Set the fourth octet within the range from 1 to 64. Set the third octet within the range from 1 to 239.

■Setting on personal computer

Set the IP address.

■Communications check

• Ping test

When C Controller module is ready for communications, execute the Ping command with the command prompt of Windows.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

Point

Ping test

The ping test can also be performed with GX Developer (SW6D5C-GPPW 6.01B or later).

For details of the ping test, refer to the following.

GX Developer Version□ Operating Manual

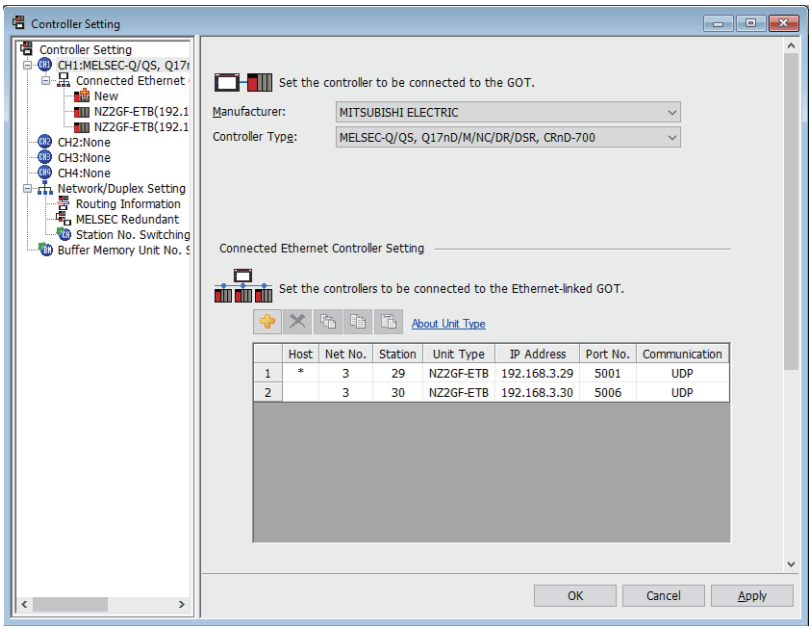
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.] *1	Set the network number of the CC-Link IE Field Network Ethernet adapter module.	[1] to [239]
[Station] *2	Set the station number of the CC-Link IE Field Network Ethernet adapter module.	[1] to [64]
[Unit Type]	Select the type of the CC-Link IE Field Network Ethernet adapter module.	[NZ2GF-ETB]
[IP Address] *3	Set the IP address of the CC-Link IE Field Network Ethernet adapter module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the CC-Link IE Field Network Ethernet adapter module.	[5001], [5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5001 or 5006), [TCP] (for port No. 5007)

*1 Set according to the third octet (network No.) of the Ethernet adapter unit IP address.

*2 Set according to the fourth octet (PC No.) of the Ethernet adapter unit IP address.

*3 Set according to the Ethernet adapter unit IP address.

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

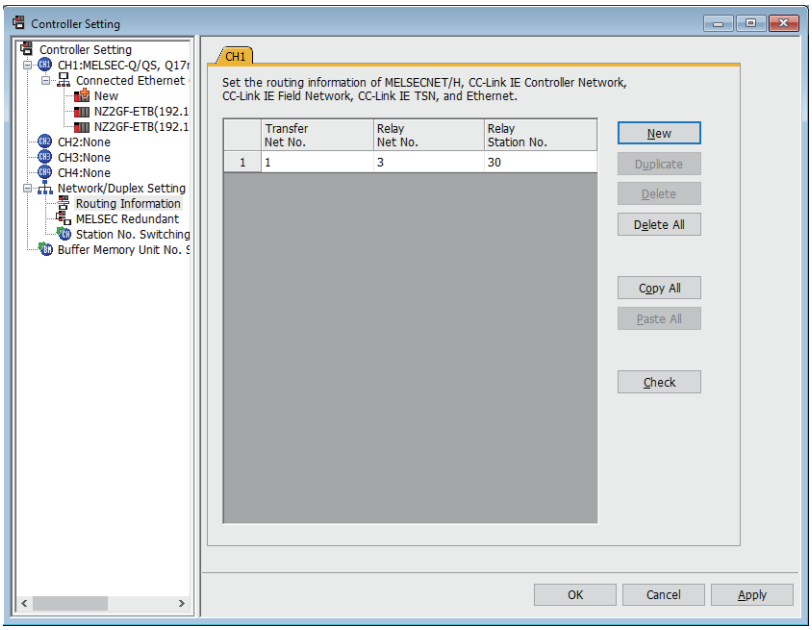
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

MQ Corresponding Ethernet Interface Module User's Manual (Application)



Setting item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

☞ Page 292 Routing Parameter Setting

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Precautions

Controller port

A communication module is required for a PLC having no built-in Ethernet port.

Communication load due to the increased number of devices connected

The increased number of connected devices may increase the load on the communication, affecting the communication performance.

Duplication of the port number

To use multiple GT SoftGOT2000 modules or use GT SoftGOT2000 with another MELSOFT application, set different port numbers for them.

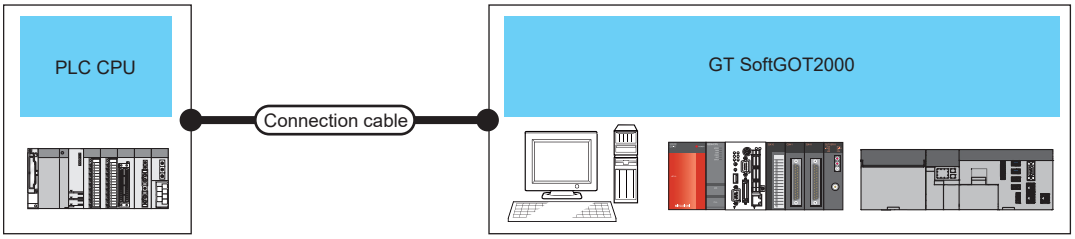
If the same port No. is specified, a communication timeout may occur, interrupting monitoring.

Setting the same number for the PLC and station numbers

Set different numbers for [PC No.] in the [Communication Setup] dialog of GT SoftGOT2000 and [Station] in [Connected Ethernet Controller Setting] in the [Controller Setting] window of GT Designer3.

3.7 Direct CPU connection (RS-232, USB)

System configurations



PLC		Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices *2
Model name	Communication type				
RCPU	USB	USB 1) USB 4) USB 6)	3m	Windows-compatible personal computer PC CPU module MELIPC*4	1
LHCPU	USB	USB 1) USB 4) USB 6)	3m		1
QCPU (Q mode)	RS-232 USB	RS-232 1) USB 1) USB 2) USB 3) USB 4) USB 5)	RS-232:3m USB:3m		1 (2 units are connectable when using both RS-232 and USB connections.)
QCPU (A mode)	RS-232	RS-232 1)	3m		1
C Controller module	RS-232 (via a QCPU in the multiple CPU system) USB (same as QCPU (Q mode))				
QSCPU	USB	USB 5)	3m	Windows-compatible personal computer PC CPU module MELIPC*4	1
LCPU	RS-232 USB	RS-232 1) USB 1) USB 2)	RS-232:3m USB:3m		1 (2 units are connectable when using both RS-232 and USB connections.)
QnACPU	RS-422	RS-422 1)	15m		1
ACPU	RS-422	RS-422 1)	15m		1
MELSEC iQ-F	RS-232	RS-232 2)	4.5m		1
	USB *5	USB 1) USB 3) USB 6)	3m		(2 units are connectable when using both RS-232 and USB connections.)
FXCPU	RS-232 RS-422	RS-232 2) RS-422 1) RS-422 2)*6	RS-232:4.5m RS-422:4.5m		1 (2 units are connectable when using both RS-232 and USB connections.)
	USB *3	USB 1)	3m		
Motion CPU: MELSEC iQ-R series	USB	USB 1) USB 4) USB 6)	5m		1 (2 units are connectable when using both RS-232 and USB connections.)
Motion CPU: Q series *1	RS-232 USB	RS-232 1) USB 1) USB 2) USB 3) USB 4) USB 5)	RS-232:3m USB:3m		
Motion CPU: A series	RS-422	RS-422 1)	15m		1
MELSECNET/H remote I/O station	RS-232	RS-232 1)	3m		1
CC-Link IE Field Network head unit	USB	USB 1) USB 2)	3m		1
CNC C80	Access the controller via an RCPU in the multiple CPU system.				
CR800-R (R16RTCPU)					

PLC		Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices *2
Model name	Communication type				
CNC C70	Access the CPU via a QCPU in the multiple CPU system.				
CRnQ-700					
CR750-Q					
CR751-Q					
CR800-Q (Q172DSRCPU)					

*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.
*2 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.
*3 The USB connection is available for the following.
FX3G series
FX3GC series
FX3GE series
FX3S series
*4 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.
*5 The USB connection is available for FX5UJ only.
*6 Use a USB/RS-422 converter and function extension board to connect the personal computer and the FXCPU with a USB cable.

Connection cable

RS-232 1)

■MITSUBISHI SYSTEM & SERVICE product

RS-232 cable *1*2

Controller: MINI-DIN 6-pin — Personal computer: D-sub 9-pin

GT01-C30R2-6P (3m)

*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.
*2 The adapter L6ADP-R2 is required for the connection with LCPU.

RS-232 2)

■MITSUBISHI SYSTEM & SERVICE product

RS-232 cable

GT01-C30R2-9S(3m)

GT01-C30R2-25P(3m)

Use the cables to connect to the function extension board or function adaptor of MELSEC iQ-F and FXCPU.
The following table shows the available communication types.

■The following communication types are available in the GT01-C30R2-9S.

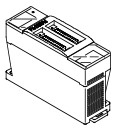
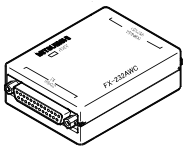
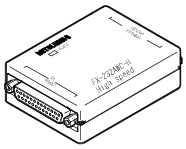
Model name	Function expansion board	Function adapter	PC side connector
FX5U FX5UJ	FX5-232-BD	-	9-pin D-sub
FX5U FX5UC FX5UJ	-	FX5-232ADP	9-pin D-sub
FX3U series, FX3UC series (FX3UC-□□-LT)	FX3U-232-BD	-	9-pin D-sub
	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-CNV-BD	FX3U-232ADP, FX3U-232ADP-MB	
FX3UC series (FX3UC-□□/D, FX3UC-□□/DSS)	-	FX3U-232ADP, FX3U-232ADP-MB	9-pin D-sub
FX3S series	FX3G-232BD	-	9-pin D-sub
	-	FX3S-CNV-ADP + FX3U-232ADP, FX3U-232ADP-MB	9-pin D-sub
FX3G series	FX3G-232BD	-	9-pin D-sub
	-	FX3S-CNV-ADP + FX3U-232ADP, FX3U-232ADP-MB	
FX3GC series	-	FX3U-232ADP, FX3U-232ADP-MB	9-pin D-sub
FX3GE series	FX3G-232BD	FX3U-232ADP	9-pin D-sub
FX2N series	FX2N-232-BD	-	9-pin D-sub
	FX2N-CNV-BD	FX2NC-232ADP	
FX1NC, FX2NC series	-	FX2NC-232ADP	9-pin D-sub
FX1S, FX1N series	FX1N-232-BD	-	9-pin D-sub
	FX1N-CNV-BD	FX2NC-232ADP	

■The following communication types are available in the GT01-C30R2-25P.

Model name	Function expansion board	Function adapter	PC side connector
FX3U series, FX3UC series (FX3UC-□□-LT)	FX3U-232-BD	-	25-pin D-sub
	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-CNV-BD	FX3U-232ADP, FX3U-232ADP-MB	
FX3UC series (FX3UC-□□/D, FX3UC-□□/DSS)	-	FX3U-232ADP, FX3U-232ADP-MB	25-pin D-sub
FX3S series	FX3G-232BD	-	25-pin D-sub
	-	FX3S-CNV-ADP + FX3U-232ADP, FX3U-232ADP-MB	
FX3G series	FX3G-232BD	-	25-pin D-sub
	-	FX3S-CNV-ADP + FX3U-232ADP, FX3U-232ADP-MB	
FX3GC series	-	FX3U-232ADP, FX3U-232ADP-MB	25-pin D-sub
FX3GE series	FX3G-232BD	FX3U-232ADP	25-pin D-sub
FX2N series	FX2N-CNV-BD	FX0N-232ADP	9-pin D-sub
	FX2N-232-BD	-	25-pin D-sub
	FX2N-CNV-BD	FX2NC-232ADP	
FX1NC, FX2NC series	-	FX0N-232ADP	9-pin D-sub
	-	FX2NC-232ADP	25-pin D-sub
FX1S, FX1N series	FX1N-CNV-BD	FX0N-232ADP	9-pin D-sub
	FX1N-232-BD	-	25-pin D-sub
	FX1N-CNV-BD	FX2NC-232ADP	

RS-422 1)

■MITSUBISHI ELECTRIC product

PLC CPU Side(RS-422 cable)	RS-232/RS-422 Converter *3	PC side (RS-232 cable)
 FX-422CAB (0.3 m), FX-422CAB-150 (1.5 m) (For connecting to QnACPU, ACPU, Motion CPU (A series), FX1CPU, FX2CPU, or FX2CCPU)	 FX-232AW	 F2-232CAB(3m) *1*2 (For the 25-pin D-sub connector of the PC side)
 FX-422CAB0 (1.5m) (For connecting to FX0/FX0S/FX0N/FX1S/ FX1N/FX2N/FX1NC/FX2NC/FX3G/FX3GC/ FX3GE/FX3U/FX3UC/FX3SCPU and AC30N2A)	 FX-232AWC	 F2-232CAB-1(3m) *2 (For the 9-pin D-sub connector of the PC side)
	 FX-232AWC-H (FX series only)	 AC30N2A(3m) *1 (For the 25-pin D-sub connector of the PC side)

*1 A straight cable for conversion between 9-pin D-sub and 25-pin D-sub is required separately.

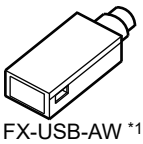
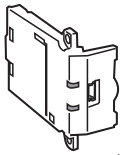
*2 How to distinguish products compatible with QnACPU, ACPU.
Check the model name label of the cable. (Incompatible cables cannot be used.)

Icompatible products	Compatible products (with indication of F/FX/A)
F2-232CAB Y990C*****	F2-232CAB(F/FX/A) Y990C*****
F2-232CAB-1 Y990C*****	F2-232CAB-1(F/FX/A) Y990C*****

*3 When connecting the FX-232AWC-H to the FX3UC/FX3UCPU, transmission speed of 9600/19200/38400/57600/115200 bps is available.
When connecting the FX-232AWC or FX-232AW, either of transmission speed of 9600/19200bps is available.

RS-422 2)

■MITSUBISHI ELECTRIC product

USB/RS-422 converter and function extension board	Personal computer side (USB cable)
 FX-USB-AW *1	(Use the cable included in the FX-USB-AW.)
 FX3U-USB-BD *1 (FX3UC/FX3U only)	(Use the cable included in the FX3U-USB-BD.)

*1 Drivers respectively stored in the CD-ROMs included in the FX-USB-AW and FX3U-USB-BD must be installed on the personal computer for using the converters.
(The converters can be used by assigning the USB-serial conversion driver to the COM number.)

USB cable 1)

■MITSUBISHI ELECTRIC product

USB cable	
Controller: USB Mini-B	Personal computer: USB TYPE-A
MR-J3USBCBL3M (3m)	

■Product manufactured by Mitsubishi Electric System & Service Co., Ltd.

USB cable	
Controller: USB Mini-B	Personal computer: USB TYPE-A
GT09-C30USB-5P (3m)	

Refer to the following for FXCPU-applicable USB cables other than the above.

☞ FX3G USER'S MANUAL [Hardware Edition]

USB cable 2)

■Product manufactured by ELECOM CO., LTD. (Recommended Product)

USB cable	
Controller: USB Mini-B	Personal computer: USB TYPE-A
USB-M53 (3m)	

■Product manufactured by LOAS CO., LTD. (Recommended Product)

USB cable	
Controller: USB Mini-B	Personal computer: USB TYPE-A
ZUM-430 (3m)	

USB cable 3)

■Product manufactured by ELECOM CO., LTD. (Recommended Product)

USB cable/USB conversion adapter		
Controller: USB Mini-B		Personal computer: USB TYPE-A
	+	
AD-USBBFTM5M		USB2-30 (3m)

USB cable 4)

■Product manufactured by BUFFALO KOKUYO SUPPLY INC. (Recommended Product)

USB cable/USB conversion adapter		
Controller: USB Mini-B		Personal computer: USB TYPE-A
	+	
AUXUBM5		AU2-30(3m)

USB cable 5)

■Product manufactured by ELECOM CO., LTD. (Recommended Product)

USB cable	
Controller: USB TYPE-B	Personal computer: USB TYPE-A

USB2-30 (3m)

■Product manufactured by BUFFALO KOKUYO SUPPLY INC. (Recommended Product)

USB cable	
Controller: USB TYPE-B	Personal computer: USB TYPE-A

AU2-30 (3m)

USB cable 6)

■Product manufactured by SANWA SUPPLY INC. (Recommended Product)

USB cable	
Controller: USB Mini-B	Personal computer: USB TYPE-A

KU-AMB530 (3 m) or KU-AMB550 (5 m)

GT SoftGOT2000 setting

To establish communication between GT SoftGOT2000 and a PLC by the direct CPU connection (RS-232, USB), configure the communication setup.

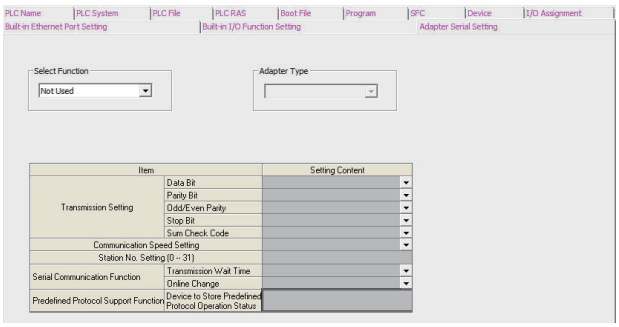
Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 76 [RS232]
☞ Page 79 [USB]

Controller setting

When connecting GT SoftGOT2000 and LCPU via the L6ADP-R2 adapter, configure the communication settings using GX Works2.

For other configurations, no setting is required on the controller.



1. Click [PLC parameter] → [Adapter Serial Setting].
2. Check that [Not Used] (default) is set in [Select Function].

Point

L6ADP-R2 adapter

For details of the L6ADP-R2 adapter, refer to the following manual.

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

Precautions

Converters and cables

■Specifications and precautions for converters and cables

For the specifications and precautions for converters and cables, refer to the manual of each product.

■When connecting or disconnecting the converter or cable that receives a 5 V DC power

Turn off the power on the PLC side before connecting or disconnecting the converter or cable that receives a 5 V DC power from the PLC side.

■When connecting or disconnecting the converter or cable that does not receive a 5 V DC power

Connect or disconnect the peripheral device or cable that receives an external power instead of the 5 V DC power from the PLC side according to the following procedure.

1. Make sure to touch the static discharge wrist strap or grounded metal before operation and discharge electrostatic from cables, human body or others.
2. Turn off the PC.
3. Turn off the converter.

Ground the FG terminal if provided.

4. Connect or disconnect the converter or cable between the personal computer and the PLC.
5. Turn on the converter.
6. Turn on the PC.
7. Start the software package.

USB cable

■Before using USB cable

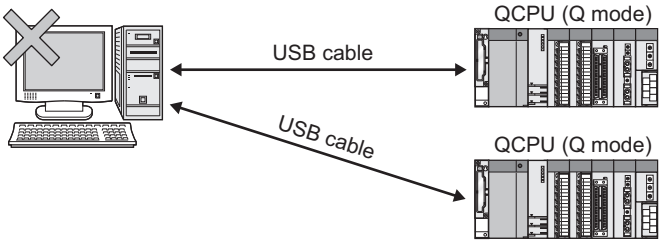
The USB cable can be used with the USB driver already installed.

■Number of connectable programmable controllers when using USB cable

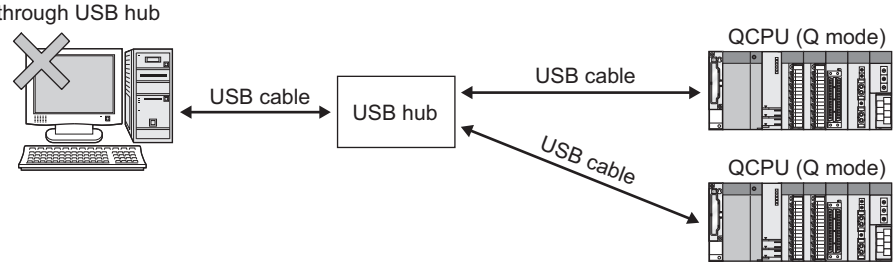
A single programmable controller can be connected when using the USB cable.

The following shows the system configurations, which do not meet the above conditions.

· Connecting from a personal computer with multiple USB ports to multiple QCPUs (Qmode)



· Connecting from a personal computer to multiple QCPUs (Q mode) through USB hub



■Precautions for connecting programmable controller

Connect or remove the USB cable, reset a programmable controller or turn the power on/off after stop the monitor.

☞ Page 108 Monitor Stop

If operated without stop, a communication timeout occurs, which cannot be fixed.

If not fixed, remove the USB cable completely.

After 5 seconds or more, reconnect the cable.

(The error may occur at first communication after the above operation. From the next time, the programmable controller functions normally.)

Duplication of communication ports

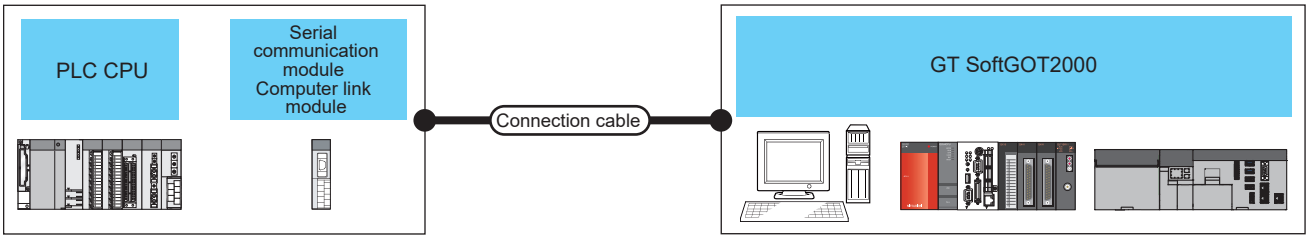
The following shows the precaution for the RS-232 connection.

When running multiple GT SoftGOT2000 modules or using GT SoftGOT2000 with another MELSOFT application, set different communication ports for them.

If the same communication port is specified, a communication timeout may occur, interrupting monitoring.

3.8 Serial Communication Connection

System configurations



PLC				Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices *1
Model name		Communication module	Communication type				
RCPU		RJ71C24, RJ71C24-R2	RS-232	RS-232 1)	15m	Windows-compatible personal computer PC CPU module MELIPC*4	1
QCPU (Q mode)		QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON				Windows-compatible personal computer PC CPU module MELIPC*4	
QCPU (A mode)		A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF		RS-232 2)			
C Controller module *3	MELSEC iQ-R series	RJ71C24, RJ71C24-R2	RS-232	RS-232 1)	15m	Windows-compatible personal computer PC CPU module MELIPC*4	1
	Q series	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON					
LCPU		LJ71C24, LJ71C24-R2	RS-232	RS-232 1)	15m	Windows-compatible personal computer PC CPU module MELIPC*4	1
QnACPU		AJ71QC24, AJ71QC24-R2, AJ71QC24N, AJ71QC24N-R2, A1SJ71QC24, A1SJ71QC24-R2, A1SJ71QC24N, A1SJ71QC24N-R2		RS-232 2)			
ACPU		AJ71C24-S8, AJ71UC24, A1SJ71C24-R2, A1SJ71C24-PRF, A1SJ71UC24-R2, A1SJ71UC24-PRF		RS-232 2)			

PLC		Communication module	Communication type	Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices *1
Model name							
Motion CPU	MELSEC iQ-R series	RJ71C24, RJ71C24-R2	RS-232	RS-232 1)	15m	Windows-compatible personal computer PC CPU module MELIPC*4	1
	Q series *2	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON		RS-232 1)			
	A series	AJ71C24-S8, AJ71UC24, A1SJ71C24-R2, A1SJ71C24-PRF, A1SJ71UC24-R2, A1SJ71UC24-PRF		RS-232 2)			
CC-Link IE Field Network head module	MELSEC iQ-R series	RJ71C24, RJ71C24-R2	RS-232	RS-232 1)	15m	Windows-compatible personal computer PC CPU module MELIPC*4	1
	L series	LJ71C24, LJ71C24-R2					
CNC C80		Configure the multiple CPU system using an RCPU.					
CNC C70		Configure the multiple CPU system using a QCPU (Q mode).					
CRnQ-700							
CR750-Q							
CR751-Q							
CR800-Q (Q172DSRCPU)							

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.
*2 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.
*3 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.
*4 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.

Serial communication module, computer link module

The following table shows connectable serial communication modules and computer link modules.
Connection via RS-422 communication cannot be used.

Item	Model name
RCPU	RJ71C24, RJ71C24-R2
QCPU (Q mode)	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON
QCPU (A mode)	A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF
C Controller module (MELSEC iQ-R series)	RJ71C24, RJ71C24-R2
C Controller module (Q series)	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON
LCPU	LJ71C24, LJ71C24-R2
QnACPU	AJ71QC24, AJ71QC24-R2, AJ71QC24N, AJ71QC24N-R2, A1SJ71QC24, A1SJ71QC24-R2, A1SJ71QC24N, A1SJ71QC24N-R2
ACPU	AJ71C24-S8, AJ71UC24, A1SJ71C24-R2, A1SJ71C24-PRF, A1SJ71UC24-R2, A1SJ71UC24-PRF
Motion CPU (MELSEC iQ-R series)	RJ71C24, RJ71C24-R2
Motion CPU (Q series)*1	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON
Motion CPU (A series)	AJ71C24-S8, AJ71UC24, A1SJ71C24-R2, A1SJ71C24-PRF, A1SJ71UC24-R2, A1SJ71UC24-PRF
CC-Link IE Field Network head module (MELSEC iQ-R series)	RJ71C24, RJ71C24-R2
CC-Link IE Field Network head module (MELSEC L series)	LJ71C24, LJ71C24-R2

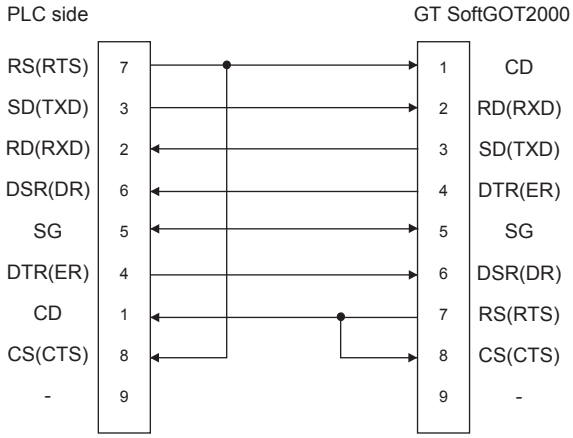
*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.

Connection cable

RS-232 1)

■Connection example which can turn ON/OFF CD signal (No. 1 pin)

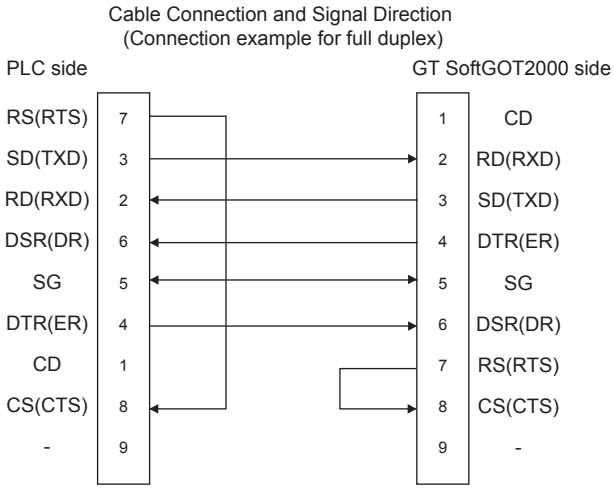
Cable Connection and Signal Direction
(Connection example for full duplex/half duplex communication)



■Connection example which cannot turn ON/OFF CD signal (No. 1 pin)

Connection example for exercising CD code control or DTR/DSR control.

Cable Connection and Signal Direction
(Connection example for full duplex)



RS-232 2)

■MITSUBISHI ELECTRIC product

RS-232 cable

Controller: D-sub 25-pin — Personal computer: D-sub 25-pin

AC30N2A(3m)*1

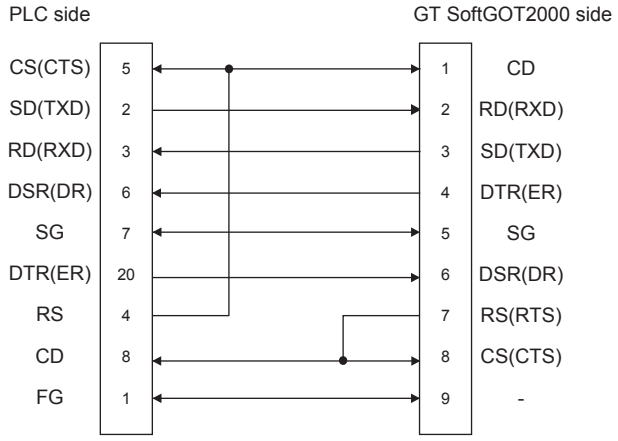
*1 When the port on the PC side is 9-pin D-sub, a 9-25 pin converter is required separately.

■User-created

• QnA Series (large-scale QC24(N))

Example of connection to an external device that allows the CD signal (No. 8 pin) to be turned ON/OFF

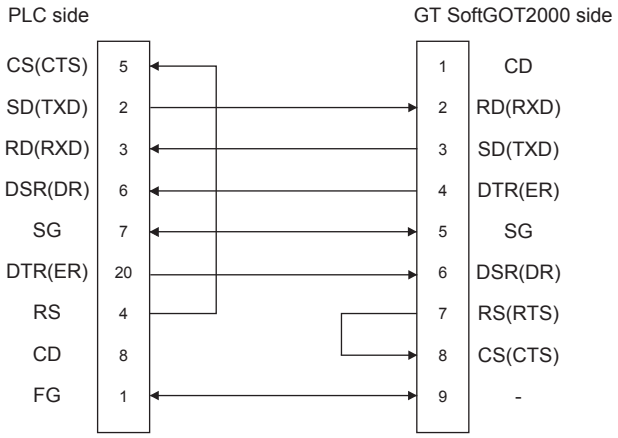
Cable Connection and Signal Direction
(Connection example for full duplex/half duplex communication)



DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

Example of connection to an external device that does not allow the CD signal (No. 8 pin) to be turned ON/OFF

Cable Connection and Signal Direction
(Connection example for full duplex)

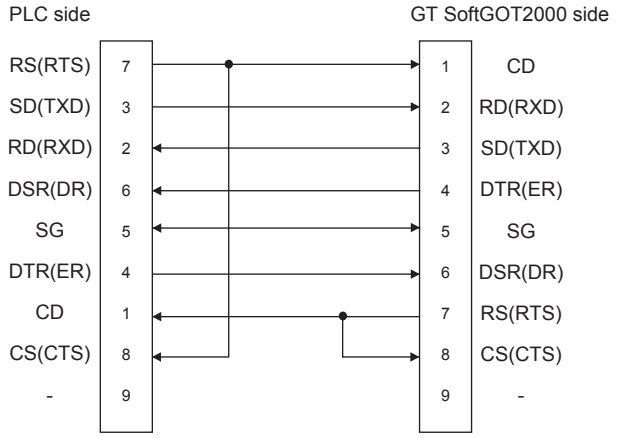


DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

• QnA Series (compact-scale QC24(N))

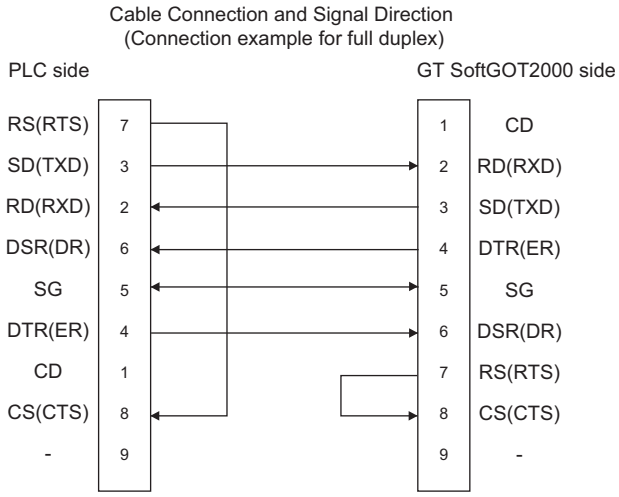
Example of connection to an external device that allows the CD signal (No.1 pin) to be turned ON/OFF

Cable Connection and Signal Direction
(Connection example for full duplex/half duplex communication)



DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

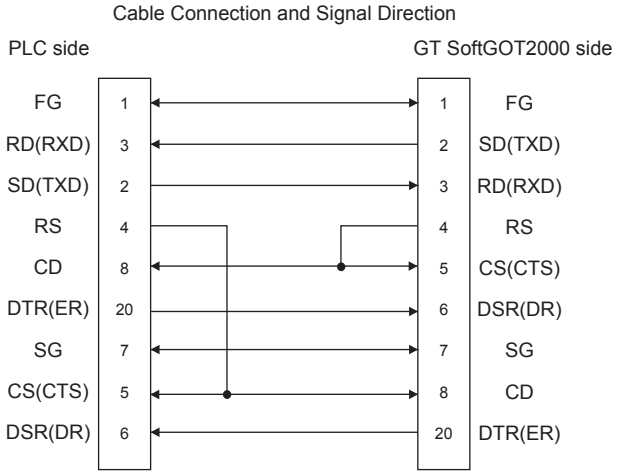
Example of connection to an external device that does not allow the CD signal (No. 1 pin) to be turned ON/OFF



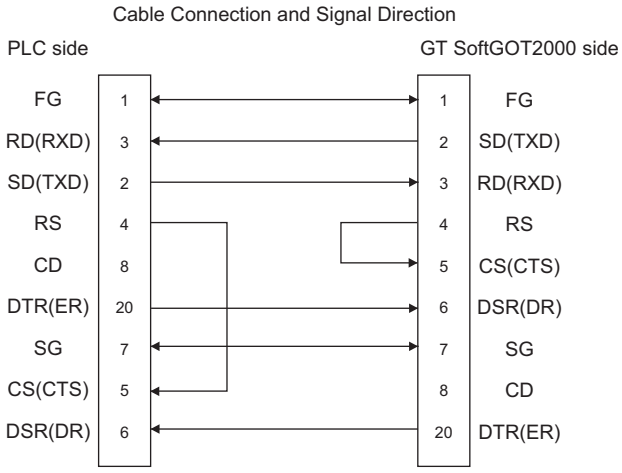
DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

• A series

Connection example 1 when the C24 (computer link module) has a 25-pin connector



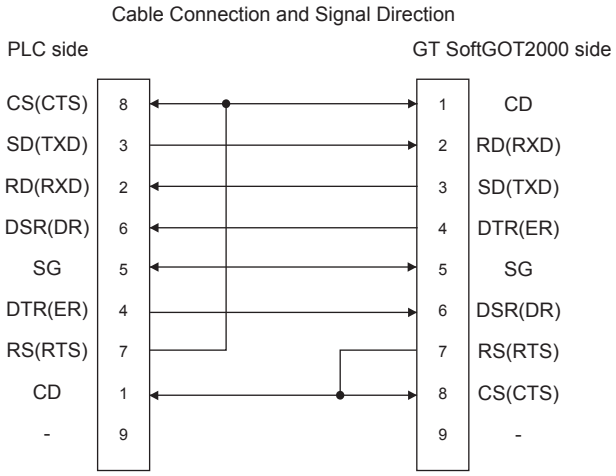
Connection example 2 when the C24 (computer link module) has a 25-pin connector



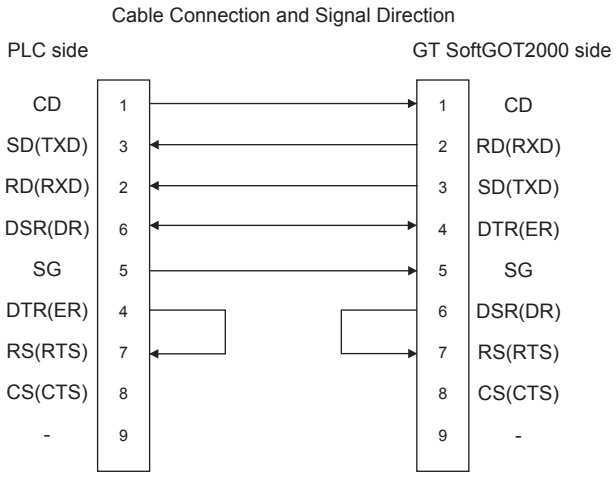
When performing a communication in the connection shown above, the CD signal is not required to be connected.

For the RS-232C CD terminal check setting (set by the buffer memory address "10BH"), specify "without CD terminal check (writing "1")"

Connection example 1 when the C24 (computer link module) has a 9-pin connector



Connection example 2 when the C24 (computer link module) has a 9-pin connector



DC code control or DTR/DSR control is enabled by connecting the DTR and DSR signals of the computer link module to an external device as shown above.

When performing a communication in the connection shown above, the CD signal is not required to be connected.

For the RS-232C CD terminal check setting (set by the buffer memory address "10BH"), specify "without CD terminal check (writing "1")".

GT SoftGOT2000 side

For the communication between GT SoftGOT2000 and a PLC in serial communication connection, communication setup is required.

The following table shows the transmission specifications for a serial communication module or a computer link module.

Model name		Settings				
		Transmission speed	Data length	Stop bit	Parity bit	Sum check
Serial communication module (MELSEC iQ-R series)	RJ71C24, RJ71C24-R2	9600bps/ 19200bps/ 38400bps/ 57600bps/ 115200bps	8 bits	1 bit	Yes (odd)	Yes
Serial communication module (Q series)	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71CMO, QJ71CMON					
Serial communication module (L series)	LJ71C24, LJ71C24-R2					
Serial communication module (QnA series)	AJ71QC24N, AJ71QC24N-R2, A1SJ71QC24N, A1SJ71QC24N-R2					
	AJ71QC24, AJ71QC24-R2, A1SJ71QC24, A1SJ71QC24-R2	9600bps/ 19200bps				
Computer link module	AJ71C24-S8, AJ71UC24, A1SJ71C24-R2, A1SJ71C24-PRF, A1SJ71UC24-R2, A1SJ71UC24-PRF					

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 80 [C24]

Controller setting

When connecting to serial communication module (MELSEC iQ-R seires, Q series, L series)

No switch setting is required for the serial communication module (MELSEC iQ-R series, Q series, L series).
(GOT monitors via it without making switch setting in the I/O assignment setting of GX Works3 or GX Works2 or GX Developer.)
The following settings are also available for monitoring, according to the CH (interface) of the module to be connected with GT SoftGOT2000.
However, if QJ71CMO or QJ71CMON is connected, only CH2 can be used.
For the GX Developer operating method, refer to the GX Works3 or GX Work2 or GX Developer Operating Manual.

Channel where GT SoftGOT2000 is connected	Settings				
	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
CH1	0000	0000			0000
CH2			0000	0000	0000

When connecting to serial communication module (QnA series)

Switch	Baud rate (Transmission speed) *1				
	9600bps	19200bps	38400bps	57600bps	115200bps
Station number switch	0				
Mode switch	5				
sw01	OFF				
sw02	ON				
sw03	ON				
sw04	OFF				
sw05	OFF				
sw06	ON				
sw07	ON				
sw08	OFF				
sw09	ON	OFF	ON	OFF	ON
sw10	OFF	ON	ON	ON	ON
sw11	ON	ON	ON	OFF	OFF
sw12	OFF	OFF	OFF	ON	ON

*1 38400 bps, 57600 bps and 115200 bps can be set only for the following modules.
AJ71QC24N
AJ71QC24N-R2
A1SJ71QC24N
A1SJ71QC24N-R2

When connecting to computer link module

■AJ71C24-S8

Switch	RS-232 communication	
	Baud rate (Transmission speed)	
	9600bps	19200bps
Station number switch	0	
Mode switch	1	
sw11	OFF	
sw12	ON	
sw13	ON	OFF
sw14	OFF	ON
sw15	ON	ON
sw16	ON	
sw17	OFF	
sw18	OFF	
sw21	ON	
sw22	ON	
sw23	OFF	
sw24	OFF	

■AJ71UC24

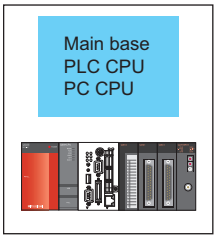
Switch	RS-232 communication	
	Baud rate (Transmission speed)	
	9600bps	19200bps
Station number switch	0	
Mode switch	1	
sw11	OFF	
sw12	ON	
sw13	ON	OFF
sw14	OFF	ON
sw15	ON	ON
sw16	ON	
sw17	OFF	
sw18	OFF	
sw21	ON	
sw22	ON	
sw23	ON	
sw24	OFF	

■A1SJ71UC24-R2, A1SJ71C24-R2, A1SJ71UC24-PRF and A1SJ71C24-PRF

Switch	RS-232 communication	
	Baud rate (Transmission speed)	
	9600bps	19200bps
Station number switch	No applicable switch	
Mode switch	1	
SW01	No applicable switch	
SW02	No applicable switch	
sw03	OFF	
sw04	ON	
sw05	ON	OFF
sw06	OFF	ON
sw07	ON	ON
sw08	ON	
sw09	ON	
sw10	OFF	
sw11	OFF	
sw12	ON	

3.9 Bus Connection

System configurations



PLC		Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name	Communication type				
QCPU (Q mode)	Bus	*1	*1	PC CPU	1 *2

*1 Connect the PC CPU with a PLC CPU on the same base unit as the PC CPU.

*2 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

GT SoftGOT2000 setting

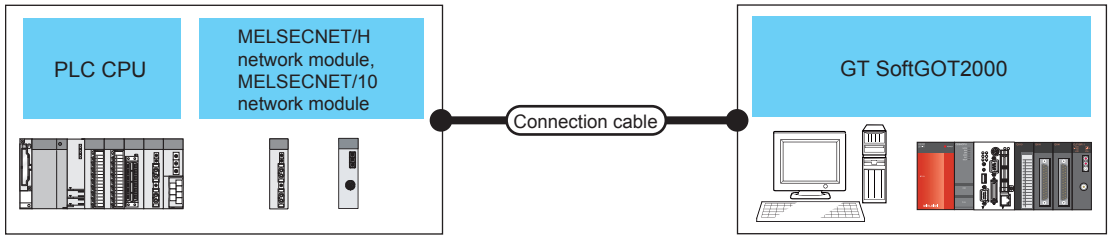
When communicating GT SoftGOT2000 to a PLC in bus connection, communication setup is required.

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 93 [BUS]

3.10 MELSECNET/H, MELSECNET/10 Connection

System configurations



PLC				Max. distance	GT SoftGOT2000	Number of connectable devices
Model name		Network module	Communication type			
QCPU		QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71BR11, AJ71LP21, A1SJ71LP21, AJ71BR11, A1SJ71BR11	MELSECNET/H MELSECNET/10	Optical fiber cable: 1km *2 Coaxial cable: 500m *2	Windows-compatible personal computer*5 PC CPU module	Optical fiber cable: 64 *3*4 Coaxial cable: 32 *3*4
C Controller module		QJ71LP21-25, QJ71LP21S-25, QJ71BR11				
QSCPU		QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71BR11				
QnACPU		AJ71QLP21, AJ71QLP21S, A1SJ71QLP21, A1SJ71QLP21S, AJ71QBR11, A1SJ71QBR11	MELSECNET/10			
ACPU		AJ71LP21, A1SJ71LP21, AJ71BR11, A1SJ71BR11				
Motion CPU	Q series *1	QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71BR11	MELSECNET/H MELSECNET/10			
	A series	AJ71LP21, A1SJ71LP21, AJ71BR11, A1SJ71BR11	MELSECNET/10			
CNC C70		Configure the multiple CPU system using QCPUs (Q mode).				
CRnQ-700						
CR750-Q						
CR751-Q						
CR800-Q (Q172DSRCPU)						

*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.

*2 Distance between stations for using QSI optical cable and 5C-2V coaxial cable.
The overall distance and distance between stations differs according to the type and the number of total stations for the cable to be used.
For details on the cable, refer to the following manual.
QIQ corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

*3 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.
*4 Applicable when using one MELSECNET/H board per personal computer.
Up to four MELSECNET/H boards can be mounted per personal computer.
*5 A MELSECNET/H interface board is required.
☞ Page 318 Interface board

Network module, interface board

The following shows connectable network modules and interface boards.

Network module

■MELSECNET/H

Item	Model name	
	Optical loop	Coaxial bus
QCPU (Q mode) *1	QJ71LP21, QJ71LP21-25, QJ71LP21S-25	QJ71BR11 *1
QSCPU		
Motion CPU (Q series)		
C Controller module	QJ71LP21-25, QJ71LP21S-25	QJ71BR11 *1

*1 Use function version B or later of the MELSECNET/H network module and CPU.

■MELSECNET/10

Item	Model name	
	Optical loop	Coaxial bus
QCPU(Q mode) *1	QJ71LP21, QJ71LP21-25, QJ71LP21S-25	QJ71BR11 *1
C Controller module	QJ71LP21-25, QJ71LP21S-25	QJ71BR11 *1
QCPU(A mode)	AJ71LP21, A1SJ71LP21	AJ71BR11, A1SJ71BR11
QSCPU	QJ71LP21, QJ71LP21-25, QJ71LP21S-25	QJ71BR11 *1
QnACPU	AJ71QLP21, AJ71QLP21S, A1SJ71QLP21, A1SJ71QLP21S	AJ71QBR11, A1SJ71QBR11
ACPU	AJ71LP21, A1SJ71LP21	AJ71BR11, A1SJ71BR11
Motion CPU (Q series)	QJ71LP21, QJ71LP21-25, QJ71LP21S-25	QJ71BR11 *1
Motion CPU (A series)	AJ71LP21, A1SJ71LP21	AJ71BR11, A1SJ71BR11

*1 Use function version B or later of the MELSECNET/H network module and CPU.

Interface board

Type	Model name	Bus format	Driver
MELSECNET/H	Q80BD-J71LP21-25 (Optical loop), Q80BD-J71LP21G (Optical loop), Q80BD-J71LP21S-25 (Optical loop, with external power supply function), Q80BD-J71BR11 (Coaxial loop)	PCI	SWODNC-MNETH-B
	Q81BD-J71LP21-25 (Coaxial loop)	PCI Express	

Refer to the following manual for the settings of the interface board.
MELSECNET/H Interface Board User's Manual (For SW0DNC-MNETH-B)

Point

When using PC CPU module
A interface board is not required.
For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

Connection cable

The cables are the same as the fiber-optic cables and coaxial cables used in the MELSECNET/H or MELSECNET/10 network system.

Refer to the following for details of cables.

📖Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

GT SoftGOT2000 setting

When communicating GT SoftGOT2000 to a PLC in MELSECNET/H or MELSECNET/10 network system, communication setup is required.

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 81 [NET/H]

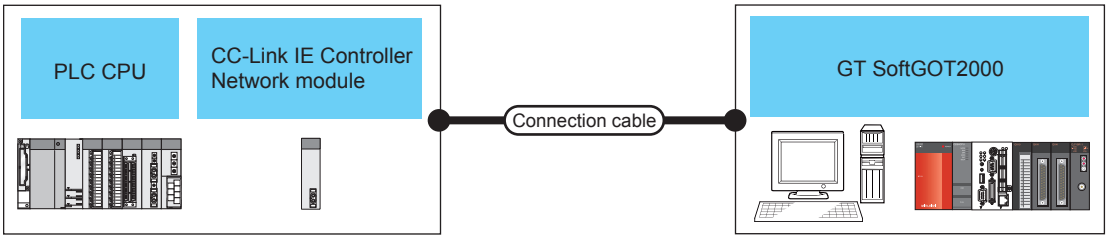
Controller setting

For the settings of the MELSECNET/H network module and MELSECNET/10 network module, refer to the following.

📖Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

3.11 CC-Link IE Controller Network Connection

System configurations



PLC				Max. distance	GT SoftGOT2000	Number of connectable devices
Model name		Network module	Communication type			
RCPU		RJ71GP21-SX	CC-Link IE Controller Network	550m *2	Windows-compatible personal computer*4 PC CPU module	120 *3
QCPU		QJ71GP21-SX, QJ71GP21S-SX				
C Controller module	MELSEC iQ-R series	RJ71GP21-SX				
	Q series	QJ71GP21-SX, QJ71GP21S-SX				
QSCPU		QJ71GP21-SX, QJ71GP21S-SX				
Motion CPU	MELSEC iQ-R series	RJ71GP21-SX				
	Q Series *1	QJ71GP21-SX, QJ71GP21S-SX				
CNC C70		Configure the multiple CPU system using QCPUs (Q mode).				
CRnQ-700						
CR750-Q						
CR751-Q						
CR800-Q (Q172DSRCPU)						

*1 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.

*2 Distance between stations for using the fiber-optic cable (core/cladding = 50/125(μm)).
The overall distance and distance between stations differs according to the type and the number of total stations for the cable to be used.
For details on the cable, refer to the following manual.
CC-Link IE Controller Network Reference Manual

*3 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*4 A CC-Link IE Controller Network interface board is required.
Page 321 Interface board

Network module, interface board

The following shows connectable network modules and interface boards.

Network module

Item		Model name
RCPU		RJ71GP21-SX
C Controller module	MELSEC iQ-R series	
Motion CPU	MELSEC iQ-R series	
QCPU (Q mode)		QJ71GP21-SX, QJ71GP21S-SX
C Controller module	Q series	
QSCPU		
Motion CPU	Q series	

Interface board

Type	Model name	Bus format	Driver
CC-Link IE Controller	Q80BD-J71GP21-SX, Q80BD-J71GP21S-SX	PCI	SW1DNC-MNETG-B
	Q81BD-J71GP21-SX (Coaxial loop), Q81BD-J71GP21S-SX (Optical loop, with external power supply function)	PCI Express	

Refer to the following manual for the settings of the interface board.

CC-Link IE Controller Network Interface Board User's Manual (For SW1DNC-MNETG-B)

Point

• When using PC CPU module

An interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

MELIPC MI5000 Series User's Manual

Connection cable

The cables are the same as the fiber-optic cables used in the CC-Link IE Controller Network.

Refer to the following for details of cables.

CC-Link IE Controller Network Reference Manual

GT SoftGOT2000 setting

When communicating GT SoftGOT2000 to a PLC in CC-Link IE Controller Network, communication setup is required.

Refer to the following for performing GT SoftGOT2000 communication setup.

Page 82 [CC IE Control] or [CC IE Field]

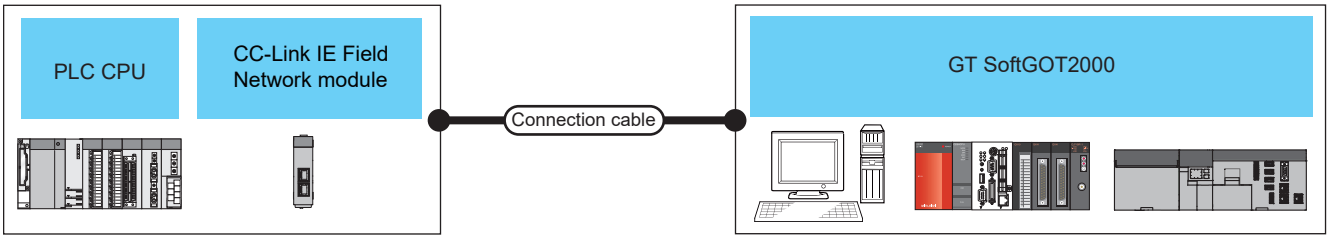
Controller setting

For the settings of the CC-Link IE Controller Network module, refer to the following.

CC-Link IE Controller Network Reference Manual

3.12 CC-Link IE Field Network Connection

System configurations



PLC				connection cable *4	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name		Network module	Communication type				
RCPU		RJ71GF11-T2, RJ71EN71, RD77GF4, RD77GF8, RD77GF16, RD77GF32	CC-Link IE Field Network	Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher, (double-shielded, STP) straight cable.	100 m (Maximum segment length)	Windows-compatible personal computer *5 PC CPU module MELIPC	120 *3
QCPU(Q mode) *1		QJ71GF11-T2					
C Controller module	MELSEC iQ-R series	RJ71GF11-T2, RJ71EN71, RD77GF4, RD77GF8, RD77GF16, RD77GF32					
	Q series	QJ71GF11-T2					
QSCPU		QS0J71GF11-T2					
LCPU		LJ71GF11-T2					
Motion CPU	MELSEC iQ-R series	RJ71GF11-T2, RJ71EN71, RD77GF4, RD77GF8, RD77GF16, RD77GF32					
	Q Series *2	QJ71GF11-T2					
CNC C70		Configure the multiple CPU system using QCPUs (Q mode).					
CRnQ-700							
CR750-Q							
CR751-Q							
CR800-Q (Q172DSRCPU)							

*1 Compatible with only the universal model QCPU.

*2 For the connection with Motion CPUs (Q series), only the PLC CPU area (CPU No. 1) of the Q170MCPU or Q170MSCPU is available.

*3 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*4 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T, ANSI/TIA/EIA-568-B (category 5e) standard.

*5 A CC-Link IE Field Network interface board is required.
☞ Page 323 Interface board

Network module, interface board

The following shows connectable network modules and interface boards.

Network module

Item		Model name
RCPU	Network module	RJ71GF11-T2, RJ71EN71, RD77GF4, RD77GF8, RD77GF16, RD77GF32
C controller module (MELSEC iQ-R Series)		
Motion CPU (MELSEC iQ-R series)		
QCPU (Q mode)		QJ71GF11-T2
C Controller module (Q Series)		
Motion CPU (Q series)		
QSCPU		QS0J71GF11-T2
LCPU		LJ71GF11-T2

Interface board

Type	Model name	Bus format	Driver
CC-Link IE Field	Q81BD-J71GF11-T2	PCI Express	SW1DNC-CCIEF-B

Refer to the following manual for the settings of the interface board.

📖CC-Link IE Field Network Interface Board User's Manual(For SW1DNC-CCIEF-B)

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

GT SoftGOT2000 setting

When communicating GT SoftGOT2000 to a PLC in the CC-Link IE Field Network system, communication setup is required.

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 82 [CC IE Control] or [CC IE Field]

Controller setting

For the settings of the CC-Link IE Field Network module, refer to the following.

📖CC-Link IE Field Network Master/Local Module User's Manual

Precautions

Precautions for using an interface board

When system switching occurs while GT SoftGOT2000 monitors the master station (station No. 0) on the network where the submaster station is set, monitoring is performed as follows.

■When the function version of the interface board is A

GT SoftGOT2000 monitors the submaster station whose station number is assumed to be zero.

The station monitoring function assumes that the previous submaster station number is faulty.

■When the function version of the interface board is B or later

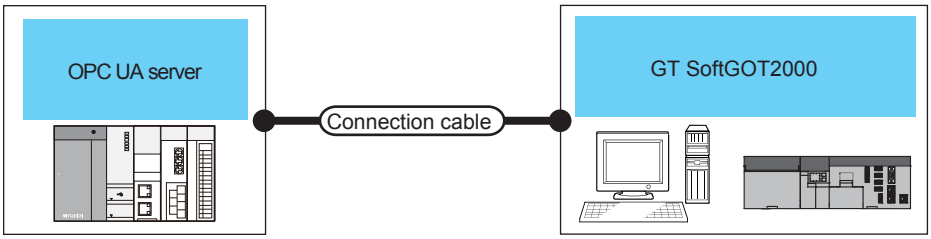
GT SoftGOT2000 cannot monitor the master station (station No. 0), and a timeout error occurs.

The station monitoring function does not detect the faulty station.

3.13 OPC UA client connection

System configuration

Connecting with an OPC UA server via Ethernet



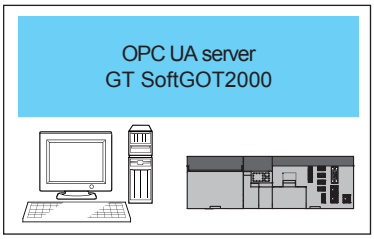
Model name	Connection type	Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per channel
OPC UA server *1	Ethernet	Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher, (double-shielded, STP) straight cable.	100m (max. segment length)	Windows-compatible personal computer*3 MELIPC	1

*1 For connectable servers, refer to the following.
☞ Page 326 Supported servers

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T, ANSI/TIA/EIA-568-B (category 5e) standard.

*3 An Ethernet board/card is required.
☞ Page 325 Ethernet board/card

Connecting with an OPC UA server on the same personal computer



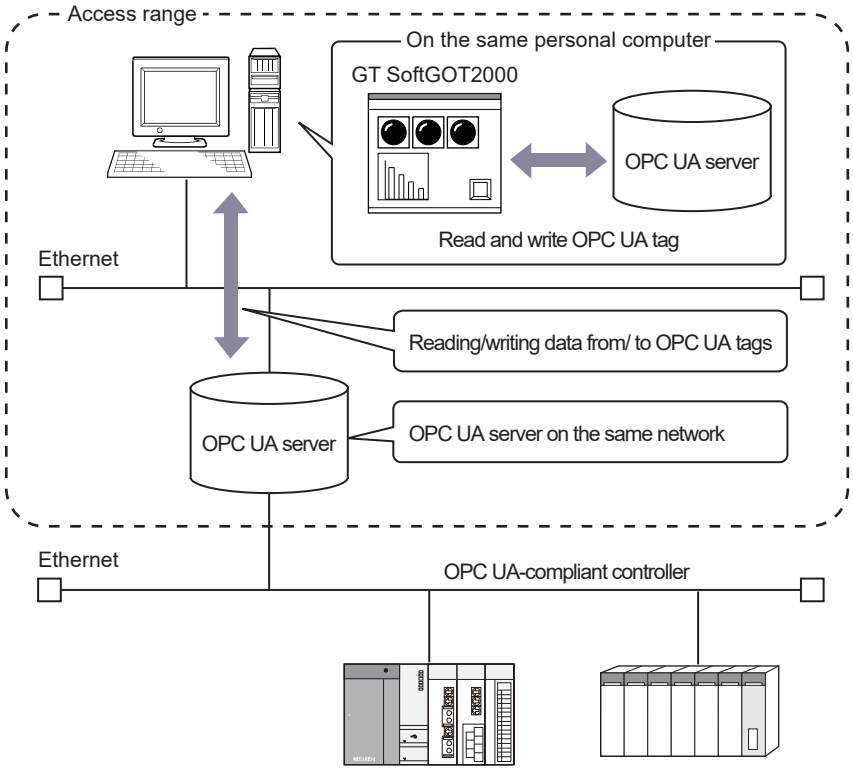
Model name	Connection type	Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per channel
OPC UA server *1*2	-	-	-	Windows-compatible personal computer MELIPC	1

*1 The server must be installed on the personal computer where GT SoftGOT2000 resides.

*2 For connectable servers, refer to the following.
☞ Page 326 Supported servers

Access range

The following shows OPC UA servers accessible by GT SoftGOT2000.



Ethernet board/card

Manufacturer	Model name	Remarks
3COM	EthernetLinkⅢ LAN PC Card	Ethernet board/card
-	Ethernet board built in the personal computer as standard	Ethernet board

Point

When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

MELIPC MI5000 Series User's Manual

Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

Controller setting

The following shows settings and precautions to establish communication between GT SoftGOT2000 and an OPC UA server.

Before setting

■Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and controller.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

Supported servers

Servers must be compliant with OPC UA 1.03 or later and support the following OPC UA service sets.

Discovery Service Set

SecureChannel Service Set

Session Service Set

View Service Set

Attribute Service Set

For recommended OPC UA servers, refer to the following Technical News.

📖List of Valid Devices Applicable for GOT2000 Series OPC UA Server Connection (GOT-A-0137)

For Technical News, contact your local distributor.

OPC UA server settings

Check the following settings of the OPC UA server.

Item	Description
Port No.	Port number of the OPC UA server.
Endpoint URL	Endpoint URL of the OPC UA server. • opc.tcp://(Host name of the OPC UA server):(port number of the OPC UA server)
Security policy	Security policy setting for communication. • None: Does not encrypt messages. • Basic128Rsa15: Uses 128-bit encryption • Basic256: Uses 256-bit encryption. • Basic256: Uses digital signing and 256-bit encryption.
Security mode	Mode of digital signing and encryption. • None: Does not encrypt messages. • Sign: Digitally signs messages. • Sign & Encrypt: Digitally signs and encrypts messages.
User authentication	User authentication method setting for connecting an OPC UA client.
User name	Specified user name.
Password	Specified password.

For information on how to check each setting, refer to the following.

📖Manual of the OPC UA server connected

Setting on the personal computer

Set the IP address.

Communications check

■Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 40

Reply from 192.168.3.40:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 40

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

■Communication Test

After configuring settings to communicate with an OPC UA server in the [Communication Setup] dialog, execute a communication test with the [Communication Test] button in the [Communication Setup] dialog.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 88 [OPC]

Installing GT OPC UA Client and configuring the settings

To access an OPC UA server to read/write data from/to the OPC UA tags, install GT OPC UA Client and configure the settings.

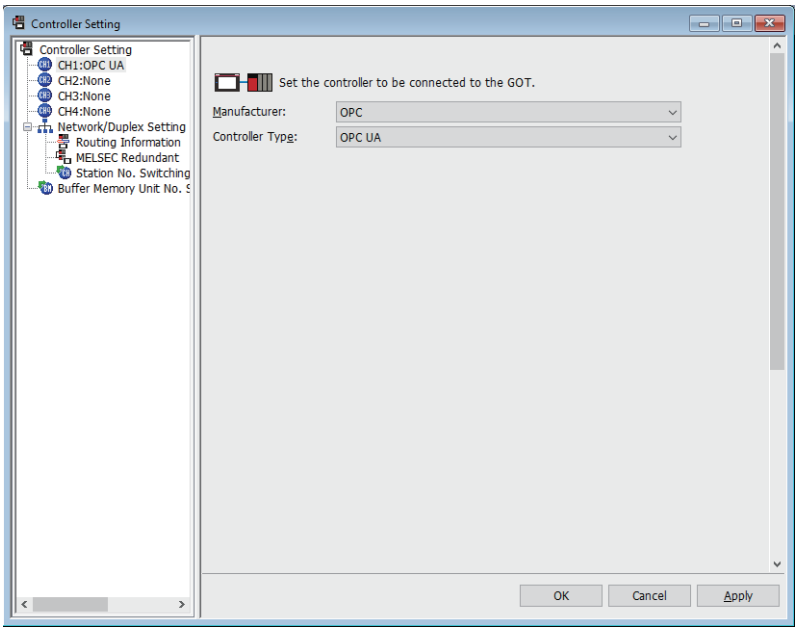
For obtaining GT OPC UA Client, contact your local sales office.

For details, refer to the following.

📖MELSOFT GT OPC UA Client Operating Manual

Settings in GT Designer3

Setting [Connected Ethernet Controller Setting] is not required.



Importing a tag information file

Import a tag information file.

For the details, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

Settings on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 88 [OPC]

Precautions

When GT SoftGOT2000 requests increase the load on the OPC UA server

The increased load on the OPC UA server may affect updating of the server's viewer.

Set [Wait Time] in the communication setup to adjust the load on the OPC UA server.

☞ Page 88 [OPC]

Troubleshooting when connecting to an OPC UA server

If a system alarm occurs when you try to connect to an OPC UA server, refer to the following and check the details of the alarm.

☞ Page 732 Troubleshooting for the OPC UA client connection

3.14 MELIPC Connection

The following shows how to connect GT SoftGOT2000 to a MELIPC.

Ethernet connection between GT SoftGOT2000 and a MELIPC

☞ Page 329 Ethernet connection

CC-Link IE Field Network connection between GT SoftGOT2000 and a MELIPC

☞ Page 334 CC-Link IE Field Network connection

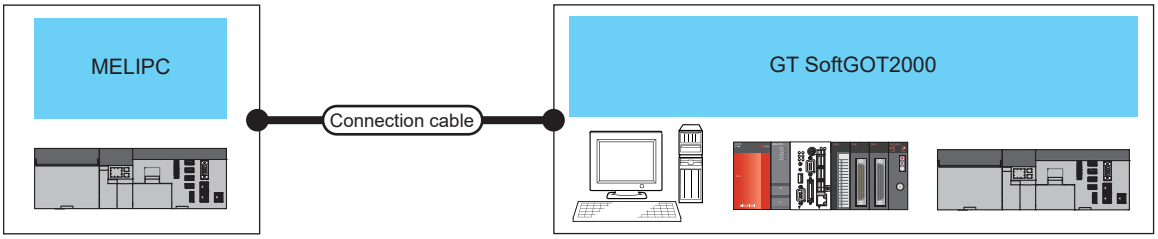
Virtual Ethernet connection between GT SoftGOT2000 installed on the Windows part of a MELIPC and the VxWorks part of the MELIPC

☞ Page 335 Direct MELIPC connection

Ethernet connection

System configuration

■Direct connection



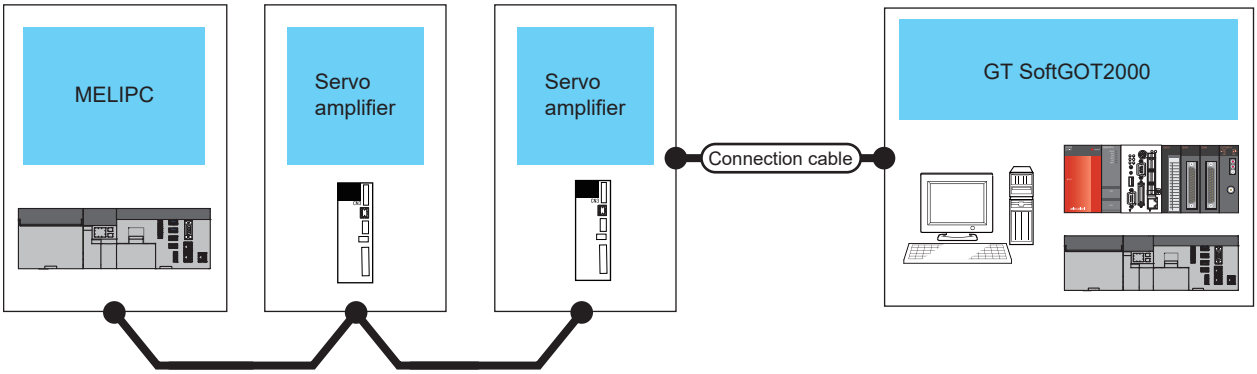
PLC				Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name		Ethernet module	Communication type					
MELIPC	MI5000 series	(Built-in Ethernet port)	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*2 PC CPU module MELIPC	UDP: 119 TCP: 17	UDP: 119 (16 or less recommended) TCP: 119 (16 or less recommended)

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 An Ethernet board/card is required.

☞ Page 331 Ethernet board/card

■Connection via a servo amplifier



CC-Link IE Field Network Basic

PLC			Servo amplifier		Connection cable*1	Max. distance	GT SoftGOT2000*2	Number of connectable devices
Model name		Communication type	Model name	Communication type				
MELIPC	MI5000 series	CC-Link IE Field Network Basic	MR-J5-□G MR-J5-□G-RJ MR-J5D1-□G4 MR-JET-□G	Ethernet	Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher (double shielded, STP), straight cable	100 m (Maximum segment length)	Windows-compatible personal computer*3 PC CPU module MELIPC	One GT SoftGOT2000 module for one servo amplifier

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T, ANSI/TIA/EIA-568-B (category 5e) standard.

*2 For the settings in GT SoftGOT2000, refer to the following.
☞ Page 236 Controller setting

*3 An Ethernet board/card is required.
☞ Page 331 Ethernet board/card

Built-in Ethernet port CPU and Ethernet board/card

The following shows connectable built-in Ethernet port CPUs and Ethernet boards/cards.

■Built-in Ethernet port CPU

Item	Model name
MELIPC	MI5122-VW

■Ethernet board/card

Applicable Ethernet bords/cards are shown in the following.

Manufacturer	Model name	Remarks
3COM	EthernetLink III LAN PC Card	Ethernet board/card
-	Ethernet board built in the personal computer as standard	Ethernet board

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

MELIPC MI5000 Series User's Manual

Connection cable

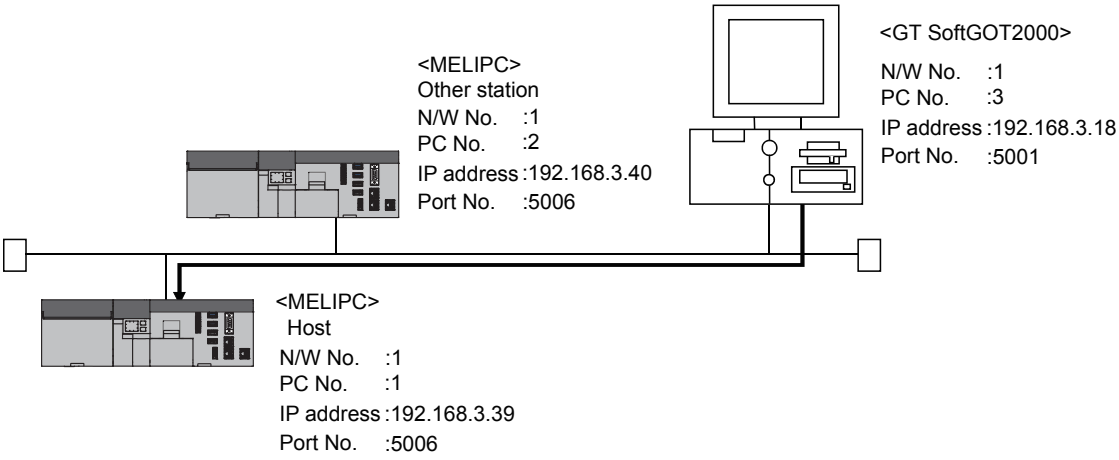
Use an applicable cable according to the Ethernet board/card used.

Controller setting

The following shows the necessary settings and precautions when GT SoftGOT2000 communicates with a MELIPC.

The explanations are given using the following system configuration to monitor the host station.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

For setting the network number, station number, IP address, and port number of a MELIPC and GT SoftGOT2000, refer to the following.

Page 333 Settings in GT Designer3

■Before setting

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

· Use a switching hub.

· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

· Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Settings on MI Configurator (Basic parameters)

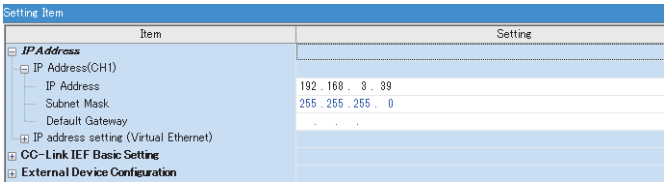
Set the basic parameters for the built-in Ethernet port.

Set the other items according to the system used.

For the details of the settings, refer to the following.

📖MI Configurator Operating Manual

Set the IP address for PLC1 in [IP Address].



■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 3. 39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 3. 39

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

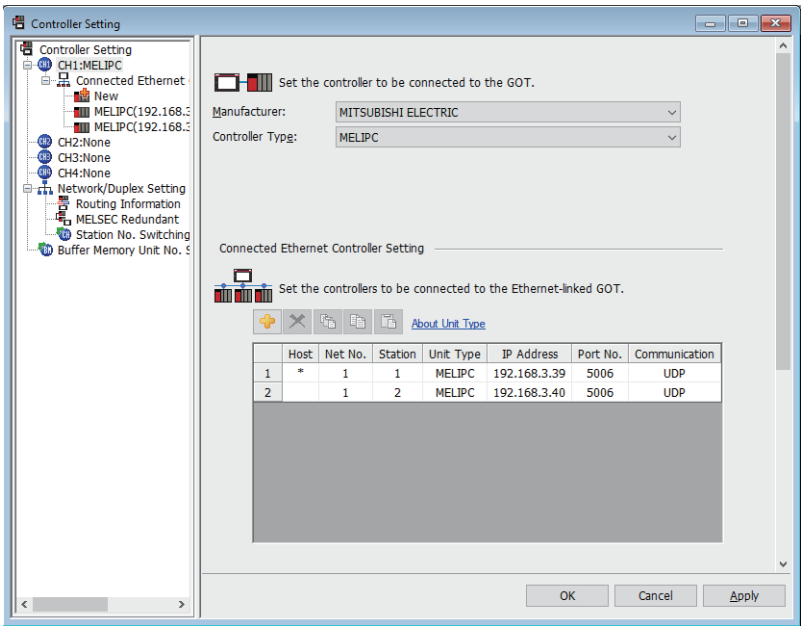
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in GT Designer3

Up to 120 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120]
[Unit Type]	Select the type of the target Ethernet module.	[MELIPC]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

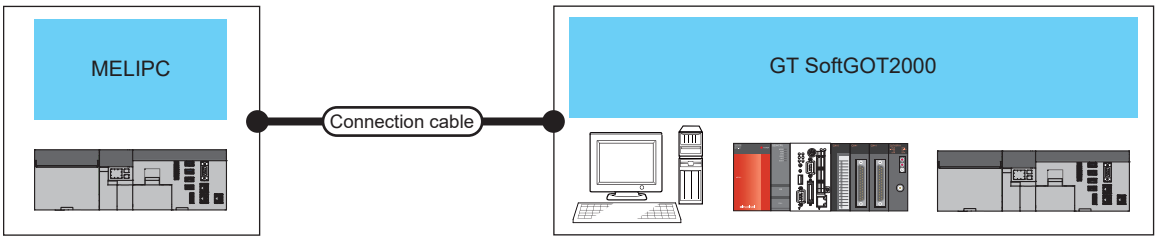
Precautions

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

CC-Link IE Field Network connection

System configurations



PLC				connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name		Network module	Communication type				
MELIPC	MI5000 series	(Built-in Ethernet port)	CC-Link IE Field Network	Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher, (double-shielded, STP) straight cable.	100 m (Maximum segment length)	Windows-compatible personal computer *3 PC CPU module MELIPC	120 *1

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T, ANSI/TIA/EIA-568-B (category 5e) standard.

*3 An Ethernet board/card is required.
☞ Page 334 Interface board

Built-in Ethernet port CPU and interface board

■Built-in Ethernet port CPU

Item	Model name
MELIPC	MI5122-VW

■Interface board

Type	Model name	Bus format	Driver
CC-Link IE Field	Q81BD-J71GF11-T2	PCI Express	SW1DNC-CCIEF-B

Refer to the following manual for the settings of the interface board.

📖CC-Link IE Field Network Interface Board User's Manual(For SW1DNC-CCIEF-B)

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

GT SoftGOT2000 setting

When communicating GT SoftGOT2000 to a PLC in the CC-Link IE Field Network system, communication setup is required.

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 82 [CC IE Control] or [CC IE Field]

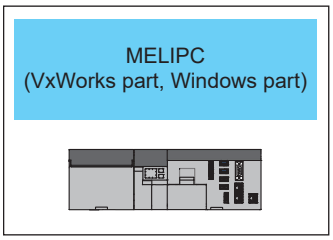
Controller setting

For the settings of the CC-Link IE Field Network module, refer to the following.

📖CC-Link IE Field Network Master/Local Module User's Manual

Direct MELIPC connection

System configurations

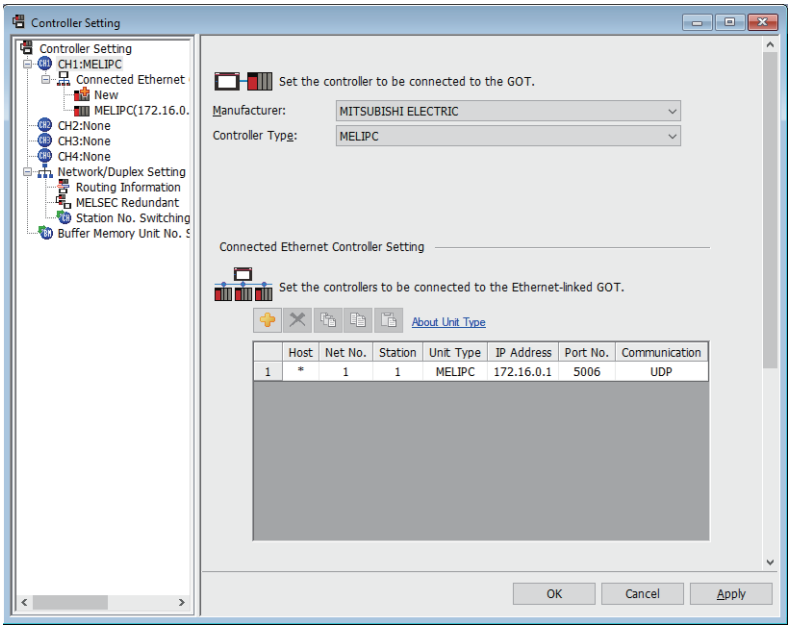


MELIPC		connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name	Communication type				
MI5122-VW (VxWorks part)	Virtual Ethernet	-	-	MELIPC (Windows part)	1 *1

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

Settings in GT Designer3

One setting can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120]
[Unit Type]	Select the type of the target Ethernet module.	[MELIPC]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255] *1
[Port No.]	Set the port number of the target Ethernet module.	[5006], [5007]
[Communication]	Displays the communication method.	[UDP] (for port No. 5006), [TCP] (for port No. 5007)

*1 Specify the IP address that is assigned for the virtual Ethernet connection.

Setting on GT SoftGOT2000

To establish communication between GT SoftGOT2000 installed on the Windows part and the VxWorks part, configure the communication settings.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 92 [MELIPC Direct]

Controller setting

For setting up a MELIPC, refer to the following.

📖User's manual of MELIPC

Precautions

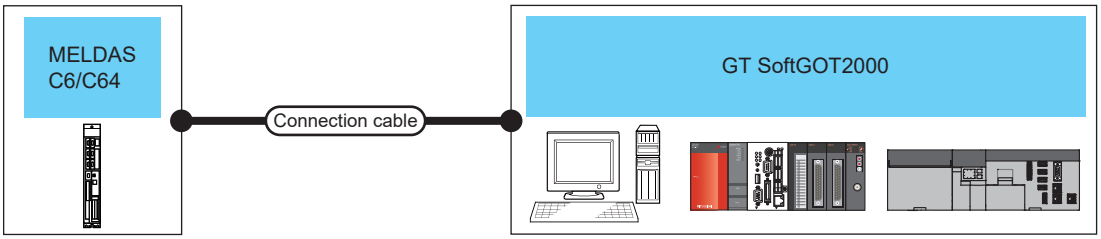
For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

3.15 CNC Connection

Direct CPU connection (RS-232)

System configurations



PLC		Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name	Communication type				
MELDAS C6/C64	RS-232	RS-232 1)	15m	Windows-compatible personal computer PC CPU module MELIPC*2	1 *1

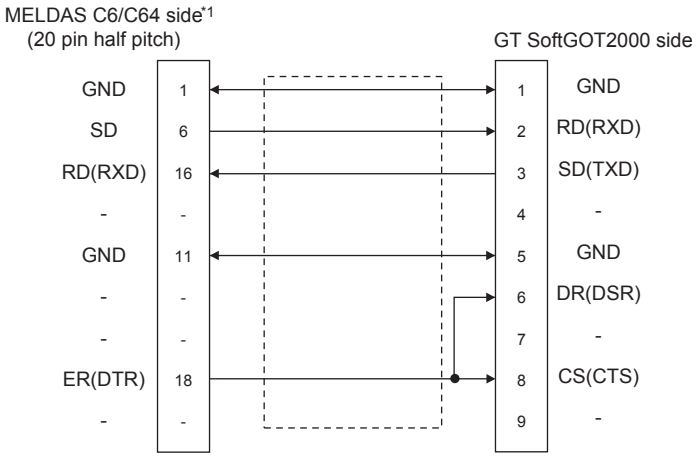
*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.
*2 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.

Connection cable

The user is required to make a conversion cable for connecting to the MELDAS C6/C64.
The following describes the connection diagram for each cable and specifications of connectors.

■RS-232 1)

• Connection diagram



• Connector specifications

PC side connector

Use the connector compatible with the PC side.

MELDAS C6/C64 side connector

Use the connector compatible with MELDAS C6/C64 side.

For details, refer to the following manual.

📖User's Manual for the MELDAS C6/C64

• Precautions for creating cables

The length of the conversion cable must be 15m or shorter.

GT SoftGOT2000 setting

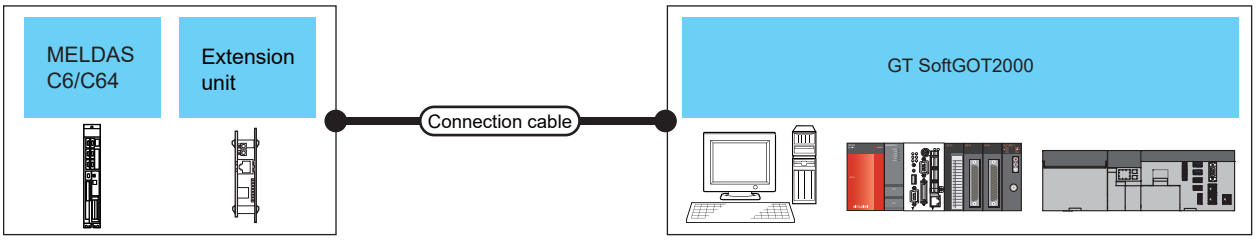
To establish communication between GT SoftGOT2000 and MELDAS C6/C64 by the direct CPU connection (RS-232), configure the communication setup.

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 76 [RS232]

Ethernet connection

System configurations and connection conditions



PLC			Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per CH
Model name	Extension unit	Communication type				
MELDAS C6/C64	FCU6-EX875	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	128 *1

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

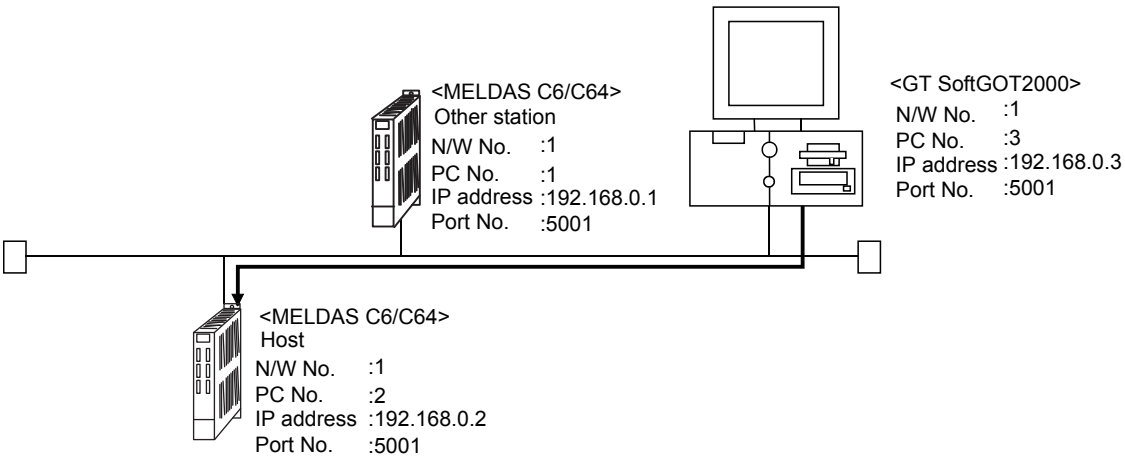
Connection cable

Use a cable applicable to the Ethernet module to be used.

Controller setting

The setting items and precautions are shown below for communicating GT SoftGOT2000 to the MELDAS C6/C64.

This section describes the system configuration to monitor the host station as shown below.



Point

Setting items

Refer to the following for how to set the Net No., PLC No./PC No., IP address and port No. of the MELDAS C6/C64 and GT SoftGOT2000.

☞ Page 341 Settings on GT Designer3

The following shows the procedure for communicating GT SoftGOT2000 to the MELDAS C6/C64.

■Before setting

• Precautions for monitoring

GT SoftGOT2000 cannot monitor CPUs on the other networks.

• Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

· Use a switching hub.

· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

· Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Compatible models

Compatible models	
FCA C6,	FCA C64

■Network parameter setting

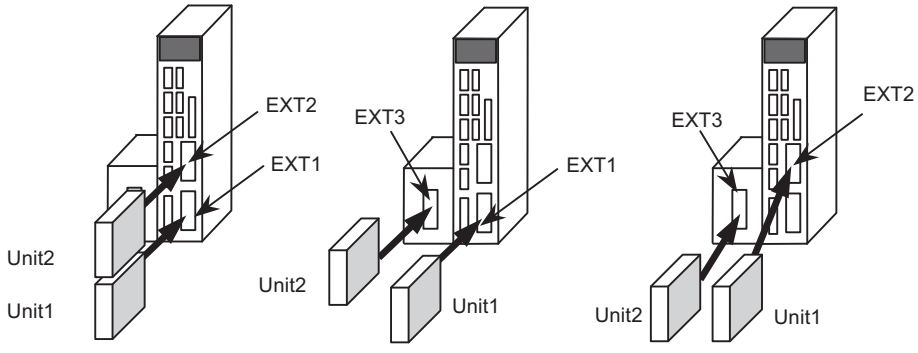
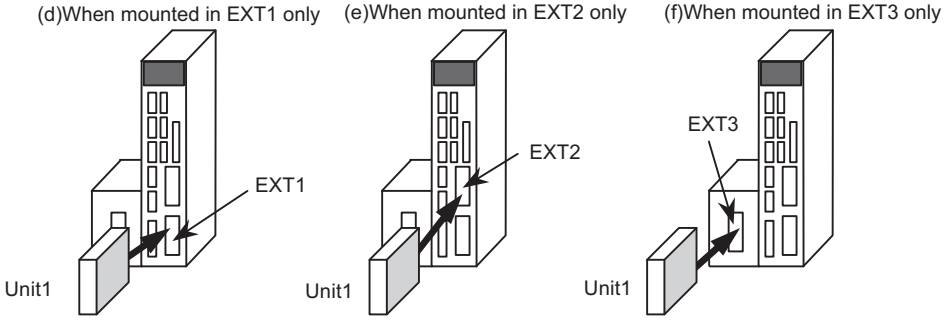
Set the network parameters by peripheral devices and write them to the MELDAS C6/C64.

The following shows an example of the parameter setting for GX Developer.

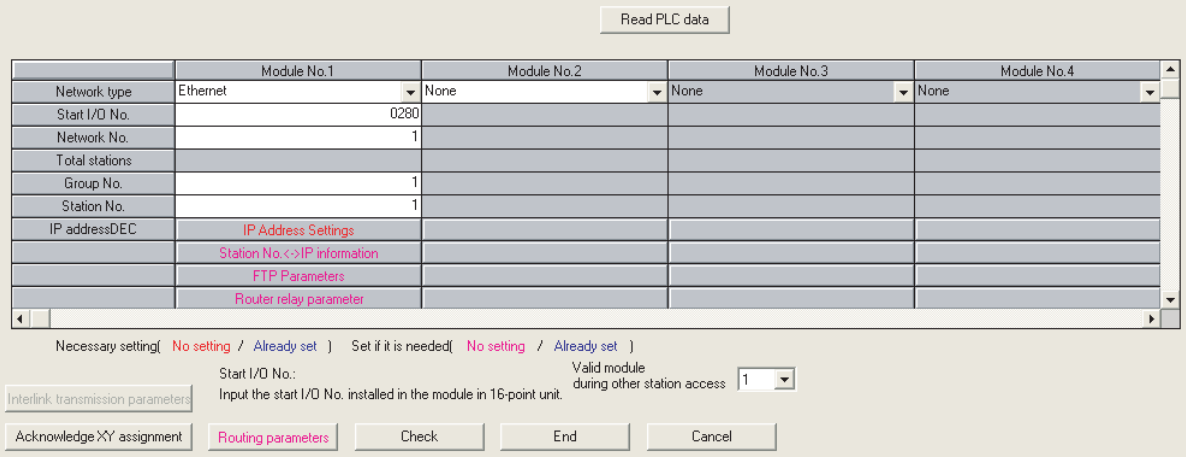
Set the start I/O No. that corresponds to the extension slot to be connected with the Ethernet unit.

When using two extension slots, unit numbers are assigned as shown in the following figures from 1) to 3).

• Start I/O No.

Extension slot	Start I/O No.	Mounting position of extension unit
EXT1	0200	(a)When mounted in EXT1 and EXT2 (b)When mounted in EXT1 and EXT3 (c)When mounted in EXT2 and EXT3  (d)When mounted in EXT1 only (e)When mounted in EXT2 only (f)When mounted in EXT3 only 
EXT2	0280	
EXT3	0300	

• Example of GX Developer setting



For details of the parameter setting, refer to the following.

MELDAS C6/C64 NETWORK MANUAL BNP-B2373

Point

IP address setting

The IP address setting on GX Developer is invalid.

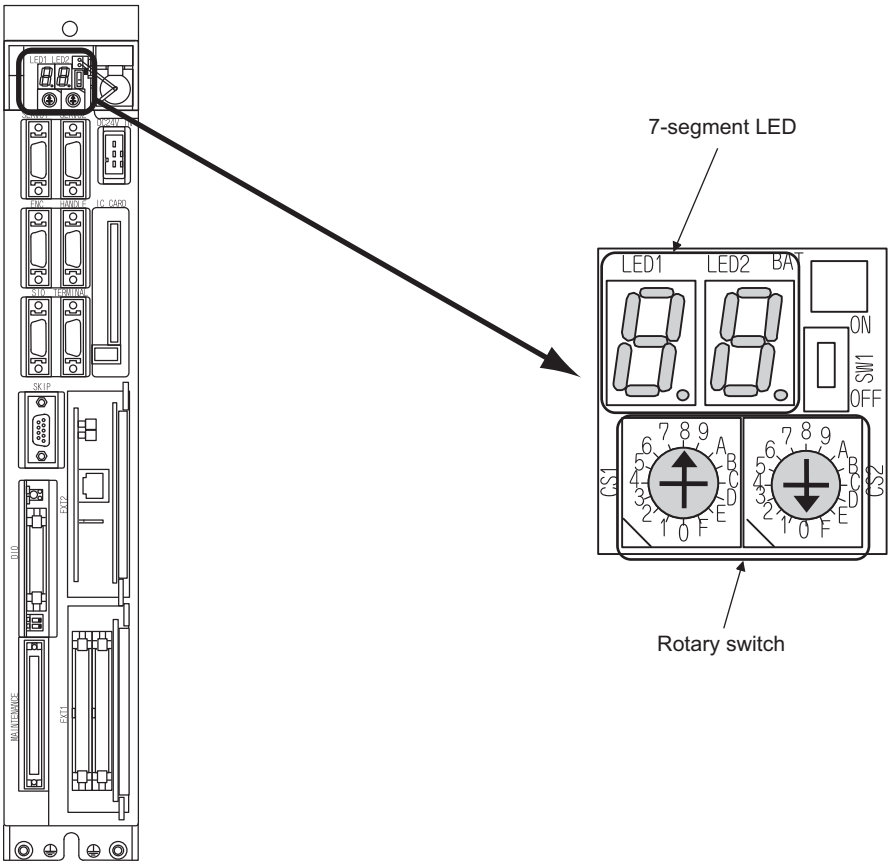
Set the IP address by the 7-segment LED and rotary switch of the MELDAS C6/C64 side, referring to the next page.

■MELDAS C6/C64 side parameter setting

Set the IP address, gateway address, subnet mask, and port No. for the 7-segment LED and rotary switch of the MELDAS C6/C64 side, and then check the settings.

For details of the parameter setting, refer to the following.

MELDAS C6/C64 NETWORK MANUAL BNPB2373 IV Setting the Ethernet IP Address



■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows.

When connections are OK

C:\>ping 192. 168. 0. 19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

When connections are not good

C:\>ping 192. 168. 0. 19

Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows.

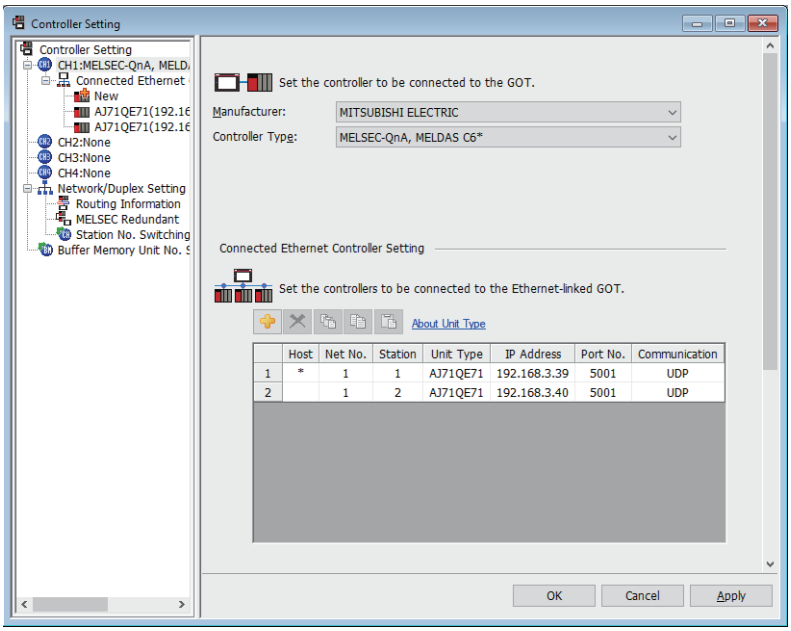
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings on GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	[AJ71QE71]
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	[5001]
[Communication]	Select a communication method.	[UDP]

■Setting on GT SoftGOT2000

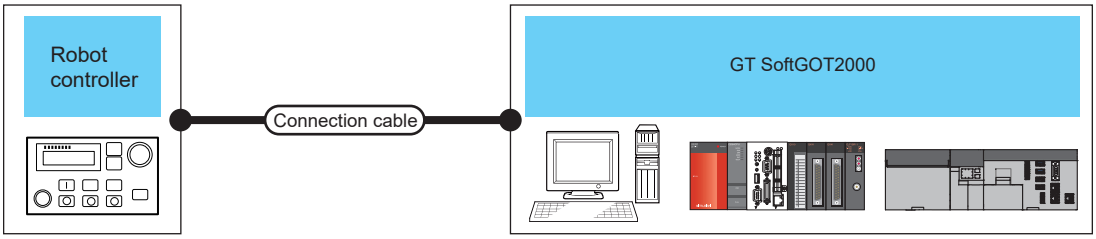
Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

3.16 Robot Controller Connection

System configurations



PLC		Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per CH
Model name	Communication type				
CR800-D	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	1 *1
CRnD-700					
CR750-D					
CR751-D					

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

Connection cable

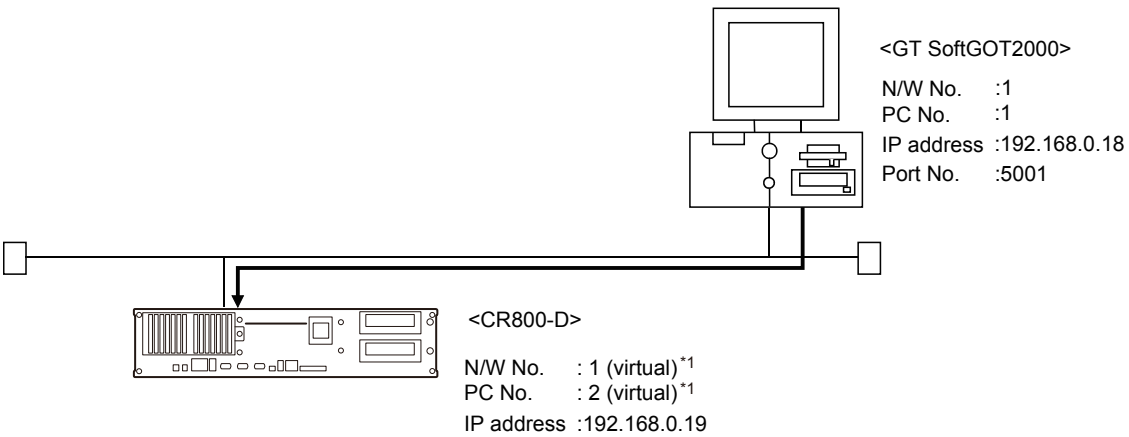
Use a cable compatible with CR800-D, CRnD-700, CR750-D, or CR751-D.

Controller setting

The following shows the setting items and precautions for communication between GT SoftGOT2000 and CR800-D, CRnD-700, CR750-D, or CR751-D.

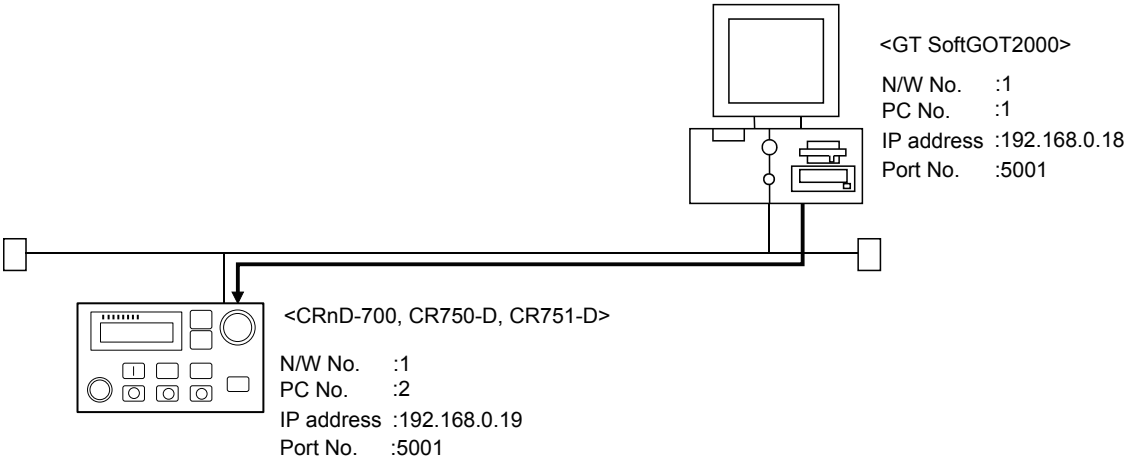
This section describes the system configuration to monitor the host as shown below.

CR800-D



*1 Although the setting is nonexistent on the robot controller side, set a virtual value on the GOT side.

CRnD-700, CR750-D, CR751-D



Point

Setting items

For setting the network number, station number, IP address, and port number of CR800-D, CRnD-700, CR750-D, CR751-D, and GT SoftGOT2000, refer to the following.

☞ Page 346 Settings in GT Designer3

The following shows the settings for communication with CR800-D, CRnD-700, CR750-D, or CR751-D.

Before setting

■Precautions for monitoring

GT SoftGOT2000 cannot monitor other stations.

GT SoftGOT2000 cannot monitor CPUs on the other networks.

■Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

· Use a switching hub.

· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

· Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

Compatible models

Compatible models
CR800-D, CRnD-700, CR750-D, CR751-D

Parameter settings for CR800-D, CRnD-700, CR750-D, and CR751-D

Set the parameters for CR800-D, CRnD-700, CR750-D, or CR751-D.

Point

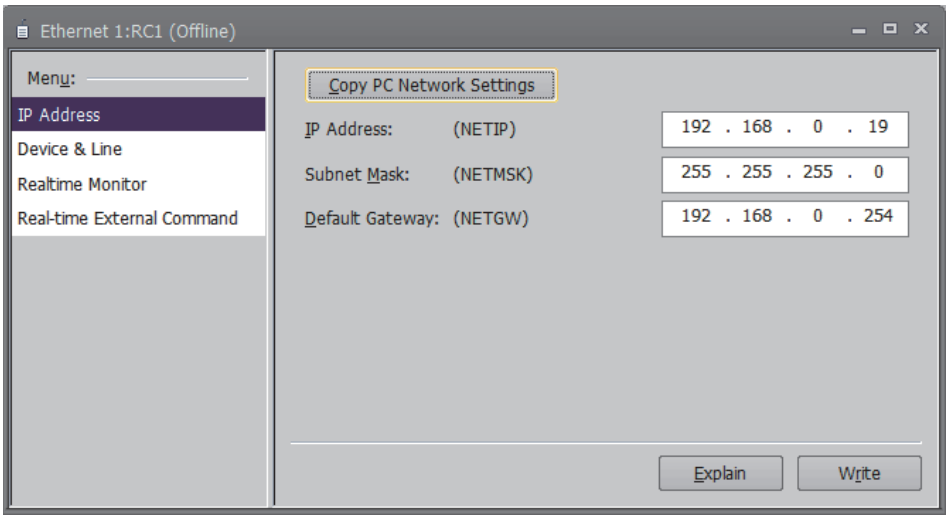
Robot controller (CR800-D, CRnD-700, CR750-D, CR751-D)

For the details of the robot controller (CR800-D, CRnD-700, CR750-D, or CR751-D), refer to the following.

Manual of the robot controller used

■CR800-D

Use RT ToolBox3 to set parameters.



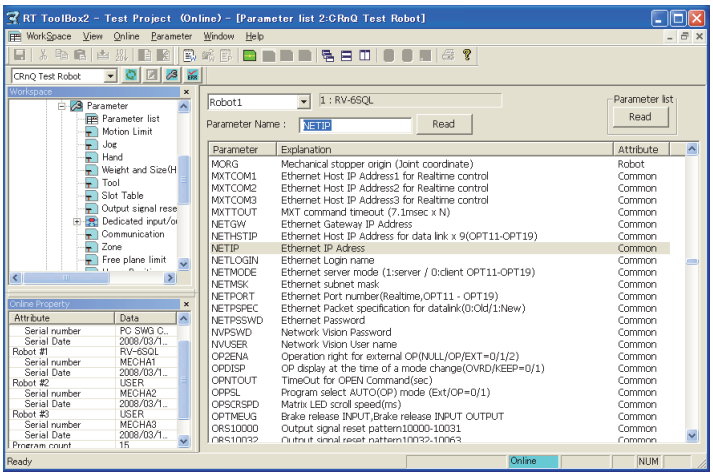
Item	Setting	Setting (with GOT connected)
IP Address (NETIP)	[192.168.0.19]	○

○: Required △: Set if necessary ×: Not required

■CRnD-700, CR750-D, CR751-D

Use RT ToolBox2 or R32TB/R56TB to set parameters.

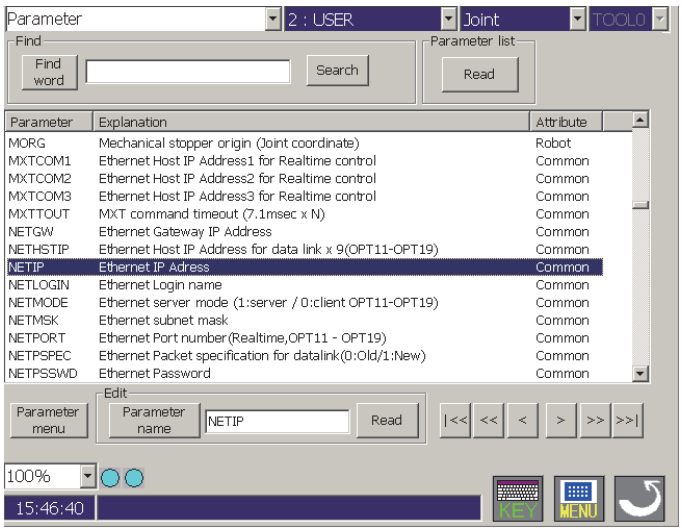
- For RT ToolBox2



Item	Setting	Setting (with GOT connected)
[NETIP]	[192.168.0.19]	○
[GOTPORT]	[5001]	○

○: Required △: Set if necessary ×: Not required

• For R32TB or R56TB



(For R56TB)

Item	Setting	Setting (with GOT connected)
[NETIP]	[192.168.0.19]	○
[GOTPORT]	[5001]	○

○: Required △: Set if necessary ×: Not required

Setting on personal computer

Set the IP address.

Communication check

■Ping test

When the CNC C70 is ready for communications, execute the Ping command with the command prompt of Windows.

When the Ping test is verified

C: \>Ping 192. 168. 0. 19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C: \>Ping 192. 168. 0. 19

Request timed out.

When the Ping test is not verified, check the connections of the cable and unit, and settings, including the IP address, for Windows.

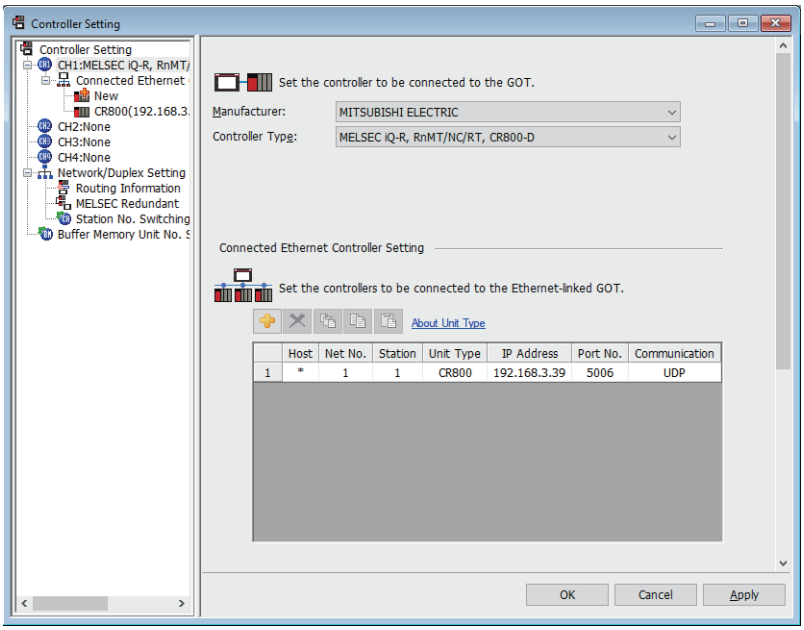
■Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖 GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select the type of the target Ethernet module.	• CR800-D: [CR800] • CRnD-700: [CRnD-700] *1
[IP Address]	Set the IP address of the target Ethernet module.	[0.0.0.0] to [255.255.255.255]
[Port No.]	Set the port number of the target Ethernet module.	• CR800-D: [5006], [5007] • CRnD-700: [5001]
[Communication]	Select a communication method.	• CR800-D: [UDP] (for port No. 5006),[TCP] (for port No. 5007) • CRnD-700: [UDP]

*1 To select [CRnD-700] in [Unit Type], set [Controller Type] to [MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700].

Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Precautions

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

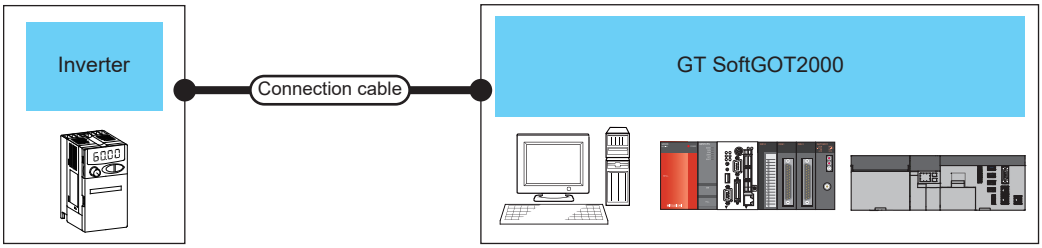
3.17 Inverter Connection (Direct Connection)

Only available to GT SoftGOT2000 (Multiple channels).

For connecting GT SoftGOT2000 and an inverter via a PLC, refer to the following.

☞ Page 358 Inverter Connection (via PLC)

System configuration



Inverter		Connection cable *1	Max. distance	GT SoftGOT2000	Number of connectable devices per channel	
Model name	Communication type				Personal computer *2	Inverter *3
FR-E7□0-NE *5 FR-A8□0 *6 FR-A8□2 *6 FR-A8□6 *6 FR-A8□0-GN FR-A8□2-GN FR-A8□0-E *4 FR-A8□2-E *4 FR-A8□6-E *4 FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-AWH FR-A8□0-E-LC FR-F8□0 *6 FR-F8□2 *6 FR-F8□6 *6 FR-F8□0-E *4 FR-F8□2-E *4 FR-E8□0-E	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer PC CPU module MELIPC	UDP: Unlimited TCP: 1	UDP: 128 (16 or less recommended) TCP: 128 (16 or less recommended)

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 Indicates the number of personal computers connectable to one inverter.

*3 Indicates the number of inverters connectable to one personal computer.

*4 When the communication type is Ethernet connection and the communication format is TCP, use an inverter with SERIAL (serial No.)"□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*5 Use an inverter with SERIAL (serial No.) "□88******" or later.
For FR-E700-SC-NNE and FR-E700-SC-ENE, use an inverter with SERIAL (serial No.) "□89******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*6 A built-in option (FR-A8NCG) is required.
Use an inverter with the following SERIAL (serial No.).
SERIAL (serial No.) is described on a rating plate of the inverter.

Country of origin indication	SERIAL (serial No.)
MADE in Japan	□96****** and later
MADE in China	□97****** and later

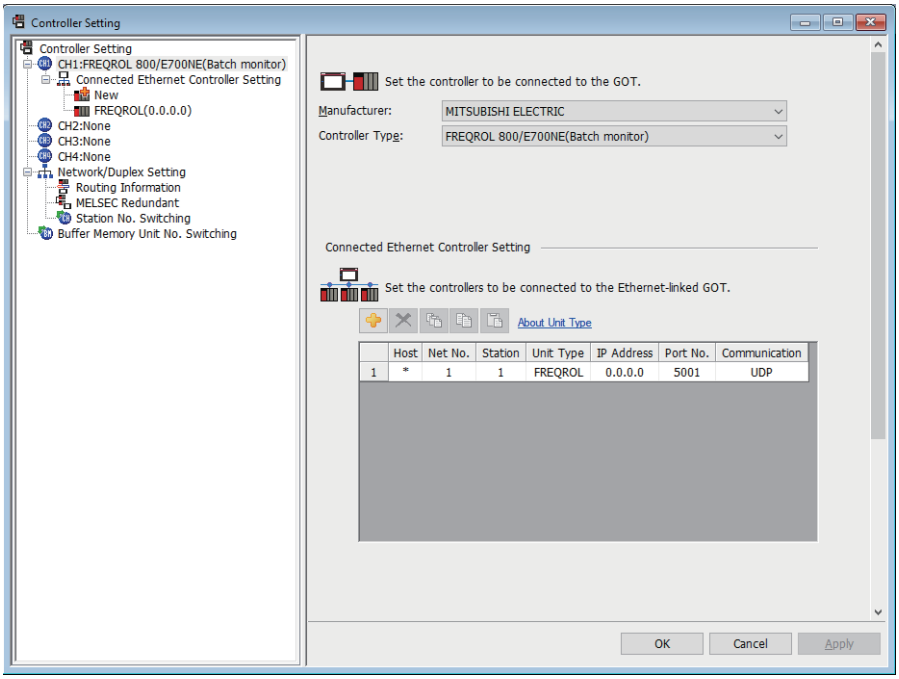
Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

Controller setting

Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Set value
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [120]
[Unit Type]	Select the type of the target Ethernet module.	[FREQROL]
[IP Address]	Set the IP address of the target Ethernet module.	Inverter side IP address
[Port No.]	Set the port number of the target Ethernet module.	Inverter side port No.
[Communication]	Displays the communication method.	Adjust the settings with the Inverter settings. [UDP] only for the connection to FR-E700-NE

Point

• When connecting to an inverter in communication format [TCP]

When setting [TCP] to the communication format for connection to an inverter, use an inverter with SERIAL (serial No.) "□7Z******" or later.

SERIAL (serial No.) is provided on the rating plate of the inverter.

Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Inverter side settings

For details of the inverter, refer to the manual of each series.

■Connecting to FR-A800, FR-F800, or FR-E800 series (FR-A8□0-E, FR-A8□2-E, FR-A8□6-E, FR-F8□0-E, FR-F8□2-E, or FR-E8□0-E)

• Communication settings

For setting up the inverter, refer to the following.

Manual of the inverter used

• Communication port and corresponding parameters

GT SoftGOT2000 connection destination	Parameters corresponding to inverter
Ethernet connector	Pr.79, Pr.340, Pr.342, Pr.414, Pr.502, Pr.549 to 551, Pr.779, Pr.1424 to 1429, Pr.1431 to 1432, Pr.1434 to 1455

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change the communication setting parameters from GT SoftGOT2000.

If the parameters are changed, communication with GT SoftGOT2000 may be disabled.

○: Required △: Set if necessary

Setting item *1	Parameter No.	Set value	Setting (with GT SoftGOT2000 connected)
Operation mode switching	Pr.79	0 (default) *3	△
Communication startup mode	Pr.340	10 *3	△
Communication EEPROM write selection	Pr.342	0 (default) *3	△
PLC function operation *4	Pr.414	0 (default) *3*4	△
Stop mode selection at communication error	Pr.502	0 (default) *3	△
Protocol selection	Pr.549	0 (default)	○
NET mode command source selection	Pr.550	5 *3	△
PU mode command source selection	Pr.551	2 *3	△
Operation frequency during communication error	Pr.779	9999 (default) *3	△
Ethernet communication network number *2	Pr.1424	1 to 239	○
Ethernet communication station number *2	Pr.1425	1 to 120	○
Link speed and duplex mode selection	Pr.1426	0 (default) *3	△
Ethernet function selection 1 *2	Pr.1427	5000 to 5002, 5006 to 5008	○
Ethernet function selection 2	Pr.1428	9999 (default) *3	△
Ethernet function selection 3	Pr.1429	9999 (default) *3	△
Ethernet signal loss detection function selection	Pr.1431	0 (default) *3	△
Ethernet communication check time interval	Pr.1432	9999 (default) *3	△
Ethernet IP address 1 (Built-in Ethernet) *2	Pr.1434	0 to 255	○
Ethernet IP address 2 (Built-in Ethernet) *2	Pr.1435	0 to 255	○
Ethernet IP address 3 (Built-in Ethernet) *2	Pr.1436	0 to 255	○
Ethernet IP address 4 (Built-in Ethernet) *2	Pr.1437	0 to 255	○
Subnet mask 1 *2	Pr.1438	255 (default) *3	△
Subnet mask 2 *2	Pr.1439	255 (default) *3	△
Subnet mask 3 *2	Pr.1440	255 (default) *3	△
Subnet mask 4 *2	Pr.1441	0 (default) *3	△
Ethernet IP filter address 1	Pr.1442	0 (default) *3	△
Ethernet IP filter address 2	Pr.1443	0 (default) *3	△
Ethernet IP filter address 3	Pr.1444	0 (default) *3	△
Ethernet IP filter address 4	Pr.1445	0 (default) *3	△
Ethernet IP filter address 2 range specification	Pr.1446	9999 (default) *3	△
Ethernet IP filter address 3 range specification	Pr.1447	9999 (default) *3	△
Ethernet IP filter address 4 range specification	Pr.1448	9999 (default) *3	△

Setting item [*1]	Parameter No.	Set value	Setting (with GT SoftGOT2000 connected)
Ethernet command source selection IP address 1	Pr.1449	0 (default) [*3]	△
Ethernet command source selection IP address 2	Pr.1450	0 (default) [*3]	△
Ethernet command source selection IP address 3	Pr.1451	0 (default) [*3]	△
Ethernet command source selection IP address 4	Pr.1452	0 (default) [*3]	△
Ethernet command source selection IP address 3 range specification	Pr.1453	9999 (default) [*3]	△
Ethernet command source selection IP address 4 range specification	Pr.1454	9999 (default) [*3]	△
Keepalive time	Pr.1455	3600 [*3]	△

*1 Setting items are the parameter names described in the FR-A800, FR-F800, and FR-E800 series manuals.
*2 You can change the GT SoftGOT2000 side settings.
When you change the GT SoftGOT2000 side settings, change the inverter side settings accordingly.
*3 Change the setting depending on the usage environment.
*4 The inverter side setting defaults to [0] (invalid). To use the PLC function, set [1] or [2].

■Connecting to FR-E700 series (FR-E7□0-NE)

• Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

• Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
Ethernet connector	Pr.79, Pr.340,Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.805 to 812, Pr.830 to 835, Pr.837 to 852

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change the communication setting parameters from GT SoftGOT2000.

If the parameters are changed, communication with GT SoftGOT2000 may be disabled.

○: Required △: Set if necessary

Setting item *1	Parameter No.	Set value	Setting (with GT SoftGOT2000 connected)
Operation mode switching	Pr.79	0 (default) *3	△
Communication startup mode	Pr.340	10 *3	△
Communication EEPROM write selection	Pr.342	0 (default) *3	△
Stop mode selection at communication error	Pr.502	0 (default) *3	△
Protocol selection	Pr.549	0 (default)	○
NET mode command source selection	Pr.550	0 (default) *3	△
PU mode command source selection	Pr.551	2 *3	△
Ethernet communication network number *2	Pr.830	1 to 239	○
Ethernet communication station number *2	Pr.831	1 to 120	○
Link speed and duplex mode selection	Pr.832	0 (default)	△
Ethernet function selection 1 *2	Pr.833	30, 31, 36, 38	○
Ethernet function selection 2	Pr.834	20 (default) *3	△
Ethernet function selection 3	Pr.835	9999 (default) *3	△
Ethernet signal loss detection function selection	Pr.851	3 (default) *3	△
Ethernet communication check time interval	Pr.852	1.5 seconds (default) *3	△
Ethernet IP address 1 (Built-in Ethernet) *2	Pr.805	0 to 255	○
Ethernet IP address 2 (Built-in Ethernet) *2	Pr.806	0 to 255	○
Ethernet IP address 3 (Built-in Ethernet) *2	Pr.807	0 to 255	○
Ethernet IP address 4 (Built-in Ethernet) *2	Pr.808	0 to 255	○
Subnet mask 1 *2	Pr.809	255 (default) *3	△
Subnet mask 2 *2	Pr.810	255 (default) *3	△
Subnet mask 3 *2	Pr.811	255 (default) *3	△
Subnet mask 4 *2	Pr.812	0 (default) *3	△
Gateway address 1 *2	Pr.442	0 (default) *3	△
Gateway address 2 *2	Pr.443	0 (default) *3	△
Gateway address 3 *2	Pr.444	0 (default) *3	△
Gateway address 4 *2	Pr.445	0 (default) *3	△
Ethernet IP filter address 1	Pr.837	0 (default) *3	△
Ethernet IP filter address 2	Pr.838	0 (default) *3	△
Ethernet IP filter address 3	Pr.839	0 (default) *3	△
Ethernet IP filter address 4	Pr.840	0 (default) *3	△
Ethernet IP filter address 2 range specification	Pr.841	9999 (default) *3	△
Ethernet IP filter address 3 range specification	Pr.842	9999 (default) *3	△
Ethernet IP filter address 4 range specification	Pr.843	9999 (default) *3	△
Ethernet command source specification IP address 1	Pr.844	0 (default) *3	△
Ethernet command source specification IP address 2	Pr.845	0 (default) *3	△
Ethernet command source specification IP address 3	Pr.846	0 (default) *3	△

Setting item [*1]	Parameter No.	Set value	Setting (with GT SoftGOT2000 connected)
Ethernet command source specification IP address 4	Pr.847	0 (default) [*3]	△
Ethernet command source selection IP address 3 range specification	Pr.848	9999 (default) [*3]	△
Ethernet command source selection IP address 4 range specification	Pr.849	9999 (default) [*3]	△
Ethernet TCP disconnection time coefficient	Pr.850	3600 [*3]	△

*1 Setting items are the parameter names described in the FR-E700 series manuals.

*2 You can change the GT SoftGOT2000 side settings.
When you change the GT SoftGOT2000 side settings, change the inverter side settings accordingly.

*3 Change the setting depending on the usage environment.

■Connecting to FR-A800 Plus series (FR-A8□0-E-CRN, FR-A8□2-E-CRN, FR-A8□0-E-R2R, FR-A8□2-E-R2R, FR-A8□0-E-AWH, or FR-A8□0-E-LC)

• Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

• Communication port and corresponding parameters

GOT connection destination	Inverter side parameter (R2R)	Inverter side parameter (CRN, AWH, LC)
Ethernet connector	Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.1073 to 1078, Pr.1431 to 1432, Pr.1434 to 1455	Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.1424 to 1429, Pr.1431 to 1432, Pr.1434 to 1455

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change the communication setting parameters from GT SoftGOT2000.

If the parameters are changed, communication with GT SoftGOT2000 may be disabled.

○: Required △: Set if necessary

Setting item *1	Parameter No.	Set value	Setting (with GT SoftGOT2000 connected)
Operation mode switching	Pr.79	0 (default) *3	△
Communication startup mode	Pr.340	10 *3	△
Communication EEPROM write selection	Pr.342	0 (default) *3	△
Stop mode selection at communication error	Pr.502	0 (default) *3	△
Protocol selection	Pr.549	0 (default)	○
NET mode command source selection	Pr.550	9999 (default) *3	△
PU mode command source selection	Pr.551	2 *3	△
Ethernet communication network number *2	Pr.1073 (R2R) or Pr.1424 (CRN, AWH, LC)	1 to 239	○
Ethernet communication station number *2	Pr.1074 (R2R) or Pr.1425 (CRN, AWH, LC)	1 to 120	○
Link speed and duplex mode selection	Pr.1075 (R2R) or Pr.1426 (CRN, AWH, LC)	0 (default)	△
Ethernet function selection 1 *2	Pr.1076 (R2R) or Pr.1427 (CRN, AWH, LC)	5000 to 5002, 5006 to 5008	○
Ethernet function selection 2	Pr.1077 (R2R) or Pr.1428 (CRN, AWH, LC)	45237 (default) *3	△
Ethernet function selection 3	Pr.1078 (R2R) or Pr.1429 (CRN, AWH, LC)	9999 (default) *3	△
Ethernet signal loss detection function selection	Pr.1431	0 (default) *3	△
Ethernet communication check time interval	Pr.1432	9999 (default) *3	△
Ethernet IP address 1 (Built-in Ethernet) *2	Pr.1434	0 to 255	○
Ethernet IP address 2 (Built-in Ethernet) *2	Pr.1435	0 to 255	○
Ethernet IP address 3 (Built-in Ethernet) *2	Pr.1436	0 to 255	○
Ethernet IP address 4 (Built-in Ethernet) *2	Pr.1437	0 to 255	○
Subnet mask 1 *2	Pr.1438	255 (default) *3	△
Subnet mask 2 *2	Pr.1439	255 (default) *3	△
Subnet mask 3 *2	Pr.1440	255 (default) *3	△
Subnet mask 4 *2	Pr.1441	0 (default) *3	△
Ethernet IP filter address 1	Pr.1442	0 (default) *3	△
Ethernet IP filter address 2	Pr.1443	0 (default) *3	△
Ethernet IP filter address 3	Pr.1444	0 (default) *3	△
Ethernet IP filter address 4	Pr.1445	0 (default) *3	△
Ethernet IP filter address 2 range specification	Pr.1446	9999 (default) *3	△
Ethernet IP filter address 3 range specification	Pr.1447	9999 (default) *3	△
Ethernet IP filter address 4 range specification	Pr.1448	9999 (default) *3	△
Ethernet command source selection IP address 1	Pr.1449	0 (default) *3	△
Ethernet command source selection IP address 2	Pr.1450	0 (default) *3	△

Setting item *1	Parameter No.	Set value	Setting (with GT SoftGOT2000 connected)
Ethernet command source selection IP address 3	Pr.1451	0 (default) *3	△
Ethernet command source selection IP address 4	Pr.1452	0 (default) *3	△
Ethernet command source selection IP address 3 range specification	Pr.1453	9999 (default) *3	△
Ethernet command source selection IP address 4 range specification	Pr.1454	9999 (default) *3	△
Keepalive time	Pr.1455	3600s (default) *3*4	△

*1 Setting items are the parameter names described in the FR-A800 Plus series manuals.
*2 You can change the GT SoftGOT2000 side settings.
When you change the GT SoftGOT2000 side settings, change the inverter side settings accordingly.
*3 Change the setting depending on the usage environment.
*4 For the precautions for the TCP/IP connection, refer to the following.
☞ Page 357 Connecting GT SoftGOT2000 and an inverter using TCP/IP

• Parameters for monitoring data specific to FR-A800 Plus series

How to monitor the winding length (upper + lower) (PV29)

Set Pr.645 (Winding diameter storage selection) to [1], and set Pr.1263 (Stored winding length (lower 4 digits)) and Pr.1298 (Stored winding length (upper 4 digits)) on the inverter side.

Communication drivers of FREQROL (Batch monitor) that supports monitoring PV are the setting target.

Setting item *1	Parameter No.	Setting range	Description
Winding diameter storage selection	Pr.645	0, 1	Select whether to store the winding diameter or winding length. 0: Not stored. 1: The current winding diameter is stored.
Stored winding diameter	Pr.646	1 to 6553 mm	The stored winding diameter can be read/written.
Operation time with stored winding diameter	Pr.647	0 to 100 s	Set the time to hold the stored winding diameter after the start signal turns on.
Target winding diameter	Pr.648	1 to 6563 mm	Set the winding diameter to output the Target Winding Diameter signal (Y233).
Winding length increment	Pr.1262	0	1km
		1	100m
		2	10m
		3	1m
		4	1cm
		5	1mm
Stored winding length (lower 4 digits)	Pr.1263	0 to 9999 m *2	The stored winding length (lower 4 digits) can be read/written.
Winding length detection (lower 4 digits)	Pr.1264	0 to 9999 m *2	Set the winding length (lower 4 digits) to output the Winding/Unwinding Completion signal (Y234).
Stored winding length (upper 4 digits)	Pr.1298	0 to 9999 m *2	The stored winding length (upper 4 digits) can be read/written.
Stored winding length increment	Pr.1299	0	1m
		1	1cm
		2	1mm
Winding length detection (upper 4 digits)	Pr.1346	0 to 9999 m *2	Set the winding length (upper 4 digits) to output the Winding/Unwinding Completion signal (Y234).

*1 Setting items are the parameter names described in the FR-A800 Plus series manuals.
*2 The unit differs depending on the setting of Pr.1262.

How to monitor the actual line speed (PV27)

The actual line speed can be set with the input value of the line speed command by setting Pr.362 (Actual line speed input selection) to [0].

For the line speed command, a value can be set in Pr.360 by setting Pr.361 (Line speed command input selection) to [8].

Communication drivers of FREQROL (Batch monitor) that supports monitoring PV are the setting target.

Setting item [*1]	Parameter No.	Setting range	Description
Line speed command voltage/current bias	Pr.350	0 to 100%	Set the converted value (%) of the bias voltage (current) for analog input.
Line speed command bias	Pr.351	0 to 6553.4 m/min [*2]	Set the bias line speed command value for analog input.
Line speed command voltage/current gain	Pr.352	0 to 100%	Set the converted value (%) of the gain voltage (current) for analog input.
Line speed command gain	Pr.353	0 to 6553.4 m/min [*2] 9999	Set the gain line speed command value for analog input.
Line speed command pulse input bias	Pr.354	0 to 500k pulses/s	Set the number of bias input pulses for pulse train input.
Line speed command pulse input gain	Pr.355	0 to 500k pulses/s	Set the number of gain input pulses for pulse train input.
Line speed command digital input bias	Pr.356	0 to 65535	Set the bias line speed command value for pulse train input.
Line speed command digital input gain	Pr.357	0 to 65535	Set the gain line speed command value for pulse train input.
Line speed unit	Pr.358	0	m/min
		1	m/sec
		2	mm/min
		3	mm/sec
Line speed command value	Pr.360	0 to 6553.4 m/min [*2]	Set the line speed command value.
Line speed command input selection	Pr.361	0	According to the priority of the speed command rights
		1	Terminal JOG single-phase pulse train input
		2	FR-A8AP/FR-A8AL/FR-A8TP encoder pulse train input
		3	Terminal 2 (0% to 100%)
		4	Terminal 4 (20% to 100%)
		5	Terminal 1 (-100% to 100%)
		6	Terminal 6 (FR-A8AZ) (-100% to 100%)
		7	FR-A8AL single-phase pulse train input
		8	Line speed command according to the setting of Pr.360 (Line speed command value)
		9999	No function
Actual line speed input selection	Pr.362	0 (Default)	V* (line speed command)
		1	Terminal JOG single-phase pulse train input
		2	FR-A8AP/FR-A8AL/FR-A8TP encoder pulse train input (complementary 12 V / differential 5 V (A-, B-phases)) [*3]
		3	Terminal 2 (analog value: 0% to 100%) (0 to 5 V DC) [*4]
		4	Terminal 4 (analog value: 20% to 100%) (4 to 20 mA DC) [*4]
		5	Terminal 1 (analog value: -100% to 100%) (0 to ±10 V DC) [*4]
		6	Terminal 6 (FR-A8AZ) (analog value: -100% to 100%) (0 to ±10 V DC) [*4]
		7	FR-A8AL single-phase pulse train input (PP, NP)
		9999	No function [*5]
Command pulse selection	Pr.428	0	Forward/Reverse pulse train (negative logic)
		1	Pulse train + rotation direction sign (negative logic)
		2	A/B-phase pulse train (negative logic)
		3	Forward/Reverse pulse train (positive logic)
		4	Pulse train + rotation direction sign (positive logic)
		5	A/B-phase pulse train (positive logic)
Start line speed command	Pr.622	0 to 6553.4 m/min [*2]	Set the line speed command to start operation.
Line multi-speed setting (high-speed)	Pr.1265	0 to 6553.4 m/min [*2]	Set the line speed command value when the RH signal is ON.

Setting item [*1]	Parameter No.	Setting range	Description
Line multi-speed setting (middle-speed)	Pr.1266	0 to 6553.4 m/min [*2]	Set the line speed command value when the RM signal is ON.
Line multi-speed setting (low-speed)	Pr.1267	0 to 6553.4 m/min [*2]	Set the line speed command value when the RL signal is ON.
Line multi-speed setting (4-speed)	Pr.1268	0 to 6553.4 m/min [*2]	The line speed can be set from 4-speed to 15-speed according to the combination of the RH, RM, RL, and REX signals.
Line multi-speed setting (5-speed)	Pr.1269	0 to 6553.4 m/min [*2]	
Line multi-speed setting (6-speed)	Pr.1270	0 to 6553.4 m/min [*2]	
Line multi-speed setting (7-speed)	Pr.1271	0 to 6553.4 m/min [*2]	
Line multi-speed setting (8-speed)	Pr.1272	0 to 6553.4 m/min [*2]	
Line multi-speed setting (9-speed)	Pr.1273	0 to 6553.4 m/min [*2]	
Line multi-speed setting (10-speed)	Pr.1274	0 to 6553.4 m/min [*2]	
Line multi-speed setting (11-speed)	Pr.1275	0 to 6553.4 m/min [*2]	
Line multi-speed setting (12-speed)	Pr.1276	0 to 6553.4 m/min [*2]	
Line multi-speed setting (13-speed)	Pr.1277	0 to 6553.4 m/min [*2]	
Line multi-speed setting (14-speed)	Pr.1278	0 to 6553.4 m/min [*2]	
Line multi-speed setting (15-speed)	Pr.1279	0 to 6553.4 m/min [*2]	

*1 Setting items are the parameter names described in the FR-A800 Plus series manuals.
*2 The unit differs depending on the setting of Pr.358.
*3 When Pr.362 is set to [2], select the option to input the actual line speed with Pr.862.
*4 These input specifications are the default.
*5 When Pr.362 is set to [9999] (No function), the actual line speed is handled as 0.

Precautions

Connection port of the inverter

Make sure to connect an Ethernet cable to an Ethernet port of an inverter.

When connecting an Ethernet cable by mistake to a PU port, there is a fear that equipment is damaged.

Monitoring virtual devices (RS, WS, A, Pr, PG, SP)

Virtual devices (RS, WS, A, Pr, PG, SP) of a single inverter cannot be monitored simultaneously from multiple GOTs.

Connecting GT SoftGOT2000 and an inverter using TCP/IP

When GT SoftGOT2000 and an inverter connected using TCP/IP are disconnected, reconnection may not be established.

In such a case, reset the inverter, or shorten the keepalive time and Ethernet TCP disconnection time coefficient.

For setting the keepalive time and Ethernet TCP disconnection time coefficient, refer to the following.

Manual of the inverter used

Monitoring PLC devices and virtual devices of an inverter simultaneously

In the following cases, the speed of monitoring the PLC devices through GT SoftGOT2000 and the inverter decreases.

- Monitoring PLC devices and virtual devices of an inverter on the same screen or background
- Resetting the inverter

By connecting a different channel for each controller with the multi-channel function, the decreasing device monitor speed of the PLC can be improved.

Link device of the CC-Link IE Field Network

When functions (signals) are assigned to the link devices (RX, RY, RWr, RWw) on the inverter side, GT SoftGOT2000 cannot write data to the virtual devices of these functions.

Example) CMD1 (Forward rotation command)

Since the forward rotation command is assigned to RY0 on the inverter side, GT SoftGOT2000 cannot write data to a virtual device CMD1 (forward rotation command).

For the functions (signals) assigned to link devices, refer to the following.

Manual of the inverter used

Control the functions (signals) assigned to the link devices (RX, RY, RWw, and RWr) on the master station.

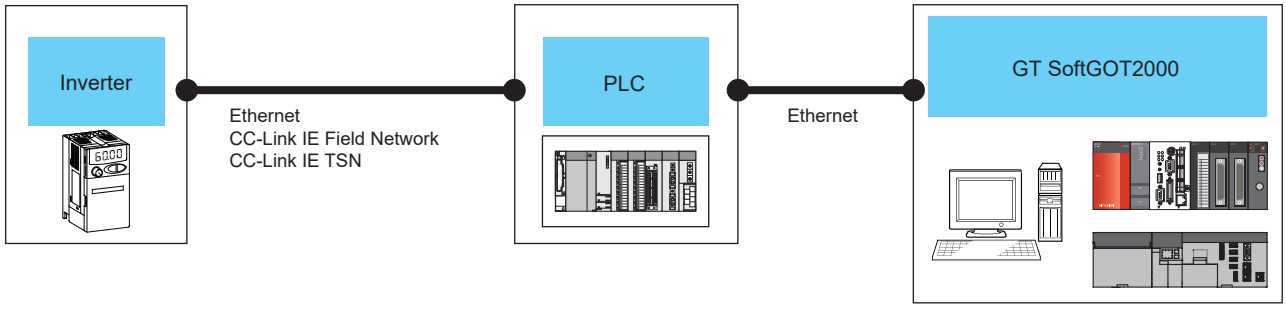
3.18 Inverter Connection (via PLC)

Only available to GT SoftGOT2000 (Multiple channels).

For directly connecting GT SoftGOT2000 and an inverter, refer to the following.

☞ Page 347 Inverter Connection (Direct Connection)

System configuration



Inverter		PLC	Connection type	GT SoftGOT2000	Number of connectable devices
Model	Communication type	CPU model			
FR-E7□0-NE *1 FR-A8□0-E *2 FR-A8□2-E *2 FR-A8□6-E *2 FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-AWH FR-A8□0-E-LC FR-F8□0-E *2 FR-F8□2-E *2 FR-E8□0-E	Ethernet	RCPU QCPU LCPU	For details on the system configuration between GT SoftGOT2000 and a PLC, refer to the following. ☞ Page 227 Ethernet Connection	Windows-compatible personal computer PC CPU module MELIPC	Varying with the connection type
FR-A8□0 *3 FR-A8□2 *3 FR-A8□6 *3 FR-A8□0-GF FR-A8□2-GF FR-A8□0-CRN *3 FR-A8□2-CRN *3 FR-A8□0-R2R *3 FR-A8□2-R2R *3 FR-A8□0-LC *3 FR-F8□0 *3 FR-F8□2 *3 FR-F8□6 *3	CC-Link IE Field Network*6	RCPU QCPU LCPU			
FR-A8□0 *4 FR-A8□2 *4 FR-A8□6 *4 FR-A8□0-GN FR-A8□2-GN FR-F8□0 *4 FR-F8□2 *4 FR-F8□6 *4 FR-E8□0-E	CC-Link IE TSN*5	RCPU			

*1 Use the inverter whose SERIAL (serial No.) is "□88******" or later.
For the FR-E700-SC-NNE and FR-E700-SC-ENE, use the inverter whose SERIAL (serial No.) is "□89******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

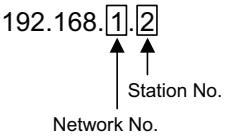
*2 When the communication type is Ethernet connection and the communication format is TCP, use the inverter whose SERIAL (serial No.) is "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*3 CC-Link IE Field Network Communication Option (FR-A8NCE) is required.
Use a CC-Link IE Field Network communication option (FR-A8NCE) whose SERIAL (serial No.) is "□83***" or later.
SERIAL (serial No.) is described on the CC-Link IE Field Network communication option (FR-A8NCE).

*4 A built-in option (FR-A8NCG) is required.
Use the inverter whose SERIAL (serial No.) is the following.
SERIAL (serial No.) is described on a rating plate of the inverter.

Country of origin indication	SERIAL (serial No.)
MADE in Japan	□96****** and later
MADE in China	□97****** and later

*5 When connecting a GOT and inverter via the PLC, set the third octet of the inverter IP address to the network No., and the fourth octet to the station No.
The following shows a setting example of the IP address when the network No. is "1" and the station No. is "2".



For the setting details, refer to the following.
📖FR-A800-GN CC-LINK IE TSN FUNCTION MANUAL
📖FR-A8NCG INSTRUCTION MANUAL

*6 Use an inverter with SERIAL (serial No.) "□83******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

Connection cable

For details on the cable between GT SoftGOT2000 and a PLC, refer to the following.
☞ Page 227 Ethernet Connection
For details on the cable between an inverter and a PLC, refer to the following.
📖FR-E700-NE ETHERNET FUNCTION MANUAL
📖FR-A800-E/F800-E ETHERNET FUNCTION MANUAL
📖FR-A8NCE INSTRUCTION MANUAL

Controller setting

Setting of a controller through which GT SoftGOT2000 monitors an inverter

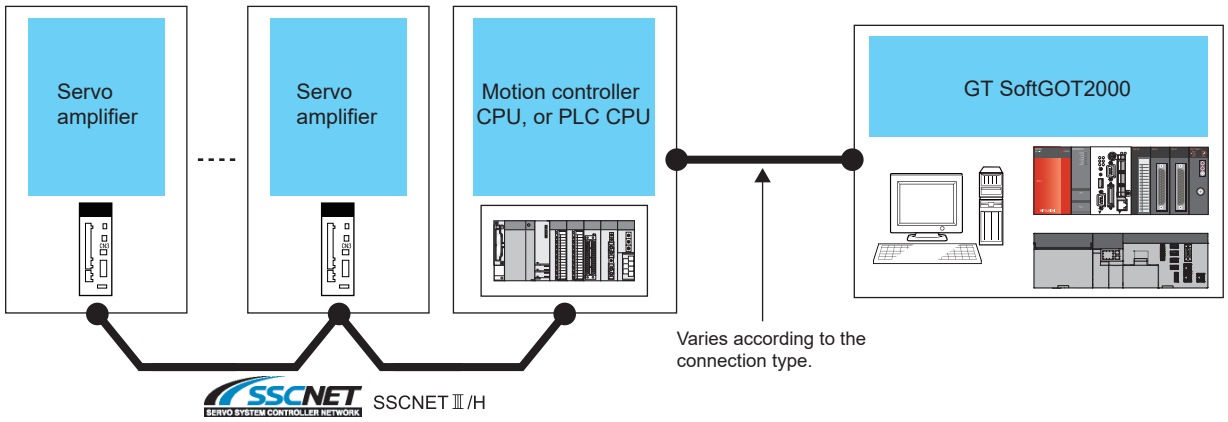
For details on the setting between GT SoftGOT2000 and a PLC, refer to the following.
☞ Page 227 Ethernet Connection

Precautions

For the precautions for the inverter connection, refer to the following.
☞ Page 357 Precautions

3.19 Servo amplifier connection (via Motion controller or Simple Motion module)

System configuration



Servo amplifier		Motion controller or PLC			GT SoftGOT2000	Number of connectable devices	
Model	Communication type	Simple motion module	CPU model	Connection type		Personal computer *3	Motion controller or PLC *4
MR-J4-□B MR-J4-□B-RJ MR-J4W2-□B MR-J4W3-□B	SSCNET III/H *1	-	RnMTCPU Q17nDS *8 Q170MS *8	Varying with the CPU model *5	Windows-compatible personal computer PC CPU module MELIPC*6	Varying with the connection type *5	Varying with the connection type *5
		RD77MS2 RD77MS4 RD77MS8 RD77MS16	RnCPU				
		QD77MS2 *7 QD77MS4 *7 QD77MS16 *7	QnCPU *8				
		LD77MS2 LD77MS4 LD77MS16	LnCPU *8				
		FX5-40SSC-S *2 FX5-80SSC-S*2*11	FX5CPU				
MR-J5-□B*8 MR-J5-□B-RJ*8 MR-J5W2-□B*8 MR-J5W3-□B*8		-	RnMTCPU Q17nDS*9 Q170MS				
		RD77MS2 RD77MS4 RD77MS8 RD77MS16	RnCPU				
		QD77MS2*10 QD77MS4*10 QD77MS16*10	QnCPU				
MR-JE-□B MR-JE-□BF	SSCNET III/H *1	RD77MS2*12 RD77MS4*12 RD77MS8*12 RD77MS16*12	RnCPU				
		QD77MS2*13 QD77MS4*13 QD77MS16*13	QnCPU *8				
		LD77MS2 *13 LD77MS4 *13 LD77MS16 *13	LnCPU *8				
		FX5-40SSC-S *2 FX5-80SSC-S *2	FX5CPU				

*1 The MR-J3 compatibility mode is not supported.
*2 This module is usable for the Ethernet connection only.
*3 Indicates the number of personal computers connectable to one motion controller or one PLC.
*4 Indicates the number of motion controllers and PLCs connectable to one personal computer.
*5 For the system configuration between GT SoftGOT2000 and a motion controller or PLC, refer to the following.
☞ Page 227 Ethernet Connection
☞ Page 297 Direct CPU connection (RS-232, USB)
☞ Page 306 Serial Communication Connection
☞ Page 320 CC-Link IE Controller Network Connection
☞ Page 322 CC-Link IE Field Network Connection
*6 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.
*7 Use a module with the upper five digits later than 12042.
*8 Only available to GT SoftGOT2000 (Multiple channels).
*9 Use a module with OS software version 00Y or later.
*10 Use a module that has a serial number starting with 23092 or later.
*11 Use a module with software version 1.004 or later.
*12 Use firmware version 3 or later.
*13 Use a module with the upper five digits later than 16102.

Connection cable

The connection cable between GT SoftGOT2000 and a motion controller or PLC for monitoring a servo amplifier varies with the connection type.

For the details of the cable, refer to the following.

☞ Page 227 Ethernet Connection
☞ Page 297 Direct CPU connection (RS-232, USB)
☞ Page 306 Serial Communication Connection
☞ Page 320 CC-Link IE Controller Network Connection
☞ Page 322 CC-Link IE Field Network Connection

For the details of the cable between a servo amplifier and a motion controller, refer to the following.

📖MELSEC iQ-R Motion Controller User's Manual

For the details of the cable between a servo amplifier and a simple motion module, refer to the following.

📖MELSEC iQ-R Simple Motion Module User's Manual (Startup)
📖MELSEC iQ-F FX5 Simple Motion Module User's Manual (Startup)

For the details of the cable between servo amplifiers, refer to the following.

📖MELSEC iQ-R Motion Controller User's Manual

Controller setting

Setting of a controller through which GT SoftGOT2000 monitors a servo amplifier

The setting of a motion controller or PLC through which GT SoftGOT2000 monitors a servo amplifier varies with the connection type.

For the setting details, refer to the following.

☞ Page 227 Ethernet Connection
☞ Page 297 Direct CPU connection (RS-232, USB)
☞ Page 306 Serial Communication Connection
☞ Page 320 CC-Link IE Controller Network Connection
☞ Page 322 CC-Link IE Field Network Connection

Precautions

Monitoring a servo amplifier during the test operation

When GT SoftGOT2000 monitors a servo amplifier during the test operation, if the communication between them is interrupted for 0.5 ms or more, the servo motor decelerates to a stop (servo-lock status).
Ensure the constant communication during the test operation by performing operations on GT SoftGOT2000, such as monitoring the servo amplifier status.

When accessing a servo amplifier simultaneously with a GOT or software application

Do not monitor or write a device value to a servo amplifier simultaneously from a GOT, GT Simulator3, GT SoftGOT2000, and other MELSOFT applications (such as MR Configurator2).
Doing so may cause the incorrect display of parameters and others on the GOT and software applications, or a servo amplifier malfunction.

When monitoring a PLC and a servo amplifier simultaneously

Do not monitor the following devices on one screen.
Doing so decreases the monitoring speed.
Devices of a PLC and devices of a servo amplifier
Devices of multiple servo amplifiers

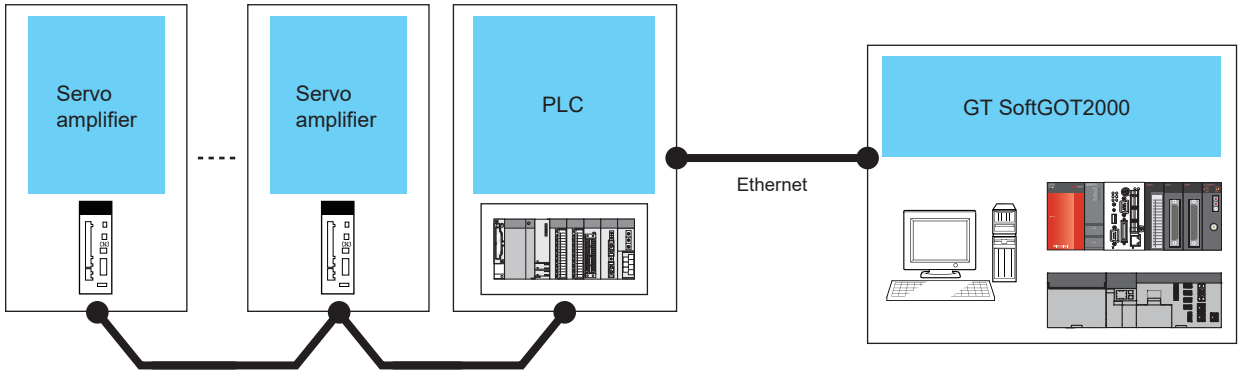
Precautions for drawing

Set the data type of the monitoring target device according to the servo amplifier parameter specifications.
If you set the data type incorrectly, an unexpected value may be written to the device.

3.20 Servo amplifier connection (via Simple Motion module or CC-Link IE Field Network master/local module)

Only available to GT SoftGOT2000 (Multiple channels).

System configuration



Servo amplifier		Motion controller or PLC			GT SoftGOT2000	Number of connectable devices per CH	
Model	Communication type	Simple motion module or master/local module	CPU model	Connection type		Personal computer *1	Motion controller or PLC *2
MR-J4-GF(-RJ)	CC-Link IE Field Network	RD77GF4 *4 RD77GF8 *4 RD77GF16 *4 RD77GF32	RCPU	For details on the system configuration between GT SoftGOT2000 and a PLC, refer to the following. ☞ Page 227 Ethernet Connection	Windows-compatible personal computer PC CPU module MELIPC	For details on the system configuration between GT SoftGOT2000 and a PLC, refer to the following. ☞ Page 227 Ethernet Connection	
		QD77GF4 *4 QD77GF8 *4 QD77GF16 *4	QCPU				
		RnENCPU	RCPU				
		RJ71EN71 RJ71GF11-T2 *3	RCPU				
		QJ71GF11-T2 *3*4	QCPU				
		LJ71GF11-T2 *3*4	LCPU				

*1 Indicates the number of personal computers connectable to a PLC.

*2 Indicates the number of PLCs connectable to a personal computer.

*3 When connecting to the servo amplifier via the CC-Link IE Field network master/local unit, connect via the master station. In this case, a different network will be accessed, so the routing must be set.

*4 Use the following version or later.

Simple motion module or master/local module	Motion mode	I/O mode
RD77GF4, RD77GF8, RD77GF16	Software version [01] or later	Software version [02] or later
QD77GF4, QD77GF8, QD77GF16	From first product	First 5 digits of serial No. 18022 or higher
QJ71GF11-T2	-	First 5 digits of serial No. 14102 or higher
LJ71GF11-T2	-	First 5 digits of serial No. 14102 or higher

Connection cable

For details of the cable between GT SoftGOT2000 and a PLC through which servo amplifiers are monitored, refer to the following.

☞ Page 227 Ethernet Connection

For the details of the cable between a servo amplifier and a simple motion module, refer to the following.

📖MELSEC iQ-R Simple Motion Module User's Manual (Startup)

📖MELSEC iQ-F FX5 Simple Motion Module User's Manual (Startup)

For the details of the cable between servo amplifiers, refer to the following.

📖MELSEC iQ-R Motion Controller User's Manual

Controller setting

Setting of a controller through which GT SoftGOT2000 monitors a servo amplifier

For details of the settings between GT SoftGOT2000 and a PLC through which servo amplifiers are monitored, refer to the following.

☞ Page 227 Ethernet Connection

Precautions

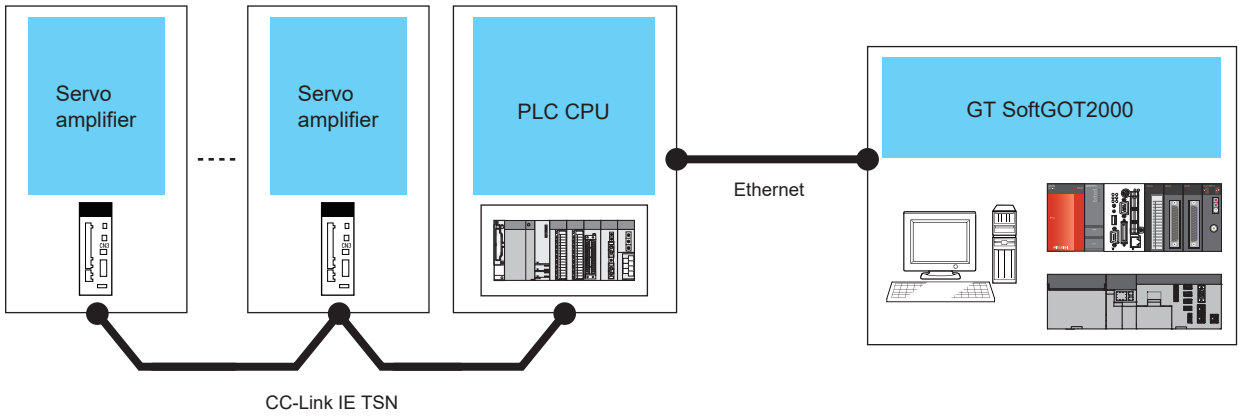
For the precautions for the servo amplifier connection, refer to the following.

☞ Page 362 Precautions

3.21 Servo Amplifier Connection (via Motion Module)

Only available to GT SoftGOT2000 (Multiple channels).

System configuration



Servo amplifier		PLC			GT SoftGOT2000	Number of connectable devices
Model	Communication type	Motion module*3	CPU model	Connection type		
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4 MR-JET-□G	CC-Link IE TSN	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	RnCPU *1 RnENCPU *1 R12CCPU-V *1	For details on the system configuration between GT SoftGOT2000 and a PLC, refer to the following. ☞ Page 237 When using Built-in Ethernet port RCPU (one-to-one connection, multi-connection) For connection between GT SoftGOT2000 and a PLC, use an Ethernet port built in the PLC CPU.	Windows-compatible personal computer PC CPU module MELIPC	One GT SoftGOT2000 module for one Motion module
		FX5-40SSC-G FX5-80SSC-G	FX5U*2 FX5UC*2			

*1 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
• For RnCPU and RnENCPU: [RCPU]
• For R12CCPU-V: [RnCCPU/RnWCPU]
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
• For RnCPU or RnENCPU
☞ Page 239 Settings in GT Designer3
• For R12CCPU-V
☞ Page 270 Settings in GT Designer3

*2 Select [FX5CPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 254 Settings in GT Designer3

*3 When monitoring a servo amplifier through a Motion module, the modes available for the servo amplifier depend on the firmware version of the Motion module to be used.
The following shows the details.

Motion module	Motion mode	Simple Motion mode
RD78G4 RD78G8 RD78G16	From the first product	Firmware version 16 or later
RD78G32 RD78G64	From the first product	Unavailable
RD78GHV RD78GHW	From the first product	Unavailable
FX5-40SSC-G FX5-80SSC-G	Unavailable	From the first product

Connection cable

For details on the cable between GT SoftGOT2000 and a PLC, refer to the following.

☞ Page 227 Ethernet Connection

For details on the cable between a servo amplifier and a Motion module, refer to the following.

📖MELSEC iQ-R Simple Motion Module User's Manual

For the details of the cable between servo amplifiers, refer to the following.

📖MELSEC iQ-R Motion Controller User's Manual

Controller setting

Setting of a controller through which GT SoftGOT2000 monitors an inverter

For details on the setting between GT SoftGOT2000 and a PLC, refer to the following.

☞ Page 227 Ethernet Connection

Precautions

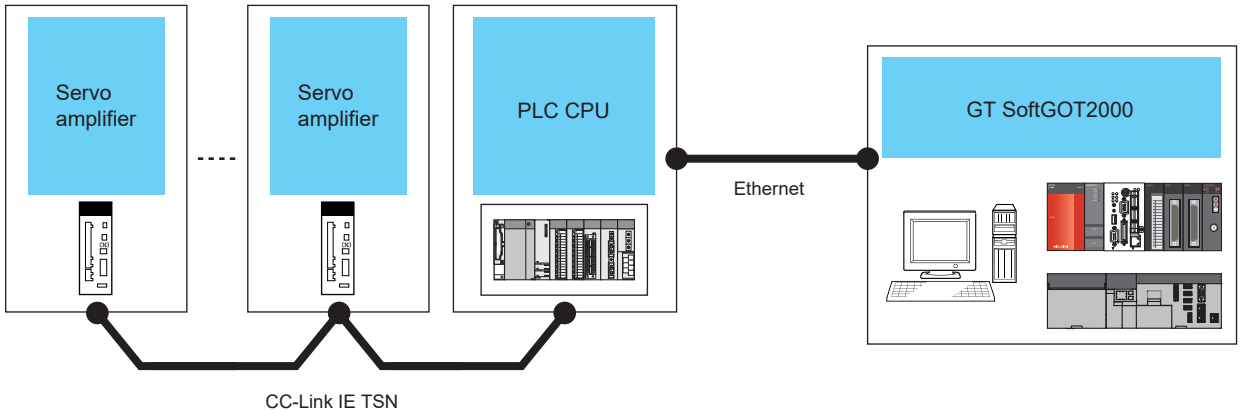
For the precautions for the servo amplifier connection, refer to the following.

☞ Page 362 Precautions

3.22 Servo Amplifier Connection (via CC-Link IE TSN-equipped Module)

Only available to GT SoftGOT2000 (Multiple channels).

System configuration



Servo amplifier		PLC			GT SoftGOT2000	Number of connectable devices
Model	Communication type	CC-Link IE TSN-equipped module	CPU model*1	Connection type		
MR-J5-□G*3 MR-J5-□G-RJ*3 MR-J5W2-□G*3 MR-J5W3-□G*3 MR-J5D1-□G4*3 MR-J5D2-□G4*3 MR-J5D3-□G4*3 MR-JET-□G*3	CC-Link IE TSN	RJ71GN11-T2*2	RnCPU RnENCPU RnSFCPU R12CCPU-V R102WCPU-W	For details on the system configuration between GT SoftGOT2000 and a PLC, refer to the following. ☞ Page 227 Ethernet Connection	Windows-compatible personal computer PC CPU module MELIPC	For details on the system configuration between GT SoftGOT2000 and a PLC, refer to the following. ☞ Page 227 Ethernet Connection
		RJ71GN11-EIP	RnCPU RnENCPU			

*1 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
- For RnCPU, RnENCPU, or RnSFCPU: [RCPU]
- For R12CCPU-V or R102WCPU-W: [RnCCPU/RnWCPU]

Set either of the following values for [Port No.] according to the communication method.
- UDP: [5006]
- TCP: [5007]

For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
- For RnCPU, RnENCPU, or RnSFCPU
  ☞ Page 239 Settings in GT Designer3
- For R12CCPU-V
  ☞ Page 270 Settings in GT Designer3
- For R102WCPU-W
  ☞ Page 273 Settings in GT Designer3

*2 Use the CC-Link IE TSN master/local module with firmware version 11 or later.

*3 Use a servo amplifier with firmware version as shown below.

Servo amplifier	Applicable firmware version
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-JET-□G	B9 or later
MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4	C0 or later

Connection cable

For details on the cable between GT SoftGOT2000 and a PLC, refer to the following.

☞ Page 227 Ethernet Connection

For details on the cable between the servo amplifier and the CC-Link IE TSN master/local module, refer to the following.

📖MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)

For details on the cable between the servo amplifier and the CC-Link IE TSN Plus master/local module, refer to the following.

📖MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual

For the details of the cable between servo amplifiers, refer to the following.

📖MELSEC iQ-R Motion Controller User's Manual

Controller setting

Setting of a controller through which GT SoftGOT2000 monitors an inverter

For details on the setting between GT SoftGOT2000 and a PLC, refer to the following.

☞ Page 227 Ethernet Connection

Precautions

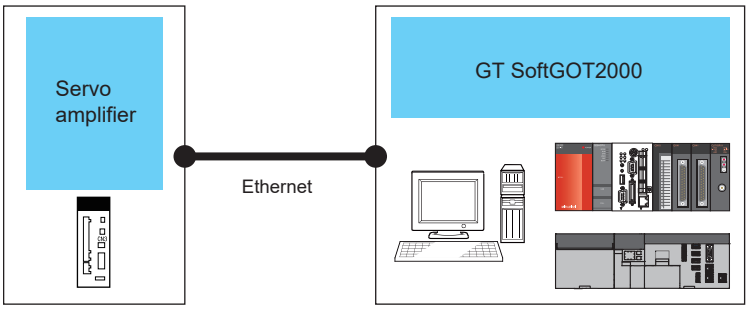
For the precautions for the servo amplifier connection, refer to the following.

☞ Page 362 Precautions

3.23 Servo Amplifier Connection (Direct Connection)

Only available to GT SoftGOT2000 (Multiple channels).

System configuration



Model	Communication type	connection cable *1	Max. distance	GT SoftGOT2000*3	Number of connectable devices per CH
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4 MR-JET-□G	Ethernet	Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher, (double-shielded, STP) straight cable.	100 m (Maximum segment length)	Windows-compatible personal computer*2 PC CPU module MELIPC	One GT SoftGOT2000 module for one servo amplifier

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T, ANSI/TIA/EIA-568-B (category 5e) standard.

*2 An Ethernet board/card is required.
☞ Page 325 Ethernet board/card

*3 When GT SoftGOT2000 and Motion Control Software SWM-G are installed on the same personal computer, GT SoftGOT2000 can monitor a servo amplifier controlled by Motion software SWM-G.
Use firmware version 1.001B or later for Motion software SWM-G.
Since GT SoftGOT2000 and Motion Control Software SWM-G have different methods of connection with a servo amplifier, the IP communication mixed function needs to be set.
For Motion Control Software SWM-G and the IP communication mixed function, refer to the following.
📖Motion Control Software SWM-G User's Manual (Startup)

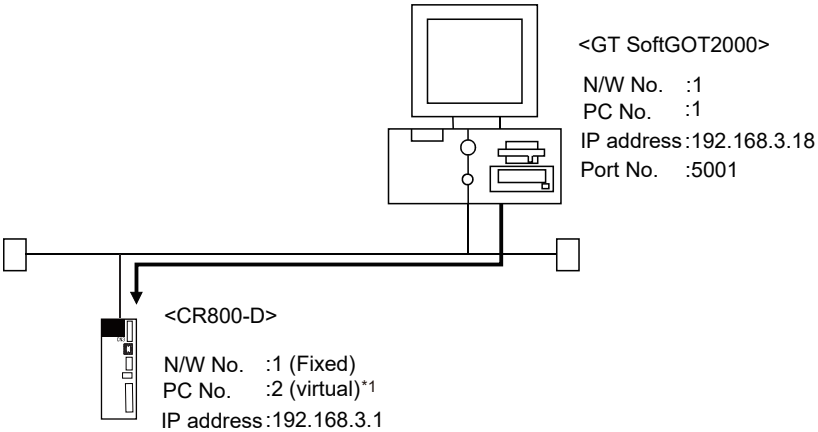
Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

Controller setting

The following shows the settings and precautions for establishing communication between GT SoftGOT2000 and MELSERVO-J5 or MELSERVO-JET.

This section describes the system configuration to monitor the host as shown below.



*1 Although the setting is nonexistent on the servo amplifier side, set a virtual value on the GOT side.

Point

Setting items

For setting the network number, station number, IP address, and port number of MELSERVO-J5, MELSERVO-JET, and GT SoftGOT2000, refer to the following.

☞ Page 373 Settings in GT Designer3

The following shows the settings for communication with MELSERVO-J5 or MELSERVO-JET.

Before setting

■Precautions for communication

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.
Use a switching hub.
Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

Compatible models

Compatible models
MR-J5-□G, MR-J5-□G-RJ, MR-J5W2-□G, MR-J5W3-□G, MR-J5D1-□G4, MR-J5D2-□G4, MR-J5D3-□G4, MR-JET-□G

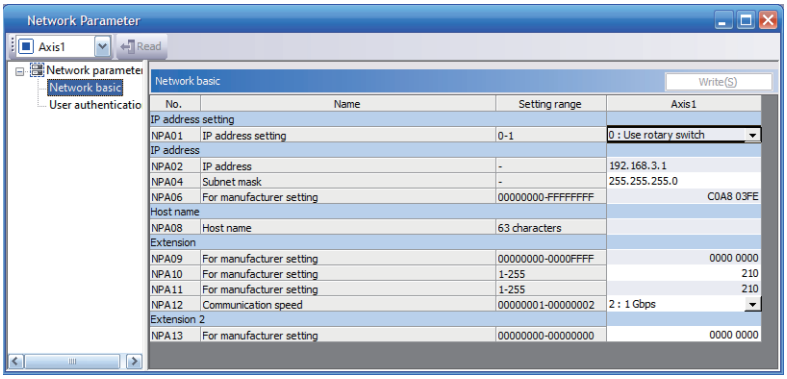
IP address setting for MELSERVO-J5, MELSERVO-JET

Set the IP address of MELSERVO-J5 or MELSERVO-JET.

Point

Servo amplifier (MELSERVO-J5, MELSERVO-JET)
For the details of the servo amplifier (MELSERVO-J5, MELSERVO-JET), refer to the following manual.
Manual of the servo amplifier used

■[Network basic] of MR Configurator2



Setting item	Description	Setting value
[NPA01]	Select whether to set the IP address by the rotary switches or parameter. The following shows the IP address when the rotary switches are used. • First octet to third octet: Values set in [NPA02] • Fourth octet: Values set by the rotary switches SW1 and SW2 When the parameter is used, the values set in [NPA02] are used as the IP address.	0: Use rotary switch 1: Use parameter
[NPA02]	Set the IP address.	192.168.3.1 (Default)
[NPA04]	Set the subnet mask.	255.255.255.0 (Default)

■IP address setting

Setting value of [NPA01]	Rotary switch (SW1, SW2)	IP address	
0 : Use rotary switch	00h	First octet	The first octet set in [NPA02] is used.
		Second octet	The second octet set in [NPA02] is used.
		Third octet	The third octet set in [NPA02] is used.
		Fourth octet	The fourth octet set in [NPA02] is used.
	01h to FEh	First octet	The first octet set in [NPA02] is used.
		Second octet	The second octet set in [NPA02] is used.
		Third octet	The third octet set in [NPA02] is used.
		Fourth octet	The setting values of the rotary switches (SW1 and SW2) are used.
	FFh	First octet	Not applicable
		Second octet	
		Third octet	
		Fourth octet	
1 : Use parameter	—	First octet	The first octet set in [NPA02] is used.
		Second octet	The second octet set in [NPA02] is used.
		Third octet	The third octet set in [NPA02] is used.
		Fourth octet	The fourth octet set in [NPA02] is used.

Setting on personal computer

Set the IP address.

Communication check

■Ping test

When the CNC C70 is ready for communications, execute the Ping command with the command prompt of Windows.

When the Ping test is verified

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192.168.3.1

Request timed out.

When the Ping test is not verified, check the connections of the cable and unit, and settings, including the IP address, for Windows.

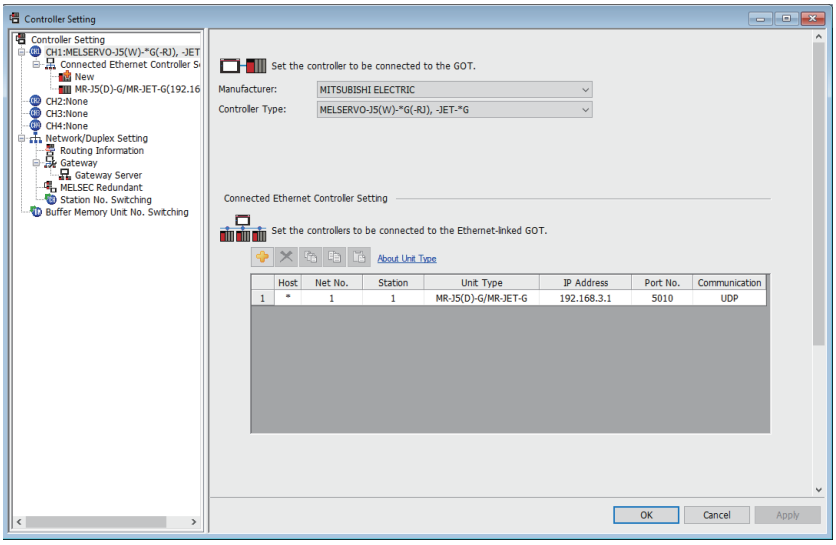
■Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.] *1	Set the network number for the target servo amplifier.	[1]
[Station] *1	Set the station number of the target servo amplifier.	[1] to [254]
[Unit Type]	Select the type of the target servo amplifier.	[MR-J5(D)-G/MR-JET-G]
[IP Address]	Set the IP address of the target servo amplifier.	[0.0.0.1] to [255.255.255.254] *2
[Port No.]	Set the port number of the target servo amplifier.	[5010]
[Communication]	Select a communication method.	[UDP]

*1 [Net No.] and [Station] should match [Network No.] and [Station No.] set for the monitoring target device.

*2 Since [0.0.0.0] and [255.255.255.255] cannot be set in the servo amplifier, set the IP address within the range of [0.0.0.1] to [255.255.255.254].
When [0.0.0.0] or [255.255.255.255] is set, a communication error occurs.

Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Precautions

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

For the precautions for the servo amplifier connection, refer to the following.

☞ Page 362 Precautions

3.24 Connecting with GX Simulator3

System configuration

Install GX Works3 in the personal computer beforehand.

When global labels are set, use GX Works3 version 1.040S or later.

For details, refer to the following.

📖GX Works3 Operating Manual

Operating procedure

The following shows the procedure for connecting GT SoftGOT2000 with GX Simulator3.

1. Start GX Works3.

📖GX Works3 Operating Manual

2. Start GX Simulator3.

GX Simulator3 does not start automatically when GT SoftGOT2000 monitors project data.

Start GX Simulator3 from GX Works3 in advance.

📖GX Works3 Operating Manual

3. Start GT SoftGOT2000.

☞ Page 52 Start GT SoftGOT2000

4. Set [Communication Setup] on GT SoftGOT2000.

☞ Page 75 [Communication Setup] dialog

5. Open the project data to be monitored.

☞ Page 103 Opening the Project

6. Monitor the project data with GT SoftGOT2000.

☞ Page 107 Monitoring

7. Exit GT SoftGOT2000.

☞ Page 60 Exiting from GT SoftGOT2000

Setting of GT SoftGOT2000

To establish communication between GT SoftGOT2000 and GX Simulator3, configure the communication setup.

For the communication setting of GT SoftGOT2000, refer to the following.

☞ Page 97 [GX Simulator3]

3.25 Connecting with GX Simulator2, MT Simulator2

System configuration

Install GX Works2 or MT Simulator2 in the personal computer beforehand.

For details, refer to the following.

📖GX Works2 Version□ Operating Manual

Operating procedure

The following shows the procedure for connecting GT SoftGOT2000 with GX Simulator2.

1. Start GX Works2.

📖GX Works2 Version□ Operating Manual (Common)

2. Start GX Simulator2.

GX Simulator2 does not start automatically when GT SoftGOT2000 monitors project data.

Start GX Simulator2 from GX Works2 in advance.

📖GX Works2 Version□ Operating Manual (Common)

3. Start GT SoftGOT2000.

☞Page 52 Start GT SoftGOT2000

4. Set [Communication Setup] on GT SoftGOT2000.

☞Page 75 [Communication Setup] dialog

5. Open the project data to be monitored.

☞Page 103 Opening the Project

6. Monitor the project data with GT SoftGOT2000.

☞Page 107 Monitoring

7. Exit GT SoftGOT2000.

☞Page 60 Exiting from GT SoftGOT2000

Setting of GT SoftGOT2000

Configure the communication setting for the communication between GT SoftGOT2000 and GX Simulator2.

For the communication setting of GT SoftGOT2000, refer to the following.

☞Page 95 [GX Simulator2]

☞Page 96 [GX Simulator2/MT Simulator2]

3.26 Connecting with GX Simulator

System configuration

Install GX Simulator in the personal computer beforehand.

For details, refer to the following.

📖GX Simulator Version□ Operating Manual

Operating procedure

The following shows the procedure for connecting GT SoftGOT2000 with GX Simulator.

1. Start GX Simulator when using GX Developer.

If GX Developer is not used, GX Simulator is started automatically when GT SoftGOT2000 monitors data.

📖GX Simulator Version□ Operating Manual

2. Start GT SoftGOT2000.

☞ Page 52 Start GT SoftGOT2000

3. Set [Communication Setup] on GT SoftGOT2000.

☞ Page 75 [Communication Setup] dialog

4. Open the project data to be monitored.

☞ Page 103 Opening the Project

5. Monitor the project data with GT SoftGOT2000.

☞ Page 107 Monitoring

6. Exit GT SoftGOT2000.

☞ Page 60 Exiting from GT SoftGOT2000

Setting of GT SoftGOT2000

Configure the communication setting for the communication between GT SoftGOT2000 and GX Simulator.

For the communication setting of GT SoftGOT2000, refer to the following.

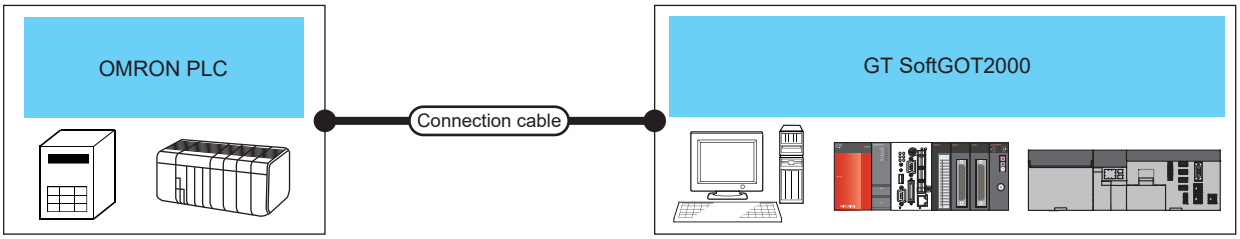
☞ Page 94 [GX Simulator]

3.27 Non-Mitsubishi Electric PLC connection

OMRON PLC

Serial connection

■System configurations and connection conditions



PLC			Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name	Communication module	Communication type				
SYSMAC CQM1H	(Built-in serial port) *1	RS-232	RS-232 1) RS-232 2)	15m	Windows-compatible personal computer PC CPU module MELIPC*2	1
SYSMAC CJ1						
SYSMAC CJ2						
SYSMAC CP1						
SYSMAC α						
SYSMAC CS1						
SYSMAC CP2						
SYSMAC CVM1/CV						
CQM1						
CPM2A						

*1 For the applicable CPUs, refer to the following.
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

*2 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.

■Connection cable

• MITSUBISHI SYSTEM & SERVICE product

RS-232 1)

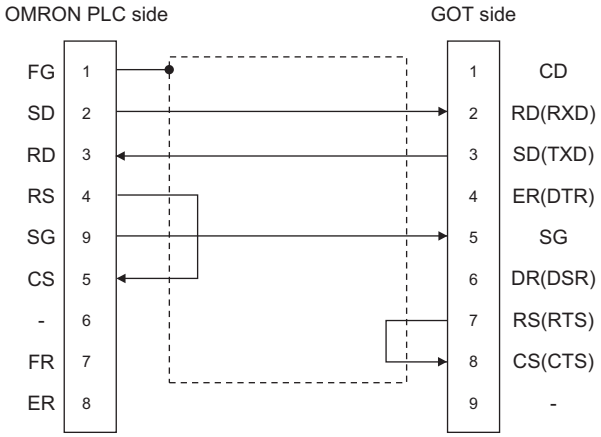
RS-232 cable
GT09-C30R20101-9P(3m) (For the 9-pin D-sub connector of the PC side)

• Using an RS-232 cable prepared by user

The following describes the connection diagram, connector and others for each cable.

Connection diagram

RS-232 2)



Connector specifications

1) PC side connector

Use the connector compatible with the PC side.

2) Omron PLC CPU side connector

Use the connector compatible with Omron PLC CPU side.

For details, refer to the following manual.

📖User's Manual for Omron PLC CPU

Precautions for creating cables

The length of the cable must be 15m or less.

■GT SoftGOT2000 setting

When communicating GT SoftGOT2000 to an OMRON PLC, communication setup is required.

Item *2	Setting
Transmission speed *1	9600/19200/38400/57600/115200bps
Data length	7bits
Stop bit	2bits
Parity	Even
Communication condition format	Individual
Host link station No.	00

*1 Transmission speed supported by the PLC must be set.

*2 The settings on the PLC and GT SoftGOT2000 must be the same.

For the communication setting of GT SoftGOT2000, refer to the following.

☞ Page 76 [RS232]

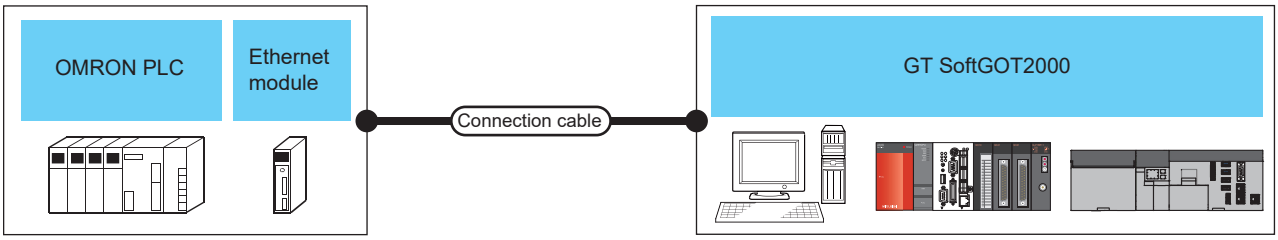
■Controller setting

For the OMRON PLC side setting, refer to the following manual.

📖 GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Controller	Ethernet module	Communication type					
SYSMAC CJ1	CJ1W-ETN21 CJ1W-EIP21	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*4 PC CPU module MELIPC	UDP: Unlimited TCP: 16	UDP: 128 TCP: 128
SYSMAC CJ2*2							
SYSMAC CS1	CS1W-ETN21, CS1W-EIP21, CS1D-ETN21D *3						
SYSMAC CP2 CP2E-N	-						
NJ*5	(Built-in Ethernet port)					UDP: Not supported TCP: 128*6	UDP: Not supported TCP: 128*6
	CJ1W-EIP21						
NX*5	(Built-in Ethernet port)						

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 The CJ2H-CPU6□-EIP or CJ2M-CPU3□ can be connected by using its Ethernet port or an Ethernet module.

*3 Available only when CS1D is used.

*4 An Ethernet board/card is required.
☞ Page 381 Ethernet module and Ethernet board/card

*5 Only available to GT SoftGOT2000 (Multiple channels).

*6 The numbers of connectable devices depend on the connection target and type.

Controller		Ethernet module	Connection	Number of connectable devices
NJ series		Built-in Ethernet port	Class3	32 or less
			UCMM	
		Ethernet module	Class3	128 or less
			UCMM	32 or less
NX series	NX1P2	Built-in Ethernet port	Class3	32 or less
			UCMM	
	NX701	Built-in Ethernet port	Class3	128 or less per port (256 or less for 2 ports)
			UCMM	32 or less per port (64 or less for 2 ports)
	NX102	Built-in Ethernet port	Class3	32 or less per port (64 or less for 2 ports)
			UCMM	

■Ethernet module and Ethernet board/card

The following shows connectable Ethernet modules and Ethernet boards/cards.

• Ethernet module

Item	Model name
CS1H, CS1G	CS1W-ETN21, CS1W-EIP21
CS1D	CS1W-ETN21, CS1W-EIP21, CS1D-ETN21D
CJ1H, CJ1M, CJ1G, CJ2H(-EIP), CJ2M	CJ1W-ETN21, CJ1W-EIP21
NJ501, NJ301, NJ101	CJ1W-EIP21

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.

☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for Ethernet connection

• OMRON PLC

For details of OMRON PLCs, refer to the following manual.

📖User's manual for OMRON PLC CPU

• Precautions for Ethernet connection

Specify the Net No. and the PLC No. of the OMRON PLC connected to the GOT via the Ethernet connection.

The specified Net No. and the PLC No. must be the same as those set on GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 383 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of programmable controller, refer to the following manual.

📖 GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

• Station monitoring function

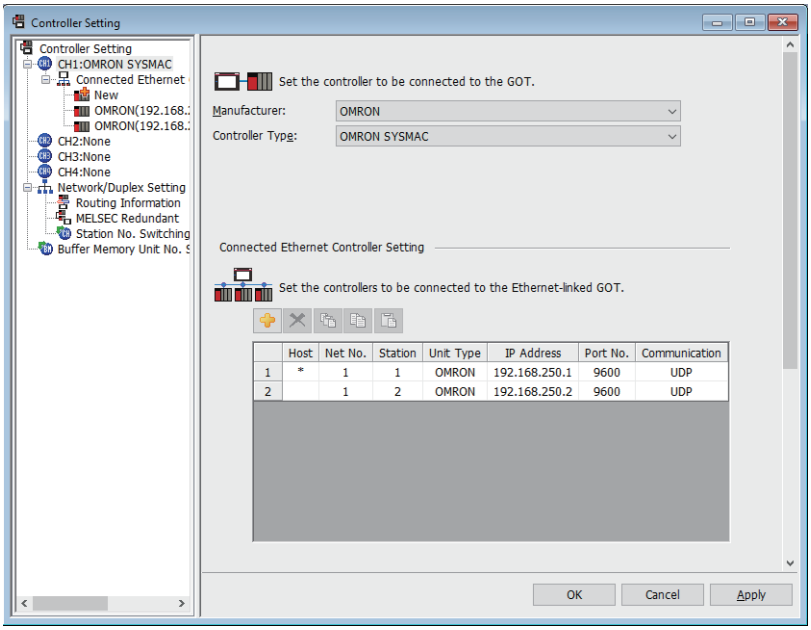
For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

■Settings in GT Designer3

• [Controller Type]: [OMRON SYSMAC]

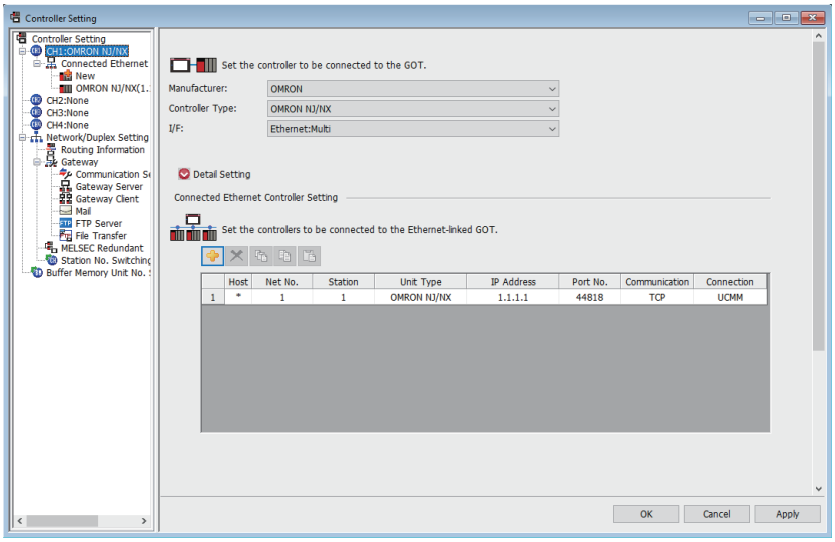
Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [127]
[Station]	Set the station number of the target Ethernet module.	[1] to [254]
[Unit Type]	Select [OMRON].	[OMRON]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[256] to [65534]
[Communication]	Select a communication method.	[UDP], [TCP]

• [Controller Type]: [OMRON NJ/NX]

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Set the unit type according to the destination of connection from GT SoftGOT2000. • When connecting to a built-in Ethernet port: [OMRON NJ/NX] • When connecting to a communication unit: [CJ1W-EIP21]*1	[OMRON NJ/NX], [CJ1W-EIP21]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side*2
[Port No.]	Set the port number of the target Ethernet module.	[44818]
[Communication]	Select a communication method.	[TCP]
[Connection]	Set a connection.	[UCMM], [Class3]

*1 [CJ1W-EIP21] is not available for NX series.

*2 NX701 and NX102 have two built-in EtherNet/IP ports.
Set [IP Address] in [Connected Ethernet Controller Setting] in GT Designer3, according to the port number set for NX701 or NX102 to be connected.

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Precautions

■Precautions for Ethernet connection

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

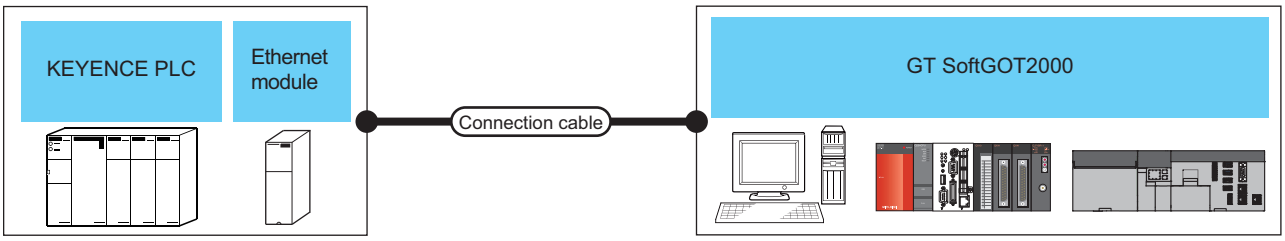
■Simultaneous use of other connections

The RFID connection cannot be used simultaneously.

KEYENCE PLC

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Ethernet module	Communication type					
KV-700 KV-1000 KV-3000 KV-5000 KV-5500 KV-7300 KV-7500 KV-8000	KV-LE20V KV-LE21V	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*2 PC CPU module MELIPC	UDP: 1 TCP: 15	UDP: 128 TCP: 128
KV-7300 KV-7500 KV-8000	KV-EP21V KV-XLE02						

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 An Ethernet board/card is required.

☞ Page 385 Ethernet module and Ethernet board/card

■Ethernet module and Ethernet board/card

The following shows connectable Ethernet modules and Ethernet boards/cards.

• Ethernet module

Item	Model name
Ethernet module	KV-LE20V, KV-LE21V

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.

☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.
· Use a switching hub.
· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
· Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for setting items
• KEYENCE PLC
For details on KEYENCE PLC, refer to the following manual.
📖User's manual for KEYENCE PLC CPU
• Precautions for Ethernet connection
The Net No. and PLC No. are specified when connecting to the KEYENCE PLC via the Ethernet. In such cases, set the Net No. and PLC No. arbitrarily on GT Designer3.
For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.
☞ Page 387 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of the programmable controller, refer to the following manual.
📖 GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

■Setting on the personal computer

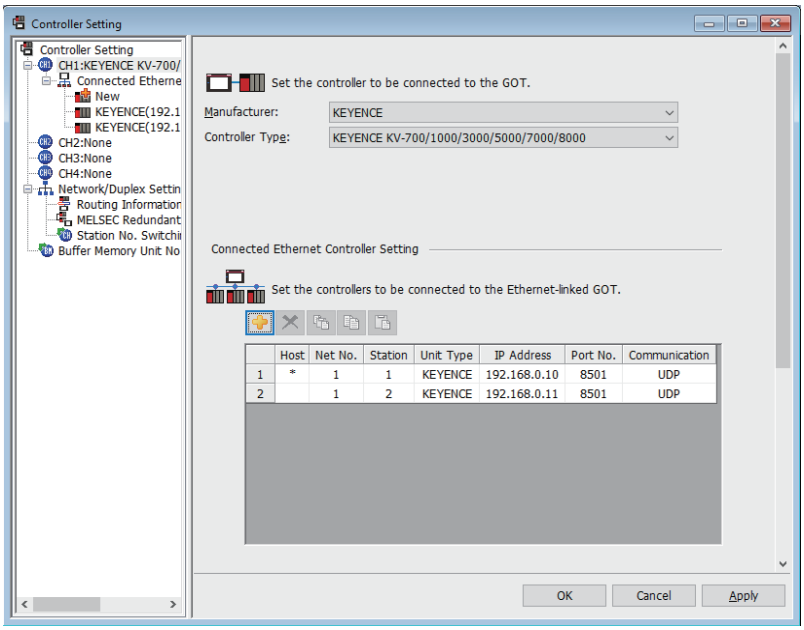
Set the IP address.

■Communications check

• Ping test
Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.
When the Ping test is verified
C:\>Ping 192. 168. 0. 2
Reply from 192.168.0.2:bytes=32 time<1ms TTL=32
When the Ping test is not verified
C:\>Ping 192. 168. 0. 2
Request timed out.
If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.
• Station monitoring function
For details on the station monitoring function, refer to the following manual.
📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

■Settings in GT Designer3

Up to 64 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module	[1] to [254]
[Unit Type]	Select [KEYENCE].	[KEYENCE]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[1024] to [5010], [5014] to [49152], [49154] to [65534]
[Communication]	Select a communication method.	[UDP], [TCP]

■Setting on GT SoftGOT2000

Set the communication setting in the [Communication Setup] dialog of GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

■Precautions

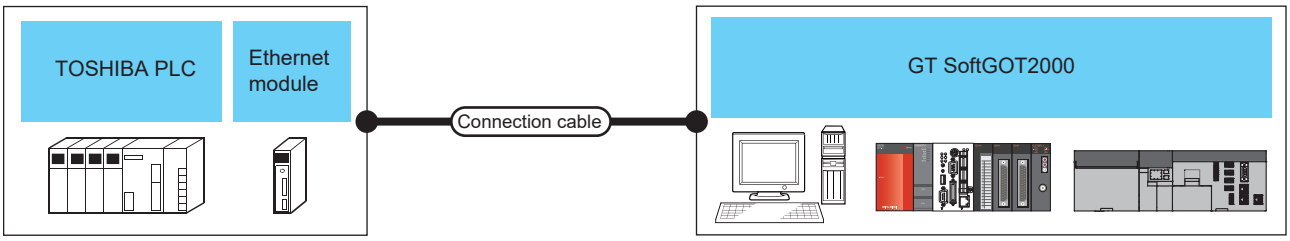
For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

TOSHIBA PLC

Ethernet connection

■System configurations and connection conditions



PLC					Connection cable *1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name			Ethernet module	Communication type					
Unified Controller nv series	Controller type1	PU811	EN811	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*3 PC CPU module MELIPC	Unlimited	32
	Controller type1 light*2	PUM11	(Built-in Ethernet)						
		PUM12							
		PUM14							

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 Use a CPU with firmware version V01.90 or later. Use nV-Tool V4.14.5 or later.

*3 An Ethernet board/card is required.
☞ Page 388 Ethernet module and Ethernet board/card

■Ethernet module and Ethernet board/card

The following shows connectable Ethernet modules and Ethernet boards/cards.

• Ethernet module

Item	Model name
Unified Controller nv series	EN811

• Ethernet moduleEthernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.
☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.
· Use a switching hub.
· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
· Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for Ethernet connection

• TOSHIBA PLC

For the details of TOSHIBA PLCs, refer to the following manual.

📖User's manual for TOSHIBA PLC

• Precautions for Ethernet connection

Specify the Net No. and station number of the TOSHIBA PLC connected to the GOT by the Ethernet connection.

The specified Net No. and station number must be the same as those set on GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 390 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of programmable controller, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

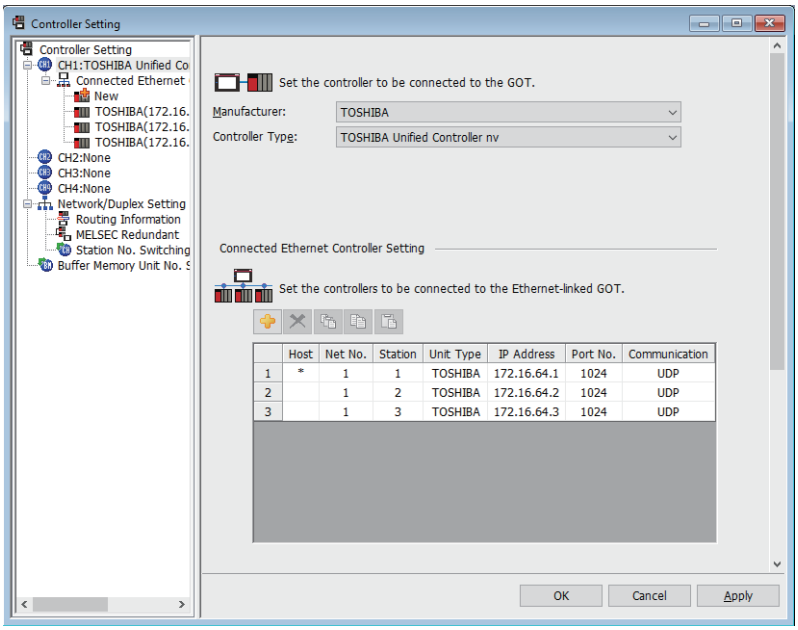
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[N/W No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [254]
[Unit Type]	Select [TOSHIBA].	[TOSHIBA]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[1024] to [65534]
[Communication]	Select a communication method.	[UDP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Precautions

■Precautions for Ethernet connection

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

■Channels available in GT SoftGOT2000 (Multiple channels)

Up to 2 of channels 1 to 4 are available for connecting TOSHIBA PLCs.

■Simultaneous use of other connections

The following connections cannot be used simultaneously.

Microcomputer connection (serial)

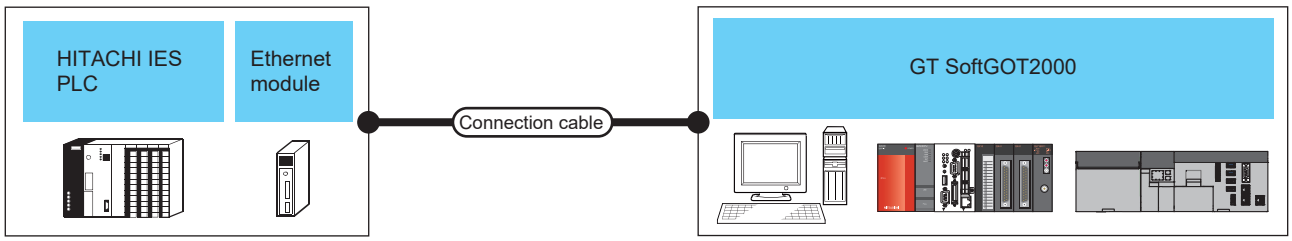
Barcode reader connection

RFID connection

HITACHI IES PLC

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable*2	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Ethernet module*1	Communication type					
EHV-CPU08 EHV-CPU16 EHV-CPU32 EHV-CPU64 EHV-CPU128	(Built-in Ethernet)	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*4 PC CPU module MELIPC	4	128
	EH-ETH EH-ETH2 EH-ELK EH-ORML EH-R2LH EH-OR2LH					36*3	
MVH-A40□□□ MVH-D40□□□ MVH-A64□□□ MVH-D64□□□	(Built-in Ethernet)					4	

*1 This PLC is manufactured by HITACHI IES. For the products, contact HITACHI IES.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*3 The number of connectable personal computers includes the number of total GT SoftGOT2000 modules started in a personal computer.

*4 An Ethernet board/card is required.
☞ Page 391 Ethernet module and Ethernet board/card

■Ethernet module and Ethernet board/card

The following shows connectable Ethernet modules and Ethernet boards/cards.

• Ethernet module

Item	Model name
Unified Controller nv series	EH-ETH EH-ETH2 EH-ELK EH-ORML EH-R2LH EH-OR2LH

• Ethernet moduleEthernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.

☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

· Use a switching hub.

· Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

· Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for Ethernet connection

• HITACHI IES PLC

For details on the HITACHI IES PLC, refer to the following manual.

Manual of the HITACHI IES PLC

• Precautions for Ethernet connection

Specify the network number and station number of the HITACHI IES PLC connected by the Ethernet connection. The network number and station number must be the same as those set in GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 393 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of programmable controller, refer to the following manual.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

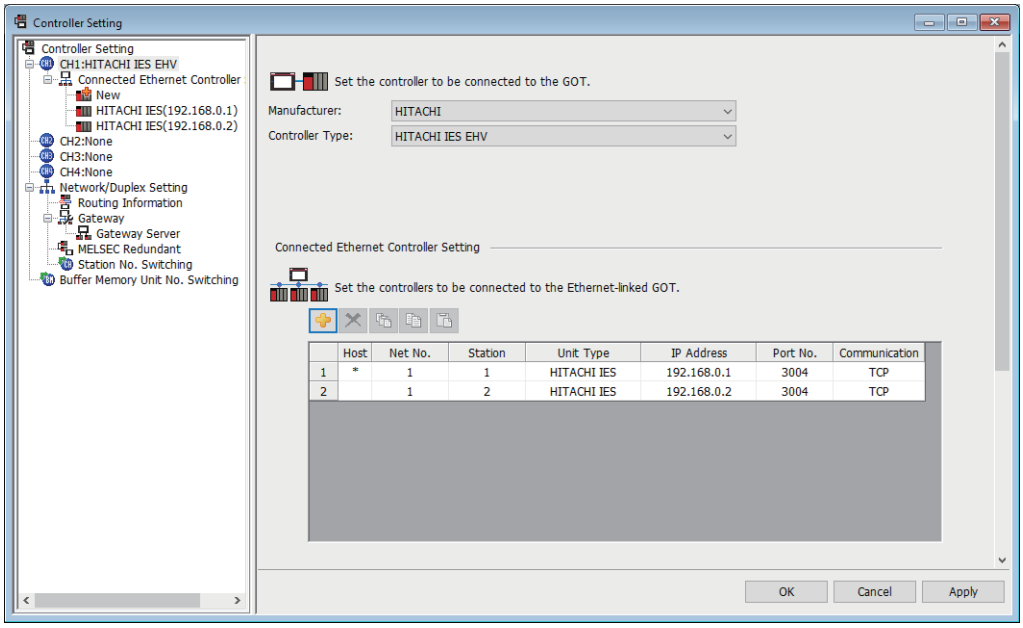
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[N/W No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [254]
[Unit Type]	Select [HITACHI IES].	[HITACHI IES]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[1024] to [65534]
[Communication]	Select a communication method.	[UDP], [TCP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

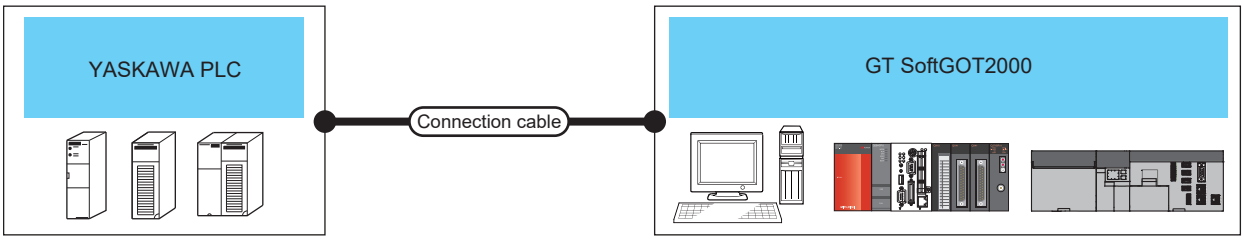
For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

YASKAWA PLC

Serial connection

■System configurations and connection conditions



PLC				Connection cable	Max. distance	GT SoftGOT2000	Number of connectable devices
Model name		MODBUS module Communication module	Communication type				
GL60S, GL60H, GL70H		JAMSC-IF60, JAMSC-IF61	RS-232	RS-232 1) RS-232 3)	15m	Windows-compatible personal computer PC CPU module MELIPC*3	1
GL120, GL130		(Built-in serial port) *1		RS-232 1) RS-232 3)			
CP-9300MS (CP-9300M compatible/non-compatible)		(Built-in serial port) *1		RS-232 2) RS-232 5)			
CP-9200(H)		(Built-in serial port) *1		RS-232 1) RS-232 3)			
PROGIC-8	For connecting to port 1	(Built-in serial port) *1		RS-232 1) RS-232 3)			
	For connecting to port 2	(Built-in serial port) *1		RS-232 4)			
MP-920		(Built-in serial port) *1		RS-232 1) RS-232 3)			
		217IF		RS-232 1) RS-232 3)			
MP-930		(Built-in serial port) *1		RS-232 1) RS-232 3)			
MP-940		(Built-in serial port) *1		RS-232 6)			
CP-9200SH, CP-317		CP-217IF	For connecting to CN1	RS-232 1) RS-232 3)			
			For connecting to CN2	RS-232 7)			
MP2200, MP2300, MP2300S		217IF-01, 218IF-01, 218IF-02 *2*4		RS-232 1) RS-232 3)			

*1 For the applicable CPUs, refer to the following.
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

*2 The maximum transmission speed of 218IF-02 is 115200bps.
However, the maximum transmission speed selectable from the GOT is 57600bps.

*3 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.

*4 To connect an MP2200, MP2300, or MP2300S via RS-232, make sure that the software version of the CPU is 2.60 or later.

■MEMOBUS modules and communication module

The following table shows connectable MEMOBUS Modules and Communication module.

Connection via RS-422 communication cannot be used.

Item		Model name
GL-60S, GL-60H, GL-70H		JAMSC-IF60, JAMSC-IF61
MP920/NSC40		217IF
CP-9200SH, CP-317		CP-217IF
MP2000	JEPMC-MP2200	217IF-01, 218IF-01, 218-IF02
	JEPMC-MP2300	217IF-01, 218IF-01, 218-IF02
	JEPMC-MP2300S	217IF-01, 218IF-01, 218-IF02

■Connection cable

• MITSUBISHI SYSTEM & SERVICE product

RS-232 1)

RS-232 cable
GT09-C30R20201-9P (3m) (For the 9-pin D-sub connector of the personal computer side)

RS-232 2)

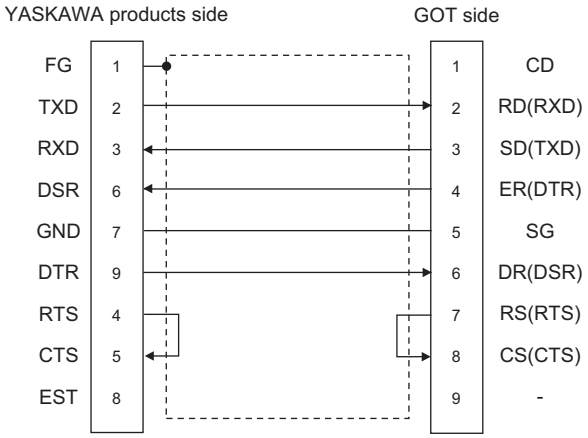
RS-232 cable
GT09-C30R20203-9P (3m) (For the 9-pin D-sub connector of the personal computer side)

• Using an RS-232 cable prepared by user

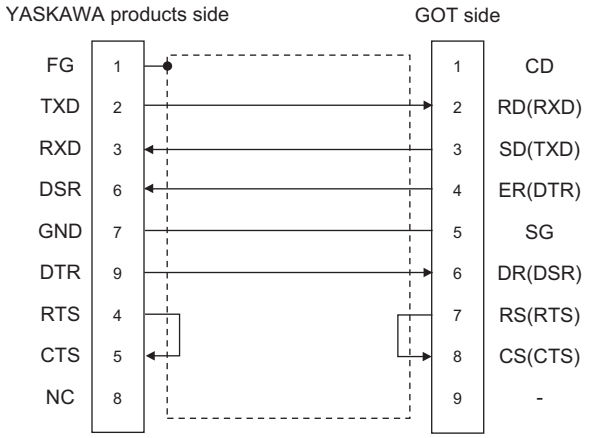
The following describes the connection diagram, connector and others for each cable.

Connection diagram

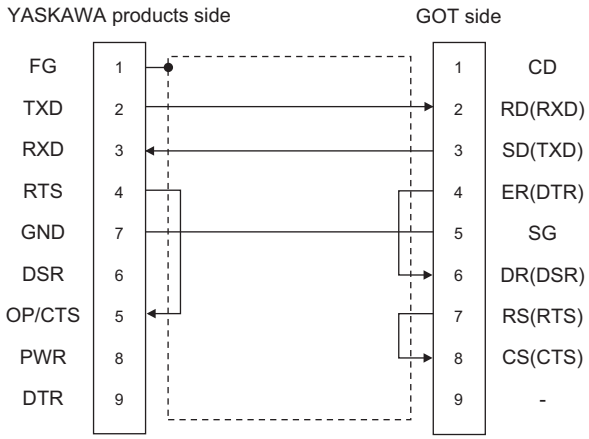
RS-232 3)



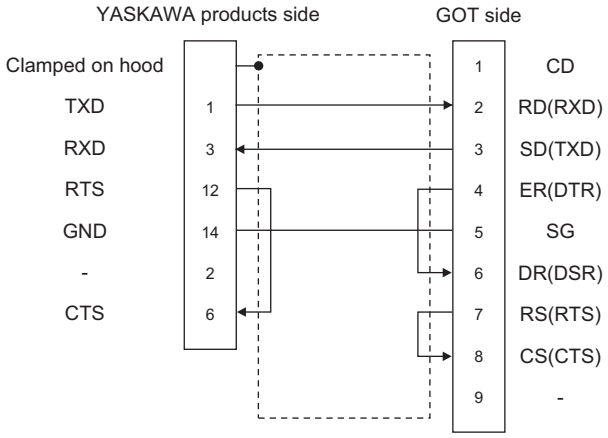
RS-232 4)



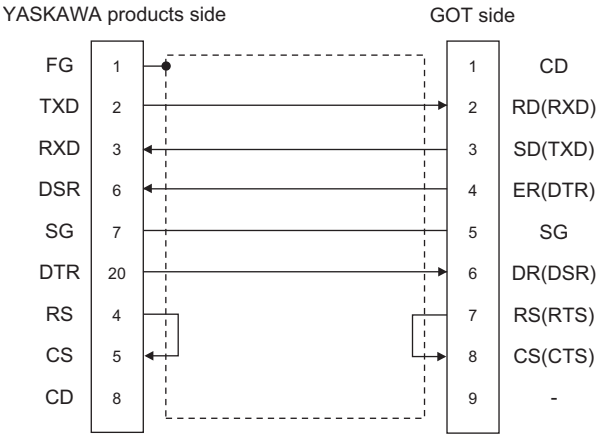
RS-232 5)



RS-232 6)



RS-232 7)



Connector specification

1) Personal computer side connecter

Use the connector compatible with the personal computer side.

2) YASKAWA PLC CPU side connector

Use the connector compatible with YASKAWA PLC CPU side.

For details, refer to the following manual.

User's manual for YASKAWA PLC CPU

Precautions for creating cables

The length of the cable must be 15m or less.

■GT SoftGOT2000 setting

When communicating GT SoftGOT2000 to a YASKAWA PLC, communication setup is required.

Item *2	Setting
Comm. port	COM1 to COM6
Baud Rate *1	9600/19200/38400/57600bps
Host Add.	1 to 31
Wait Time	0 to 300ms

*1 The baud rate supported by the programmable controller must be set.

*2 The settings on the programmable controller and GT SoftGOT2000 must be the same.

Refer to the following for performing GT SoftGOT2000 communication setup.

☞ Page 76 [RS232]

■Controller setting

For the programmable controller side setting, refer to the following manual.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

Point

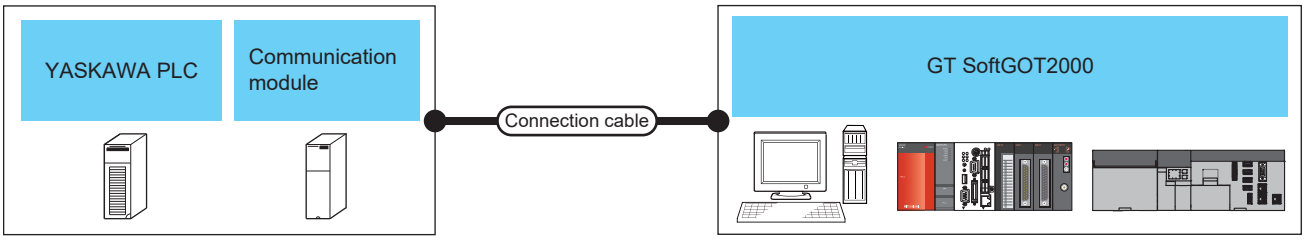
Send delay time

Set the transmission wait time as shown below when connecting to the programmable controller of CP-9200(H) or CP-9300MS.

Model name		Send delay time
CP-9200(H)		30ms or more
CP-9300MS	For connecting to port 0	10ms or more
	For connecting to port 1	30ms or more

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Communication module	Communication type					
MP920	218IF	Ethernet (Controller type: YASKAWA MP2000/ MP900/CP9200SH)	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*3 PC CPU module MELIPC	10	UDP: 128 TCP: 10
MP2200, MP2300, MP2300S	218IF-01, 218IF-02*2						
CP-317	218TXB						
MP3200, MP3300	(Built-in Ethernet)	Ethernet (Controller type: YASKAWA MP3000)					

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 To connect an MP2200, MP2300, or MP2300S via Ethernet, make sure that the software version of the CPU is 2.60 or later.

*3 An Ethernet board/card is required.

☞ Page 398 Communication module, Ethernet board/card

■Communication module, Ethernet board/card

The following table shows connectable communication modules and Ethernet board/card.

• Communication module

Item	Model name
For MP920	218IF
For MP2200, MP2300, MP2300S	218IF-01, 218IF-02
For CP-317	218TXB

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.

☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for Ethernet connection

• YASKAWA PLC

For details on YASKAWA PLC, refer to the following manual.

📖User's manual for YASKAWA PLC CPU

• Precautions for Ethernet connection

The Net No. and PLC No. are specified when connecting to the YASKAWA PLC via the Ethernet connection.

In such cases, set the Net No. and PLC No. arbitrarily on GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 400 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of programmable controller, refer to the following manual.

📖 GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

• Station monitoring function

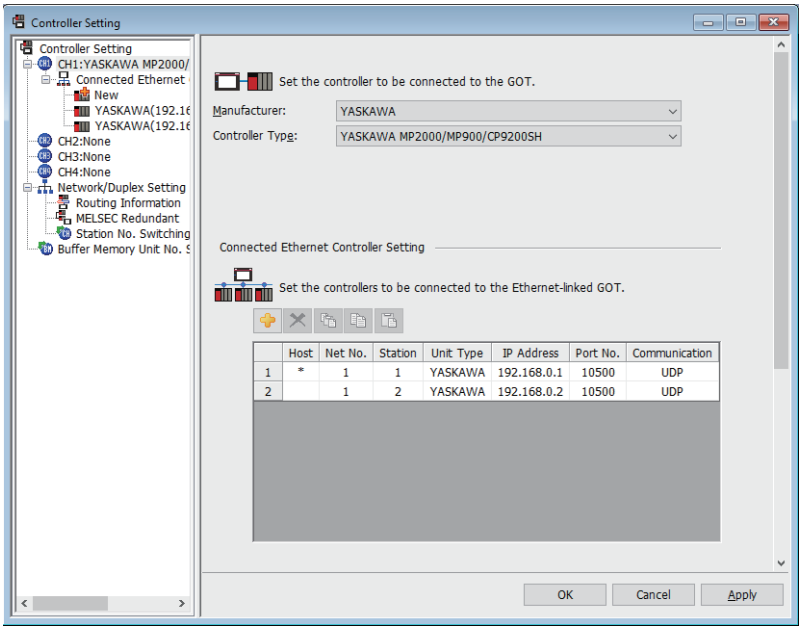
For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Settings in GT Designer3

• [Controller Type]: [YASKAWA MP2000/MP900/CP9200SH]

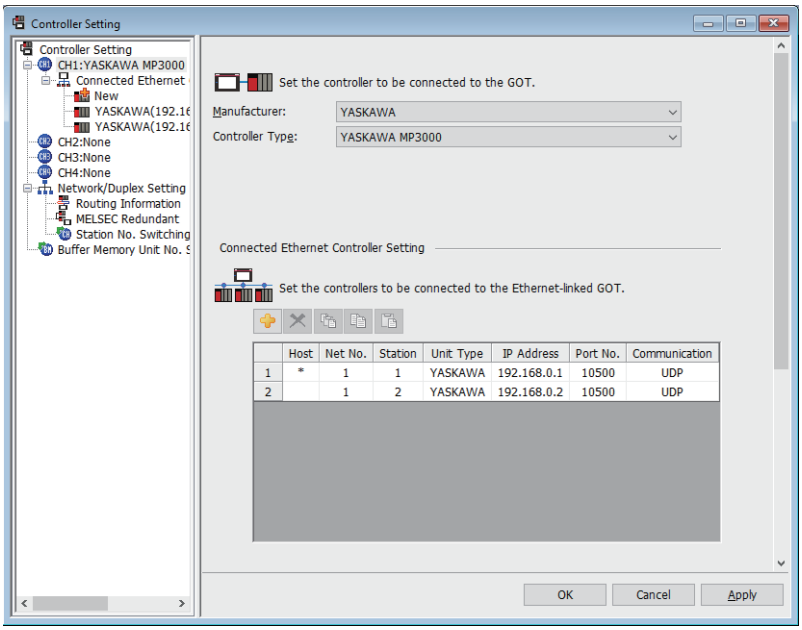
Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select [YASKAWA].	[YASKAWA]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[256] to [65534]
[Communication]	Select a communication method.	[UDP], [TCP]

• [Controller Type]: [YASKAWA MP3000]

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [64]
[Unit Type]	Select [YASKAWA].	[YASKAWA]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[256] to [65534]
[Communication]	Select a communication method.	[UDP], [TCP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

Precautions

■Precautions for Ethernet connection

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

■Simultaneous use of other connections

The following connections cannot be used simultaneously.

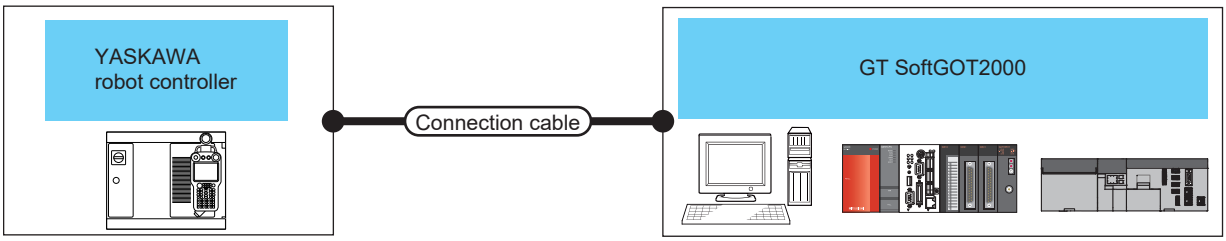
Barcode reader connection

RFID connection

YASKAWA robot controller

Ethernet connection

■System configurations and connection conditions



Robot controller		Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of robot controllers connectable to GT SoftGOT2000
Model name	Communication type					
YRC1000*3 YRC1000micro	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*2 PC CPU module MELIPC	1	1

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 An Ethernet board/card is required.
☞ Page 402 Ethernet board/card

*3 Connect GT SoftGOT2000 to a LAN connector which can be used for the Ethernet function of YRC1000.
Do not connect GT SoftGOT2000 to a LAN connector dedicated to the programming pendant.
For the details, refer to the manual of the YASKAWA robot controller.

■Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.
☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and robot controller.
The following countermeasures may improve the communication performance.
Use a switching hub.
Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for setting items

• YASKAWA robot controller

For the details on YASKAWA robot controller, refer to the following manual.

📖User's manual for YASKAWA robot controller

• Precautions for Ethernet connection

Specify the Net No. and station number of the YASKAWA robot controller connected to the GOT by the Ethernet connection.

The specified Net No. and station number must be the same as those set on GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 404 Settings in GT Designer3

■Robot controller settings

For the settings of the robot controller, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

• Station monitoring function

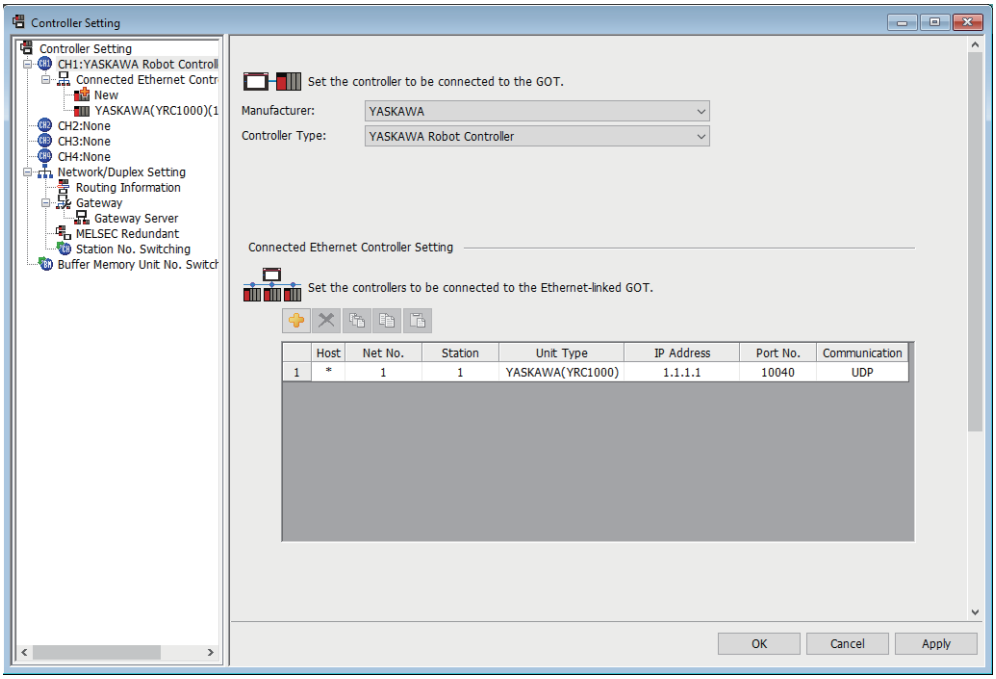
For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

■Settings in GT Designer3

[Controller Type]: [YASKAWA Robot Controller]

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1]
[Station]	Set the station number of the target Ethernet module.	[1] to [120]
[Unit Type]	Select [YASKAWA(YRC1000)].	[YASKAWA(YRC1000)]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of the robot controller
[Port No.]	Set the port number of the target Ethernet module.	[10040]
[Communication]	Select a communication method.	[UDP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

■Precautions

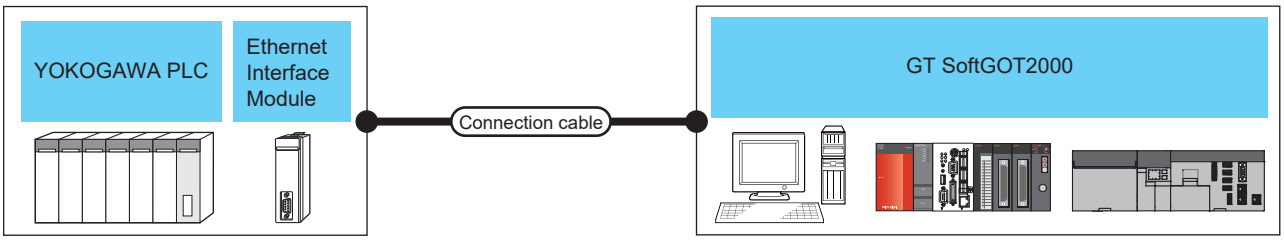
For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

YOKOGAWA PLC

Ethernet connection

■System configurations and connection conditions



PLC*2			Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Ethernet Interface Module	Communication type					
FA-M3	(Sequence CPU module with built-in network functions)*3 F3LE01-5T, F3LE11-0T, F3LE12-0T	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*4 PC CPU module MELIPC	UDP: 128 TCP: 8	UDP: 128 TCP: 10

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 The multiple CPU system can be configured via an Ethernet Interface Module. For the details of the multiple CPU system, refer to the following manual.
Manual of YOKOGAWA PLC

*3 For the applicable CPUs, refer to the following.
Page 405 Ethernet Interface Module and Ethernet board/card

*4 An Ethernet board/card is required.
Page 405 Ethernet Interface Module and Ethernet board/card

■Ethernet Interface Module and Ethernet board/card

The following table shows connectable Ethernet Interface Modules and Ethernet boards/cards.

• Ethernet Interface Module

Item	Model name
For FA-M3	F3LE01-5T, F3LE11-0T, F3LE12-0T
Sequence CPU module with built-in network functions	F3SP66, F3SP67, F3SP71-4N, F3SP71-4S, F3SP76-7S

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.
Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.
Use a switching hub.
Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for setting items

• YOKOGAWA PLC

For details on YOKOGAWA PLC, refer to the following manual.

📖User's manual for YOKOGAWA PLC CPU

• Precautions for Ethernet connection

The Net No. and PLC No. are specified when connecting to the YOKOGAWA PLC via the Ethernet.
In such cases, set the Net No. and PLC No. arbitrarily on GT Designer3.
For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 407 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of the programmable controller, refer to the following manual.

📖 GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.
When the Ping test is verified
C:\>Ping 192. 168. 0. 2
Reply from 192.168.0.2:bytes=32 time<1ms TTL=32
When the Ping test is not verified
C:\>Ping 192. 168. 0. 2
Request timed out.
If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

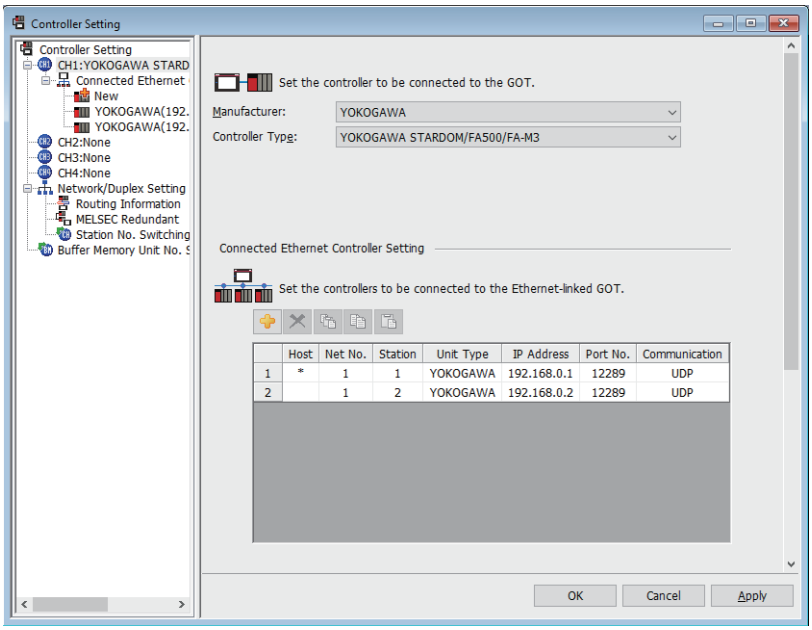
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module	[1] to [64]
[Unit Type]	Select [YOKOGAWA].	[YOKOGAWA]
[IP Address] *1	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.] *2	Set the port number of the target Ethernet module.	[12289], [12291]
[Communication] *1	Select a communication method.	[UDP], [TCP]

*1 Set the IP address and the communication method set for the PLC.

*2 Set the port number of the higher-level link service used for the PLC.

■Setting on GT SoftGOT2000

Set the communication setting in the [Communication Setup] dialog of GT SoftGOT2000.

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

☞ Page 83 [Ethernet]

■Precautions

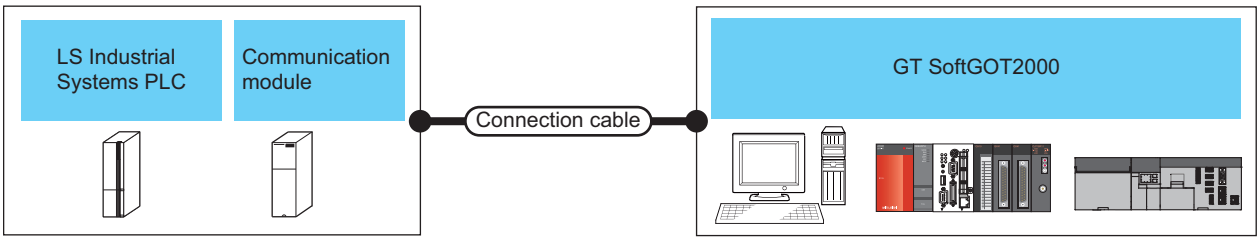
For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

LS Industrial Systems PLC

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable *2	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Communication module	Communication type					
XGK-CPUU XGK-CPUH XGK-CPUA XGK-CPUS XGK-CPUE	XGL-EFMT(B)	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*3 PC CPU module MELIPC	16 *1	63
XGK-CPUUN XGK-CPUHN XGK-CPUSN	XGL-EFMT(B)					16 *1	
	(Built-in Ethernet)					4	

*1 The number of connectable personal computers includes the number of total GT SoftGOT2000 modules started in a personal computer.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*3 An Ethernet board/card is required.
☞ Page 408 Communication module, Ethernet board/card

■Communication module, Ethernet board/card

The following table shows connectable communication modules and Ethernet board/card.

• Communication module

Item	Model name
Communication module	XGL-EFMT(B)

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.
☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for setting items

• LS Industrial Systems PLC

For details on LS Industrial Systems PLC, refer to the following manual.

📖User's manual for LS Industrial Systems PLC

• Precautions for Ethernet connection

Specify the Net No. and station number of the LS Industrial Systems PLC connected to the GOT by the Ethernet connection.

The specified Net No. and station number must be the same as those set on GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 410 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of the programmable controller, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

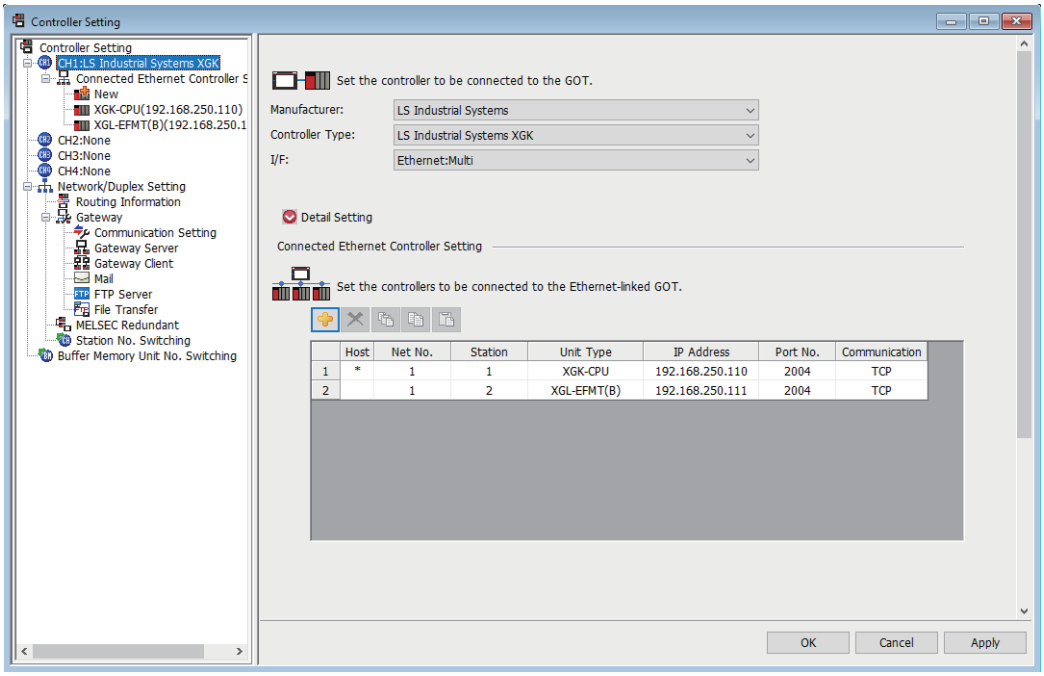
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range*1	
		[XGK-CPU]	[XGL-EFMT(B)]
[Host]	Indicate the host station. (The host station is indicated as *.)	-	
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]	
[Station]	Set the station number of the target Ethernet module	[1] to [64]	
[Unit Type]	Set this item according to the connection destination for GT SoftGOT2000. • When connecting to a built-in Ethernet port: [XGK-CPU] • When connecting to a communication module: [XGL-EFMT(B)]	[XGK-CPU]	[XGL-EFMT(B)]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side	
[Port No.]	Set the port number of the target Ethernet module.	[2004]	[2004], [2005]
[Communication]	Select a communication method.	[TCP]	[UDP], [TCP]

*1 The default value and setting range may differ depending on the setting of [Unit Type] of the connection destination.

■Setting on GT SoftGOT2000

Set the communication setting in the [Communication Setup] dialog of GT SoftGOT2000.

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

☞ Page 83 [Ethernet]

■Precautions

For the precautions for the Ethernet connection, refer to the following.

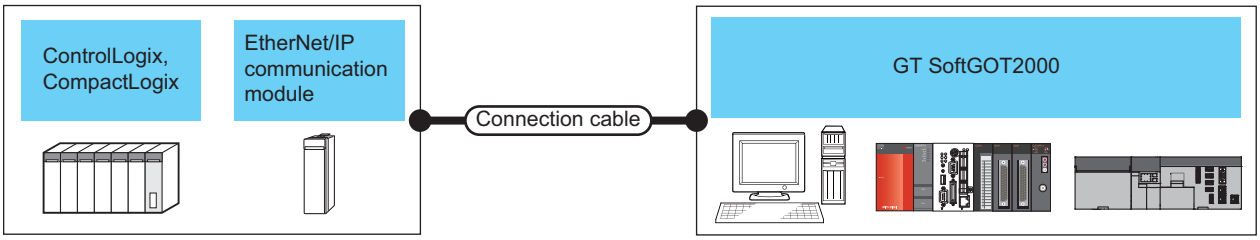
☞ Page 296 Precautions

ALLEN-BRADLEY PLC

Only available to GT SoftGOT2000 (Multiple channels).

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable*1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Series	EtherNet/IP communication module	Communication type					
ControlLogix	*3	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*2 PC CPU module MELIPC	UDP: Not supported TCP: 32	UDP: Not supported TCP: 16
CompactLogix	-					UDP: Not supported TCP: 20	UDP: Not supported TCP: 16
FlexLogix	1788-ENBT/A						

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 An Ethernet board/card is required.
☞ Page 411 EtherNet/IP communication module and Ethernet board/card

*3 The mountable EtherNet/IP communication module differs depending on the PLC model. For the applicable CPUs, refer to the following.
☞ Page 411 EtherNet/IP communication module and Ethernet board/card

■EtherNet/IP communication module and Ethernet board/card

The following shows connectable EtherNet/IP communication modules and Ethernet boards/cards.

• EtherNet/IP communication module

Item	Model name
1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3	1756-ENET (10Mbps), 1756-ENBT (10/100Mbps)
1756-L61, 1756-L62, 1756-L63	1756-ENET (10Mbps), 1756-ENBT (10/100Mbps)
1756-L64	1756-ENET (10Mbps), 1756-ENBT (10/100Mbps), 1756-EN2T (10/100Mbps)
1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24	1756-ENET (10Mbps), 1756-ENBT (10/100Mbps)
1756-L72S	1756-EN2T (10/100Mbps)
1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75	1756-EN2T (10/100Mbps), 1756-EN2TR (10/100Mbps), 1756-EN3TR (10/100Mbps), 1756-ENBT (10/100Mbps)
1756-L81E, 1756-L82E, 1756-L83E, 1756-L84E, 1756-L85E	1756-EN2T (10/100Mbps), 1756-EN2TR (10/100Mbps), 1756-EN3TR (10/100Mbps), 1756-ENBT (10/100Mbps), 1756-EN2TSC (10/100Mbps)
1794-L33, 1794-L34	1788-ENBT/A (100Mbps)

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.
☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for setting items

• ALLEN-BRADLEY PLC

For details of the ALLEN-BRADLEY PLC, refer to the following manual.

📖Manual of the ALLEN-BRADLEY PLC

• Precautions for Ethernet connection

Specify the network number and station number of the ALLEN-BRADLEY PLC connected by the Ethernet connection. The network number and station number must be the same as those set in GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 413 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of the programmable controller, refer to the following manual.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

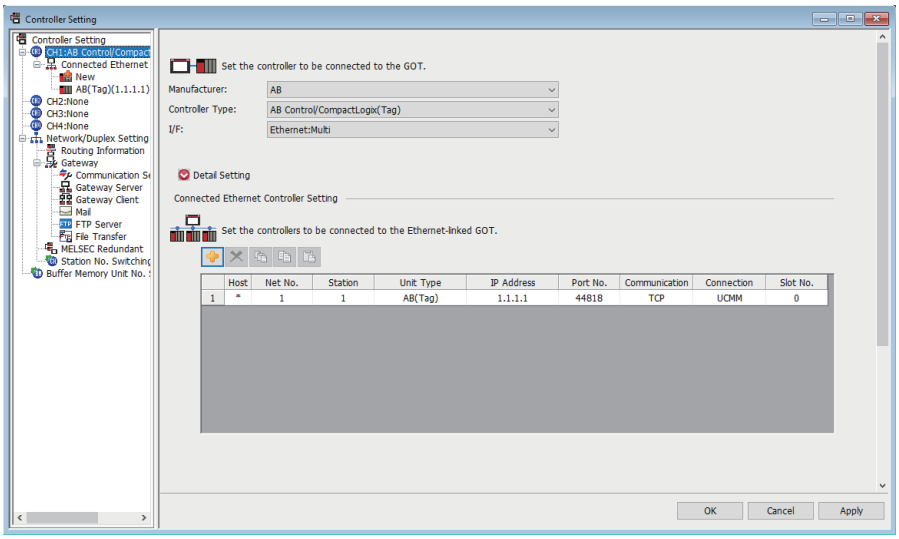
• Station monitoring function

For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

■Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module	[1] to [64]
[Unit Type]	Select [AB(Tag)].	[AB(Tag)]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Set the port number of the target Ethernet module.	[44818]
[Communication]	Displays the communication method.	[TCP]
[Connection]	Set the message communication type according to the connected Ethernet module.	[UCMM], [Class3]
[Slot No.]	Set the slot number to which the CPU module is installed in the PLC.	[0] to [20]

■Setting on GT SoftGOT2000

Set the communication setting in the [Communication Setup] dialog of GT SoftGOT2000.

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

☞ Page 83 [Ethernet]

■Precautions

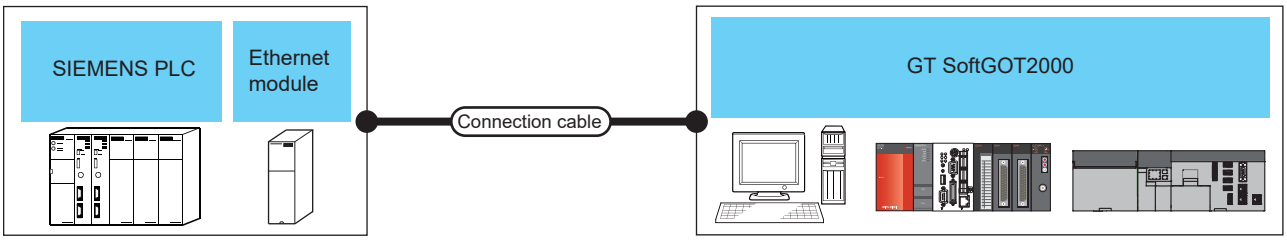
For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

SIEMENS PLC

Ethernet connection

■System configurations and connection conditions



PLC			Connection cable *1	Max. distance	GT SoftGOT2000	Number of GT SoftGOT2000 modules connectable to a module	Number of PLCs connectable to GT SoftGOT2000
Model name	Ethernet module	Communication type					
SIMATIC S7-300	CP343-1 IT, CP343-1, CP343-1 Lean, CP343-1 Advanced	Ethernet (Ethernet connection type: FETCH/WRITE)	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*3 PC CPU module MELIPC	32	16
SIMATIC S7-400	CP443-1 IT, CP443-1						
SIMATIC S7-200	CP 243-1, CP 243-1 IT	Ethernet (Ethernet connection type: OP communication)				32	128
SIMATIC S7-200 SMART	(Built-in Ethernet port)*2						
SIMATIC S7-300	CP 343-1, CP 343-1 Lean, CP 343-1 Advanced-IT						
SIMATIC S7-400	CP 443-1, CP 443-1 Advanced-IT						
SIMATIC S7-1200	(Built-in Ethernet port)*2						
SIMATIC S7-1500	(Built-in Ethernet port)*2						

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 For the applicable CPUs, refer to the following.
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

*3 An Ethernet board/card is required.
☞ Page 414 Ethernet module and Ethernet board/card

■Ethernet module and Ethernet board/card

The following shows connectable Ethernet modules and Ethernet boards/cards.

• Ethernet module

Ethernet connection type: FETCH/WRITE

Item	Model name
SIMATIC S7-300	CP343-1 IT, CP343-1, CP343-1 Lean, CP343-1 Advanced
SIMATIC S7-400	CP443-1 IT, CP443-1

Ethernet connection type: OP communication

Item	Model name
SIMATIC S7-200	CP 243-1, CP 243-1 IT
SIMATIC S7-300	CP 343-1, CP 343-1 Lean, CP 343-1 Advanced-IT
SIMATIC S7-400	CP 443-1, CP 443-1 Advanced-IT

• Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.

☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

■Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

■Before setting

When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.

The following countermeasures may improve the communication performance.

Use a switching hub.

Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.

Reduce the number of devices monitored by GT SoftGOT2000.

When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.

When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.

Doing so may cause a communication error on the GOT1000 series model.

■Controller setting

Point

Precautions for Ethernet connection

• SIEMENS PLC

For the details of SIEMENS PLCs, refer to the following manual.

📖User's manual for SIEMENS PLC

• Precautions for Ethernet connection

Specify the Net No. and the PLC No. of the SIEMENS PLC connected to the GOT via the Ethernet connection.

The specified Net No. and the PLC No. must be the same as those set on GT Designer3.

For the Ethernet module settings and GT SoftGOT2000 settings, refer to the following.

☞ Page 294 Settings in GT Designer3

■Setting of programmable controller side

For settings for each part of programmable controller, refer to the following manual.

📖 GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Setting on the personal computer

Set the IP address.

■Communications check

• Ping test

Execute the Ping command with Command Prompt of Windows when the preparations for communication are complete.

When the Ping test is verified

C:\>Ping 192. 168. 0. 2

Reply from 192.168.0.2:bytes=32 time<1ms TTL=32

When the Ping test is not verified

C:\>Ping 192. 168. 0. 2

Request timed out.

If the Ping test is not verified, check connections of the cable and unit, Windows side IP address and other settings.

• Station monitoring function

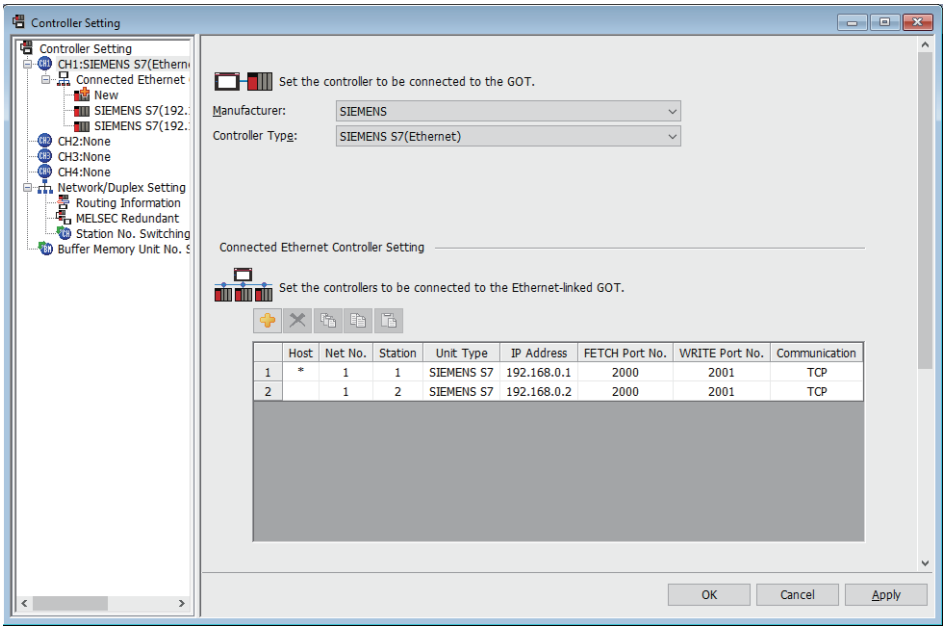
For details on the station monitoring function, refer to the following manual.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) for GT Works3

■Settings in GT Designer3

• Ethernet connection type: FETCH/WRITE

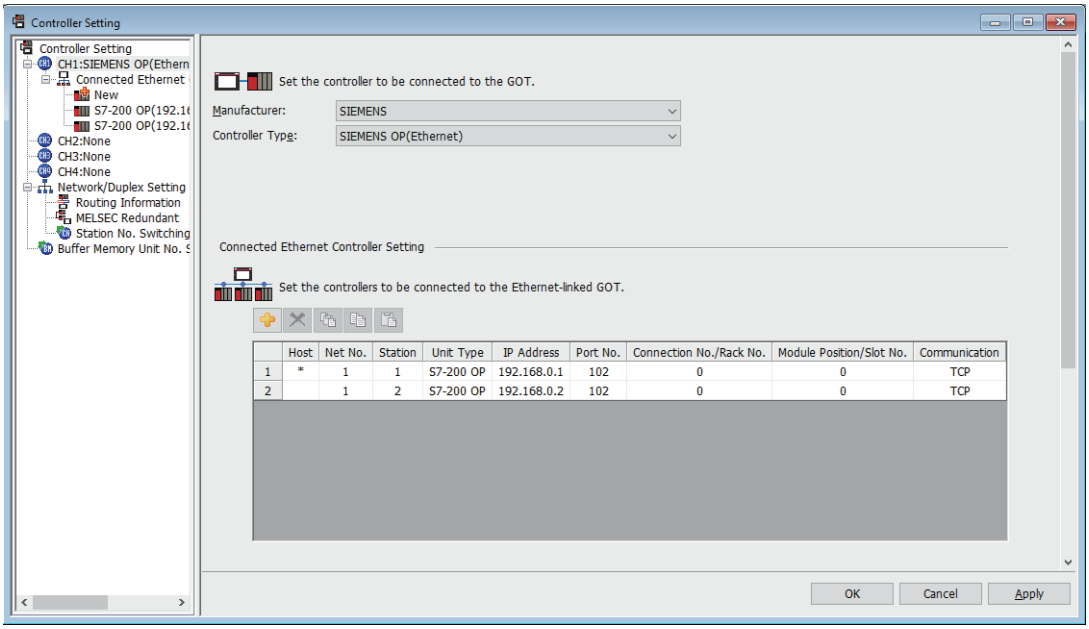
Up to 64 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [254]
[Unit Type]	Select [SIEMENS S7].	[SIEMENS S7]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[FETCH Port No.]	Set the FETCH port No. of the connected Ethernet module.	[1024] to [65534]
[WRITE Port No.]	For the WRITE port No. of the connected Ethernet module, the value that the FETCH port No. is incremented by one is set automatically.	[1025] to [65535]
[Communication]	Displays the communication method.	[TCP]

• Ethernet connection type: OP communication

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module.	[1] to [254]
[Unit Type]	Set a PLC type to be connected.	[S7-1500 OP] [S7-200 OP] [S7-200 SMART OP] [S7-300/400 OP] [S7-1200 OP]
[IP Address]	Set the IP address of the target Ethernet module.	IP address of programmable controller side
[Port No.]	Displays the port number of the destination Ethernet module.	[102]
[Connection No./Rack No.]	Set this item when [Controller Type] is set to [S7-200 OP] or [S7-300/400 OP]. Set the connection No./rack No. which is set in the PLC side.	[0] to [7]
[Module Position/Slot No.]	Set the module position/slot No. which is set in the PLC side.	S7-1500 OP: [0] to [31] S7-200 OP: [0] to [6] S7-200 SMART OP: [1] S7-300/400 OP: [0] to [31] S7-1200 OP: [1]
[Communication]	Displays the communication method.	[TCP]

■Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

■Precautions

For the precautions for the Ethernet connection, refer to the following.

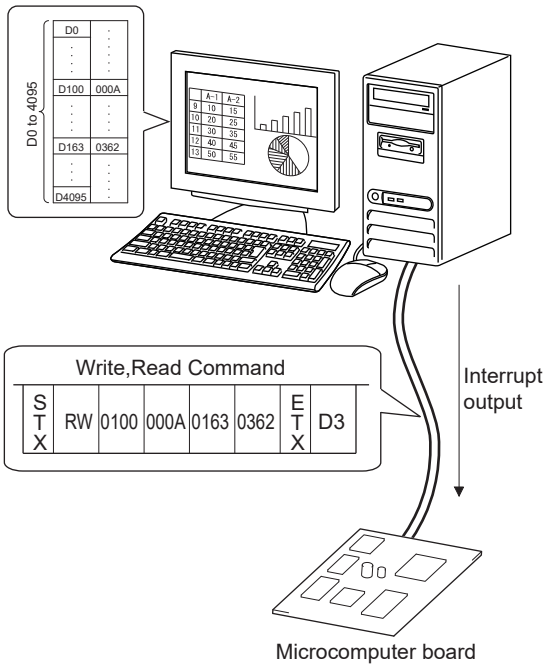
☞ Page 296 Precautions

3.28 Microcomputer Connection (Serial)

The microcomputer connection (serial) is established between GT SoftGOT2000 and the host (such as a personal computer, microcomputer board, or PLC) via a serial cable, and allows the host to read/write data from/to the virtual devices of GT SoftGOT2000.

GT SoftGOT2000 can send an interrupt output to the host.

Virtual devices of GT SoftGOT2000



Point

Virtual devices of GT SoftGOT2000

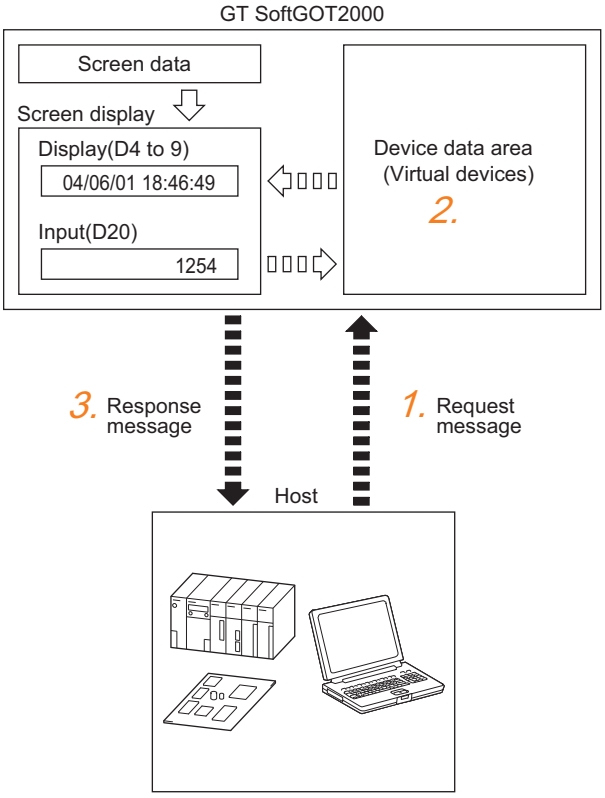
The virtual devices of GT SoftGOT2000 are used when the microcomputer connection is established.

PLC devices are not used.

☞ Page 422 Device data area

Flow of data processing

■Reading or writing data



1. The host sends a request message (a read or write command) to GT SoftGOT2000.

2. GT SoftGOT2000 services the request for reading/writing data from/to the virtual devices.

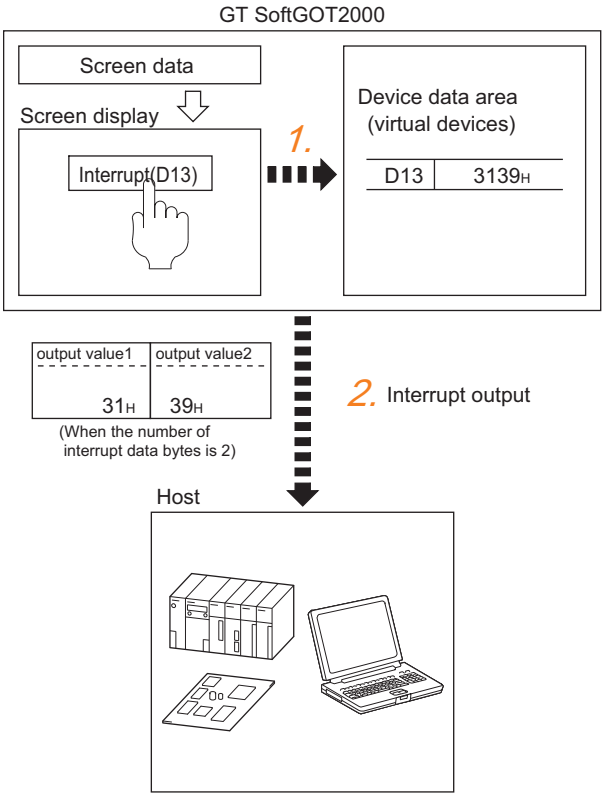
3. When reading or writing data is complete, GT SoftGOT2000 sends a response message (a read or write result) to the host.

The following objects can use the data that has been read/written from/to the virtual devices.

Numerical display object for displaying the data written by a write command

Numerical input object for inputting the data to be sent to the host

■Sending interrupt outputs



1. In GT SoftGOT2000, write the data to be output to the host to the virtual device by using a touch switch or other methods.

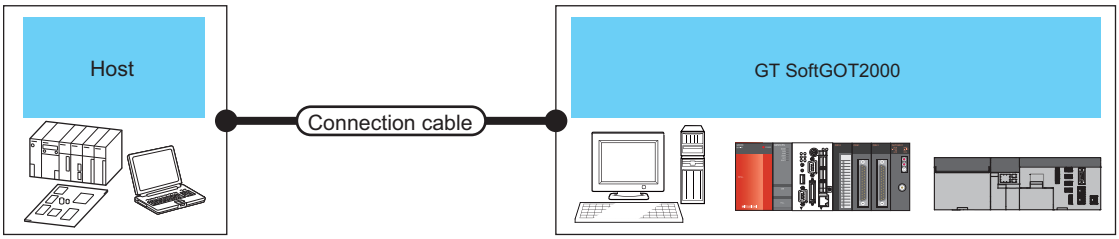
2. GT SoftGOT2000 sends the written data to the host (Interrupt output).

For the details of the message formats for interrupt outputs and the device data area, refer to the following.

☞ Page 434 Data format type and application

☞ Page 422 Device data area

System configuration



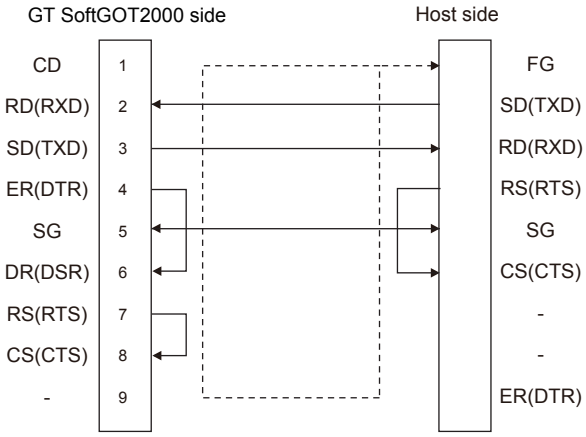
Host		Connection cable	Maximum length	GT SoftGOT2000	Number of connectable devices
Unit Type	Communication type				
Personal computer, microcomputer board, PLC, or other devices	RS-232	RS-232 cable	Depending on the specifications of the host	Windows-compatible personal computer PC CPU module MELIPC*2	1 *1

*1 Activating multiple GT SoftGOT2000 modules enables you to perform monitoring from multiple screens.
*2 Assign the RS-232 port on the MELIPC to the Windows part.

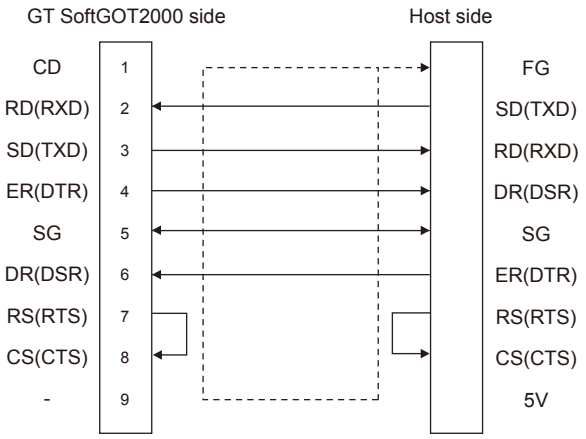
Connection cable

RS-232 cable

Example of when the DTR/DSR signal is not used



Example of when the DTR/DSR signal is used



Device data area

The following shows the GT SoftGOT2000 virtual devices that are usable when the microcomputer connection (serial) is used and the address specification values for each data format.

The address specification values for the GT SoftGOT2000 virtual devices vary by data format. *1

Virtual device *2			Address specification value					Refer to
Name	Device range (decimal)	Device type	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15	
D	0 to 4095	Word	0 to 4095	D0 to 4095	D0 to 4095	0000 to 0FFFH	8000 to 9FFFH	☞ Page 423 D devices
R	0 to 4095	Word	4096 to 8191	R0 to 4095	R0 to 4095	1000 to 1FFFH	0000 to 1FFFH	☞ Page 427 R devices
L	0 to 2047	Bit	8192 to 8319	L0 to 2047	L0 to 2047	2000 to 207FH	A000 to A0FFH	☞ Page 428 L devices
M	0 to 2047	Bit	8320 to 8447	M0 to 2047	M0 to 2047	2080 to 20FFH	2000 to 20FFH	☞ Page 428 M devices
SD	0 to 15	Word	8448 to 8463	D9000 to 9015	SD0 to 15	2100 to 210FH	2100 to 211FH (3000 to 300DH) *3	☞ Page 429 SD devices
SM	0 to 63	Bit	8464 to 8467	M9000 to 9063	SM0 to 63	2110 to 2113H	2200 to 2207H	☞ Page 432 SM devices

*1 For the address specification method for each data format, refer to the following.
☞ Page 434 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3 to 6: A compatible 1C frame
Formats 7 to 10: QnA compatible 3C/4C frame
Formats 11 to 13: SCHNEIDER EJH's memory link method
Formats 14, 15: GOT-F900 Series microcomputer connection

*2 When reusing GOT900 Series project data
GOT-A900 Series virtual devices (D0 to 2047)
Can be used as they are without changing the assignments.
GOT-F900 Series virtual devices
Since some of the assigned virtual device values differ as indicated below, change the assignment using device batch edit of GT Designer3.
Refer to the following manual for device batch edit of GT Designer3.
GT Designer3 (GOT2000) Screen Design Manual

GOT2000 Series virtual devices	GOT-F900 Series virtual devices
D0 to 2047	-
D2048 to 4095	-
R0 to 4095	D0 to 4095
L0 to 2047	-
M0 to 2047	M0 to 2047
SD0 to 15	D8000 to 8015 GD0 to 6
SM0 to 63	M8000 to 8063

*3 Access to SD3 to 9 can also be made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

Point

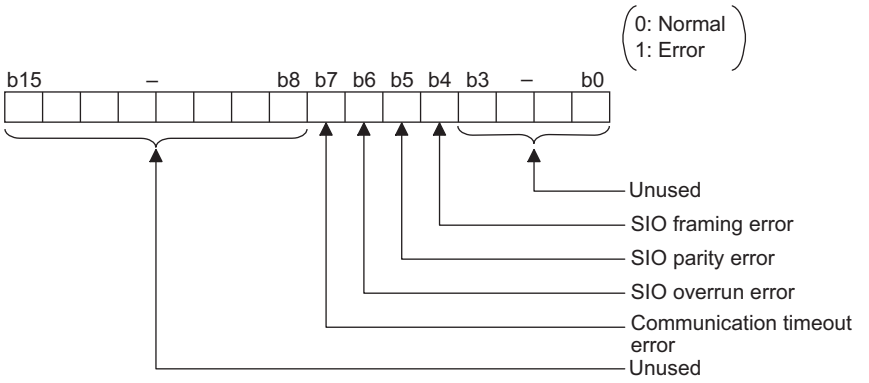
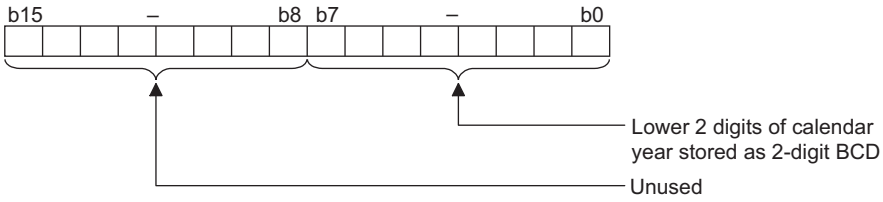
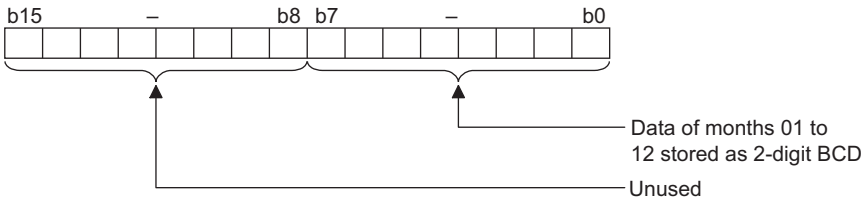
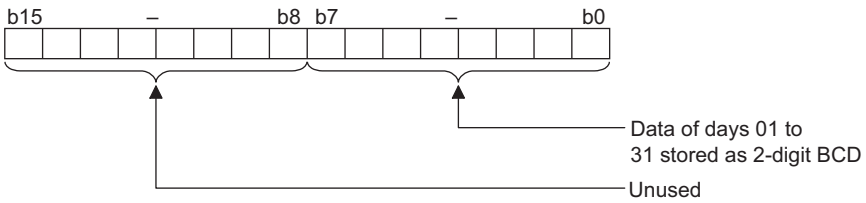
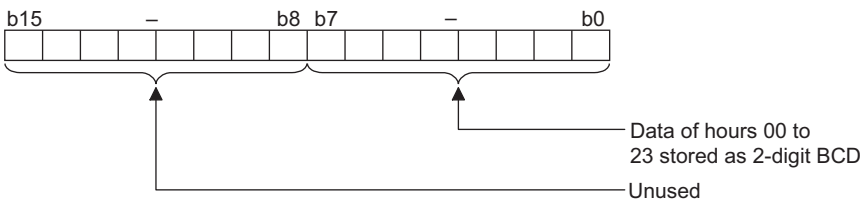
Values of the GT SoftGOT2000 virtual devices
Exiting or resetting GT SoftGOT2000 clears the values of the virtual devices to their defaults (bit devices: OFF, word devices: 0).
If you close and reopen a project, the stored values will be held.

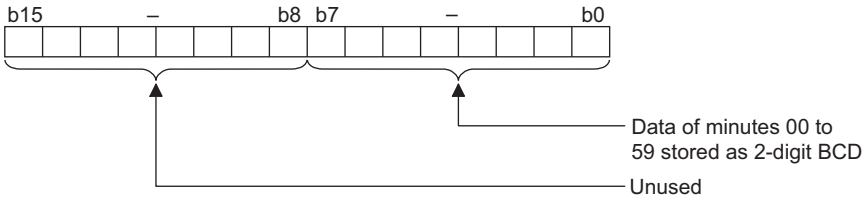
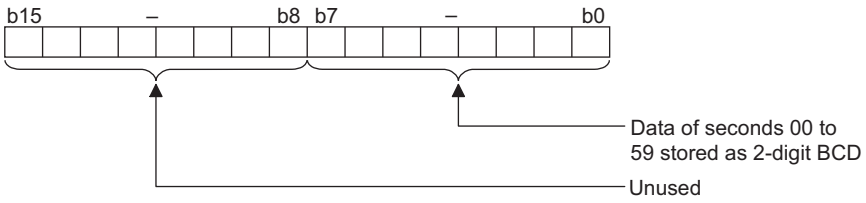
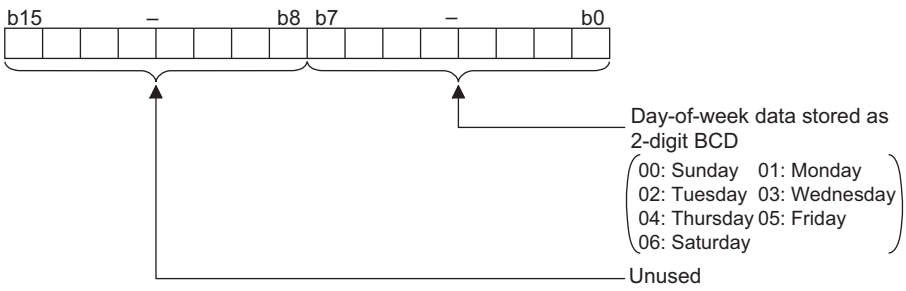
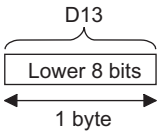
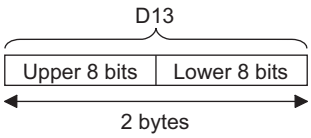
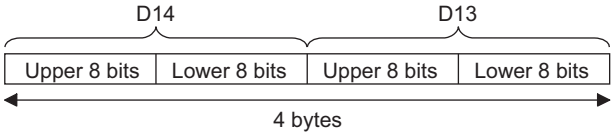
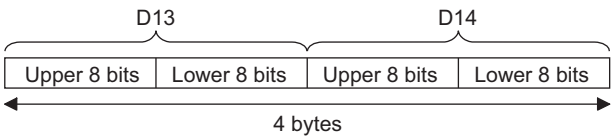
D devices

The D devices are word devices to store data, including the communication error data and clock data of GT SoftGOT2000.
The following shows the D devices which are the virtual devices of GT SoftGOT2000.

List of D devices

The following shows the D devices which are the virtual devices of GT SoftGOT2000.

Address	Description	Set by
D0 to 2	Unused	-
D3	Communication error status The communication error details of GT SoftGOT2000 are stored.  • b4 to 6 turn ON when an SIO error occurs, and turn OFF when an request message from the host is received successfully after the error occurrence. • b7 turns ON about 3 seconds after the host side DTR becomes OFF, and turns OFF when transmission is performed successfully to the host after the error occurrence.	System
D4	Clock data (year)  	
D5	Clock data (month)  	
D6	Clock data (day)  	
D7	Clock data (hour)  	

Address	Description	Set by
D8	Clock data (minute) 	System
D9	Clock data (second) 	
D10	Clock data (day of week) 	
D11 to 12	Unused	-
D13 D14	Interrupt output If you write data to D13 and D14 by using a touch switch or other methods in GT SoftGOT2000, the written data will be sent to the host (Interrupt output). *1*2 Set the amount of data (number of bytes) to be sent with [Interrupt Data Byte] in the [Communication Setup] dialog. ☞ Page 76 [RS232] • Output value when [1Byte] is set for [Interrupt Data Byte] in the [Communication Setup] dialog  • Output value when [2Byte] is set for [Interrupt Data Byte] in the [Communication Setup] dialog  • Output value when [4Byte] is set for [Interrupt Data Byte] in the [Communication Setup] dialog*3 (1) When [LH Order] is set for [32bit Storage:] in the [Communication Setup] dialog  (2) When [HL Order] is set for [32bit Storage:] in the [Communication Setup] dialog 	User
D15 to 19	Unused	-
D20 to 2031	User area	User
D2032 to 2034	Unused	-

Address	Description	Set by
D2035	1-second binary counter The counter is incremented every second after GT SoftGOT2000 is started. (The time elapsed after monitoring is started is stored in seconds.) Data are stored in binary format.	System
D2036 to 4095	User area	User

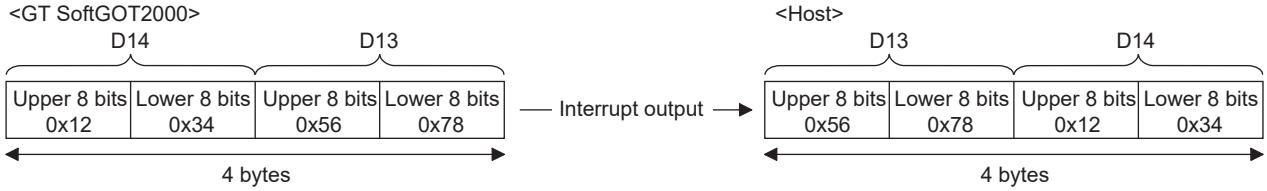
*1 An interrupt output is sent within 1 to 10 ms after data is written to the devices.

*2 If the host writes data to D13 and D14, an interrupt output will not be sent.

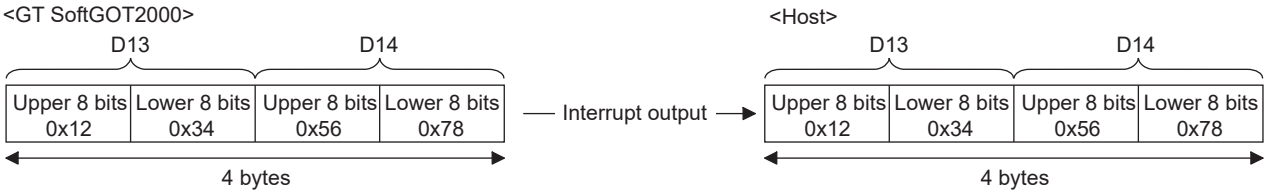
*3 When 32-bit data are written to D13 and D14, the values are output to the host side regardless of the setting for [32bit Storage] in the [Communication Setup] dialog.

Example) When outputting 0x12345678 with unsigned 32-bit binary data

· LH Order



· HL Order



Point

• Who sets values in the virtual devices

System: The system sets values in the virtual devices.

User: The user sets values in the virtual devices (in response to the requests from the host or by using a touch switch or other methods in GT SoftGOT2000).

• Interrupt outputs using D13 and D14

To disable interrupt outputs, turn on SM52 (Disable interrupt code output flag).

☞ Page 432 SM devices

When performing interrupt output in format 1, 2, 11, 14, or 15, set [Data Bit] to [8bit] in the [Communication Setup] dialog.

When [7bit] is set, data is output with ignoring the most significant bit (8th bit).

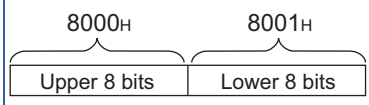
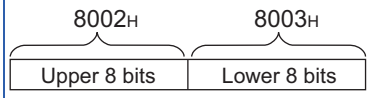
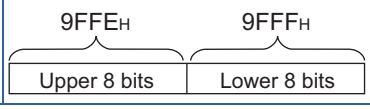
(Example: FFH→7FH)

☞ Page 76 [RS232]

Differences in address specifications by data format

The address specification of devices varies depending on the data format. *1

The following shows the address specification values for each data format.

Address	Address specification value				
	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
D0	0	D0	D0	0000H	8000H, 8001H 
D1	1	D1	D1	0001H	8002H, 8003H 
:	:	:	:	:	:
D4095	4095	D4095	D4095	0FFFH	9FFEH, 9FFFH 

*1 For the address specification method for each data format, refer to the following.

☞ Page 434 Data format type and application

Formats 1, 2: GOT-A900 Series microcomputer connection

Formats 3 to 6: A compatible 1C frame

Formats 7 to 10: QnA compatible 3C/4C frame

Formats 11 to 13: SCHNEIDER EJH's memory link method

Formats 14, 15: GOT-F900 Series microcomputer connection

R devices

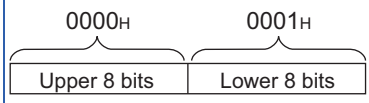
The R devices are word devices into which user data are stored.

All of these devices can be used as a user area.

List of R devices and differences in address specification by data format

The following shows the R devices which are the virtual devices of GT SoftGOT2000.

The address specification values vary by data format as shown below. *1

Address	Address specification value				
	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
R0	4096	R0	R0	1000H	0000H, 0001H 
R1	4097	R1	R1	1001H	0002H, 0003H
:	:	:	:	:	:
R4095	8191	R4095	R4095	1FFFH	1FFEH, 1FFFH

*1 For the address specification method for each data format, refer to the following.

☞ Page 434 Data format type and application

Formats 1, 2: GOT-A900 Series microcomputer connection

Formats 3 to 6: A compatible 1C frame

Formats 7 to 10: QnA compatible 3C/4C frame

Formats 11 to 13: SCHNEIDER EJH's memory link method

Formats 14, 15: GOT-F900 Series microcomputer connection

L devices

The L devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of L devices and differences in address specification by data format

The following shows the L devices which are the virtual devices of GT SoftGOT2000.

The address specification values vary by data format as shown below. *1

Address								Address specification value				
b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
L7	L6	L5	L4	L3	L2	L1	L0	8192	Same as address column on left *2		2000H	A000H
L15	L14	L13	L12	L11	L10	L9	L8					A001H
L23	L22	L21	L20	L19	L18	L17	L16	8193			2001H	A002H
L31	L30	L29	L28	L27	L26	L25	L24					A003H
:								:			:	:
L2039	L2038	L2037	L2036	L2035	L2034	L2033	L2032	8319			207FH	A0FEH
L2047	L2046	L2045	L2044	L2043	L2042	L2041	L2040					A0FFH

*1 For the address specification method for each data format, refer to the following.
☞ Page 434 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3 to 6: A compatible 1C frame
Formats 7 to 10: QnA compatible 3C/4C frame
Formats 11 to 13: SCHNEIDER EJH's memory link method
Formats 14, 15: GOT-F900 Series microcomputer connection

*2 Specify addresses in increments of 16 for reading or writing data in word units. (Example: L0, L16, L32,...)

M devices

The M devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of M devices and differences in address specification by data format

The following shows the M devices which are the virtual devices of GT SoftGOT2000.

The address specification values vary by data format as shown below. *1

Address								Address specification value				
b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
M7	M6	M5	M4	M3	M2	M1	M0	8320	Same as address column on left *2		2080H	2000H
M15	M14	M13	M12	M11	M10	M9	M8					2001H
M23	M22	M21	M20	M19	M18	M17	M16	8321			2081H	2002H
M31	M30	M29	M28	M27	M26	M25	M24					2003H
:								:			:	:
M2039	M2038	M2037	M2036	M2035	M2034	M2033	M2032	8447			20FFH	20FEH
M2047	M2046	M2045	M2044	M2043	M2042	M2041	M2040					20FFH

*1 For the address specification method for each data format, refer to the following.
☞ Page 434 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3 to 6: A compatible 1C frame
Formats 7 to 10: QnA compatible 3C/4C frame
Formats 11 to 13: SCHNEIDER EJH's memory link method
Formats 14, 15: GOT-F900 Series microcomputer connection

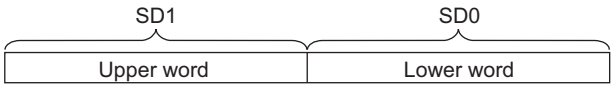
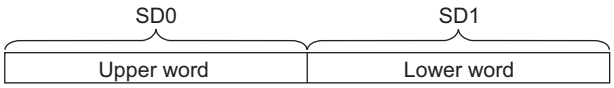
*2 Specify addresses in increments of 16 for reading or writing data in word units. (Example: M0, M16, M32,...)

SD devices

The SD devices are word devices to store data, including the communication error codes and clock data of GT SoftGOT2000.

List of SD devices

The following shows the SD devices which are the virtual devices of GT SoftGOT2000.

Address	Description	Set by
SD0 SD1	100ms counter (32bits) The counter is incremented by 100 ms after GT SoftGOT2000 is started. (The time elapsed after GT SoftGOT2000 is started is stored in increments of 100 ms.) (1) When [LH Order] is set for [32bit Storage:] in the [Communication Setup] dialog The lower and upper bits are stored in SD0 and SD1 respectively.  (2) When [HL Order] is set for [32bit Storage:] in the [Communication Setup] dialog The upper and lower bits are stored in SD0 and SD1 respectively. 	System
SD2 *1	Communication error status A communication error code is stored. • Host station (Communication error in the destination GT SoftGOT2000) 0: No error 1: Parity error 2: Framing error 3: Overrun error 4: Communication message error 5: Command error 6: Clock data setting error	
SD3	Clock data (second) Second data of 00 to 59 is stored.	
SD4	Clock data (minute) Minute data of 00 to 59 is stored.	
SD5	Clock data (hour) Hour data of 00 to 23 is stored.	
SD6	Clock data (day) Day data of 00 to 31 is stored.	
SD7	Clock data (month) Month data of 01 to 12 is stored.	
SD8	Clock data (year) The last two digits of four-digit year data are stored.	
SD9	Clock data (day of week) Day-of-the-week data is stored. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday	
SD10 to 15	Unused	-

*1 For details and corrective actions for the errors (error codes) that are stored into SD2, refer to the following:
☞ Page 430 Details and actions for errors (error codes) stored into SD2

Point

Who sets values in the virtual devices

System: The system sets values in the virtual devices.

User: The user sets values in the virtual devices (in response to the requests from the host or by using a touch switch or other methods in GT SoftGOT2000).

Details and actions for errors (error codes) stored into SD2

Error code	Description	Action
0	No error	-
1, 101	Parity error The parity bit does not match.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Configure the same transmission settings in GT SoftGOT2000 and on the host.
2, 102	Framing error The data bit and/or stop bit are not correct.	
3, 103	Overrun error Before GT SoftGOT2000 finishes processing the received data, GT SoftGOT2000 has received new data from the host.	• Check the settings of the [Communication Setup] dialog. • Decrease the transmission speed.
4, 104	Communication message error EXT/CR could not be found before the upper limit of the receive buffer was exceeded.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
5	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message.
105	Timeout error There is no response from GT SoftGOT2000, or the specified station is nonexistent.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
106	Multiple units not connectable The RS-232 port is occupied.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Check to see if the RS-232 port is occupied.
6, 107	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.

Differences in address specifications by data format

The address specification of devices varies depending on the data format. *1

The following shows the address specification values for each data format.

Address	Address specification value				
	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15 *2
SD0	8448	D9000	SD0	2100H	2100H, 2101H 2100H 2101H Upper 8 bits | Lower 8 bits
SD1	8449	D9001	SD1	2101H	2102H, 2103H 2102H 2103H Upper 8 bits | Lower 8 bits
SD2	8450	D9002	SD2	2102H	2104H, 2105H 2104H 2105H Upper 8 bits | Lower 8 bits
SD3	8451	D9003	SD3	2103H	2106H(3000H), 2107H(3001H) 2106H(3000H) 2107H(3001H) Upper 8 bits | Lower 8 bits
SD4	8452	D9004	SD4	2104H	2108H(3002H), 2109H(3003H) 2108H(3002H) 2109H(3003H) Upper 8 bits | Lower 8 bits
SD5	8453	D9005	SD5	2105H	210AH(3004H), 210BH(3005H) 210AH(3004H) 210BH(3005H) Upper 8 bits | Lower 8 bits
SD6	8454	D9006	SD6	2106H	210CH(3006H), 210DH(3007H) 210CH(3006H) 210DH(3007H) Upper 8 bits | Lower 8 bits
SD7	8455	D9007	SD7	2107H	210EH(3008H), 210FH(3009H) 210EH(3008H) 210FH(3009H) Upper 8 bits | Lower 8 bits
SD8	8456	D9008	SD8	2108H	2110H(300AH), 2111H(300BH) 2110H(300AH) 2111H(300BH) Upper 8 bits | Lower 8 bits
SD9	8457	D9009	SD9	2109H	2112H(300CH), 2113H(300DH) 2112H(300CH) 2113H(300DH) Upper 8 bits | Lower 8 bits

*1 For the address specification method for each data format, refer to the following.
☞ Page 434 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3 to 6: A compatible 1C frame
Formats 7 to 10: QnA compatible 3C/4C frame
Formats 11 to 13: SCHNEIDER EJH's memory link method
Formats 14, 15: GOT-F900 Series microcomputer connection

*2 SD3 to 9 correspond to GD0 to 6 on the GOT-F900 Series.
Access to SD3 to 9 can be also made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

SM devices

The SM devices are bit devices to store data, including the data to be used for interrupt outputs and clock data (ON or OFF status in every seconds).

List of SM devices

The following shows the SM devices which are the virtual devices of GT SoftGOT2000.

<table>
<tr><th>Address</th><th>Description</th><th>Set by</th></tr>
<tr><td>SM0 to 49</td><td>Interrupt output
If you change the ON or OFF status of any device in the range from SM0 to SM49 by using a touch switch or other methods in GT SoftGOT2000, an interrupt code will be sent to the host as shown below (Interrupt output). *1*2
Set the amount of data (number of bytes) to be sent with [Interrupt Data Byte] in the [Communication Setup] dialog.
☞ Page 76 [RS232]
<table>
<tr><th>Address</th><th>Event type</th><th>Interrupt code</th></tr>
<tr><td rowspan="2">SM0</td><td>Changed from OFF to ON</td><td>50H</td></tr>
<tr><td>Changed from ON to OFF</td><td>51H</td></tr>
<tr><td rowspan="2">SM1</td><td>Changed from OFF to ON</td><td>52H</td></tr>
<tr><td>Changed from ON to OFF</td><td>53H</td></tr>
<tr><td rowspan="2">SM2</td><td>Changed from OFF to ON</td><td>54H</td></tr>
<tr><td>Changed from ON to OFF</td><td>55H</td></tr>
<tr><td>:</td><td>:</td><td>:</td></tr>
<tr><td rowspan="2">SM48</td><td>Changed from OFF to ON</td><td>B0H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B1H</td></tr>
<tr><td rowspan="2">SM49</td><td>Changed from OFF to ON</td><td>B2H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B3H</td></tr>
</table></td><td>User</td></tr>
<tr><td>SM50</td><td>1-second cycle clock
Turns ON/OFF at a 1-second cycle.
</td><td rowspan="2">System</td></tr>
<tr><td>SM51</td><td>2-second cycle clock
Turns ON/OFF at a 2-second cycle.
</td></tr>
<tr><td>SM52</td><td>Disable interrupt code output flag
Enable or disable the output of interrupt codes and special interrupt codes.
OFF: Enabled, ON: Disabled
When the output is disabled, GT SoftGOT2000 does not send interrupt outputs to the host.
(Relevant devices: D13, D14, SM0 to 49)</td><td>User</td></tr>
<tr><td>SM53 to 63</td><td>Unused</td><td>-</td></tr>
</table>

*1 An interrupt output is sent within 1 to 10 ms after the ON or OFF status is changed.

*2 If the host changes the ON or OFF status of any device in the range from SM0 to SM49, an interrupt output will not be sent.

Point

• Who sets values in the virtual devices

System: The system sets values in the virtual devices.

User: The user sets values in the virtual devices (in response to the requests from the host or by using a touch switch or other methods in GT SoftGOT2000).

• Interrupt outputs using SM0 to SM49

To disable interrupt outputs, turn on SM52 (Disable interrupt code output flag).

☞ Page 432 SM devices

When performing interrupt output in format 1, 2, 11, 14, or 15, set [Data Bit] to [8bit] in the [Communication Setup] dialog.

When [7bit] is set, data is output with ignoring the most significant bit (8th bit).

(Example: FFH→7FH)

☞ Page 76 [RS232]

Differences in address specifications by data format

The address specification of devices varies depending on the data format. *1

The following shows the address specification values for each data format.

Address								Address specification value				
b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
SM7	SM6	SM5	SM4	SM3	SM2	SM1	SM0	8464	*2*4	*3*4	2110H	2200H
SM15	SM14	SM13	SM12	SM11	SM10	SM9	SM8					2201H
SM23	SM22	SM21	SM20	SM19	SM18	SM17	SM16	8465			2111H	2202H
SM31	SM30	SM29	SM28	SM27	SM26	SM25	SM24					2203H
SM39	SM38	SM37	SM36	SM35	SM34	SM33	SM32	8466			2112H	2204H
SM47	SM46	SM45	SM44	SM43	SM42	SM41	SM40					2205H
Unused			SM52	SM51	SM50	SM49	SM48	8467			2113H	2206H
Unused								-				-

*1 For the address specification method for each data format, refer to the following.
☞ Page 434 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3 to 6: A compatible 1C frame
Formats 7 to 10: QnA compatible 3C/4C frame
Formats 11 to 13: SCHNEIDER EJH's memory link method
Formats 14, 15: GOT-F900 Series microcomputer connection

*2 In formats 3 to 6, values are specified within a range of M9000 to 9052.

*3 In formats 7 to 10, values are specified within a range of SM0 to 52.

*4 Specify addresses in increments of 16 for reading or writing data in word units. (Example: SM0, SM16, SM32,...)

Data format type and application

Data format type and application

Communication is possible using any of the data formats shown below.

■Formats 1, 2 (GOT-A900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-A900 series.

Type	Name	Description	Refer to
Format 1	GOT-A900 Series microcomputer connection (format 1)	This format is used when one host and one GT SoftGOT2000 module are connected.	☞ Page 436 Formats 1, 2 (GOT-A900 Series microcomputer connection)
Format 2	GOT-A900 Series microcomputer connection (format 2)	This is the appended format with error code at the error response of the GOT-A900 Series microcomputer connection (format 1).	

■Formats 3 to 6 (A compatible 1C frame)

This is the same message format as when communication is performed using the dedicated protocol of the A series computer link module.

Type	Name	Description	Refer to
Format 3	A compatible 1C frame (format 1)	This is the basic format of the dedicated protocols.	☞ Page 449 Formats 3 to 6 (A compatible 1C frame)
Format 4	A compatible 1C frame (format 2)	This is the appended format of the A compatible 1C frame (format 1) with a block No.	
Format 5	A compatible 1C frame (format 3)	This is the enclosed format of the A compatible 1C frame (format 1) with STX and ETX.	
Format 6	A compatible 1C frame (format 4)	This is the appended format of the A compatible 1C frame (format 1) with CR and LF.	

■Formats 7 to 10 (QnA compatible 3C/4C frame)

This is the same message format as when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

Type	Name	Description	Refer to
Format 7	QnA compatible 3C/4C frame (format 1)	This is the basic format of the MC protocols.	☞ Page 454 Formats 7 to 10 (QnA compatible 3C/4C frame)
Format 8	QnA compatible 3C/4C frame (format 2)	This is the appended format of the QnA compatible 3C/4C frame (format 1) with block No.	
Format 9	QnA compatible 3C/4C frame (format 3)	This is the enclosed format of the QnA compatible 3C/4C frame (format 1) with STX and ETX.	
Format 10	QnA compatible 3C/4C frame (format 4)	This is the appended format of the QnA compatible 3C/4C frame (format 1) with CR and LF.	

■Format 11 to 13 (SCHNEIDER EJH's memory link method)

These are the same message formats as the formats for the protocol of the SCHNEIDER EJH's memory link method.

Type	Name	Description	Refer to
Format 11	SCHNEIDER EJH's memory link method (compatible mode)	This is the standard format of the SCHNEIDER EJH's memory link method.	☞ Page 460 Format 11 to 13 (SCHNEIDER EJH's (formerly Digital Electronics Corporation's) memory link method)
Format 12	SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1)	This is the format of the SCHNEIDER EJH's memory link method (compatibility mode) with a sum check code, CR, and LF added.	
Format 13	SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)	This is the format of the SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1) with a station number added.	

■Formats 14, 15 (GOT-F900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-F900 Series.

Type	Name	Description	Refer to
Format 14	GOT-F900 Series microcomputer connection (format 1)	This format is used to establish a 1:1 or m:n connection between the host and GT SoftGOT2000. The end code is CR.	☞ Page 469 Formats 14, 15 (GOT-F900 Series microcomputer connection)
Format 15	GOT-F900 Series microcomputer connection (format 2)	This format is used to establish a 1:1 or m:n connection between the host and GT SoftGOT2000. The end code is ETX or sum check.	

How to set data format

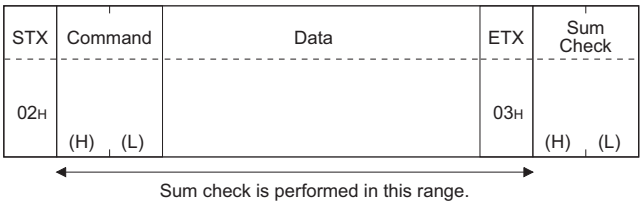
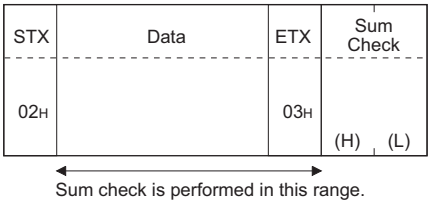
Set the data format in the [Communication Setup] dialog.

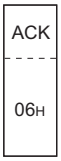
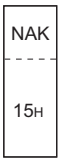
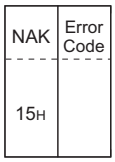
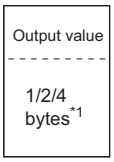
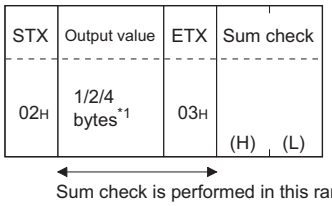
For details of the data format setting method, refer to the following.

☞ Page 76 [RS232]

Formats 1, 2 (GOT-A900 Series microcomputer connection)

Basic format of data communication

<table>
<tr><th>Item</th><th colspan="2">Message format</th></tr>
<tr><td>Request message (Host → GT SoftGOT2000)</td><td colspan="2"> 
</td></tr>
<tr><td>Response message during normal communication (GT SoftGOT2000 → Host)</td><td colspan="2">(1) When servicing a read command
 

(2) When servicing a write command
 
</td></tr>
<tr><td>Response message during faulty communication (GT SoftGOT2000 → Host)</td><td>(format 1: GOT-A900 Series microcomputer connection (format 1))
 
</td><td>(format 2: GOT-A900 Series microcomputer connection (format 2))
 
</td></tr>
<tr><td>When sending an interrupt output *2</td><td>(format 1: GOT-A900 Series microcomputer connection (format 1))
 
</td><td>(format 2: GOT-A900 Series microcomputer connection (format 2))
 
</td></tr>
</table>

*1 Set the number of interrupt data bytes in the [Communication Setup] dialog.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 76 [RS232]

*2 To send an interrupt output, write data to the interrupt output devices (D13 and D14).
☞ Page 423 D devices

Details of data items in message format

Point

Data code during communication

The ASCII code is used for communication. (Excluding interrupt outputs)

■Control codes

Symbol	ASCII code	Description
STX	02H	Start of Text (start marker of message frame)
ETX	03H	End of Text (end marker of message frame)
EOT	04H	End of Transmission
ENQ	05H	Enquiry (inquiry start)
NAK	15H	Negative ACK (error response)
ACK	06H	Acknowledge (write completion response)
LF	0AH	Line Feed
CL	0CH	Clear
CR	0DH	Carriage Return

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 438 List of commands for formats 1, 2 (GOT-A900 Series microcomputer connection)

■Address

Specify the first device of consecutive devices that are used for reading and writing data.

The address notated in decimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For the range of accessible devices, refer to the following.

☞ Page 422 Device data area

■Number of points

Specify the number of devices that are used for reading and writing data. (Setting range: 1 to 99)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 445 Read clock data (TR) command

☞ Page 446 Set clock data (TS) command

■Data

Specify the data to be read from or written to the specified device. (in word units)

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

■Error code

This is the response message at faulty communication appended with error contents.

Error code is transmitted in 1 byte.

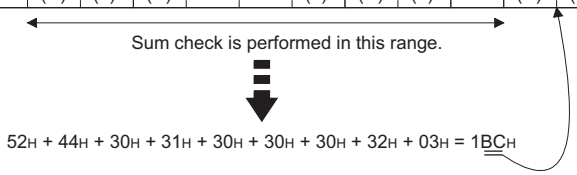
For details of the error codes generated in format 2 (GOT-A900 Series microcomputer connection (format 2)), refer to the following.

☞ Page 448 Error code list

■Sum check code

The sum check code is obtained by converting the lower 1 byte (8 bits) of the result (sum), after having added the sum check target data as binary data, to 2-digit ASCII code (Hex).

STX	Command		Address				Number of points		ETX	Sum Check	
	R	D	0	1	0	0	0	2		B	C
02H	52H	44H	30H	31H	30H	30H	30H	32H	03H	42H	43H
	(H)	(L)	(H)	—	—	(L)	(H)	(L)		(H)	(L)



$52_H + 44_H + 30_H + 31_H + 30_H + 30_H + 30_H + 32_H + 03_H = 1BC_H$

List of commands for formats 1, 2 (GOT-A900 Series microcomputer connection)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
RD	52H 44H	Batch read in word units	Reads bit devices in 16-point units.	99 words(1584points)
			Reads word devices in 1-point units.	99 points
WD	57H 44H	Batch write in word units	Writes to bit devices in 16-point units.	99 words(1584points)
			Writes to word devices in 1-point units.	99 points
RR	52H 52H	Random read in word units *1	Reads multiple different bit devices in 16-point units.	256 words(4096points)
			Reads multiple different word devices in 1-point units.	256 points
RW	52H 57H	Random write in word units *1	Writes to multiple different word devices in 16-point units.	128 words(2048points)
			Writes to multiple different word devices in 1-point units.	128 points
TR	54H 52H	Read clock data	Reads the clock data of the personal computer.	-
TS	54H 53H	Set clock data	Sets the clock data of the personal computer.	-

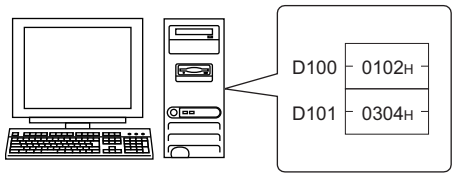
*1 Mixed specification of bit devices and word devices is also possible.

Message Formats

■Batch read in word units (RD) command

• When reading a word device

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

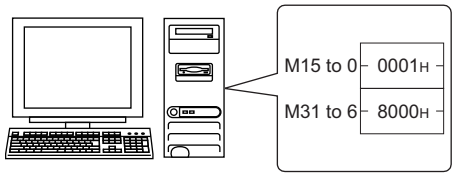


Item	Message format
Request message (Host → GT SoftGOT2000)	STX: 02H Command: R 52H (H), D 44H (L) Address: 0 30H (H), 1 31H, 0 30H, 0 30H (L) Number of points: 0 30H (H), 2 32H (L) ETX: 03H Sum Check: B 42H (H), C 43H (L) Sum check is performed in this range.
Response message during normal communication (GT SoftGOT2000 → Host)	STX: 02H Data 1 (D100): 0 30H (H), 1 31H, 0 30H, 2 32H (L) Data 2 (D101): 0 30H (H), 3 33H, 0 30H, 4 34H (L) ETX: 03H Sum Check: 8 38H (H), D 44H (L) Sum check is performed in this range.
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When reading a bit device

The following shows an example of reading the two points of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

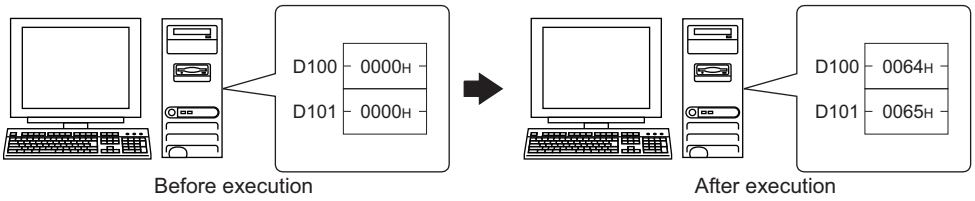


Item	Message format
Request message (Host → GT SoftGOT2000)	STX: 02H Command: R D (52H (H), 44H (L)) Address: 8 3 2 0 (38H (H), 33H, 32H, 30H (L)) Number of points: 0 2 (30H (H), 32H (L)) ETX: 03H Sum Check: C 8 (43H (H), 38H (L)) Sum check is performed in this range.
Response message during normal communication (GT SoftGOT2000 → Host)	Sum check is performed in this range. STX: 02H Data 1 (M15 to 0): 0 0 0 1 (30H, 30H, 30H, 31H) Data 2 (M31 to 16): 8 0 0 0 (38H (H), 30H, 30H, 30H (L)) ETX: 03H Sum Check: 8 C (38H (H), 43H (L)) 0000000000000011000000000000000 MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 11111119876543210332222222222211111 5432109876543210
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Batch write in word units (WD) command

• When writing to a word device

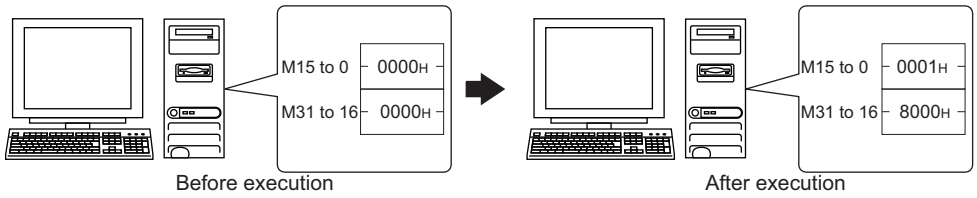
The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.



Item	Message format
Request message (Host → GT SoftGOT2000)	STX: 02H Command: W 57H (H), D 44H (L) Address: 0 30H (H), 1 31H, 0 30H, 0 30H (L) Number of points: 0 30H (H), 2 32H (L) Data 1(D100): 0 30H (H), 0 30H, 6 36H, 4 34H (L) Data 2 (D101): 0 30H (H), 0 30H, 6 36H, 5 35H (L) ETX: 03H Sum Check: 5 35H (H), 6 36H (L) Sum check is performed in this range.
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When writing to a bit device

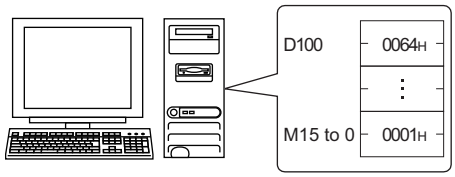
The following shows an example of writing "1"s to virtual devices M0 and M31.



Item	Message format
Request message (Host → GT SoftGOT2000)	Sum check is performed in this range. STX: 02H Command: W 57H (H), D 44H (L) Address: 8 38H (H), 3 33H, 2 32H, 0 30H (L) Number of points: 0 30H (H), 2 32H (L) Data 1 (M15 to 0): 0 30H (H), 0 30H, 0 30H, 1 31H (L) Data 2 (M31 to 16): 8 38H (H), 0 30H, 0 30H, 0 30H (L) ETX: 03H Sum Check: 5 35H (H), 6 36H (L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 M M M M M M M M M M M M M M M M M M M M M M M M M M M M 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 3 3 2 2 2 2 2 2 2 2 2 2 1 1 1 1 5 4 3 2 1 0 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random read in word units (RR) command

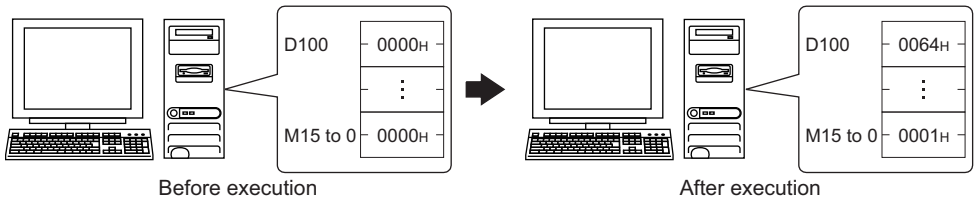
The following shows an example of reading the two points of the virtual devices D100 and M0 to M15.
(Assuming D100=0064H, M0=1are stored.)



Item	Message format
Request message (Host → GT SoftGOT2000)	STX: 02H Command: R R = 52H 52H (H) (L) Address 1: 0 1 0 0 = 30H 31H 30H 30H (H) – – (L) Address 2: 8 3 2 0 = 38H 33H 32H 30H (H) – – (L) ETX: 03H Sum Check: 3 5 = 33H 35H (H) (L) Sum check is performed in this range.
Response message during normal communication (GT SoftGOT2000 → Host)	Sum check is performed in this range. STX: 02H Data 1 (D100): 0 0 6 4 = 30H 30H 36H 34H (H) – – (L) Data 2 (M15 to 0): 0 0 0 1 = 30H 30H 30H 31H (H) – – (L) ETX: 03H Sum Check: 8 E = 38H 45H (H) (L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 MMMMMMMMMMMMMMMM 1111111198765432 10 5432 10
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random write in word units (RW) command

The following shows an example of writing "0064H" and "1" to virtual devices D100 and M0, respectively.

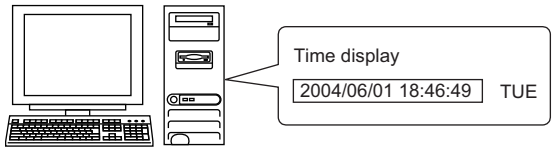


Item	Message format
Request message (Host → GT SoftGOT2000)	STX: 02H Command: R 52H (H), W 57H (L) Following*1 ETX: 03H Sum Check: C 43H (H), 5 35H (L) Sum check is performed in this range. *1 Address 1: 0 30H (H), 1 31H, 0 30H, 0 30H (L) Data 1 (D100): 0 30H (H), 0 30H, 6 36H, 4 34H (L) Address 2: 8 38H (H), 3 33H, 2 32H, 0 30H (L) Data 2 (M15 to 0): 0 30H (H), 0 30H, 0 30H, 1 31H (L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 M M M M M M M M M M M M M M M M 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 5 4 3 2 1 0
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Read clock data (TR) command

The following shows an example of reading the clock data of the personal computer.

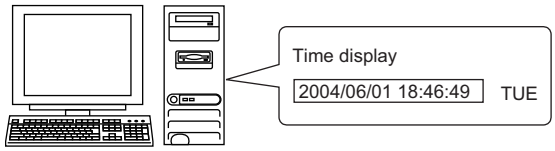
(The clock is set to 18:46:49 on Tuesday, June 1, 2004.)



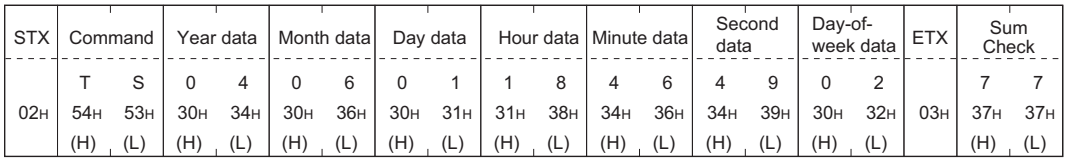
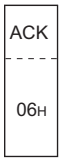
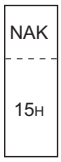
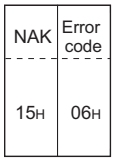
Item	Message format
Request message (Host → GT SoftGOT2000)	STX: 02H Command: T (54H (H)) R (52H (L)) ETX: 03H Sum Check: A (41H (H)) 9 (39H (L)) Sum check is performed in this range.
Response message during normal communication (GT SoftGOT2000 → Host)	STX: 02H Year data: 0 (30H (H)) 4 (34H (L)) Month data: 0 (30H (H)) 6 (36H (L)) Day data: 0 (30H (H)) 1 (31H (L)) Hour data: 1 (31H (H)) 8 (38H (L)) Minute data: 4 (34H (H)) 6 (36H (L)) Second data: 4 (34H (H)) 9 (39H (L)) Day-of-week data: 0 (30H (H)) 2 (32H (L)) ETX: 03H Sum Check: D (44H (H)) 0 (30H (L)) Sum check is performed in this range.
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Set clock data (TS) command

The following shows an example of setting the clock data of the personal computer.
(The clock will be set to 18:46:49 on Tuesday, June 1, 2004.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	
Response message during normal communication (GT SoftGOT2000 → Host)	
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (format 1))  (format 2: GOT-A900 Series microcomputer connection (format 2))  The above is a case where the sum check error (06H) has occurred.

Point

Setting the wrong day of the week by the clock data setting command

If the wrong day of the week is set by the clock data setting command, it will be corrected.

Example: Setting the clock to Thursday, June 1, 2004 by the clock data setting command (The actual day of the week is Tuesday.)

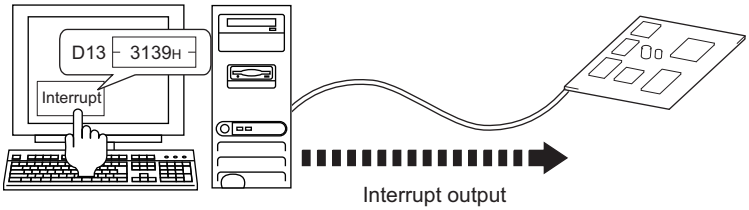
Tuesday will be set.

■Sending interrupt outputs

Writing data to the interrupt output devices (D13 and D14) sends the data to the host.

(The following shows a case where 3139H is written to D13 and AA55H is written to D14.)

Example) When [Interrupt Data Byte] in "Communication Detail Settings" is set to "2 byte" as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value 1
39H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value 1	ETX	Sum check	
			3	C
02H	39H	03H	33H	43H
			(H)	(L)

Sum check is performed in this range.

(2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value 1	Output value 2
31H	39H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value 1	Output value 2	ETX	Sum check	
				6	D
02H	31H	39H	03H	36H	44H
				(H)	(L)

Sum check is performed in this range.

(3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog

When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value1	Output value2	Output value3	Output value4
AAH	55H	31H	39H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value1	Output value2	Output value3	Output value4	ETX	Sum Check	
						6	C
02H	AAH	55H	31H	39H	03H	36H	43H
						(H)	(L)

Sum check is performed in this range.

When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value1	Output value2	Output value3	Output value4
31H	39H	AAH	55H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value1	Output value2	Output value3	Output value4	ETX	Sum Check	
						6	C
02H	31H	39H	AAH	55H	03H	36H	43H
						(H)	(L)

Sum check is performed in this range.

Point

Interrupt output

To disable interrupt outputs, turn on SM52 (Disable interrupt code output flag).

☞ Page 432 SM devices

When performing interrupt output in format 1, 2, 11, 14, or 15, set [Data Bit] to [8bit] in the [Communication Setup] dialog.

When [7bit] is set, data is output with ignoring the most significant bit (8th bit).

(Example: FFH→7FH)

☞ Page 76 [RS232]

Error code list

In the case of format 2 (GOT-A900 series microcomputer connection (format 2)), the error contents (error code) are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
06H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message.
11H	Message length error The data length is greater than the maximum data length for GT SoftGOT2000.	• Review the contents of the message to transmit. • Check the data length of the message.(data length of the data section, etc.)
12H	Communication message error EXT was not found within the upper limit of the receive buffer.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
15H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
7AH	Address error The start address of the devices specified for reading or writing data is out of range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 422 Device data area
7BH	Exceeded number of points error The number of devices specified for reading and writing data has exceeded the number of devices specified for GT SoftGOT2000.	

Precautions

■Storage order for 32-bit data

When 32-bit data is set to maintain program compatibility with GOT-A900 series, set [32bit Storage:] to [HL Order] in the [Communication Setup] dialog.

When [LH Order] is set, the higher-order bits and lower-order bits of 32-bit data are displayed or written in reverse order in GT SoftGOT2000.

Formats 3 to 6 (A compatible 1C frame)

Basic format of data communication

This is the same message format as when communication is performed using the dedicated protocol (A compatible 1C frame) of the A Series computer link module.

For details of the basic format of data communication, refer to the following manual.

📖MELSEC Communication Protocol Reference Manual

This section explains settings that differ from the dedicated protocol settings of the A series computer link modules, and the commands dedicated to the microcomputer connection.

Example: Request message for the batch read in word units (QR) command in format 4 (A-compatible 1C frame (format 2))

Character A section

ENQ	Block No.		Station No.		PLC No.		Command		Wait	Address							Number of points		Sum Check	
	0	0	0	0	0	0	Q	R	0	D	0	0	0	1	0	0	0	2	B	A
05H	30H	30H	30H	30H	30H	30H	51H	52H	30H	44H	30H	30H	30H	31H	30H	30H	30H	32H	42H	41H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	–	–	–	–	–	(L)	(H)	(L)	(H)	(L)

Sum check is performed in this range.

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code.

■Block No, PLC No.

These items are ignored when the microcomputer connection is used.

Specify "00".

"00" is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Station No.

This item is used by the host to identify the destination GT SoftGOT2000.

(Setting range: 0 to 31)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

GT SoftGOT2000 processes the command specified in the message that includes the station number matching with the set value of [Host Add.: (0 to 31)] in the [Communication Setup] dialog.

(GT SoftGOT2000 ignores the messages that do not include the matched station number.)

For the settings in the [Communication Setup] dialog, refer to the following.

☞ Page 76 [RS232]

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 450 List of commands for formats 3 to 6 (A compatible 1C frame)

■Wait

This item is ignored when the microcomputer connection is used.

Specify 0.

The value 0 is converted to its 1-digit ASCII code (hexadecimal), and the code is sent.

■Address

Specify the first device of consecutive devices that are used for reading and writing data.

The data annotated in decimal is converted to a 5- or 7-digit ASCII code (Hex) and transmitted from the upper digit.

For the range of accessible devices, refer to the following.

☞ Page 422 Device data area

■Number of points

Specify the number of devices that are used for reading and writing data. (Setting range: 1 to 40H)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 451 Read clock data (TR) command

☞ Page 452 Set clock data (TS) command

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of error codes generated in formats 3 to 6 (A compatible 1C frame), refer to the following:

☞ Page 453 Error code list

Point

Connecting microcomputers or other devices that use the dedicated protocol of the A series computer link modules

If you connect microcomputers or other devices that use the dedicated protocol of the A series computer link modules, change the commands and the devices according to the specifications of GT SoftGOT2000.

List of commands for formats 3 to 6 (A compatible 1C frame)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
BR JR	42H 52H 4AH 52H	Batch read in bit units	Reads bit devices in 1-point units.	64 points
WR QR	57H 52H 51H 52H	Batch read in word units	Reads bit devices in 16-point units. *2	64 words (1024 points)
			Reads word devices in 1-point units.	64 points
BW JW	42H 57H 4AH 57H	Batch write in bit units	Writes to bit devices in 1-point units.	64 points
WW QW	57H 57H 51H 57H	Batch write in word units	Writes to bit devices in 16-point units. *2	64 words (1024 points)
			Writes to word devices in 1-point units.	64 points
BT JT	42H 54H 4AH 54H	Test in bit units (random write)	Writes to multiple different bit devices in 1-point units.	64 points
WT QT	57H 54H 51H 54H	Test in word units (random write)	Writes to multiple different bit devices in 16-point units. *2	64 words (1024 points)
			Writes to multiple different word devices in 1-point units.	64 points
TR *1	54H 52H	Read clock data	Reads the clock data of the personal computer.	-
TS *1	54H 53H	Set clock data	Sets the clock data of the personal computer.	-

*1 This command is usable only when the microcomputer connection is used.

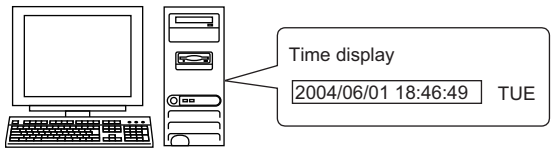
*2 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Message format

The following shows the message formats for the commands that are usable only when the microcomputer connection is used.

■Read clock data (TR) command

The following shows an example of reading the clock data of the personal computer.
(The clock is set to 18:46:49 on Tuesday, June 1, 2004.)



Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 3 (A compatible 1C frame (format 1))

ENQ	Station No.		PLC No.		Command		Wait	Sum Check	
	0	0	0	0	T	R	0	9	6
05H	30H	30H	30H	30H	54H	52H	30H	39H	36H
	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

Response message during normal communication (GT SoftGOT2000 → Host)

Example: Format 3 (A compatible 1C frame (format 1))

Character B section

STX	Station No.		PLC No.			ETX	Sum Check	
	0	0	0	0	Following*1		9	0
02H	30H	30H	30H	30H		03H	39H	30H
	(H)	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1

	Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
	0	4	0	6	0	1	1	8	4	6	4	9	0	2
	30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Response message during faulty communication (GT SoftGOT2000 → Host)

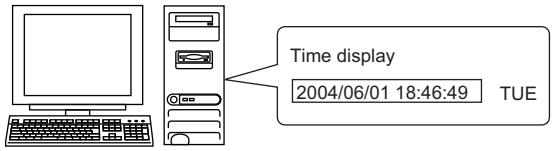
Example: Format 3 (A compatible 1C frame (format 1))

NAK	Station No.		PLC No.		Error code	
	0	0	0	0	0	5
15H	30H	30H	30H	30H	30H	35H
	(H)	(L)	(H)	(L)	(H)	(L)

The above is the case where an overrun error (05H) has occurred.

■Set clock data (TS) command

The following shows an example of setting the clock data of the personal computer.
(The clock will be set to 18:46:49 on Tuesday, June 1, 2004.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 3 (A compatible 1C frame (format 1))
Response message during normal communication (GT SoftGOT2000 → Host)	Example: Format 3 (A compatible 1C frame (format 1))
Response message during faulty communication (GT SoftGOT2000 → Host)	Example: Format 3 (A compatible 1C frame (format 1))

Character C section

ENQ	Station No.		PLC No.		Command		Wait	Following*1	Sum Check	
	0	0	0	0	T	S	0		6	4
05H	30H	30H	30H	30H	54H	53H	30H		36H	34H
	(H)	(L)	(H)	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

ACK	Station No.		PLC No.	
	0	0	0	0
06H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)

NAK	Station No.		PLC No.		Error code	
	0	0	0	0	0	5
15H	30H	30H	30H	30H	30H	35H
	(H)	(L)	(H)	(L)	(H)	(L)

The above is the case where an overrun error (05H) has occurred.

Point

Setting the wrong day of the week by the clock data setting command

If the wrong day of the week is set by the clock data setting command, it will be corrected.

Example: Setting the clock to Thursday, June 1, 2004 by the clock data setting command (The actual day of the week is Tuesday.)

Tuesday will be set.

Error code list

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
01H	Parity error The parity bit does not match.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Configure the same transmission settings in GT SoftGOT2000 and on the host.
02H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
03H	Protocol error GT SoftGOT2000 has received a message that does not follow the control procedure of the format set in the [Communication Setup] dialog.	• Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
05H	Overrun error Before GT SoftGOT2000 finishes processing the received data, GT SoftGOT2000 has received new data from the host.	• Check the settings of the [Communication Setup] dialog. • Decrease the transmission speed.
06H	Character section error The character section specification error. • The method of specifying the character section is wrong. • The specified command has error. • The number of points of the processing requests exceeds the allowable range. • A non-existent device has been specified. • The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check the commands in the message. • Check the devices that can be used and the device ranges. ☞ Page 422 Device data area • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
07H	Character error A character other than "A to Z", "0 to 9", space, and control codes has been received.	• Review the contents of the message to transmit.

Formats 7 to 10 (QnA compatible 3C/4C frame)

Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (QnA compatible 3C/4C frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section explains the settings that differ from the MC protocol settings of the Q/QnA series serial communication modules, and the commands dedicated to the microcomputer connection.

Example: Request message for the batch read in word units (0401) command in format 8 (QnA-compatible 4C frame (format 2))

ENQ	Block No.		Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1	Sum check	
	0	0	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5	4
05H	30H	30H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		35H	34H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

*1 Character A section

Command				Sub-command				Device code		Head Device						Device points			
0	4	0	1	0	0	0	0	D	*	0	0	0	1	0	0	0	0	0	2
30H	34H	30H	31H	30H	30H	30H	30H	44H	2AH	30H	30H	30H	31H	30H	30H	30H	30H	30H	32H
(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	–	–	(L)	(H)	–	–	(L)

Point

QnA compatible 4C frame (format 5)

The QnA-compatible 4C frame (format 5) cannot be used in GT SoftGOT2000.

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code.

■Block No., network No., PLC No., request destination module I/O No. and station No.

These items are ignored when the microcomputer connection is used.

Specify "00". (The request destination module I/O No. is "0000".)

"00" is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

(The request destination module I/O No. is 4-digit.)

■Station No.

This item is used by the host to identify the destination GT SoftGOT2000.

(Setting range: 0 to 1FH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

GT SoftGOT2000 processes the messages that include the station number that matches the value set to [Host Add.: (0 to 31)] in the [Communication Setup] dialog.

(GT SoftGOT2000 ignores the messages that do not include the matched station number.)

For the settings in the [Communication Setup] dialog, refer to the following.

☞ Page 76 [RS232]

■Command, sub-command

Specify the contents to be accessed from the host to GT SoftGOT2000.

The command is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 456 Command lists for formats 7 to 10 (QnA compatible 3C/4C frame)

■Device code

Specify the code to identify the device data to be read and written.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For the range of accessible devices, refer to the following.

☞ Page 422 Device data area

■Head device

Specify the first device of consecutive devices that are used for reading and writing data.

The address notated in decimal is converted to a 6-digit ASCII code (Hex) and transmitted from the upper digit.

For the range of accessible devices, refer to the following.

☞ Page 422 Device data area

■Device points

Specify the number of devices that are used for reading and writing data. (Setting range: 1 to 40H)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

When specifying multiple devices as follows, limit the total device points to within 64 points.

- Using random read/write commands

When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points

- Using multi-block batch read/write commands

When setting multiple blocks, limit the total number of points of all blocks to within 64 points.

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 457 Read clock data (1901) command

☞ Page 458 Set clock data (0901) command

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of error codes that are generated in formats 7 to 10 (QnA compatible 3C/4C frame), refer to the following.

☞ Page 459 Error code list

Point

Connecting microcomputers or other devices that use the MC protocol of the Q/QnA series serial communication modules

If you connect microcomputers or other devices that use the MC protocol of the Q/QnA series serial communication modules, change the commands and the devices according to the specifications of GT SoftGOT2000.

Command lists for formats 7 to 10 (QnA compatible 3C/4C frame)

Command	Subcommand	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	64 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units. *3	64 words (1024 points)
			Reads word devices in 1-point units.	64 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	64 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units. *3	64 words (1024 points)
			Writes to word devices in 1-point units.	64 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units. *3	64 words (1024 points)
			Reads multiple different word devices in 1-point and 2-point units.	64 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	64 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units. *3	64 words (1024 points)
			Writes to multiple different word devices in 1-point and 2-point units.	64 points
0406	0000	Multi-block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	64 points
1406	0000	Multi-block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	64 points
1901 *2	0000	Read clock data	Reads the clock data of the personal computer.	-
0901 *2	0000	Set clock data	Sets the clock data of the personal computer.	-

*1 Mixed specification of bit devices and word devices is also possible.

*2 This command is usable only when the microcomputer connection is used.

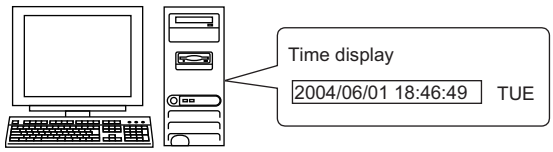
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Message format

The following shows the message formats for the commands that are usable only when the microcomputer connection is used.

■Read clock data (1901) command

The following shows an example of reading the clock data of the personal computer.
(The clock is set to 18:46:49 on Tuesday, June 1, 2004.)



Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 7 (QnA compatible 4C frame (format 1))

ENQ	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1	Sum check	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0		A	9
05H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		41H	39H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

*1 (Character A section)

Host Address No.		Command				Sub-command			
0	0	1	9	0	1	0	0	0	0
30H	30H	31H	39H	30H	31H	30H	30H	30H	30H
(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

Example: Format 7 (QnA compatible 4C frame (format 1))

STX	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1	ETX	Sum check	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0			E	E
02H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		03H	43H	43H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1 (Character B section)

Host Address No.		Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	0	0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	30H	30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Response message during normal communication (GT SoftGOT2000 → Host)

Example: Format 7 (QnA compatible 4C frame (format 1))

NAK	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

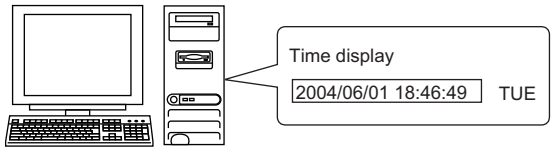
Error code			
7	F	6	9
37H	46H	36H	39H
(H)	–	–	(L)

The above is the case where a parity error (7F69H) has occurred.

■Set clock data (0901) command

The following shows an example of setting the clock data of the personal computer.

(The clock will be set to 18:46:49 on Tuesday, June 1, 2004.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 7 (QnA compatible 4C frame (format 1))

ENQ	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1	Sum check	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0		7	5
05H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		37H	35H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

*1

Character C section

Command				Sub-command				
0	9	0	1	0	0	0	0	→ 1)
30H	39H	30H	31H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	–	–	(L)	

Character C section

1) →

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Response message during normal communication (GT SoftGOT2000 → Host)	Example: Format 7 (QnA compatible 4C frame (format 1))

ACK	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)

Response message during faulty communication (GT SoftGOT2000 → Host)	Example: Format 7 (QnA compatible 4C frame (format 1))

NAK	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Error code			
7	F	6	9
37H	46H	36H	39H
(H)	–	–	(L)

The above is the case where a parity error (7F69H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If the wrong day of the week is set by the clock data setting command, it will be corrected.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday will be set.

Error code list

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
7E40H	Command error An unsupported command or sub-command was used.	• Review the contents of the message to transmit. • Check the commands in the message.
7E41H	Data length error The number of devices specified for random read or write exceeds the settable number of devices.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 422 Device data area
7E42H	Number of data error The number of requests exceeds the command range.	
7E43H	Device error A non-existent device has been specified.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 422 Device data area
7E46H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
7E4FH	Exceeded number of points error The range of devices specified for reading and writing data is outside the device range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 422 Device data area
7F20H	Character error A character other than "A to Z", "0 to 9", space, and control codes has been received.	• Review the contents of the message to transmit.
7F23H	Communication message error EXT/CR+LF was not found within the upper limit of the receive buffer.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
7F24H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
7F67H	Overrun error Before GT SoftGOT2000 finishes processing the received data, GT SoftGOT2000 has received new data from the host.	• Check the settings of the [Communication Setup] dialog. • Decrease the transmission speed.
7F68H	Framing error The data bit and/or stop bit are not correct.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Configure the same transmission settings in GT SoftGOT2000 and on the host.
7E40H	Parity error The parity bit does not match.	
7F6AH	Buffer full error The receive buffer overflowed.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.

Format 11 to 13 (SCHNEIDER EJH's (formerly Digital Electronics Corporation's) memory link method)

Basic format of data communication

These are the same message formats as the formats for the protocol of the SCHNEIDER EJH's memory link method.
For details of the basic format of data communication, refer to the following manual.
SCHNEIDER EJH device connection manual
This section explains the settings that differ from the protocol settings of the SCHNEIDER EJH's memory link method, and the commands dedicated to the microcomputer connection.
Example: Request message for the batch read in word units (R) command in format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

ENQ	Station No.		ESC	Com-mand	Address				Number of points				Sum Check		CR	LF
	0	0		R	0	0	6	4	0	0	0	2	5	E		
05H	30H	30H	1BH	52H	30H	30H	36H	34H	30H	30H	30H	32H	35H	45H	0DH	0AH
	(H)	(L)			(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)		

Sum check is performed in this range.

Point

Compatibility with SCHNEIDER EJH's memory link method
In formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), some communication packets are incompatible with SCHNEIDER EJH's memory link method. Therefore, a communication error may occur.
To give the compatibility, turn on the digital compatible signals (GS580 to GS583) of the GOT internal device and communicate in the fully compatible message format.

Device	Function	Bit	Bit position	Settings
GS580	Microcomputer connection extended setting (CH1)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible
GS581	Microcomputer connection extended setting (CH2)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible
GS582	Microcomputer connection extended setting (CH3)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible
GS583	Microcomputer connection extended setting (CH4)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible

When the digital compatible signal turns on, interrupt outputs (D13 to D14, SM0 to SM49) are invalid.
To use interrupt outputs, turn off the digital compatible signal.
For the GOT internal device, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code.

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 462 Commands for formats 11 to 13 (SCHNEIDER EJH's memory link method)

■Station No.

This item is used by the host to identify the destination GT SoftGOT2000.

(Setting range: 0 to 1FH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

GT SoftGOT2000 processes the messages that include the station number matching with the set value of [Host Add.: (0 to 31)] in the [Communication Setup] dialog.

(GT SoftGOT2000 ignores the messages that do not include the matched station number.)

For the settings in the [Communication Setup] dialog, refer to the following.

☞ Page 76 [RS232]

■Address

Specify the first device of consecutive devices that are used for reading and writing data.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For the range of accessible devices, refer to the following.

☞ Page 422 Device data area

■Number of points

Specify the number of devices that are used for reading and writing data.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upperdigit.

The setting range depends on the format and command.

Format	Command	Command name	Setting range
11	R	Batch read in word units	1 to 100H
	W	Batch write in word units	1 to 1F0H
12	R	Batch read in word units	1 to 100H
	W	Batch write in word units	
13	R	Batch read in word units	1 to 100H
	W	Batch write in word units	

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.

For details of error codes generated in formats 12 and 13 (Digital Electronics Corporation's memory link method (extended mode)), refer to the following.

☞ Page 462 Read clock data (N) command

☞ Page 464 Set clock data (M) command

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For the codes of errors that may occur using formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), refer to the following.

☞ Page 468 Error code list

Point

Connecting microcomputers or other devices that use the protocol of the SCHNEIDER EJH's memory link method

If you connect microcomputers or other devices that use the protocol of the SCHNEIDER EJH's memory link method, change the commands and the devices according to the specifications of GT SoftGOT2000.

Commands for formats 11 to 13 (SCHNEIDER EJH's memory link method)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
R	52H	Batch read in word units	Reads bit devices in 16-point units.	256 words (4096 devices)
			Reads word devices in 1-point units.	256 devices
W	57H	Batch write in word units	Writes to bit devices in 16-point units.	Format 11: 496 words (7936 devices) Format 12: 256 words (4096 devices) Format 13: 256 words (4096 devices)
			Writes to word devices in 1-point units.	Format 11: 496 devices Format 12: 256 devices Format 13: 256 devices
I	49H	Interrupt inquiry	Sends an interrupt inquiry. (Format 13 only)	-
N *1	4DH	Read clock data	Reads the clock data of the personal computer.	-
M *1	4EH	Set clock data	Sets the clock data of the personal computer.	-

*1 This command is usable only when the microcomputer connection is used.

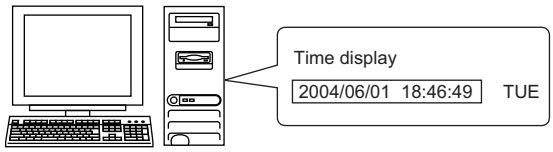
Message format

The following shows the message formats for the commands that are usable only when the microcomputer connection is used.

■Read clock data (N) command

The following shows an example of reading the clock data of the personal computer.

(The clock is set to 18:46:49 on Tuesday, June 1, 2004.)



Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) • Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

ENQ	Station No.		ESC	Com-mand	Sum Check		CR	LF
	0	0		N	C	E		
05H	30H (H)	30H (L)	1BH	4EH	43H (H)	45H (L)	0DH	0AH

This range Sum check

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

ENQ	Station No.		ESC	Com-mand	Sum Check		CR	LF
	0	0		N	C	9		
05H	30H (H)	30H (L)	1BH	4EH	43H (H)	39H (L)	0DH	0AH

This range Sum check

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) • Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

STX	Station No.		ESC	Com-mand	Following*1	ETX	Sum Check		CR	LF
	0	0		A			8	E		
02H	30H	30H	1BH	41H		03H	38H	45H	0DH	0AH
	(H)	(L)					(H)	(L)		

This range Sum check

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

STX	Station No.		ESC	Com-mand	Following*1	ETX	Sum Check		CR	LF
	0	0		A			8	C		
02H	30H	30H	1BH	41H		03H	38H	43H	0DH	0AH
	(H)	(L)					(H)	(L)		

This range Sum check

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Item	Message format
Response message during faulty communication (GT SoftGOT2000 → Host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

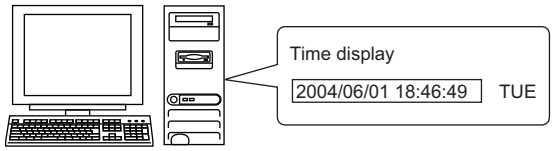
NAK	Station No.		Error code		CR	LF
	0	0	0	6		
15H	30H	30H	30H	36H	0DH	0AH
	(H)	(L)	(H)	(L)		

The above is a case where the sum check error (06H) has occurred.

■Set clock data (M) command

The following shows an example of setting the clock data of the personal computer.

(The clock will be set to 18:46:49 on Tuesday, June 1, 2004.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) • Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

ENQ	Station No.		ESC	Com-mand	Following*1	Sum Check		CR	LF
	0	0		M		9	A		
05H	30H (H)	30H (L)	1BH	4DH		39H (H)	41H (L)	0DH	0AH

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

ENQ	Station No.		ESC	Com-mand	Following*1	Sum Check		CR	LF
	0	0		M		9	5		
05H	30H (H)	30H (L)	1BH	4DH		39H (H)	35H (L)	0DH	0AH

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)

Response message during normal communication (GT SoftGOT2000 → Host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

ACK	Station No.		CR	LF
	0	0		
06H	30H (H)	30H (L)	0DH	0AH

Response message during faulty communication (GT SoftGOT2000 → Host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

NAK	Station No.		Error code		CR	LF
	0	0	0	6		
15H	30H (H)	30H (L)	30H (H)	36H (L)	0DH	0AH

The above is a case where the sum check error (06H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If the wrong day of the week is set by the clock data setting command, it will be corrected.

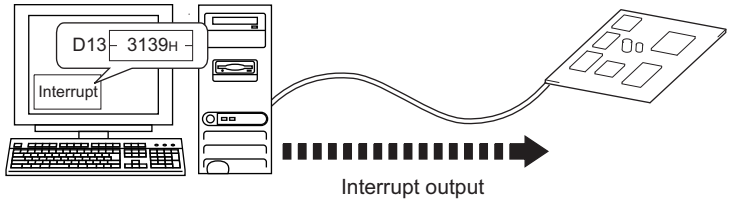
Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday will be set.

■Interrupt inquiry

The following shows an example of interrupt inquiry when data are written to the interrupt output devices (D13 and D14). (Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example: When the number of interrupt data bytes is 2 in format 11



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Request message (Host → GT SoftGOT2000)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) • Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

ENQ	Station No.		ESC	Com-mand	Sum Check		CR	LF
	0	0		I	C	9		
05H	30H	30H	1BH	49H	43H	39H	0DH	0AH
	(H)	(L)			(H)	(L)		

This range Sum check

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

ENQ	Station No.		ESC	Com-mand	Sum Check		CR	LF
	0	0		I	C	4		
05H	30H	30H	1BH	49H	43H	34H	0DH	0AH
	(H)	(L)			(H)	(L)		

This range Sum check

Item	Message format
Interrupt inquiry (GT SoftGOT2000 → Host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) (1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		ETX	Sum Check		CR	LF
	0	0		I	0	1	3	9		9	4		
02H	30H	30H	1BH	49H	30H	31H	33H	39H	03H	39H	44H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)		(H)	(L)		

This range Sum check is performed.

(2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		ETX	Sum Check		CR	LF
	0	0		I	0	1	3	1	3	9		F	9		
02H	30H	30H	1BH	49H	30H	31H	33H	31H	33H	39H	03H	46H	39H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

(3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		Output value 3		Output value 4		ETX	Sum Check		CR	LF
	0	0		I	0	1	A	A	5	5	3	1	3	9		E	7		
02H	30H	30H	1BH	49H	30H	31H	41H	41H	35H	35H	33H	31H	33H	39H	03H	45H	37H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

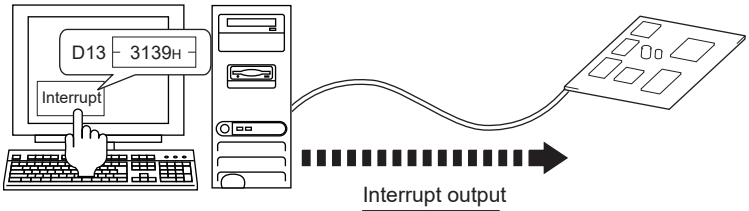
Sum check is performed in this range.

■Sending interrupt outputs

Writing data to the interrupt output devices (D13 and D14) sends the data to the host.

(The following shows a case where 3139H is written to D13 and AA55H is written to D14.)

Example) When [Interrupt Data Byte] in "Communication Detail Settings" is set to "2 byte" as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		ETX	Sum Check		CR	LF
	0	0		I	0	1	3	9		9	4		
02H	30H	30H	1BH	49H	30H	31H	33H	39H	03H	39H	44H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)		(H)	(L)		

This range Sum check is performed.

(2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		ETX	Sum Check		CR	LF
	0	0		I	0	2	3	1	3	9		F	9		
02H	30H	30H	1BH	49H	30H	32H	33H	31H	33H	39H	03H	46H	39H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

(3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog
When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		Output value 3		Output value 4		ETX	Sum Check		CR	LF
	0	0		I	0	4	A	A	5	5	3	1	3	9		E	7		
02H	30H	30H	1BH	49H	30H	34H	41H	41H	35H	35H	33H	31H	33H	39H	03H	45H	37H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		Output value 3		Output value 4		ETX	Sum Check		CR	LF
	0	0		I	0	4	3	1	3	9	A	A	5	5		E	7		
02H	30H	30H	1BH	49H	30H	34H	33H	31H	39H	39H	41H	41H	35H	35H	03H	45H	37H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

Point

Interrupt output

To disable interrupt outputs, turn on SM52 (Disable interrupt code output flag).

☞ Page 432 SM devices

When performing interrupt output in format 1, 2, 11, 14, or 15, set [Data Bit] to [8bit] in the [Communication Setup] dialog.

When [7bit] is set, data is output with ignoring the most significant bit (8th bit).

(Example: FFH→7FH)

☞ Page 76 [RS232]

Error code list

When the message format is 12 or 13 (SCHNEIDER EJH's memory link method (extended mode)), if there is an error, the error code is added to the response message.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
06H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message.
12H	Message length error The data length is greater than the maximum data length for GT SoftGOT2000.	
16H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
FAH	Address error The start device number of the read or write devices is outside the range.	• Review the contents of the message to transmit. • Check the data length of the message.(data length of the data section, etc.)
FBH	Exceeded number of points error The number of devices specified for reading and writing data has exceeded the number of devices specified for GT SoftGOT2000.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 422 Device data area
FCH	Message format error The format of the received message has error.	• Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
FFH	Timeout error There is no response from GT SoftGOT2000, or the specified station is nonexistent.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.

Precautions

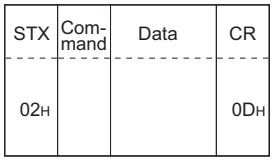
■Storage order for 32-bit data

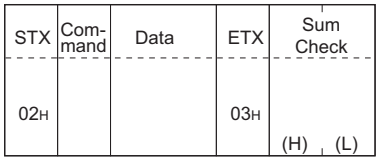
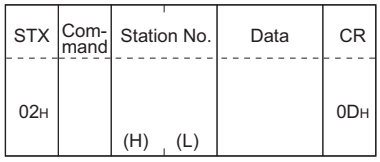
When 32-bit data is set to maintain program compatibility with the SCHNEIDER EJH's memory link method, set [32bit Storage:] to [HL Order] in the [Communication Setup] dialog.

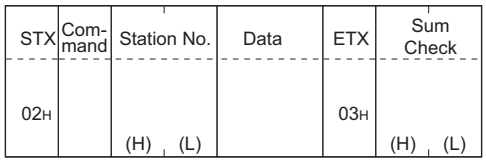
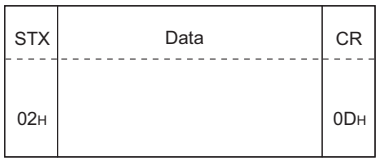
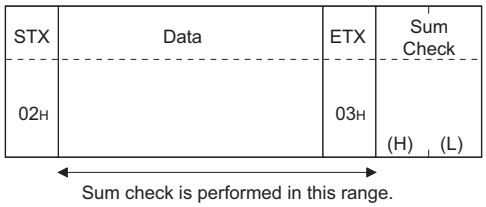
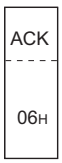
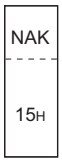
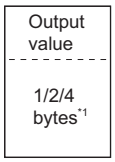
When [LH Order] is set, the higher-order bits and lower-order bits of 32-bit data are displayed or written in reverse order in GT SoftGOT2000.

Formats 14, 15 (GOT-F900 Series microcomputer connection)

Basic format of data communication

<table>
<tr><th>Item</th><th colspan="2">Message format</th></tr>
<tr><td>Request message (Host → GT SoftGOT2000)</td><td>(format 14: GOT-F900 Series microcomputer connection (format 1))
(1) w/out station No.
 

(2) w/station No.
 
</td><td>(format 15: GOT-F900 Series microcomputer connection (format 2))
(1) w/out station No.
 

(2) w/station No.
 
</td></tr>
<tr><td>Response message during normal communication (GT SoftGOT2000 → Host)</td><td>(1) When servicing a read command
(format 14: GOT-F900 Series microcomputer connection (format 1))
 
</td><td>(format 15: GOT-F900 Series microcomputer connection (format 2))
 
</td></tr>
<tr><td></td><td colspan="2">(2) When servicing a write command
 
</td></tr>
<tr><td>Response message during faulty communication (GT SoftGOT2000 → Host)</td><td colspan="2"> 
</td></tr>
<tr><td>Sending an interrupt output *2</td><td colspan="2"> 
</td></tr>
</table>

*1 Set the number of interrupt data bytes in the [Communication Setup] dialog.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 76 [RS232]

*2 To send an interrupt output, write data to the interrupt output devices (D13 and D14).
☞ Page 423 D devices

Details of data items in message format

Point

Data code during communication

The ASCII code is used for communication. (Excluding interrupt outputs)

■Control codes

Symbol	ASCII code	Description
STX	02H	Start of Text (start marker of message frame)
ETX	03H	End of Text (end marker of message frame)
EOT	04H	End of Transmission
ENQ	05H	Enquiry (inquiry start)
NAK	15H	Negative ACK (error response)
ACK	06H	Acknowledge (write completion response)
LF	0AH	Line Feed
CL	0CH	Clear
CR	0DH	Carriage Return

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 472 List of commands for formats 14, 15 (GOT-F900 series microcomputer connection)

■Station No.

This item is used by the host to identify the destination GT SoftGOT2000.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

GT SoftGOT2000 processes the messages that include the station number matching with the set value of [Host Add.: (0 to 31)] in the [Communication Setup] dialog.

(GT SoftGOT2000 ignores the messages that do not include the matched station number.)

For the settings in the [Communication Setup] dialog, refer to the following.

☞ Page 76 [RS232]

■Address

Specify the first device of consecutive devices that are used for reading and writing data.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For the range of accessible devices, refer to the following.

☞ Page 422 Device data area

■Bit pattern

Specifies the pattern of the bits to change.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 477 Multi-point write in bit units (3) command (without station No.), Multi-point write in bit units (D) command (with station No.)

■Write specification

Specifies how to change the data of the specified address by bit pattern.

(Setting range: 0 to 3)

Data notated in decimal is converted to a 1-digit ASCII code (Hex) and transmitted.

☞ Page 477 Multi-point write in bit units (3) command (without station No.), Multi-point write in bit units (D) command (with station No.)

■Number of bytes

Specify the number of bytes to be read/written from/to devices in one go. (Setting range: 0 to FFH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Number of points

Specifies the number of devices that are used for multi-point write in bits.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 480 Read clock data (6) command (without station No.) and the read clock data (G) command (with station No.)

☞ Page 481 Set clock data (5) command (w/out station No.), set clock data (F) command (w/station No.)

■Data

Specifies data (word unit) to be read or written to the specified device data.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

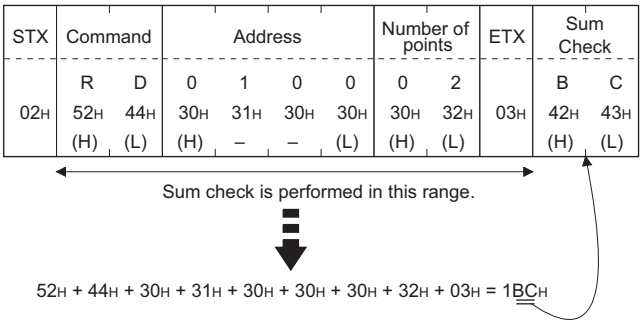
■Writing data

Specify data to be written to the specified device data.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Sum check code (for format 15: GOT-F900 series microcomputer connection (format 2) only)

The sum check code is obtained by converting the lower 1 byte (8 bits) of the result (sum), after having added the sum check target data as binary data, to 2-digit ASCII code (Hex).



List of commands for formats 14, 15 (GOT-F900 series microcomputer connection)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
0	30H	Batch read (without station No.)	Reads bit devices in byte units.	255bytes (2040 points)
			Reads word devices in byte units.	255bytes (127 points)
A	41H	Batch read (with station No.)	Reads bit devices in byte units.	255bytes (2040 points)
			Reads word devices in byte units.	255bytes (127 points)
1	31H	Batch write (without station No.)	Writes to bit devices in byte units.	255bytes (2040 points)
			Writes to word devices in byte units.	255bytes (127 points)
B	42H	Batch write (with station No.)	Writes to bit devices in byte units.	255bytes (2040 points)
			Writes to word devices in byte units.	255bytes (127 points)
3	33H	Multi-point write in bit units (without station No.)	Writes bit patterns (bit ON/OFF, inversion, direct specification) in 1-point units (8 bits for 1 point) to a specified device.	70bytes (560 points)
D	44H	Multi-point write in bit units (with station No.)		
4	34H	Fill command (w/out station No.)	Writes the same value to a range of specified devices.	-
E	45H	Fill command (w/ station No.)		
5	35H	Set clock data (w/out station No.)	Sets the clock data of the personal computer.	-
F	46H	Set clock data (w/ station No.)		
6	36H	Read clock data (without station No.)	Reads the clock data of the personal computer.	-
G	47H	Read clock data (with station No.)		

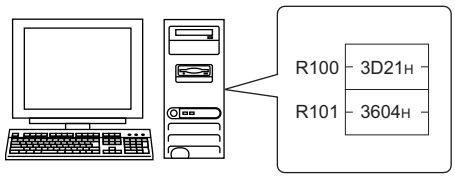
Message format

■Batch read (0) command (without station No.) and the batch read (A) command (with station No.)

- When reading a word device

The following shows an example of reading 4-byte data from virtual devices R100 and R101 for GT SoftGOT2000 (station No. 15).

(Assuming R100=3D21H, R101=3604H are stored.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		CR
	A	1	5	0	0	C	8	0	4	
02H	41H	31H (H)	35H (L)	30H (H)	30H –	43H –	38H (L)	30H (H)	34H (L)	0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Number of bytes		ETX	Sum Check	
	A	1	5	0	0	C	8	0	4		E	9
02H	41H	31H (H)	35H (L)	30H (H)	30H –	43H –	38H (L)	30H (H)	34H (L)	03H	45H (H)	39H (L)

Sum check is performed in this range.

Response message during normal communication (GT SoftGOT2000 → Host)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)		CR
	3	D	2	1	3	6	0	4	
02H	33H (H)	44H (L)	32H (H)	31H (L)	33H (H)	36H (L)	30H (H)	34H (L)	0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)		ETX	Sum Check	
	3	D	2	1	3	6	0	4		A	A
02H	33H (H)	44H (L)	32H (H)	31H (L)	33H (H)	36H (L)	30H (H)	34H (L)	03H	41H (H)	41H (L)

Sum check is performed in this range.

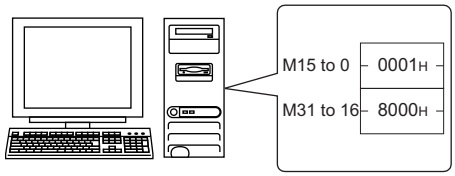
Response message during faulty communication (GT SoftGOT2000 → Host)

NAK
15H

• When reading a bit device

The following shows an example of reading four bytes of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		CR
	A	1	5	2	0	0	0	0	4	
02H	41H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)	0DH

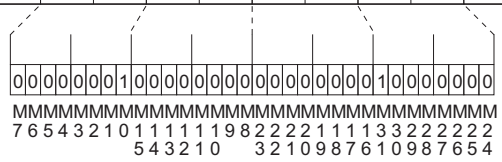
(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Number of bytes		ETX	Sum Check	
	A	1	5	2	0	0	0	0	4		D	0
02H	41H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)	03H	44H (H)	30H (L)

Sum check is performed in this range.

Response message during normal communication (GT SoftGOT2000 → Host)	(format 14: GOT-F900 Series microcomputer connection (format 1))

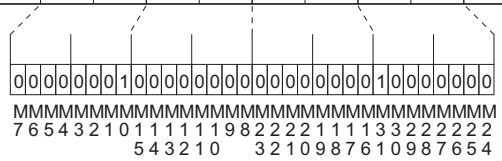
STX	Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)		CR
	0	1	0	0	0	0	8	0	
02H	30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)	0DH



(format 15: GOT-F900 Series microcomputer connection (format 2))

Sum check is performed in this range.

STX	Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)		ETX	Sum Check	
	0	1	0	0	0	0	8	0		8	C
02H	30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)	03H	38H (H)	43H (L)

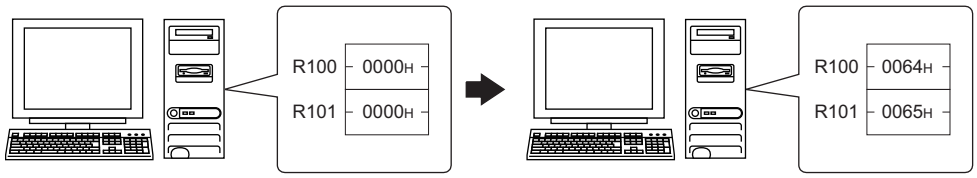


Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

■Batch write (1) command (without station No.) and the batch write (B) command (with station No.)

• When writing to a word device

The following shows an example of writing 0064H and 0065H to virtual devices R100 and R101 for GT SoftGOT2000 (station No. 15).



Before execution　　After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		Following*1	CR
	B	1	5	0	0	C	8	0	4		
02H	42H	31H	35H	30H	30H	43H	38H	30H	34H		0DH
		(H)	(L)	(H)	–	–	(L)	(H)	(L)		

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Number of bytes		Following*1	ETX	Sum Check	
	B	1	5	0	0	C	8	0	4			9	1
02H	42H	31H	35H	30H	30H	43H	38H	30H	34H		03H	39H	31H
		(H)	(L)	(H)	–	–	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

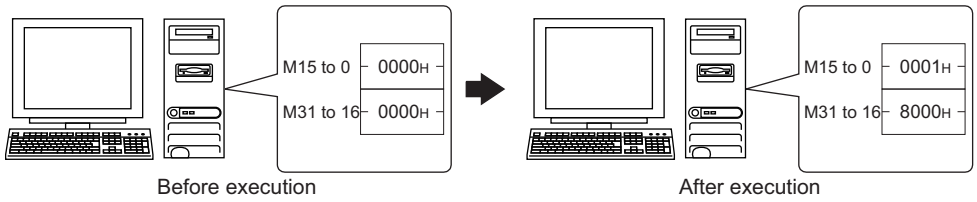
*1

Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)	
0	0	6	4	0	0	6	5
30H	30H	36H	34H	30H	30H	36H	35H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H

• When writing to a bit device

The following shows an example of writing 1 to virtual devices M0 and M31 for GT SoftGOT2000 (station No. 15).



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		Following*1	CR
	B	1	5	2	0	0	0	0	4		
02H	42H	31H	35H	32H	30H	30H	30H	30H	34H		0DH
		(H)	(L)	(H)	–	–	(L)	(H)	(L)		

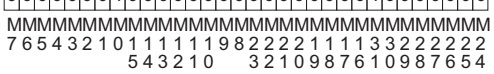
(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Byte Number		Following*1	ETX	Sum Check	
	B	1	5	2	0	0	0	0	4			5	A
02H	42H	31H	35H	32H	30H	30H	30H	30H	34H		03H	35H	41H
		(H)	(L)	(H)	–	–	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1

Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)	
0	1	0	0	0	0	8	0
30H	31H	30H	30H	30H	30H	38H	30H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)



Response message during normal communication (GT SoftGOT2000 → Host)	ACK 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

■Multi-point write in bit units (3) command (without station No.), Multi-point write in bit units (D) command (with station No.)

The following shows an example of turning off virtual device M31 and turning on M2038 for GT SoftGOT2000 (station No. 31).

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Number of points		Following*1	CR
	D	3	1	0	2		
02H	44H	33H (H)	31H (L)	30H (H)	32H (L)		0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Number of points		Following *1	ETX	Sum check	
	D	3	1	0	2			E	C
02H	44H	33H (H)	31H (L)	30H (H)	32H (L)		03H	45H (H)	43H (L)

Sum check is performed in this range.

*1

	Write specification 1	Address1				Bit pattern1		Write specification 2	Address2				Bit pattern2	
	1	2	0	0	3	8	0	0	2	0	F	E	4	0
	31H	32H (H)	30H –	30H –	33H (L)	38H (H)	30H (L)	30H	32H (H)	30H –	46 –	45H (L)	34H (H)	30H (L)

*2 (write specification1=1)

	MM32 10	MM32 98	MM22 76	MM22 54
Source data bit pattern	10101010	10000000		
Result	00101010			

*2 (write specification2=0)

	MM22 32	MM22 10	MM33 32	MM33 10
Source data bit pattern	10101010	01000000		
Result	11101010			

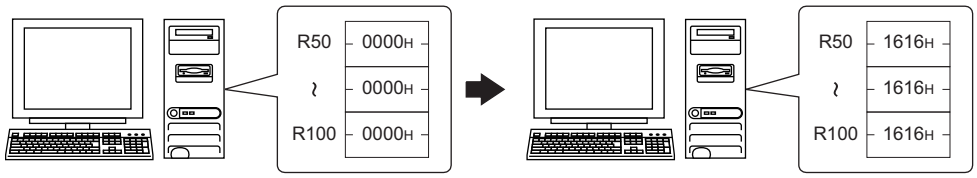
Response message during normal communication (GT SoftGOT2000 → Host)	ACK 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

*1 For write specification, specify how to change the data of specified address with bit pattern.

Write specification	Function	Description	Action example
0	ON specification	Bits set to "1" by the bit pattern are turned ON.	Original data1010 Bit pattern1100 Result1110
1	OFF specification	Bits set to "1" by the bit pattern are turned OFF.	Original data1010 Bit pattern1100 Result0010
2	Invert specification	Bits set to "1" by the bit pattern are inverted.	Original data1010 Bit pattern1100 Result0110
3	Write specification	The numerical values to write by the bit pattern are specified directly.	Original data1010 Bit pattern1100 Result1100

■Fill command (4) (w/out station No.), fill command (E) (w/station No.)

The following shows an example of writing 16 to virtual devices R50 to R100 for GT SoftGOT2000 (station No. 27).



Before execution　　After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Start address				End address				Write Data		CR
	E	2	7	0	0	6	4	0	0	C	9	1	6	
02H	45H	32H (H)	37H (L)	30H (H)	30H –	36H –	34H (L)	30H (H)	30H –	43H –	39H (L)	31H (H)	36H (L)	0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Start address				End address				Write Data		ETX	Sum Check	
	E	2	7	0	0	6	4	0	0	C	9	1	6		B	E
02H	45H	32H (H)	37H (L)	30H (H)	30H –	36H –	34H (L)	30H (H)	30H –	43H –	39H (L)	31H (H)	36H (L)	03H	42H (H)	45H (L)

Sum check is performed in this range.

Response message during normal communication (GT SoftGOT2000 → Host)	ACK 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

Point

• Start address/end address specification conditions

Specify addresses so that the start address is the same or less than the end address.

Error response occurs in the following cases:

The address to specify has the start address greater than the end address.

Either of the start address or end address exceeds the device range that can be specified.

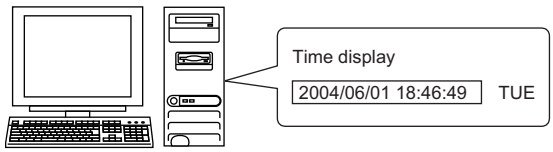
• Address specifying crossing over different devices

The start address and end address can be specified crossing over different devices.

■Read clock data (6) command (without station No.) and the read clock data (G) command (with station No.)

The following shows an example of reading the clock data from GT SoftGOT2000 (station No. 27).

(The clock is set to 18:46:49 on Tuesday, June 1, 2004.)

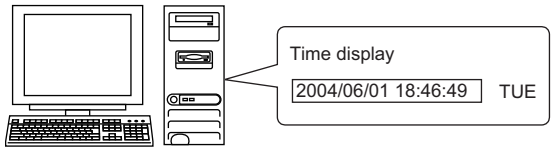


Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1)) STX: 02H Command: G (47H) Station No.: 27 (32H (H), 37H (L)) CR: 0DH (format 15: GOT-F900 Series microcomputer connection (format 2)) STX: 02H Command: G (47H) Station No.: 27 (32H (H), 37H (L)) ETX: 03H Sum Check: B3 (42H (H), 33H (L)) Sum check is performed in this range.
Response message during normal communication (GT SoftGOT2000 → Host)	(format 14: GOT-F900 Series microcomputer connection (format 1)) STX: 02H Year data: 04 (30H (H), 34H (L)) Month data: 06 (30H (H), 36H (L)) Day data: 01 (30H (H), 31H (L)) Hour data: 18 (31H (H), 38H (L)) Minute data: 46 (34H (H), 36H (L)) Second data: 49 (34H (H), 39H (L)) Day-of-week data: 02 (30H (H), 32H (L)) CR: 0DH (format 15: GOT-F900 Series microcomputer connection (format 2)) STX: 02H Year data: 04 (30H (H), 34H (L)) Month data: 06 (30H (H), 36H (L)) Day data: 01 (30H (H), 31H (L)) Hour data: 18 (31H (H), 38H (L)) Minute data: 46 (34H (H), 36H (L)) Second data: 49 (34H (H), 39H (L)) Day-of-week data: 02 (30H (H), 32H (L)) ETX: 03H Sum Check: D0 (44H (H), 30H (L)) Sum check is performed in this range.
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H

■Set clock data (5) command (w/out station No.), set clock data (F) command (w/station No.)

The following shows an example of setting the clock data for GT SoftGOT2000 (station No. 27).

(The clock will be set to 18:46:49 on Tuesday, June 1, 2004.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Year data		Month data		Day Data		Hour data		Minute data		Second data		Day-of-week data		CR
	F	2	7	0	4	0	6	0	1	1	8	4	6	4	9	0	2	
02H	46H	32H (H)	37H (L)	30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)	0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Following*1	ETX	Sum Check	
	F	2	7			7	F
02H	46H	32H (H)	37H (L)		03H	37H (H)	46H (L)

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)

Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H

Point

When a wrong day of the week has been set by the clock data setting command

If the wrong day of the week is set by the clock data setting command, it will be corrected.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

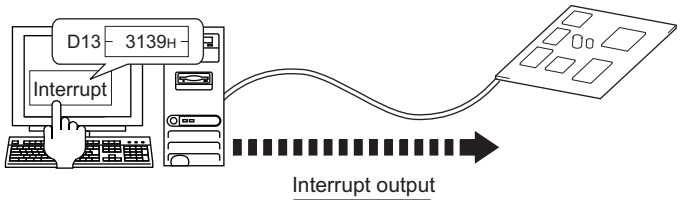
Tuesday will be set.

■Sending interrupt outputs

Writing data to the interrupt output devices (D13 and D14) sends the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in "Communication Detail Settings" is set to "2 byte" as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog Output value 1: 39H (2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H (3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog • When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog Output value 1: AAH, Output value 2: 55H, Output value 3: 31H, Output value 4: 39H • When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H, Output value 3: AAH, Output value 4: 55H

Point

Interrupt output

To disable interrupt outputs, turn on SM52 (Disable interrupt code output flag).

☞ Page 432 SM devices

When performing interrupt output in format 1, 2, 11, 14, or 15, set [Data Bit] to [8bit] in the [Communication Setup] dialog.

When [7bit] is set, data is output with ignoring the most significant bit (8th bit).

(Example: FFH→7FH)

☞ Page 76 [RS232]

Error code list

When faulty, the error code is stored in SD2.

For details of error code stored in SD2, the error contents, cause and measures, refer to the following.

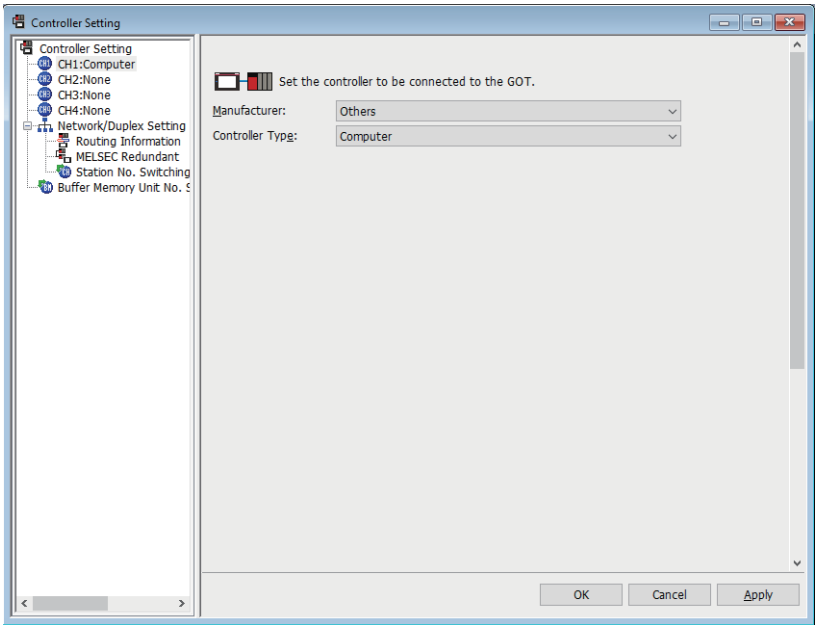
☞ Page 430 Details and actions for errors (error codes) stored into SD2

When an error other than those to be stored in SD2 occurs, at faulty, only the NAK response is executed.

Controller setting

Settings in GT Designer3

Configure the settings in GT Designer3 as shown below.



Item	Description	Range
[Manufacturer]	Select the manufacturer of the controller connected to GT SoftGOT2000.	[Others]
[Controller Type]	Select the type of the controller connected to GT SoftGOT2000.	[Computer]

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Settings in GT SoftGOT2000

To establish communication between GT SoftGOT2000 and the host by using the microcomputer connection (serial), configure the communication settings.

Refer to the following, and configure the communication settings in GT SoftGOT2000.

☞ Page 76 [RS232]

Precautions

Clock control in GT SoftGOT2000

The time setting and time notification set in GT Designer3 will be disabled.

To read or write the clock data between GT SoftGOT2000 and a host, use the dedicated command.

Placing GT SoftGOT2000 into offline mode

Before placing GT SoftGOT2000 into offline mode, stop data transmission between GT SoftGOT2000 and the host.

In offline mode, GT SoftGOT2000 cannot respond to the requests from the host.

Even after GT SoftGOT2000 switches back from offline mode, GT SoftGOT2000 may not communicate with the host until the communication timeout period of the host elapses.

Channels available in GT SoftGOT2000 (Multiple channels)

One of channels 1 to 4 is available for the microcomputer connection (serial).

Simultaneous use of other connections

The following connections cannot be used simultaneously.

Connection to TOSHIBA PLCs

Barcode reader connection

RFID connection

3.29 Microcomputer Connection (Ethernet)

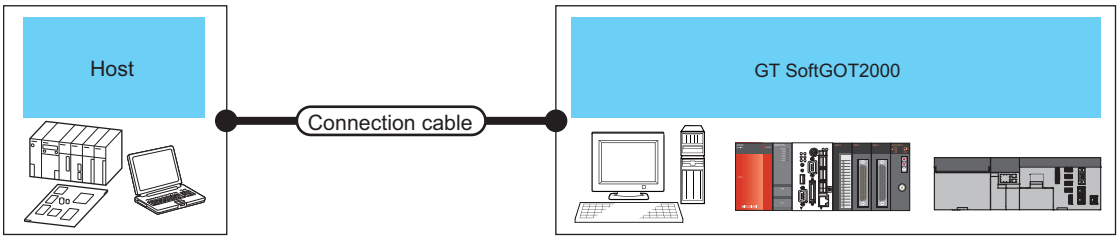
The microcomputer connection (Ethernet) is established between GT SoftGOT2000 and the host (such as a personal computer, microcomputer board, or PLC) via Ethernet, and allows the host to read/write data from/to the virtual devices of GT SoftGOT2000.

GT SoftGOT2000 can send an interrupt output to the host.

For the flow of the data processing, such as reading or writing data and interrupt output, refer to the following.

☞ Page 418 Microcomputer Connection (Serial)

System Configuration



Host		Connection cable*1	Maximum length	GT SoftGOT2000	Number of connectable GT SoftGOT2000 modules per host	Number of connectable hosts per GT SoftGOT2000 channel
Unit Type	Communication type					
Personal computer, microcomputer board, PLC, or other devices	Ethernet	Twisted pair cable	100 m(max. segment length)	Windows-compatible personal computer*2 PC CPU module MELIPC	UDP: Unlimited TCP: Unlimited	UDP: Unlimited TCP: 1

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 An Ethernet board/card is required.

☞ Page 485 Ethernet board/card

Ethernet board/card

Use the same Ethernet board or Ethernet card as the one used for connection to a MITSUBISHI ELECTRIC PLC.

☞ Page 234 Ethernet interface

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

📖User's manual of MELIPC

Connection cable

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

Device data area

The following shows the GT SoftGOT2000 virtual devices that are usable when the microcomputer connection (Ethernet) is used and the address specification values for each data format.
The address specification values for the GT SoftGOT2000 virtual devices vary by data format.*1

Virtual device*2			Address specification value				Refer to
Name	Device range (decimal)	Device type	Format 1, 2	Format 3, 4	Format 5	Format 6 to 9	
D	0 to 4095	Word	0 to 4095	8000 to 9FFFH	0000 to 0FFFH	D0 to D4095	☞ Page 487 D devices
R	0 to 4095	Word	4096 to 8191	0000 to 1FFFH	1000 to 1FFFH	R0 to R4095	☞ Page 491 R devices
L	0 to 2047	Bit	8192 to 8319	A000 to A0FFH	2000 to 207FH	L0 to L2047	☞ Page 492 L devices
M	0 to 2047	Bit	8320 to 8447	2000 to 20FFH	2080 to 20FFH	M0 to M2047	☞ Page 493 M devices
SD	0 to 15	Word	8448 to 8463	2100 to 211FH (3000 to 300DH)*3	2100 to 210FH	SD0 to SD15	☞ Page 494 SD devices
SM	0 to 63	Bit	8464 to 8467	2200 to 2207H	2110 to 2113H	SM0 to SM63	☞ Page 497 SM devices

*1 For the address specification method for each data format, refer to the following.
☞ Page 499 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3, 4: GOT-F900 Series microcomputer connection
Format 5: SCHNEIDER EJH's memory link method
Formats 6. 7: 4E frame
Formats 8, 9: QnA compatible 3E frame

*2 When reusing GOT900 Series project data
GOT-A900 Series virtual devices (D0 to 2047)
Can be used as they are without changing the assignments.
GOT-F900 Series virtual devices
Since some of the assigned virtual device values differ as indicated below, change the assignment using device batch edit of GT Designer3.
Refer to the following manual for device batch edit of GT Designer3.
GT Designer3 (GOT2000) Screen Design Manual

GOT2000 Series virtual devices	GOT-F900 Series virtual devices
D0 to 2047	—
D2048 to 4095	—
R0 to 4095	D0 to 4095
L0 to 2047	—
M0 to 2047	M0 to 2047
SD0 to 15	D8000 to 8015 GD0 to 6
SM0 to 63	M8000 to 8063

*3 Access to SD3 to 9 can also be made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

Point

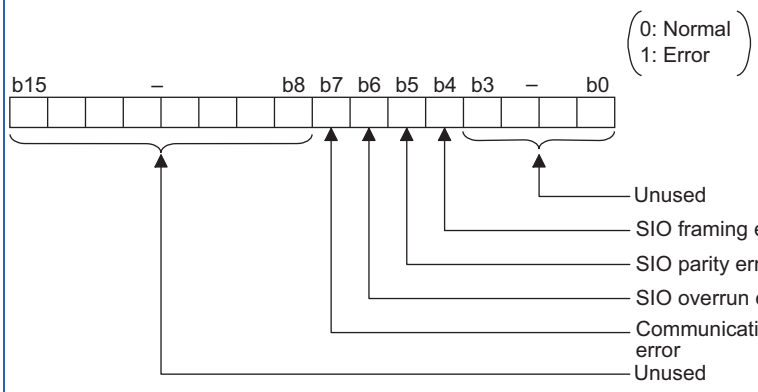
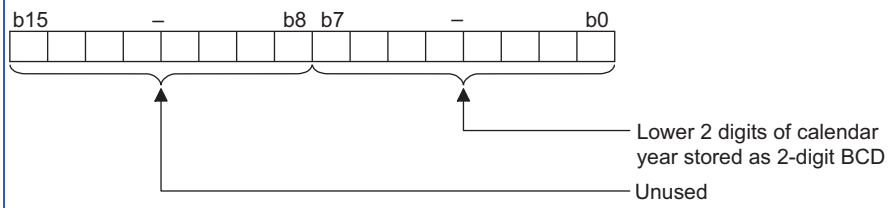
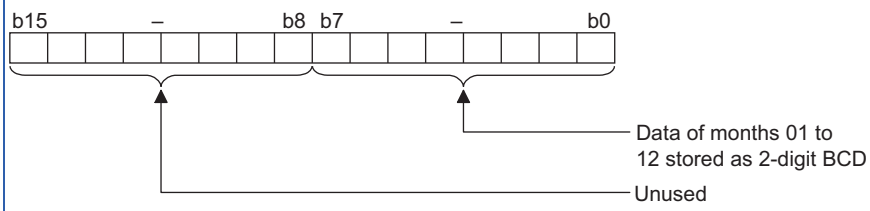
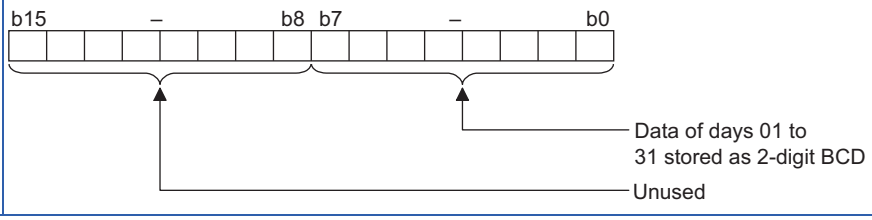
Values of the GT SoftGOT2000 virtual devices
Exiting GT SoftGOT2000 clears the values of the virtual devices to their defaults (bit devices: OFF, word devices: 0).
If you close and reopen a project, the stored values will be held.

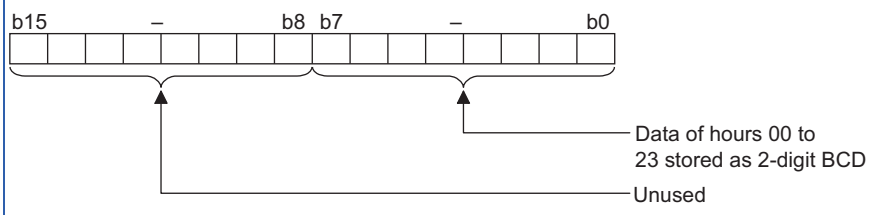
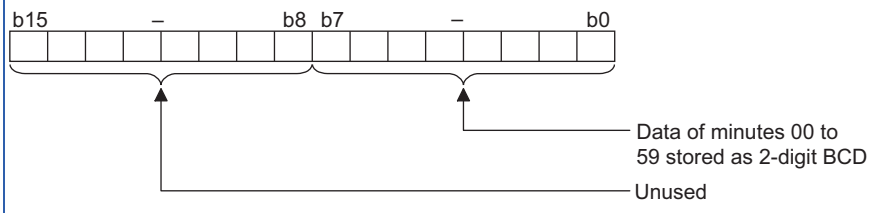
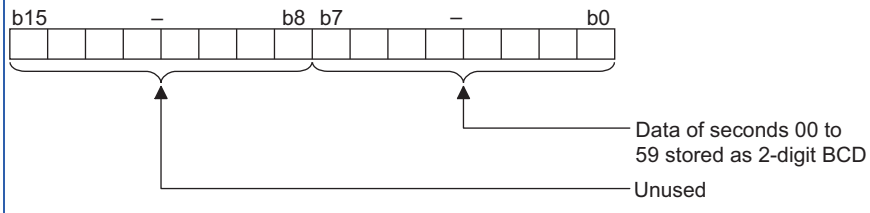
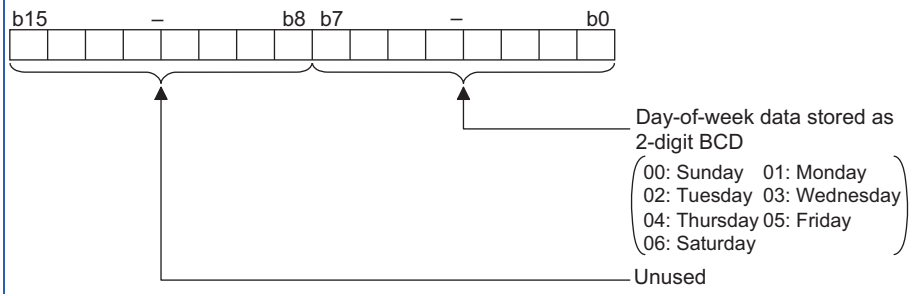
D devices

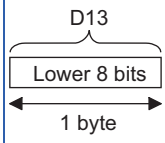
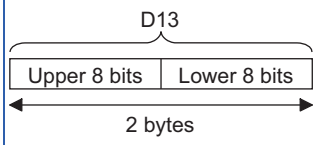
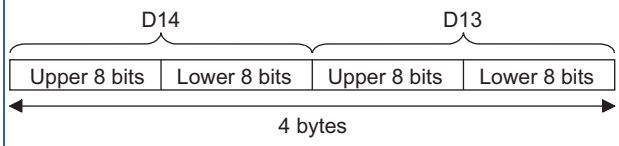
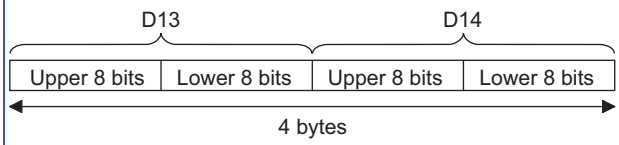
The D devices are word devices to store data, including the communication error data and clock data of GT SoftGOT2000. The user can also store data in the user area.

List of D devices

The following shows the D devices which are the virtual devices of GT SoftGOT2000.

Address	Description	Set side
D0 to 2	Unused	—
D3	Communication error status The communication error details of GT SoftGOT2000 are stored.  • b4 to 6 turn ON when an SIO error occurs, and turn OFF when an request message from the host is received successfully after the error occurrence. • b7 turns ON about 3 seconds after the host side DTR becomes OFF, and turns OFF when transmission is performed successfully to the host after the error occurrence.	System
D4	Clock data (year) 	
D5	Clock data (month) 	
D6	Clock data (day) 	

Address	Description	Set side
D7	Clock data (hour) 	System
D8	Clock data (minute) 	
D9	Clock data (second) 	
D10	Clock data (day of the week) 	
D11, D12	Unused	—

Address	Description	Set side
D13 D14	Interrupt output If you write data to D13 and D14 by using a touch switch or other methods in GT SoftGOT2000, the written data will be sent to the host (Interrupt output).*1*2 Set the amount of data (number of bytes) to be sent with [Interrupt Data Byte] in the [Communication Setup] dialog. ☞ Page 83 [Ethernet] • Output value when [1Byte] is set for [Interrupt Data Byte] in the [Communication Setup] dialog  • Output value when [2Byte] is set for [Interrupt Data Byte] in the [Communication Setup] dialog  • Output value when [4Byte] is set for [Interrupt Data Byte] in the [Communication Setup] dialog*3 (1) When [LH Order] is set for [32bit Storage:] in the [Communication Setup] dialog  (2) When [HL Order] is set for [32bit Storage:] in the [Communication Setup] dialog  	User
D15 to 19	Unused	—
D20 to 2031	User area	User
D2032 to 2034	Unused	—
D2035	1-second binary counter The counter is incremented every second after GT SoftGOT2000 is started. (The time elapsed after monitoring is started is stored in seconds.) Data are stored in binary format.	System
D2036 to 4095	User area	User

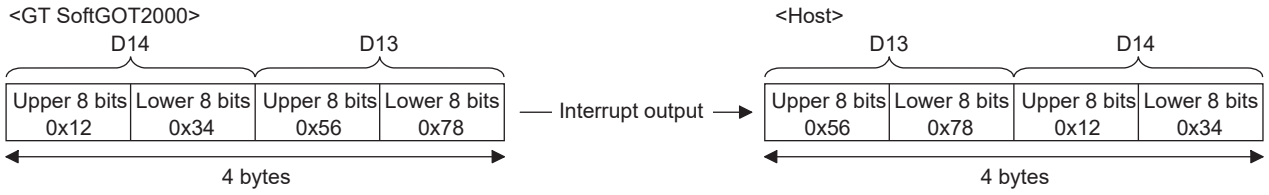
*1 After writing data, the interrupt data is output within a period of 1 to 10 ms.

*2 When data are written to D13 and D14 from the host side, interrupt output is not performed.

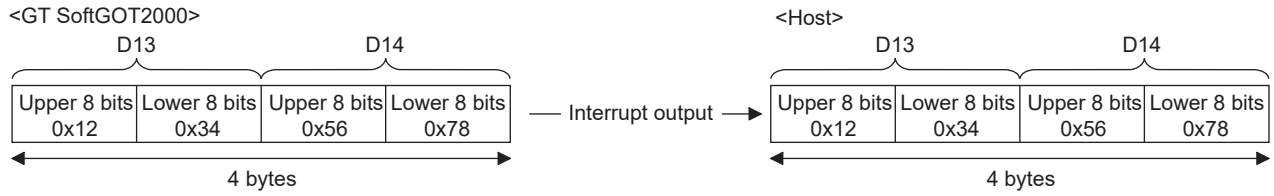
*3 When 32-bit data are written to D13 and D14, the values are output to the host side regardless of the setting for [32bit Storage] in the [Communication Setup] dialog.

Example) When outputting 0x12345678 with unsigned 32-bit binary data

· LH Order



· HL Order



Point

• The side where virtual devices are set

System: Set on the system side.

User: The user sets values in the virtual devices (in response to the requests from the host or by using a touch switch or other methods in GT SoftGOT2000).

• Interrupt output (D13, D14)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Address	Address specification value				
	Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
D0	0	8000H 8001H		0000H	D0
D1	1	8002H 8003H		0001H	D1
:	:	:	:	:	:
D4095	4095	9FFEH 9FFFH		0FFFH	D4095

*1 For the address specification method for each data format, refer to the following.

☞ Page 499 Data format type and application

Formats 1, 2: GOT-A900 Series microcomputer connection

Formats 3, 4: GOT-F900 Series microcomputer connection

Format 5: SCHNEIDER EJH's memory link method

Formats 6. 7: 4E frame

Formats 8, 9: QnA compatible 3E frame

R devices

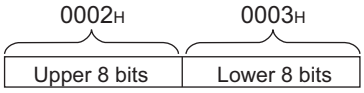
The R devices are word devices into which user data are stored.

All of these devices can be used as a user area.

List of R devices and differences in address specification by data format

The following shows the R devices which are the virtual devices of GT SoftGOT2000.

The address specification values different depending on the data format are also given below.*1

Address	Address specification value				
	Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
R0	4096	0000H 0001H		1000H	R0
R1	4097	0002H 0003H		1001H	R1
:	:	:	:	:	:
R4095	8191	1FFEH 1FFFH		1FFFH	R4095

*1 For the address specification method for each data format, refer to the following.

☞ Page 499 Data format type and application

Formats 1, 2: GOT-A900 Series microcomputer connection

Formats 3, 4: GOT-F900 Series microcomputer connection

Format 5: SCHNEIDER EJH's memory link method

Formats 6. 7: 4E frame

Formats 8, 9: QnA compatible 3E frame

L devices

The L devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of L devices and differences in address specification by data format

The following shows the L devices which are the virtual devices of GT SoftGOT2000.

The address specification values different depending on the data format are also given below.*1

Address								Address specification value				
b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
									When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON	When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF		
L7	L6	L5	L4	L3	L2	L1	L0	8192	A000H	A001H	2000H	Same as address column on left*2
L15	L14	L13	L12	L11	L10	L9	L8		A001H	A000H		
L23	L22	L21	L20	L19	L18	L17	L16	8193	A002H	A003H	2001H	
L31	L30	L29	L28	L27	L26	L25	L24		A003H	A002H		
:								:	:	:	:	
L2039	L2038	L2037	L2036	L2035	L2034	L2033	L2032	8319	A0FEH	A0FFH	207FH	
L2047	L2046	L2045	L2044	L2043	L2042	L2041	L2040		A0FFH	A0FEH		

*1 For the address specification method for each data format, refer to the following.
☞ Page 499 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3, 4: GOT-F900 Series microcomputer connection
Format 5: SCHNEIDER EJH's memory link method
Formats 6. 7: 4E frame
Formats 8, 9: QnA compatible 3E frame

*2 For reading or writing data in word units, specify the addresses in 16-point units. (Example: L0, L16, L32, and others)

M devices

The M devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of M devices and differences in address specification by data format

The following shows the M devices which are the virtual devices of GT SoftGOT2000.

The address specification values different depending on the data format are also given below.*1

Address								Address specification value				
b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
									When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON	When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF		
M7	M6	M5	M4	M3	M2	M1	M0	8320	2000H	2001H	2080H	Same as address column on left*2
M15	M14	M13	M12	M11	M10	M9	M8		2001H	2000H		
M23	M22	M21	M20	M19	M18	M17	M16	8321	2002H	2003H	2081H	
M31	M30	M29	M28	M27	M26	M25	M24		2003H	2002H		
:								:	:	:	:	
M2039	M2038	M2037	M2036	M2035	M2034	M2033	M2032	8447	20FEH	20FFH	20FFH	
M2047	M2046	M2045	M2044	M2043	M2042	M2041	M2040		20FFH	20FEH		

*1 For the address specification method for each data format, refer to the following.
☞ Page 499 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3, 4: GOT-F900 Series microcomputer connection
Format 5: SCHNEIDER EJH's memory link method
Formats 6. 7: 4E frame
Formats 8, 9: QnA compatible 3E frame

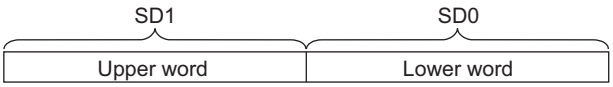
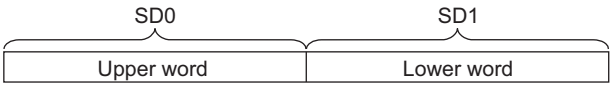
*2 For reading or writing data in word units, specify the addresses in 16-point units. (Example: M0, M16, M32, and others)

SD devices

The SD devices are word devices to store data, including the communication error codes and clock data of GT SoftGOT2000.

List of SD devices

The following shows the SD devices which are the virtual devices of GT SoftGOT2000.

Address	Description	Set side
SD0 SD1	100ms counter (32bits) The counter is incremented by 100 ms after GT SoftGOT2000 is started. (The time elapsed after GT SoftGOT2000 is started is stored in increments of 100 ms.) (1) When [LH Order] is set for [32bit Storage:] in the [Communication Setup] dialog The lower and upper bits are stored in SD0 and SD1 respectively.  (2) When [HL Order] is set for [32bit Storage:] in the [Communication Setup] dialog The upper and lower bits are stored in SD0 and SD1 respectively. 	System
SD2*1	Communication error status An error data (error code) occurred during communication is stored. • Host station (Communication error in the destination GT SoftGOT2000) 0: No error 1: Parity error 2: Framing error 3: Overrun error 4: Communication message error 5: Command error 6: Clock data setting error	
SD3	Clock data (second) Second data of 00 to 59 is stored.	
SD4	Clock data (minute) Minute data of 00 to 59 is stored.	
SD5	Clock data (hour) Hour data of 00 to 23 is stored.	
SD6	Clock data (day) Day data of 00 to 31 is stored.	
SD7	Clock data (month) Month data of 01 to 12 is stored.	
SD8	Clock data (year) The last two digits of four-digit year data are stored.	
SD9	Clock data (day of the week) Day-of-the-week data is stored. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday	
SD10 to 15	Unused	—

*1 For details and corrective actions for the errors (error codes) that are stored into SD2, refer to the following:
☞ Page 495 Details and actions for errors (error codes) stored into SD2

Point

The side where virtual devices are set

System: Set on the system side.

User: The user sets values in the virtual devices (in response to the requests from the host or by using a touch switch or other methods in GT SoftGOT2000).

Details and actions for errors (error codes) stored into SD2

Error code	Description	Action
0	No error	—
1	Parity error The parity bit does not match.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Configure the same transmission settings in GT SoftGOT2000 and on the host.
2	Framing error The data bit and/or stop bit are not correct.	
3	Overrun error Before GT SoftGOT2000 finishes processing the received data, GT SoftGOT2000 has received new data from the host.	• Check the settings of the [Communication Setup] dialog. • Decrease the transmission speed.
4	Communication message error EXT/CR could not be found before the upper limit of the receive buffer was exceeded.	• Check the communication cable and communication module attachment. • Check the settings of the [Communication Setup] dialog. • Review the contents of the message to transmit.
5	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message.
6	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Address	Address specification value				
	Format 1, 2	Format 3, 4*2		Format 5	Format 6 to 9
SD0	8448	2100H 2101H	2100H 2101H Upper 8 bits Lower 8 bits	2100H	SD0
SD1	8449	2102H 2103H	2102H 2103H Upper 8 bits Lower 8 bits	2101H	SD1
SD2	8450	2104H 2105H	2104H 2105H Upper 8 bits Lower 8 bits	2102H	SD2
SD3	8451	2106H (3000H) 2107H (3001H)	2106H(3000H) 2107H(3001H) Upper 8 bits Lower 8 bits	2103H	SD3
SD4	8452	2108H (3002H) 2109H (3003H)	2108H(3002H) 2109H(3003H) Upper 8 bits Lower 8 bits	2104H	SD4
SD5	8453	210AH (3004H) 210BH (3005H)	210AH(3004H) 210BH(3005H) Upper 8 bits Lower 8 bits	2105H	SD5
SD6	8454	210CH (3006H) 210DH (3007H)	210CH(3006H) 210DH(3007H) Upper 8 bits Lower 8 bits	2106H	SD6
SD7	8455	210EH (3008H) 210FH (3009H)	210EH(3008H) 210FH(3009H) Upper 8 bits Lower 8 bits	2107H	SD7
SD8	8456	2110H (300AH) 2111H (300BH)	2110H(300AH) 2111H(300BH) Upper 8 bits Lower 8 bits	2108H	SD8
SD9	8457	2112H (300CH) 2113H (300DH)	2112H(300CH) 2113H(300DH) Upper 8 bits Lower 8 bits	2109H	SD9

*1 For the address specification method for each data format, refer to the following.
☞ Page 499 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3, 4: GOT-F900 Series microcomputer connection
Format 5: SCHNEIDER EJH's memory link method
Formats 6. 7: 4E frame
Formats 8, 9: QnA compatible 3E frame

*2 SD3 to 9 correspond to GD0 to 6 on the GOT-F900 Series.
Access to SD3 to 9 can be also made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

SM devices

The SM devices are bit devices into which interrupt outputs and clock data that turn ON or OFF in 1-second cycles are stored.

List of SM devices

The following shows the SM devices which are the virtual devices of GT SoftGOT2000.

<table>
<tr><th>Address</th><th>Description</th><th>Set side</th></tr>
<tr><td>SM0 to 49</td><td>Interrupt output
If you change the ON or OFF status of any device in the range from SM0 to SM49 by using a touch switch or other methods in GT SoftGOT2000, an interrupt code will be sent to the host as shown below (Interrupt output).*1*2
Set the amount of data (number of bytes) to be sent with [Interrupt Data Byte] in the [Communication Setup] dialog.
☞ Page 83 [Ethernet]
<table>
<tr><th>Address</th><th>Event type</th><th>Interrupt code</th></tr>
<tr><td rowspan="2">SM0</td><td>Changed from OFF to ON</td><td>50H</td></tr>
<tr><td>Changed from ON to OFF</td><td>51H</td></tr>
<tr><td rowspan="2">SM1</td><td>Changed from OFF to ON</td><td>52H</td></tr>
<tr><td>Changed from ON to OFF</td><td>53H</td></tr>
<tr><td rowspan="2">SM2</td><td>Changed from OFF to ON</td><td>54H</td></tr>
<tr><td>Changed from ON to OFF</td><td>55H</td></tr>
<tr><td>:</td><td>:</td><td>:</td></tr>
<tr><td rowspan="2">SM48</td><td>Changed from OFF to ON</td><td>B0H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B1H</td></tr>
<tr><td rowspan="2">SM49</td><td>Changed from OFF to ON</td><td>B2H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B3H</td></tr>
</table></td><td>User</td></tr>
<tr><td>SM50</td><td>1-second cycle clock
Turns ON and OFF in 1-second cycles.
</td><td rowspan="2">System</td></tr>
<tr><td>SM51</td><td>2-second cycle clock
Turns ON and OFF in 2-second cycles.
</td></tr>
<tr><td>SM52</td><td>Interrupt code output disable flag
Enables or disables the output of the interrupt code and special interrupt code.
OFF: Output enabled, ON: Output disabled
When the output is set to be disabled, no interrupt data are output to the host.
(Relevant devices: D13, D14, SM0 to 49)</td><td>User</td></tr>
<tr><td>SM53 to 63</td><td>Unused</td><td>—</td></tr>
</table>

*1 After the ON or OFF state is changed, the interrupt data is output within a period of 1 to 10 ms.

*2 When the ON or OFF state of SM0 to 49 is changed from the host side, interrupt output is not performed.

Point

• The side where virtual devices are set

System: Set on the system side.

User: The user sets values in the virtual devices (in response to the requests from the host or by using a touch switch or other methods in GT SoftGOT2000).

• Interrupt outputs (SM0 to 49)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Address								Address specification value				
b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
									When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON	When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF		
SM7	SM6	SM5	SM4	SM3	SM2	SM1	SM0	8464	2200H	2201H	2110H	*2*3
SM15	SM14	SM13	SM12	SM11	SM10	SM9	SM8		2201H	2200H		
SM23	SM22	SM21	SM20	SM19	SM18	SM17	SM16	8465	2202H	2203H	2111H	
SM31	SM30	SM29	SM28	SM27	SM26	SM25	SM24		2203H	2202H		
SM39	SM38	SM37	SM36	SM35	SM34	SM33	SM32	8466	2204H	2205H	2112H	
SM47	SM46	SM45	SM44	SM43	SM42	SM41	SM40		2205H	2204H		
Unused			SM52	SM51	SM50	SM49	SM48	8467	2206H	2207H	2113H	
Unused								—	—	—		

*1 For the address specification method for each data format, refer to the following.
☞ Page 499 Data format type and application
Formats 1, 2: GOT-A900 Series microcomputer connection
Formats 3, 4: GOT-F900 Series microcomputer connection
Format 5: SCHNEIDER EJH's memory link method
Formats 6. 7: 4E frame
Formats 8, 9: QnA compatible 3E frame

*2 In formats 6 to 9, values are specified within a range of SM0 to 52.

*3 For reading or writing data in word units, specify the addresses in 16-point units. (Example: SM0, SM16, SM32, and others)

Data format type and application

Communication is possible using any of the data formats shown below.

Formats 1, 2 (GOT-A900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-A900 series.

Type	Name	Description	Refer to
Format 1	GOT-A900 series microcomputer connection (ASCII)	This format is used when one host and one GT SoftGOT2000 module are connected. The data format is ASCII.	☞ Page 500 Formats 1, 2 (GOT-A900 Series microcomputer connection)
Format 2	GOT-A900 series microcomputer connection (Binary)	This format is used when one host and one GT SoftGOT2000 module are connected. The data format is Binary.	

Formats 3, 4 (GOT-F900 series microcomputer connection)

This is the compatible message format with when a microcomputer connection is established with the GOT-F900 Series.

Type	Name	Description	Refer to
Format 3	GOT-F900 series microcomputer connection (ASCII)	This format is used to establish a 1:1 or m:n connection between the host and GT SoftGOT2000. The data format is ASCII.	☞ Page 513 Formats 3, 4 (GOT-F900 Series microcomputer connection)
Format 4	GOT-F900 series microcomputer connection (Binary)	This format is used to establish a 1:1 or m:n connection between the host and GT SoftGOT2000. The data format is Binary.	

Format 5 (SCHNEIDER EJH's memory link method)

This is the message format compatible with the protocol of the SCHNEIDER EJH's memory link method.

Type	Name	Description	Refer to
Format 5	SCHNEIDER EJH's memory link method	This is the basic format of the SCHNEIDER EJH's memory link method.	☞ Page 527 Format 5 (SCHNEIDER EJH's (formerly Digital Electronics Corporation's) memory link method)

Formats 6, 7 (4E frame)

This is the compatible message format with when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

Type	Name	Description	Refer to
Format 6	4E frame (ASCII)	This is the basic format of the MC protocols. The data format is ASCII.	☞ Page 531 Formats 6, 7 (4E frame)
Format 7	4E frame (Binary)	This is the basic format of the MC protocols. The data format is Binary.	

Formats 8, 9 (QnA compatible 3E frame)

This is the compatible message format with when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

Type	Name	Description	Refer to
Format 8	QnA compatible 3E frame (ASCII)	This is the basic format of the MC protocols. The data format is ASCII.	☞ Page 543 Formats 8, 9 (QnA compatible 3E frame)
Format 9	QnA compatible 3E frame (Binary)	This is the basic format of the MC protocols. The data format is Binary.	

How to set data format

Set the data format in the [Communication Setup] dialog.

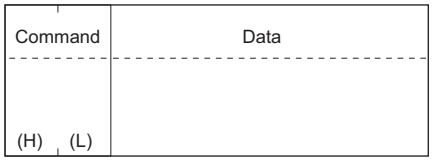
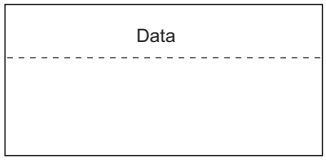
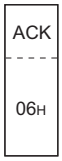
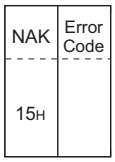
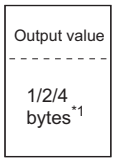
For details of the data format setting method, refer to the following.

☞ Page 83 [Ethernet]

Formats 1, 2 (GOT-A900 Series microcomputer connection)

The following describes the message formats 1 and 2 (GOT-A900 Series microcomputer connection).

Basic format of data communication

Item	Message format
Request message (Host → GT SoftGOT2000)	
Response message during normal communication (GT SoftGOT2000 → Host)	(1) During processing of read commands  (2) During processing of write commands 
Response message during faulty communication (GT SoftGOT2000 → Host)	
During interrupt output *2	

*1 Set the number of interrupt data bytes in the [Communication Setup] dialog.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 83 [Ethernet]

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 487 D devices

Details of data items in message format

Point

Data code during communication
Communication of the format 1 is performed in ASCII code. (excluding interrupt output)
Communication of the format 2 is performed in Binary code.

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.
The command is converted to a 2-byte ASCII code, and transmitted from the higher-order byte.
For details of the commands that can be used, refer to the following.
☞ Page 502 List of commands for format 1 (GOT-A900 series microcomputer connection (ASCII))
☞ Page 502 List of commands for format 2 (GOT-A900 series microcomputer connection (Binary))

■Address

Specifies the head No. of the device data to be read or written.
The data notated in decimal in format 1 is converted to a 4-byte ASCII code and transmitted from the higher-order byte.
The data notated in decimal in format 2 is converted to a 2-byte binary code and transmitted from the higher-order byte.
For the range of accessible devices, refer to the following.
☞ Page 486 Device data area

■Number of points

Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)
The data notated in decimal in format 1 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.
The data notated in decimal in format 2 is converted to a 1-byte binary code and transmitted.

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.
The data notated in decimal in format 1 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.
The data notated in decimal in format 2 is converted to a 1-byte binary code and transmitted.
☞ Page 509 Read clock data (TR) command
☞ Page 510 Set clock data (TS) command

■Data

Specifies the data to read from or write to the specified device data. (word unit)
The data notated in hexadecimal in format 1 is converted to a 4-byte ASCII code and transmitted from the higher-order byte.
The data notated in hexadecimal in format 2 is converted to a 2-byte binary code and transmitted from the higher-order byte.

■Error code

This is the response message at faulty communication appended with error contents. Error code is transmitted in 1 byte.
For the error codes, refer to the following.
☞ Page 512 Error code list

List of commands for format 1 (GOT-A900 series microcomputer connection (ASCII))

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
RD	52H 44H	Batch read in word units	Reads bit devices in 16-point units.	99 words (1584 points)
			Reads word devices in 1-point units.	99 points
WD	57H 44H	Batch write in word units	Writes to bit devices in 16-point units.	99 words (1584 points)
			Writes to word devices in 1-point units.	99 points
RR	52H 52H	Random read in word units *1	Reads multiple different bit devices in 16-point units.	256 words (4096 points)
			Reads multiple different word devices in 1-point units.	256 points
RW	52H 57H	Random write in word units *1	Writes to multiple different word devices in 16-point units.	128 words (2048 points)
			Writes to multiple different word devices in 1-point units.	128 points
TR	54H 52H	Read clock data	Reads the clock data of the personal computer.	—
TS	54H 53H	Set clock data	Sets the clock data of the personal computer.	—

*1 Mixed specification of bit devices and word devices is also possible.

List of commands for format 2 (GOT-A900 series microcomputer connection (Binary))

Command	Command name	Description	Max. number of points processed
RD	Batch read in word units	Reads bit devices in 16-point units.	255 words (4080 points)
		Reads word devices in 1-point units.	255 points
WD	Batch write in word units	Writes to bit devices in 16-point units.	255 words (4080 points)
		Writes to word devices in 1-point units.	255 points
RR	Random read in word units *1	Reads multiple different bit devices in 16-point units.	512 words (8192 points)
		Reads multiple different word devices in 1-point units.	512 points
RW	Random write in word units *1	Writes to multiple different word devices in 16-point units.	256 words (4096 points)
		Writes to multiple different word devices in 1-point units.	256 points
TR	Read clock data	Reads the clock data of the personal computer.	—
TS	Set clock data	Sets the clock data of the personal computer.	—

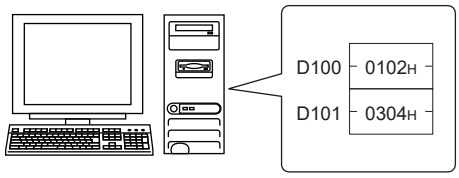
*1 Mixed specification of bit devices and word devices is also possible.

Message Formats

■Batch read in word units (RD) command

• When reading a word device

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

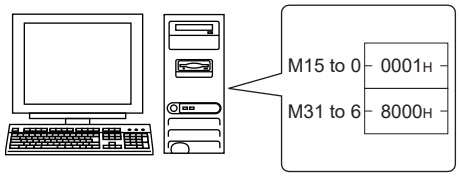


Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: R (52H) D (44H) Address: 0 (30H) 1 (31H) 0 (30H) 0 (30H) (H) — — (L) Number of points: 0 (30H) 2 (32H) (H) (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: R D Address: 00H 64H Number of points: 02H
Response message during normal communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Data 1 (D100): 0 (30H) 1 (31H) 0 (30H) 2 (32H) (H) — — (L) Data 2 (D101): 0 (30H) 3 (33H) 0 (30H) 4 (34H) (H) — — (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Data 1 (D100): 01H 02H Data 2 (D101): 03H 04H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When reading a bit device

The following shows an example of reading the two points of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

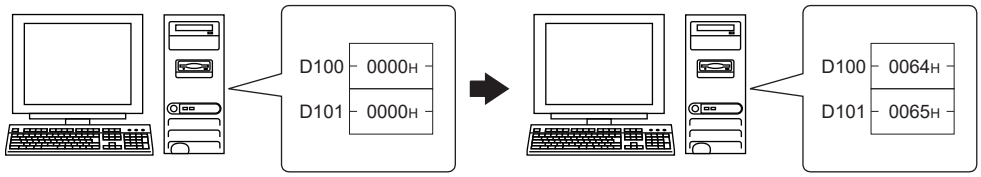


Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: R D = 52H 44H (H) (L) Address: 8 3 2 0 = 38H 33H 32H 30H (H) – – (L) Number of points: 0 2 = 30H 32H (H) (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: R D = 83H 20H Address Number of points: 02H
Response message during normal communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Data 1 (M15 to 0): 0 0 0 1 = 30H 30H 30H 31H (H) – – (L) Data 2 (M31 to 16): 8 0 0 0 = 38H 30H 30H 30H (H) – – (L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 3 3 2 2 2 2 2 2 2 2 2 2 1 1 1 1 5 4 3 2 1 0 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6 (format 2: GOT-A900 Series microcomputer connection (Binary)) Data 1 (M15 to 0): 00H 01H Data 2 (M31 to 16): 80H 00H 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 3 3 2 2 2 2 2 2 2 2 2 2 1 1 1 1 5 4 3 2 1 0 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Batch write in word units (WD) command

• When writing to a word device

The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.

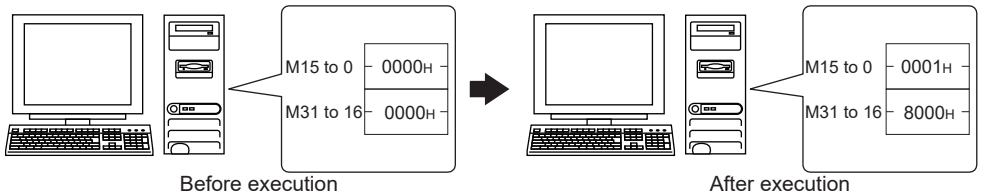


Before execution　　After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: W D (57H 44H) Address: 0 1 0 0 (30H 31H 30H 30H) Number of points: 0 2 (30H 32H) Data 1(D100): 0 0 6 4 (30H 30H 36H 34H) Data 2 (D101): 0 0 6 5 (30H 30H 36H 35H) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: W D Address: 00H 64H Number of points: 02H Data1 (D100): 00H 64H Data 2 (D101): 00H 65H
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

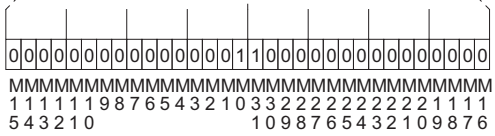
• When writing to a bit device

The following shows an example of writing "1"s to virtual devices M0 and M31.



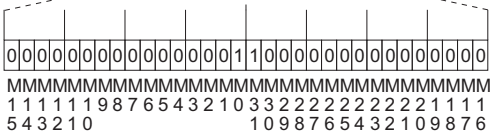
Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII))

Command		Address				Number of points		Data 1 (M15 to 0)				Data 2 (M31 to 16)			
W	D	8	3	2	0	0	2	0	0	0	1	8	0	0	0
57H	44H	38H	33H	32H	30H	30H	32H	30H	30H	30H	31H	38H	30H	30H	30H
(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)



(format 2: GOT-A900 Series microcomputer connection (Binary))

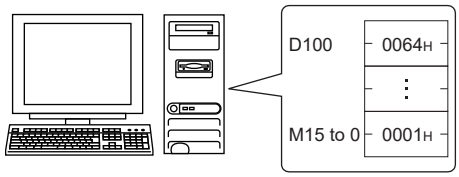
Command		Address		Number of points	Data 1 (M15 to 0)		Data 2 (M31 to 16)	
W	D	20H	80H	02H	00H	01H	80H	00H



Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random read in word units (RR) command

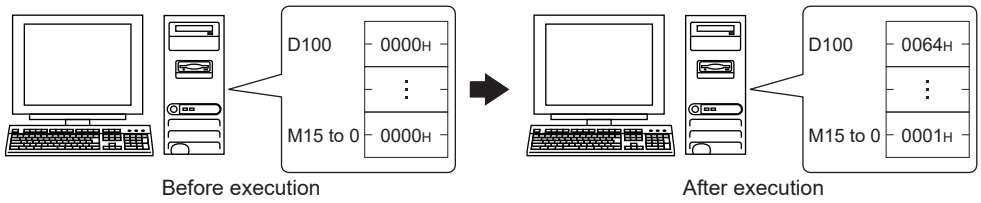
The following shows an example of reading the two points of the virtual devices D100 and M0 to M15.
(Assuming D100=0064H, M0=1are stored.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: R R (52H 52H (H) (L)); Address 1: 0 1 0 0 (30H 31H 30H 30H (H) – – (L)); Address 2: 8 3 2 0 (38H 33H 32H 30H (H) – – (L)) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: R R; Address 1: 00H 64H; Address 2: 20H 80H
Response message during normal communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Data 1 (D100): 0 0 6 4 (30H 30H 36H 34H (H) – – (L)); Data 2 (M15 to 0): 0 0 0 1 (30H 30H 30H 31H (H) – – (L)) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 M M M M M M M M M M M M M M M M 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 5 4 3 2 1 0 (format 2: GOT-A900 Series microcomputer connection (Binary)) Data 1 (D100): 00H 64H; Data 2 (M15 to 0): 00H 01H 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 M M M M M M M M M M M M M M M M 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 5 4 3 2 1 0
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random write in word units (RW) command

The following shows an example of writing "0064H" and "1" to virtual devices D100 and M0, respectively.



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII))

Command		Address 1				Data 1 (D100)				Address 2				Data 2 (M15 to 0)			
R	W	0	1	0	0	0	0	6	4	8	3	2	0	0	0	0	1
52H	57H	30H	31H	30H	30H	30H	30H	36H	34H	38H	33H	32H	30H	30H	30H	30H	31H
(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
1	1	1	1	1	1	9	8	7	6	5	4	3	2	1	0
5	4	3	2	1	0										

(format 2: GOT-A900 Series microcomputer connection (Binary))

Command		Address 1		Data 1 (D100)		Address 2		Data 2 (M15 to 0)	
R	W	00H	64H	00H	00H	20H	80H	00H	01H

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
1	1	1	1	1	1	9	8	7	6	5	4	3	2	1	0
5	4	3	2	1	0										

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	

ACK
06H

Item	Message format
Response message during faulty communication (GT SoftGOT2000 → Host)	

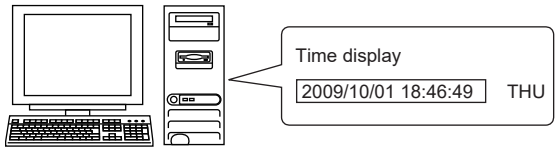
NAK	Error code
15H	06H

The above is a case where the sum check error (06H) has occurred.

■Read clock data (TR) command

The following shows an example of reading the clock data of the personal computer.

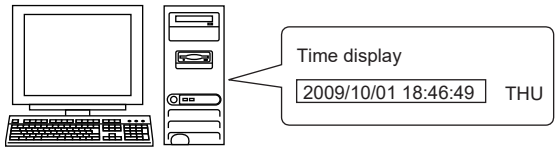
(The clock is set to 18:46:49 on Thursday, October 1, 2009.)



Item	Message format
Request message (Host → GT SoftGOT2000)	Command T R 54H 52H (H) (L)
Response message during normal communication (GT SoftGOT2000 → Host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Year data: 0 9 / 30H 39H / (H) (L) Month data: 1 0 / 31H 30H / (H) (L) Day data: 0 1 / 30H 31H / (H) (L) Hour data: 1 8 / 31H 38H / (H) (L) Minute data: 4 6 / 34H 36H / (H) (L) Second data: 4 9 / 34H 39H / (H) (L) Day-of-week data: 0 4 / 30H 34H / (H) (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Year data: 09H Month data: 0AH Day data: 01H Hour data: 12H Minute data: 2EH Second data: 31H Day-of-week data: 04H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Set clock data (TS) command

The following shows an example of setting the clock data of the personal computer.
(The clock will be set to 18:46:49 on Thursday, October 1, 2009.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 1: GOT-A900 Series microcomputer connection (ASCII))

Command		Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
T	S	0	9	1	0	0	1	1	8	4	6	4	9	0	4
54H	53H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 2: GOT-A900 Series microcomputer connection (Binary))

Command		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
T	S	09H	0AH	01H	12H	2EH	31H	04H

Response message during normal communication (GT SoftGOT2000 → Host)

ACK
06H

Response message during faulty communication (GT SoftGOT2000 → Host)

NAK	Error code
15H	06H

The above is a case where the sum check error (06H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

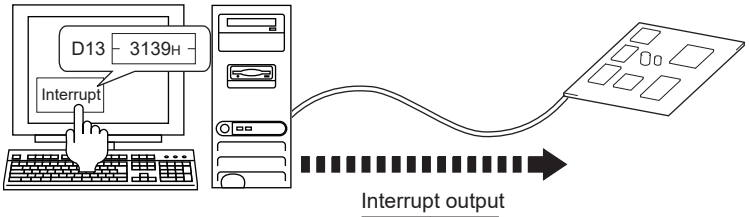
■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Interrupt output is available only when [TCP/IP] is set for [Protocol] in the [Communication Setup] dialog.

Example) When [Interrupt Data Byte] in the [Communication Setup] dialog is set to [2Byte] as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog Output value 1: 39H (2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H (3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog Output value1: AAH, Output value2: 55H, Output value3: 31H, Output value4: 39H When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog Output value1: 31H, Output value2: 39H, Output value3: AAH, Output value4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Error code list

The error contents (error code) are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 502 List of commands for format 1 (GOT-A900 series microcomputer connection (ASCII)) ☞ Page 502 List of commands for format 2 (GOT-A900 series microcomputer connection (Binary))
11H	Message length error The data length is greater than the maximum data length for GT SoftGOT2000.	• Review the contents of the message to transmit. • Check the data length of the message. (data length of the data section, etc.)
15H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
7AH	Address error The start address of the read or write device is out of range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 486 Device data area
7BH	Exceeded number of points error The read or write range has exceeded the device range.	

Precautions

■Storage order for 32-bit data

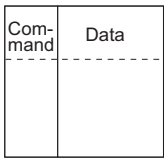
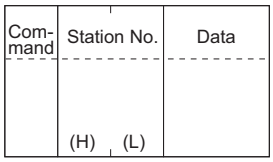
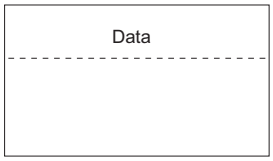
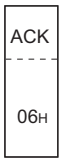
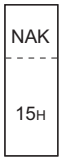
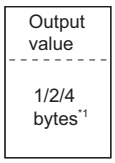
When 32-bit data is set to maintain program compatibility with GOT-A900 series, set [32bit Storage:] to [HL Order] in the [Communication Setup] dialog.

When [LH Order] is set, the higher-order bits and lower-order bits of 32-bit data are displayed or written in reverse order in GT SoftGOT2000.

Formats 3, 4 (GOT-F900 Series microcomputer connection)

The following describes the message formats 3 and 4 (GOT-F900 Series microcomputer connection).

Basic format of data communication

Item	Message format
Request message (Host → GT SoftGOT2000)	(1) w/out station No. 
	(2) w/station No. 
Response message during normal communication (GT SoftGOT2000 → Host)	(1) During processing of read commands 
	(2) During processing of write commands 
Response message during faulty communication (GT SoftGOT2000 → Host)	
During interrupt output *2	

*1 Set the number of interrupt data bytes in the [Communication Setup] dialog.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 83 [Ethernet]

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 487 D devices

Details of data items in message format

Point

Data code during communication
Communication of the format 3 is performed in ASCII code. (excluding interrupt output)
Communication of the format 4 is performed in Binary code.

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.
The command is converted to a 1-byte ASCII code and transmitted.
For details of the commands that can be used, refer to the following.
☞ Page 516 List of commands for formats 3, 4 (GOT-F900 series microcomputer connection)

■Station No.

This item is used by the host to identify the destination GT SoftGOT2000. (Setting range: 0 to 31)
The data notated in decimal in format 3 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.
The data notated in decimal in format 4 is converted to a 1-byte binary code and transmitted.
GT SoftGOT2000 processes the messages that include the station number matching with the set value of [PC No. (1 to 64)] in the [Communication Setup] dialog. (GT SoftGOT2000 ignores the messages that do not include the matched station number.)
For the settings in the [Communication Setup] dialog, refer to the following.
☞ Page 83 [Ethernet]

■Address

Specifies the head No. of the device data to be read or written.
The data notated in hexadecimal in format 3 is converted to a 4-byte ASCII code and transmitted from the higher-order byte.
The data notated in hexadecimal in format 4 is converted to a 2-byte binary code and transmitted from the higher-order byte.
For the range of accessible devices, refer to the following.
☞ Page 486 Device data area

■Bit pattern

Specifies the pattern of the bits to change.
The data notated in hexadecimal in format 3 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.
The data notated in hexadecimal in format 4 is converted to a 1-byte binary code and transmitted.
☞ Page 521 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

■Write specification

Specifies how to change the data of the specified address by bit pattern.
(Setting range: 0 to 3)
The data notated in decimal is converted to a 1-byte ASCII code and transmitted.
☞ Page 521 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

■Number of bytes

Specifies the number of bytes of the device data to be batch read or written. (Setting range: 0 to FFH)

The data notated in hexadecimal in format 3 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.

The data notated in hexadecimal in format 4 is converted to a 1-byte binary code and transmitted.

■Number of points

Specifies the device data points to be written to multi-point in bit units. (Setting range: Range of the maximum number of points processed for each command)

The data notated in decimal in format 3 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.

The data notated in decimal in format 4 is converted to a 1-byte binary code and transmitted.

■Year, month, day, hour, minute, second and day of the week data

Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer.

The data notated in decimal in format 3 is converted to a 2-byte ASCII code and transmitted from the higher-order byte.

The data notated in decimal in format 4 is converted to a 1-byte binary code and transmitted.

☞ Page 524 Read clock data (6) command (without station No.), read clock data (G) command (with station No.)

☞ Page 525 Set clock data (5) command (without station No.), set clock data (F) command (with station No.)

■Data

Specifies the data to read from or write to the specified device data. (word unit)

The data notated in hexadecimal in format 3 is converted to a 4-byte ASCII code and transmitted from the higher-order byte.

The data notated in hexadecimal in format 4 is converted to a 2-byte binary code and transmitted from the higher-order byte.

■Write data

Specifies the data to write to the specified device data.

The data notated n format 3 in decimal is converted to a 2-byte ASCII code and transmitted from the higher-order byte.

The data notated in decimal in format 4 is converted to a 1-byte binary code and transmitted.

List of commands for formats 3, 4 (GOT-F900 series microcomputer connection)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
0	30H	Batch read (without station No.)	Reads bit devices in byte units.	255 bytes (2040 points)
			Reads word devices in byte units.	255 bytes (127 points)
A	41H	Batch read (with station No.)	Reads bit devices in byte units.	255 bytes (2040 points)
			Reads word devices in byte units.	255 bytes (127 points)
1	31H	Batch write (without station No.)	Writes to bit devices in byte units.	255 bytes (2040 points)
			Writes to word devices in byte units.	255 bytes (127 points)
B	42H	Batch write (with station No.)	Writes to bit devices in byte units.	255 bytes (2040 points)
			Writes to word devices in byte units.	255 bytes (127 points)
3	33H	Multi-point write in bit units (without station No.)	Writes bit patterns (bit ON or OFF, inversion, direct specification) in 1-point units (8 bits for 1 point) to a specified device.	99 points
D	44H	Multi-point write in bit units (with station No.)		
4	34H	Fill command (without station No.)	Writes the same value to a range of specified devices.	—
E	45H	Fill command (with station No.)		
5	35H	Set clock data (without station No.)	Sets the clock data of the personal computer.	—
F	46H	Set clock data (with station No.)		
6	36H	Read clock data (without station No.)	Reads the clock data of the personal computer.	—
G	47H	Read clock data (with station No.)		

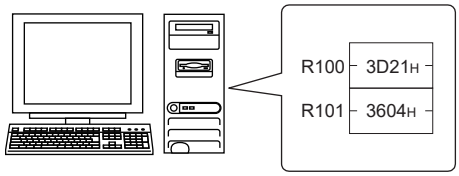
Message format

■Batch read (0) command (without station No.), batch read (A) command (with station No.)

• When reading a word device

The following shows an example of reading 4-byte data from virtual devices R100 and R101 for GT SoftGOT2000 (station No. 15).

(Assuming R100=3D21H, R101=3604H are stored.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Address				Number of bytes	
A	1	5	0	0	C	8	0	4
41H	31H (H)	35H (L)	30H (H)	30H –	43H –	38H (L)	30H (H)	34H (L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Address		Number of bytes
A	0FH	00H	C8H	04H

Response message during normal communication (GT SoftGOT2000 → Host)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)	
3	D	2	1	3	6	0	4
33H (H)	44H (L)	32H (H)	31H (L)	33H (H)	36H (L)	30H (H)	34H (L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

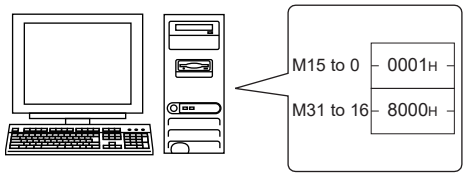
Data 1 (R100 upper)	Data 2 (R100 lower)	Data 3 (R101 upper)	Data 4 (R101 lower)
3DH	21H	36H	04H

Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

• When reading a bit device (GS580.b8, GS581.b8, GS582.b8, and GS583.b8 are on)

The following shows an example of reading four bytes of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

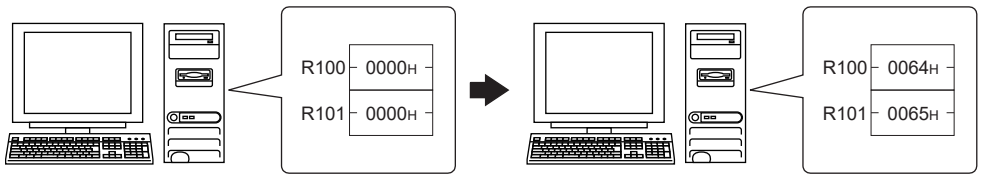


Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Command: A (41H) Station No.: 15 (31H (H), 35H (L)) Address: 2000 (32H (H), 30H, 30H, 30H (L)) Number of bytes: 04 (30H (H), 34H (L)) (format 4: GOT-F900 Series microcomputer connection (Binary)) Command: A Station No.: 0FH Address: 20H 00H Number of bytes: 04H
Response message during normal communication (GT SoftGOT2000 → Host)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Data 1 (M7 to 0): 01 (30H (H), 31H (L)) Data 2 (M15 to 8): 00 (30H (H), 30H (L)) Data 3 (M23 to 16): 00 (30H (H), 30H (L)) Data 4 (M31 to 24): 80 (38H (H), 30H (L)) 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M 7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 9 8 2 2 2 2 2 1 1 1 1 3 3 2 2 2 2 2 2 5 4 3 2 1 0 3 2 1 0 9 8 7 6 1 0 9 8 7 6 5 4 (format 4: GOT-F900 Series microcomputer connection (Binary)) Data 1 (M7 to 0): 01H Data 2 (M15 to 8): 00H Data 3 (M23 to 16): 00H Data 4 (M31 to 24): 80H 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M 7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 9 8 2 2 2 2 2 1 1 1 1 3 3 2 2 2 2 2 2 5 4 3 2 1 0 3 2 1 0 9 8 7 6 1 0 9 8 7 6 5 4
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

■Batch write (1) command (without station No.), batch write (B) command (with station No.)

• When writing to a word device

The following shows an example of writing 3D21H and 3604H to virtual devices R100 and R101 for GT SoftGOT2000 (station No. 15).



Before execution　　After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Command	Station No.		Address				Number of bytes		Following*1
B	1	5	0	0	C	8	0	4	
42H	31H	35H	30H	30H	43H	38H	30H	34H	
	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)	
3	D	2	1	3	6	0	4
33H	44H	32H	31H	33H	36H	30H	34H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Command	Station No.	Address		Number of bytes	Following*2
B	0FH	00H	C8H	04H	

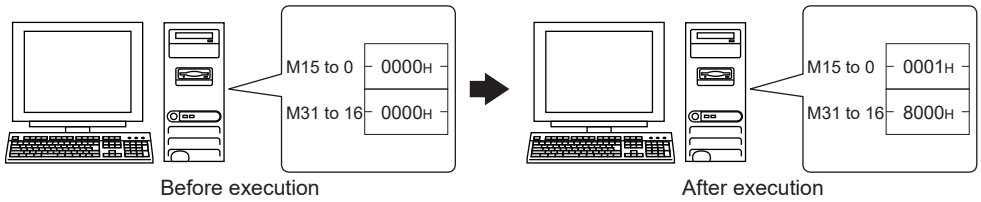
*2

Data 1 (R100 upper)	Data 2 (R100 lower)	Data 3 (R101 upper)	Data 4 (R101 lower)
3DH	21H	36H	04H

Response message during normal communication (GT SoftGOT2000 → Host)	ACK 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

• When writing to a bit device (GS580.b8, GS581.b8, GS582.b8, and GS583.b8 are on)

The following shows an example of writing 1 to virtual devices M0 and M31 for GT SoftGOT2000 (station No. 15).



Before execution　　After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Address				Number of bytes		Following*1
B	1	5	2	0	0	0	0	4	
42H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)	

*1

Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)	
0	1	0	0	0	0	8	0
30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)

0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0

MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 9 8 2 2 2 2 2 1 1 1 1 3 3 2 2 2 2 2 2
5 4 3 2 1 0 3 2 1 0 9 8 7 6 1 0 9 8 7 6 5 4

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Address		Number of bytes	Following*2
B	0FH	20H	00H	04H	

*2

Data 1 (M7 to 0)	Data 2 (M15 to 8)	Data 3 (M23 to 16)	Data 4 (M31 to 24)
01H	00H	00H	80H

0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0

MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 9 8 2 2 2 2 2 1 1 1 1 3 3 2 2 2 2 2 2
5 4 3 2 1 0 3 2 1 0 9 8 7 6 1 0 9 8 7 6 5 4

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	ACK 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

■Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

The following shows an example of turning off virtual device M31 and turning on M2038 for GT SoftGOT2000 (station No. 31).

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Number of points		Following *2
D	3	1	0	2	
44H	33H (H)	31H (L)	30H (H)	32H (L)	

*2

Write specification 1	Address1				Bit pattern1		Write specification 2	Address2				Bit pattern2	
1	2	0	0	3	8	0	0	2	0	F	E	4	0
31H	32H (H)	30H –	30H –	33H (L)	38H (H)	30H (L)	30H	32H (H)	30H –	46 –	45H (L)	34H (H)	30H (L)

*1 (write specification1=1)

Source data bit pattern	1	0	1	0	1	0	1	0	
	1	0	0	0	0	0	0	0	
Result	0	0	1	0	1	0	1	0	

MMMMMMMM
33222222
10987654

*1 (write specification2=0)

Source data bit pattern	1	0	1	0	1	0	1	0	
	0	1	0	0	0	0	0	0	
Result	1	1	1	0	1	0	1	0	

MMMMMMMM
22222222
00000000
33333333
98765432

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Number of points	Following *3
D	1FH	02H	

*3

Write specification 1	Address1		Bit pattern1	Write specification 2	Address2		Bit pattern2
1	20H	03H	80H	0	20H	FEH	40H

*1 (write specification1=1)

Source data bit pattern	1	0	1	0	1	0	1	0	
	1	0	0	0	0	0	0	0	
Result	0	0	1	0	1	0	1	0	

MMMMMMMM
33222222
10987654

*1 (write specification2=0)

Source data bit pattern	1	0	1	0	1	0	1	0	
	0	1	0	0	0	0	0	0	
Result	1	1	1	0	1	0	1	0	

MMMMMMMM
22222222
00000000
33333333
98765432

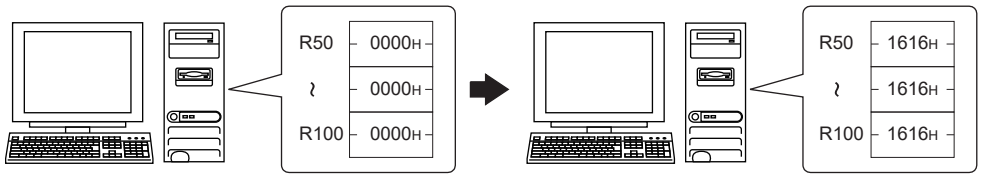
Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	ACK (06H)
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK (15H)

*1 The write specification specifies how the data of the specified address is changed in the bit pattern.

Write specification	Function	Description	Action example
0	ON specification	Bits set to "1" by the bit pattern are turned ON.	Original data1010 Bit pattern1100
			Result1110
1	OFF specification	Bits set to "1" by the bit pattern are turned OFF.	Original data1010 Bit pattern1100
			Result0010
2	Invert specification	Bits set to "1" by the bit pattern are inverted.	Original data1010 Bit pattern1100
			Result0110
3	Write specification	The numerical values to write by the bit pattern are specified directly.	Original data1010 Bit pattern1100
			Result1100

■Fill command (4) (without station No.), fill command (E) (with station No.)

The following shows an example of writing 16 to virtual devices R50 to R100 for GT SoftGOT2000 (station No. 27).



Before execution　　After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Start address				End address				Write Data	
E	2	7	0	0	6	4	0	0	C	9	1	6
45H	32H	37H	30H	30H	36H	34H	30H	30H	43H	39H	31H	36H
	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Start address		End address		Write Data
E	1BH	00H	64H	00H	C9H	16H

Response message during normal communication (GT SoftGOT2000 → Host)	ACK 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK 15H

Point

• Start address/end address specification conditions

Specify addresses so that the start address is the same or less than the end address.

Error response occurs in the following cases:

The address to specify has the start address greater than the end address.

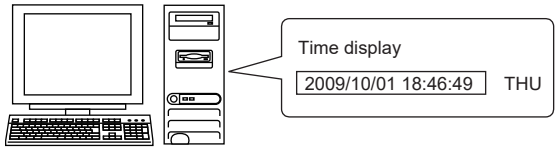
Either of the start address or end address exceeds the device range that can be specified.

• Address specifying crossing over different devices

The start address and end address can be specified crossing over different devices.

■Read clock data (6) command (without station No.), read clock data (G) command (with station No.)

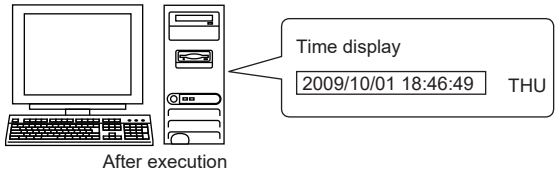
The following shows an example of reading the clock data of the personal computer from GT SoftGOT2000 (station No. 27).
(The clock is set to 18:46:49 on Thursday, October 1, 2009.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Com-mand: G (47H) Station No.: 27 (32H 37H) (format 4: GOT-F900 Series microcomputer connection (Binary)) Com-mand: G Station No.: 1BH
Response message during normal communication (GT SoftGOT2000 → Host)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Year data: 09 (30H 39H) Month data: 10 (31H 30H) Day data: 01 (30H 31H) Hour data: 18 (31H 38H) Minute data: 46 (34H 36H) Second data: 49 (34H 39H) Day-of-week data: 04 (30H 34H) (format 4: GOT-F900 Series microcomputer connection (Binary)) Year data: 09H Month data: 0AH Day data: 01H Hour data: 12H Minute data: 2EH Second data: 31H Day-of-week data: 04H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK (15H)

■Set clock data (5) command (without station No.), set clock data (F) command (with station No.)

The following shows an example of setting the clock data of the personal computer for GT SoftGOT2000 (station No. 27).
(The clock will be set to 18:46:49 on Thursday, October 1, 2009.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Year data		Month data		Day Data		Hour data		Minute data		Second data		Day-of-week data	
F	2	7	0	9	1	0	0	1	1	8	4	6	4	9	0	4
46H	32H	37H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
F	1BH	09H	0AH	01H	12H	2EH	31H	04H

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	ACK: 06H
Response message during faulty communication (GT SoftGOT2000 → Host)	NAK: 15H

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

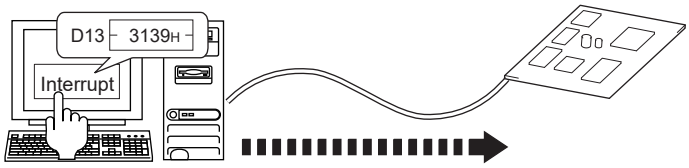
■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Interrupt output is available only when [TCP/IP] is set for [Protocol] in the [Communication Setup] dialog.

Example) When [Interrupt Data Byte] in the [Communication Setup] dialog is set to [2Byte] as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog Output value 1: 39H (2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H (3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog Output value 1: AAH, Output value 2: 55H, Output value 3: 31H, Output value 4: 39H When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H, Output value 3: AAH, Output value 4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Error code list

When faulty, the error code is stored in SD2.

For details on error code stored in SD2, the error contents, cause and measures, refer to the following.

☞ Page 495 Details and actions for errors (error codes) stored into SD2

When an error other than those to be stored in SD2 occurs, at faulty, only the NAK response is executed.

Format 5 (SCHNEIDER EJH's (formerly Digital Electronics Corporation's) memory link method)

The following describes the message format 5 (SCHNEIDER EJH's (former Digital Electronics Corporation) memory link method).

Basic format of data communication

This is the same format as the protocol of the SCHNEIDER EJH's memory link method.

For details of the basic format of data communication, refer to the following manual:

☞ The connection manual of the device manufactured by SCHNEIDER EJH

This section explains the settings that differ from the protocol settings of the SCHNEIDER EJH's memory link method, and the commands dedicated to the microcomputer connection.

Example: Request message for the batch read in word units (R) command in format 5 (SCHNEIDER EJH's memory link method)

	Data length	ESC	Com-mand	Address	Number of points
B			R		
42H 00H 00H 00H	00H 00H 00H 06H	1BH	52H	00H 64H	00H 02H

Details of data items in message format

Point

Data code during communication

Communication is performed in Binary code.

■Command

Specify the contents to be accessed from the host to GT SoftGOT2000.

The command is converted to a 1-byte ASCII code and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 528 List of commands for format 5 (SCHNEIDER EJH's memory link method)

■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 2-byte binary code and transmitted from the higher-order byte.

For the range of accessible devices, refer to the following.

☞ Page 486 Device data area

■Number of points

Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)

The number of points notated in hexadecimal is converted to a 2-byte binary code and transmitted from the higher-order byte.

■Error code

This is the response message at faulty communication appended with error contents.

The error code notated in hexadecimal is converted to a 1-byte binary code and transmitted.

For details on error code generated in format 5 (SCHNEIDER EJH's memory link method), refer to the following.

☞ Page 530 Error code list

Point

Connecting microcomputers or other devices that use the protocol of the SCHNEIDER EJH's memory link method

If you connect microcomputers or other devices that use the protocol of the SCHNEIDER EJH's memory link method, change the commands and the devices according to the specifications of GT SoftGOT2000.

List of commands for format 5 (SCHNEIDER EJH's memory link method)

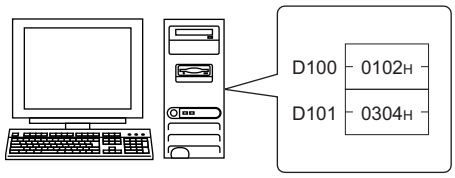
Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
R	52H	Batch read in word units	Reads bit devices in 16-point units.	512 words (8192 points)
			Reads word devices in 1-point units.	512 points
W	57H	Batch write in word units	Writes to bit devices in 16-point units.	512 words (8192 points)
			Writes to word devices in 1-point units.	512 points
I	49H	Interrupt inquiry	Issues an interrupt inquiry.	—

Message Formats

The following shows the message formats for the commands that are usable only when the microcomputer connection is used.

■Batch read in word units (R) command

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)



Item	Message format

Request message (Host → GT SoftGOT2000)

				Data length				ESC	Command	Address		Number of points	
B									R				
42H	00H	00H	00H	00H	00H	00H	06H	1BH	52H	00H	64H	00H	02H

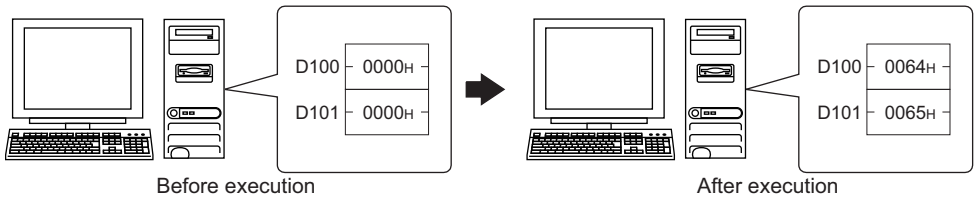
Response message during normal communication (GT SoftGOT2000 → Host)

				Data length				ESC	Command	Address		Number of points	
b									A				
42H	00H	00H	00H	00H	00H	00H	06H	1BH	41H	01H	02H	03H	04H

■Batch write in word units (WD) command

• When writing to a word device

The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.



Before execution　　After execution

Item	Message format

Request message (Host → GT SoftGOT2000)

				Data length				ESC	Command	Address		Number of points		Data 1		Data 2	
B									W								
42H	00H	00H	00H	00H	00H	00H	0AH	1BH	57H	00H	64H	00H	02H	00H	64H	00H	65H

Response message during normal communication (GT SoftGOT2000 → Host)

				Data length				ACK
b								
42H	00H	00H	00H	00H	00H	00H	06H	06H

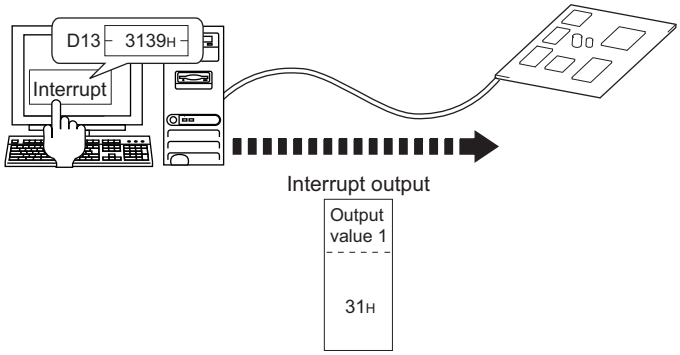
■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "31H" is written to D13.)

Interrupt output is available only when [TCP/IP] is set for [Protocol] in the [Communication Setup] dialog.

Example: When [Interrupt Data Byte] in the [Communication Setup] dialog is set to [1Byte]



Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	When [Interrupt Data Byte] in the [Communication Setup] dialog is set to [1Byte] Output value 1 31H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Error code list

In the case of format 5 (SCHNEIDER EJH's memory link method), the details (error code) of the error are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 528 List of commands for format 5 (SCHNEIDER EJH's memory link method)
12H	Message length error The data length is greater than the maximum data length for GT SoftGOT2000.	
FAH	Address error The start address of the read or write device is out of range.	• Review the contents of the message to transmit. • Check the data length of the message.(data length of the data section, etc.)
FBH	Exceeded number of points error The read or write range has exceeded the device range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 486 Device data area
FCH	Message format error The format of the received message has error.	• Check the settings in the communication detail settings. • Review the contents of the message to transmit.
FFH	Timeout error There is no response from GT SoftGOT2000, or the specified station is nonexistent.	• Check the communication cable and communication module attachment. • Check the settings in the communication detail settings. • Review the contents of the message to transmit.

Precautions

■Storage order for 32-bit data

When 32-bit data is set to maintain program compatibility with the SCHNEIDER EJH's memory link method, set [32bit Storage:] to [HL Order] in the [Communication Setup] dialog.

When [LH Order] is set, the higher-order bits and lower-order bits of 32-bit data are displayed or written in reverse order in GT SoftGOT2000.

Formats 6, 7 (4E frame)

The following describes the message formats 6 and 7 (4E frame).

Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (4E frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section explains the settings that differ from the MC protocol settings of the Q/QnA series serial communication modules, and the commands dedicated to the microcomputer connection.

Example: Request message for the batch read (0401) command in word units

Device name : D

Head device : 100

Device points : 2

Communication setting in GT SoftGOT2000: Network number = 1, PC number = 1

(Format 6 (4E frame (ASCII))

Request type				Serial No.				Fixed value				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	
35H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Request data length				CPU monitoring timer				Command				
0	0	1	8	0	0	0	0	0	4	0	1	→ 1)
30H	30H	31H	38H	30H	30H	30H	30H	30H	34H	30H	31H	
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	

Data length target range

Character A section

1) →	Sub-command				Device code		Head Device						Device points			
	0	0	0	0	D	*	0	0	0	1	0	0	0	0	0	2
	30H	30H	30H	30H	44H	2AH	30H	30H	30H	31H	30H	30H	30H	30H	30H	32H
	(H)	–	–	(L)	(H)	(L)	(H)	–	–	–	–	(L)	(H)	–	–	(L)

Data length target range

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		CPU monitoring timer		Command		Sub-command		Head Device			Device code	Device points	
54H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0CH	00H	00H	00H	01H	04H	00H	00H	64H	00H	00H	A8H	02H	00H

Data length target range

Details of data items in message format

Point

Data code during communication

Communication of format 6 is performed in ASCII code.

Communication of the format 7 is performed in Binary code.

The following table shows the contents of the data items.

<table>
<tr><th rowspan="2">Data item name</th><th colspan="2">Contents</th></tr>
<tr><th>Format 6</th><th>Format 7</th></tr>
<tr><td rowspan="2">Request type (Microcomputer side)</td><td colspan="2">Indicates it is a command message.</td></tr>
<tr><td>Command message: ASCII "5400" (Fixed value)</td><td>Command message: 54H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Response type (GT SoftGOT2000 side)</td><td colspan="2">Indicates it is a response message.</td></tr>
<tr><td>Response message: ASCII "D400" (Fixed value)</td><td>Response message: D4H (Upper digit) (Fixed value)</td></tr>
<tr><td>Serial No.</td><td colspan="2">Arbitrary number for recognition of the message appended at the microcomputer side.
GT SoftGOT2000 sends the response message appending this Serial No.</td></tr>
<tr><td>Fixed value</td><td>Should be ASCII "0000".</td><td>Should be "0000H".</td></tr>
<tr><td rowspan="2">Network No.</td><td colspan="2">Set the same number as the network number set in GT SoftGOT2000.
For the settings in the [Communication Setup] dialog, refer to the following.
☞ Page 83 [Ethernet]</td></tr>
<tr><td>Transmit the data converted to a 2-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 1-byte binary code.</td></tr>
<tr><td rowspan="2">PLC No.</td><td colspan="2">Set the same number as the PC number set in GT SoftGOT2000.
For the settings in the [Communication Setup] dialog, refer to the following.
☞ Page 83 [Ethernet]</td></tr>
<tr><td>Transmit the data converted to a 2-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 1-byte binary code.</td></tr>
<tr><td>Request destination module I/O No.</td><td colspan="2">GT SoftGOT2000 ignores this item.</td></tr>
<tr><td>Request destination module station No.</td><td colspan="2">GT SoftGOT2000 ignores this item.</td></tr>
<tr><td rowspan="2">Request data length</td><td colspan="2">Number of bytes from the start of CPU monitoring timer to the last request data.</td></tr>
<tr><td>Transmit the data converted to a 4-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 2-byte binary code from the lower-order byte.</td></tr>
<tr><td rowspan="2">Response data length</td><td colspan="2">Appended to the response message from the microcomputer side.
Number of bytes from the start of end code to the last response data or last error response data.</td></tr>
<tr><td>Transmit the data converted to a 4-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 2-byte binary code from the lower-order byte.</td></tr>
<tr><td>CPU monitoring timer</td><td colspan="2">GT SoftGOT2000 ignores this item.</td></tr>
<tr><td rowspan="2">Command, Sub-command</td><td colspan="2">Specifies the access contents from the microcomputer side to GT SoftGOT2000.
For details of the commands that can be used, refer to the following.
☞ Page 534 Commands for format 6 (4E frame (ASCII))
☞ Page 535 Commands for format 7 (4E frame (binary))</td></tr>
<tr><td>Transmit the data converted to a 4-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 2-byte binary code from the lower-order byte.</td></tr>
<tr><td rowspan="2">Device code</td><td colspan="2">Specify the code to identify the device data to be read and written.
For the range of accessible devices, refer to the following.
☞ Page 486 Device data area</td></tr>
<tr><td>Transmit the 2-byte ASCII code corresponding to the following device codes from the higher-order byte.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>M*</td></tr><tr><td>SM</td><td>SM</td></tr><tr><td>L</td><td>L*</td></tr><tr><td>D</td><td>D*</td></tr><tr><td>SD</td><td>SD</td></tr><tr><td>R</td><td>R*</td></tr></table></td><td>Transmit the 1-byte binary code corresponding to the following device codes.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>90H</td></tr><tr><td>SM</td><td>91H</td></tr><tr><td>L</td><td>92H</td></tr><tr><td>D</td><td>A8H</td></tr><tr><td>SD</td><td>A9H</td></tr><tr><td>R</td><td>AFH</td></tr></table></td></tr>
</table>

Data item name	Contents	
	Format 6	Format 7
Head device	Specifies the head No. of the device data to be read or written. For the range of accessible devices, refer to the following. ☞ Page 486 Device data area	
	Convert the decimal data to 6-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 3-byte binary code from the lower-order byte.
Device points	Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command) <When using the random read or write command> When setting multiple bit access points, word access points, or double-word access points, the total points must be within the maximum points processed by each command. <When using multiple block batch read or write commands> When setting multiple blocks, limit the total number of points of all blocks to within the maximum number of points processed for each command.	
	Convert the decimal data to 4-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 2-byte binary code from the lower-order byte.
Year, month, day, hour, minute, second and day of the week data	Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer. ☞ Page 536 Read clock data (1901) command ☞ Page 539 Set clock data (0901) command	
	Convert the decimal data to 2-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 1-byte binary code.
End code (Microcomputer side)	Appended to the response message from the microcomputer side. If an error occurs at the microcomputer side, the error code is displayed. ☞ Page 542 Error code list	
	Convert the hexadecimal data to 4-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 2-byte binary code from the lower-order byte.

Point

Connecting microcomputers or other devices that use the MC protocol of the Q/QnA series serial communication modules

If you connect microcomputers or other devices that use the MC protocol of the Q/QnA series serial communication modules, change the commands and the devices according to the specifications of GT SoftGOT2000.

Commands for format 6 (4E frame (ASCII))

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	896 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units.*3	256 words (4096 points)
			Reads word devices in 1-point units.	256 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	896 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units.*3	244 words (3904 points)
			Writes to word devices in 1-point units.	244 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units.*3	128 words (2048 points)
			Reads multiple different word devices in 1-point and 2-point units.	128 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	96 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units.*3	64 words (1024 points)
			Writes to multiple different word devices in 1-point and 2-point units.	64 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	80 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	64 points
1901*2	0000	Read clock data	Reads the clock data of the personal computer.	—
0901*2	0000	Set clock data	Sets the clock data of the personal computer.	—

*1 Mixed specification of bit devices and word devices is also possible.
*2 This command is usable only when the microcomputer connection is used.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Commands for format 7 (4E frame (binary))

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	896 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units. *3	512 words (8192 points)
			Reads word devices in 1-point units.	512 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	896 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units. *3	496 words (7936 points)
			Writes to word devices in 1-point units.	496 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units. *3	255 words (4080 points)
			Reads multiple different word devices in 1-point and 2-point units.	255 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	188 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units. *3	128 words (2048 points)
			Writes to multiple different word devices in 1-point and 2-point units.	128 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	160 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	128 points
1901 *2	0000	Read clock data	Reads the clock data of the personal computer.	—
0901 *2	0000	Set clock data	Sets the clock data of the personal computer.	—

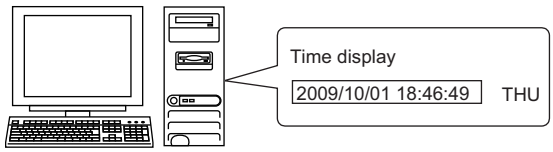
*1 Mixed specification of bit devices and word devices is also possible.
*2 This command is usable only when the microcomputer connection is used.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Message format

The following shows the message formats for the commands that are usable only when the microcomputer connection is used.

■Read clock data (1901) command

The following shows an example of reading the clock data of the personal computer.
(The clock is set to 18:46:49 on Thursday, October 1, 2009.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 6:4E frame (ASCII))

Request type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
35H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Request data length				CPU monitoring timer				
0	0	0	0	0	0	0	0	0	C	0	0	0	0	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	30H	43H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Character A section

1) →	Command				Sub-command			
	1	9	0	1	0	0	0	0
	31H	39H	30H	31H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		Following *1
54H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	06H	00H	

Data length target range

*1

CPU monitoring timer		Command		Sub-command	
00H	00H	01H	19H	00H	00H

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code				
0	0	0	0	0	0	0	0	1	2	0	0	0	0	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	31H	32H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Character B section

1) →

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	9	1	0	0	1	1	8	4	6	4	9	0	4
30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	09H	00H	

Data length target range

*1 →

End code		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Item	Message format
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code				
0	0	0	0	0	0	0	0	1	6	0	0	5	6	→ 1)
30H	**30H**	30H	30H	30H	30H	30H	30H	31H	36H	30H	30H	35H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

1) →	Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Command				Sub-command			
	0	0	0	0	0	0	0	0	0	0	1	9	0	1	0	0	0	0
	30H	30H	30H	30H	30H	**30H**	30H	30H	30H	30H	31H	39H	30H	31H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0BH	00H	

Data length target range

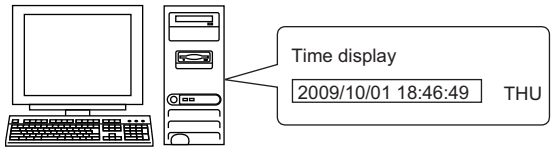
*1

End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
56H	00H	00H	00H	00H	00H	00H	01H	19H	00H	00H

■Set clock data (0901) command

The following shows an example of setting the clock data of the personal computer.

(The clock will be set to 18:46:49 on Thursday, October 1, 2009.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
35H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Request data length				CPU monitoring timer				Command				
0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	9	0	1	1)
30H	30H	30H	30H	30H	30H	30H	30H	31H	41H	30H	30H	30H	30H	31H	39H	30H	31H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Character C section

1)	Sub-command				Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
	0	0	0	0	0	9	1	0	0	1	1	8	4	6	4	9	0	4
	30H	30H	30H	30H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		Following *1
54H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0DH	00H	

Data length target range

*1

CPU monitoring timer		Command		Sub-command		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
00H	00H	01H	09H	00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Following *1
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code			
0	0	0	0	0	0	0	0	0	4	0	0	0	0
30H	30H	30H	30H	30H	30H	30H	30H	30H	34H	30H	30H	30H	30H
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Data length target range

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		End code	
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	02H	00H	00H	00H

Response message during faulty communication (GT SoftGOT2000 → Host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Following *1
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code				
0	0	0	0	0	0	0	0	1	6	0	0	5	6	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	31H	36H	30H	30H	35H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

1) →	Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Command				Sub-command			
	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	0	0
	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	39H	30H	31H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following*1
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0BH	0H	

Data length target range

*1

End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
56H	00H	00H	00H	00H	00H	00H	01H	09H	00H	00H

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

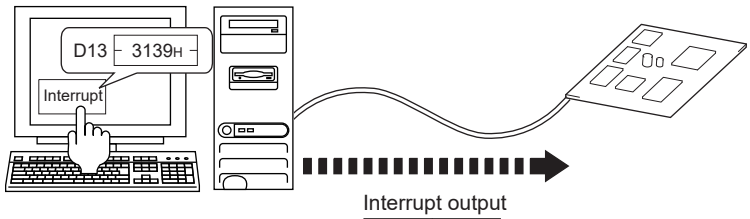
■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Interrupt output is available only when [TCP/IP] is set for [Protocol] in the [Communication Setup] dialog.

Example) When [Interrupt Data Byte] in the [Communication Setup] dialog is set to [2Byte] as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog Output value 1: 39H (2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H (3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog Output value1: AAH, Output value2: 55H, Output value3: 31H, Output value4: 39H When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog Output value1: 31H, Output value2: 39H, Output value3: AAH, Output value4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Error code list

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
0002H	Device point error The specified device range to be read or written is incorrect.	• Check the specified head device and number of points, and correct it. ☞ Page 486 Device data area
0050H	Request (command) type or response (response) type code error A code other than the specified value is set for the command type or response type.	• Check and correct the command type or response type set in the microcomputer.
0056H	Device error A non-existent device has been specified.	• Check the devices that can be used and the device ranges. ☞ Page 486 Device data area
0057H	Device point error • The command number of points specification from the microcomputer exceeds the maximum number of points processed at each process (number of points processed in one communication). • The start address (head device number) to specified number of points exceeds the maximum address (device number, step number) for each process.	• Correct the specified number of points, or the start address (device number). ☞ Page 486 Device data area
	When writing data which the command bit length is longer or shorter than the specification, the set number of write data points differs from the specified number of points value.	• Check the command data length and set the data again.
0058H	• The command start address (head device number, start step number) specification from the microcomputer exceeds the range that can be specified. • A value outside the GT SoftGOT2000 parameter setting range is specified for reading or writing the microcomputer program or file register (R).	• Correct the values to values that can be specified in each process.
	• Word device is specified in the command for bit device. • In the command for word device, a bit device start number is specified in other than hexadecimal.	• Correct the command or the specified device.
00A1H	• Request content cannot be analyzed because the text length or request data length is too short.	• Review the text length or the head request data length.
00A2H	• Request cannot be processed.	• Correct the request content and command.
C0D6H	• The specification of network No. and station No. have error.	• Review the network No., station No. specification method.

Formats 8, 9 (QnA compatible 3E frame)

The following describes the message formats 8 and 9 (QnA compatible 3E frame).

Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (QnA compatible 3E frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section explains the settings that differ from the MC protocol settings of the Q/QnA series serial communication modules, and the commands dedicated to the microcomputer connection.

Example: Request message for the batch read (0401) command in word units

Device name : D

Head device : 100

Device points : 2

Communication setting in GT SoftGOT2000: Network number = 1, PC number = 1

(Format 8: QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Request data length				Following *1
5	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	8	
35H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	38H	
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	

*1 Character A section

CPU monitoring timer				Command				Sub-command				Device code		Start Device						Device points			
0	0	0	0	0	4	0	1	0	0	0	0	D	*	0	0	0	1	0	0	0	0	0	2
30H	30H	30H	30H	30H	34H	30H	31H	30H	30H	30H	30H	44H	2AH	30H	30H	30H	31H	30H	30H	30H	30H	30H	32H
(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	–	–	(L)	(H)	–	–	(L)

Data length target data

(Format 9: QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		CPU monitoring timer		Command		Sub-command		Start Device			Device code	Device points	
50H	00H	01H	01H	00H	00H	00H	0CH	00H	00H	00H	01H	04H	00H	00H	64H	00H	00H	A8H	02H	00H

Data length target data

Details of data items in message format

Point

Data code during communication

Communication of format 8 is performed in ASCII code.

Communication of the format 9 is performed in Binary code.

The following table shows the contents of the data items.

<table>
<tr><th rowspan="2">Data item name</th><th colspan="2">Contents</th></tr>
<tr><th>Format 8</th><th>Format 9</th></tr>
<tr><td rowspan="2">Subheader (Microcomputer side)</td><td colspan="2">Indicates it is a command message.</td></tr>
<tr><td>Command message: ASCII "5000" (Fixed value)</td><td>Command message: 50H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Subheader (GT SoftGOT2000 side)</td><td colspan="2">Indicates it is a response message.</td></tr>
<tr><td>Response message: ASCII "D000" (Fixed value)</td><td>Response message: D0H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Network No.</td><td colspan="2">Set the same number as the network number set in GT SoftGOT2000.
For the settings in the [Communication Setup] dialog, refer to the following.
☞ Page 83 [Ethernet]</td></tr>
<tr><td>Transmit the data converted to a 2-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 1-byte binary code.</td></tr>
<tr><td rowspan="2">PLC No.</td><td colspan="2">Set the same number as the PC number set in GT SoftGOT2000.
For the settings in the [Communication Setup] dialog, refer to the following.
☞ Page 83 [Ethernet]</td></tr>
<tr><td>Transmit the data converted to a 2-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 1-byte binary code.</td></tr>
<tr><td>Request destination module I/O No.</td><td colspan="2">GT SoftGOT2000 ignores this item.</td></tr>
<tr><td>Request destination module station No.</td><td colspan="2">GT SoftGOT2000 ignores this item.</td></tr>
<tr><td rowspan="2">Request data length</td><td colspan="2">Number of bytes from the start of CPU monitoring timer to the last request data.</td></tr>
<tr><td>Transmit the data converted to a 4-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 2-byte binary code from the lower-order byte.</td></tr>
<tr><td rowspan="2">Response data length</td><td colspan="2">Appended to the response message from the microcomputer side.
Number of bytes from the start of end code to the last response data or last error response data.</td></tr>
<tr><td>Transmit the data converted to a 4-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 2-byte binary code from the lower-order byte.</td></tr>
<tr><td>CPU monitoring timer</td><td colspan="2">GT SoftGOT2000 ignores this item.</td></tr>
<tr><td rowspan="2">Command, Sub-command</td><td colspan="2">Specifies the access contents from the microcomputer side to GT SoftGOT2000.
For details of the commands that can be used, refer to the following.
☞ Page 546 Commands for format 8 (QnA compatible 3E frame (ASCII))
☞ Page 547 Commands for format 9 (QnA compatible 3E frame (binary))</td></tr>
<tr><td>Transmit the data converted to a 4-byte ASCII code from the higher-order byte.</td><td>Transmit the data converted to a 2-byte binary code from the lower-order byte.</td></tr>
<tr><td>Device code</td><td colspan="2">Specifies the code by which the device data to be read or written is recognized.
For the range of accessible devices, refer to the following.
☞ Page 486 Device data area</td></tr>
<tr><td>Transmit the 2-byte ASCII code corresponding to the following device codes from the higher-order byte.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>M*</td></tr><tr><td>SM</td><td>SM</td></tr><tr><td>L</td><td>L*</td></tr><tr><td>D</td><td>D*</td></tr><tr><td>SD</td><td>SD</td></tr><tr><td>R</td><td>R*</td></tr></table></td><td>Transmit the 1-byte binary code corresponding to the following device codes.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>90H</td></tr><tr><td>SM</td><td>91H</td></tr><tr><td>L</td><td>92H</td></tr><tr><td>D</td><td>A8H</td></tr><tr><td>SD</td><td>A9H</td></tr><tr><td>R</td><td>AFH</td></tr></table></td></tr>
<tr><td rowspan="2">Head device</td><td colspan="2">Specifies the head No. of the device data to be read or written.
For the accessible device range, refer to the following.
☞ Page 486 Device data area</td></tr>
<tr><td>Convert the decimal data to 6-byte ASCII code and transmit the data from the higher-order byte.</td><td>Transmit the data converted to a 3-byte binary code from the lower-order byte.</td></tr>
</table>

Data item name	Contents	
	Format 8	Format 9
Device points	Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command) <When using random read or write command> When setting multiple bit access points, word access points, or double-word access points, the total points must be within the maximum points processed by each command. <When using multiple block batch read or write commands> When setting multiple blocks, limit the total number of points of all blocks to within the maximum number of points processed for each command.	
	Convert the decimal data to 4-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 2-byte binary code from the lower-order byte.
Year, month, day, hour, minute, second and day of the week data	Specify the year, month, day, hour, minute, second, and day of the week to read or set the clock data of the personal computer. ☞ Page 548 Read clock data (1901) command ☞ Page 550 Set clock data (0901) command	
	Convert the decimal data to 2-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 1-byte binary code.
End code (Microcomputer side)	Appended to the response message from the microcomputer side. If an error occurs at the microcomputer side, the error code is displayed. ☞ Page 553 Error code list	
	Convert the hexadecimal data to 4-byte ASCII code and transmit the data from the higher-order byte.	Transmit the data converted to a 2-byte binary code from the lower-order byte.

Point

Connecting microcomputers or other devices that use the MC protocol of the Q/QnA series serial communication modules

If you connect microcomputers or other devices that use the MC protocol of the Q/QnA series serial communication modules, change the commands and the devices according to the specifications of GT SoftGOT2000.

Commands for format 8 (QnA compatible 3E frame (ASCII))

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	896 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units.*3	256 words (4096 points)
			Reads word devices in 1-point units.	256 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	896 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units.*3	244 words (3904 points)
			Writes to word devices in 1-point units.	244 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units.*3	128 words (2048 points)
			Reads multiple different word devices in 1-point and 2-point units.	128 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	96 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units.*3	64 words (1024 points)
			Writes to multiple different word devices in 1-point and 2-point units.	64 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	80 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	64 points
1901*2	0000	Read clock data	Reads the clock data of the personal computer.	—
0901*2	0000	Set clock data	Sets the clock data of the personal computer.	—

*1 Mixed specification of bit devices and word devices is also possible.
*2 This command is usable only when the microcomputer connection is used.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Commands for format 9 (QnA compatible 3E frame (binary))

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	896 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units. *3	512 words (8192 points)
			Reads word devices in 1-point units.	512 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	896 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units. *3	496 words (7936 points)
			Writes to word devices in 1-point units.	496 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units. *3	255 words (4080 points)
			Reads multiple different word devices in 1-point and 2-point units.	255 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	188 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units. *3	128 words (2048 points)
			Writes to multiple different word devices in 1-point and 2-point units.	128 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	160 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	128 points
1901 *2	0000	Read clock data	Reads the clock data of the personal computer.	—
0901 *2	0000	Set clock data	Sets the clock data of the personal computer.	—

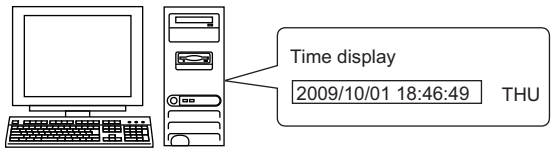
*1 Mixed specification of bit devices and word devices is also possible.
*2 This command is usable only when the microcomputer connection is used.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Message format

The following shows the message formats for the commands that are usable only when the microcomputer connection is used.

■Read clock data (1901) command

The following shows an example of reading the clock data of the personal computer.
(The clock is set to 18:46:49 on Thursday, October 1, 2009.)



Item	Message format
Request message (Host → GT SoftGOT2000)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
5	0	0	0	0	1	0	1	0	0	0	0	0	0	
35H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Request data length				CPU monitoring timer				Command				Sub-command			
0	0	0	C	0	0	0	0	1	9	0	1	0	0	0	0
30H	30H	30H	43H	30H	30H	30H	30H	31H	39H	30H	31H	30H	30H	30H	30H
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)

Character A section

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		CPU monitoring timer		Command		Sub-command	
50H	00H	01H	01H	00H	00H	00H	06H	00H	00H	00H	01H	19H	00H	00H

Data length target data

Response message during normal communication (GT SoftGOT2000 → Host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Response data length				Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	2	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	32H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	

*1

End code				Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	0	0	0	0	9	1	0	0	1	1	8	4	6	4	9	0	4
30H	30H	30H	30H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Character B section

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		End code		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
D0H	00H	01H	01H	00H	00H	00H	09H	00H	00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Data length target data

Item	Message format
Response message during faulty communication (GT SoftGOT2000 → Host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Response data length				Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	6	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	

*1

	End code				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		
	0	0	5	6	0	0	0	0	0	0	0	0	0	0	→ 1)
	30H	30H	35H	36H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

Data length target data

1) →	Command				Sub-command			
	1	9	0	1	0	0	0	0
	31H	39H	30H	31H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D0H	00H	01H	01H	00H	00H	00H	0BH	00H	

*1

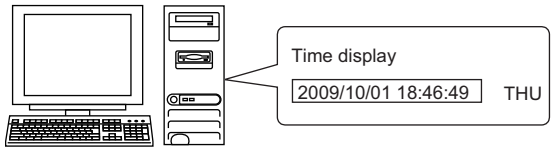
	End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
	56H	00H	00H	00H	00H	00H	00H	01H	19H	00H	00H

Data length target data

■Set clock data (0901) command

The following shows an example of setting the clock data of the personal computer.

(The clock will be set to 18:46:49 on Thursday, October 1, 2009.)



After execution

Item	Message format
Request message (Host → GT SoftGOT2000)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
5	0	0	0	0	1	0	1	0	0	0	0	0	0	
35H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Response data length				CPU monitoring timer				Command				
0	0	1	A	0	0	0	0	0	9	0	1	→ 1)
30H	30H	31H	41H	30H	30H	30H	30H	31H	39H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Data length target data

Character C section

1) →	Sub-command				Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
	0	0	0	0	0	9	1	0	0	1	1	8	4	6	4	9	0	4
	30H	30H	30H	30H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		Following *1
50H	00H	01H	01H	00H	00H	00H	0DH	00H	

*1

CPU monitoring timer		Command		Sub-command		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
00H	00H	01H	09H	00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Data length target data

Item	Message format
Response message during normal communication (GT SoftGOT2000 → Host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

	Response data length				End code			
	0	0	0	4	0	0	0	0
	30H	30H	30H	34H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		End code	
D0H	00H	01H	01H	00H	00H	00H	02H	00H	00H	00H

Data length target data

Response message during faulty communication (GT SoftGOT2000 → Host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Response data length				Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	6	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	

*1

	End code				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		
	0	0	5	6	0	0	0	0	0	0	0	0	0	0	→ 1)
	30H	30H	35H	36H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

Data length target data

1) →

	Command				Sub-command			
	0	9	0	1	0	0	0	0
	30H	39H	30H	31H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D0H	00H	01H	01H	00H	00H	00H	0BH	00H	

*1

	End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
	56H	00H	00H	00H	00H	00H	00H	01H	09H	00H	00H

Data length target data

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

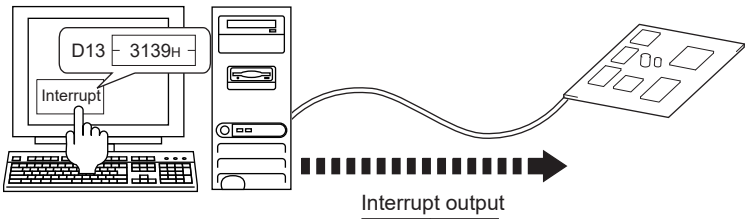
■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Interrupt output is available only when [TCP/IP] is set for [Protocol] in the [Communication Setup] dialog.

Example) When [Interrupt Data Byte] in the [Communication Setup] dialog is set to [2Byte] as (2) in the following table



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GT SoftGOT2000 → Host)	(1) When [Interrupt Data Byte] is set to [1Byte] in the [Communication Setup] dialog Output value 1: 39H (2) When [Interrupt Data Byte] is set to [2Byte] in the [Communication Setup] dialog Output value 1: 31H, Output value 2: 39H (3) When [Interrupt Data Byte] is set to [4Byte] in the [Communication Setup] dialog When [32bit Storage:] is set to [LH Order] in the [Communication Setup] dialog Output value1: AAH, Output value2: 55H, Output value3: 31H, Output value4: 39H When [32bit Storage:] is set to [HL Order] in the [Communication Setup] dialog Output value1: 31H, Output value2: 39H, Output value3: AAH, Output value4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 497 SM devices

Error code list

For the error codes, refer to the following.

☞ Page 542 Error code list

Controller setting

Before setting

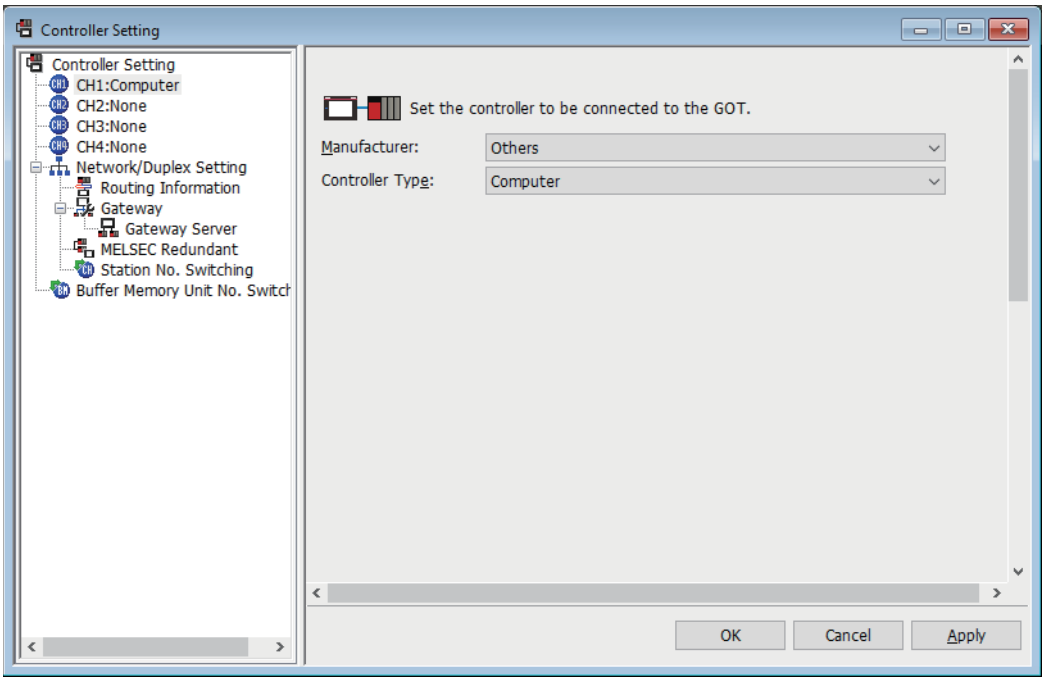
When multiple network devices (including a GT SoftGOT2000 module) are connected to the same segment, the network load increases, possibly degrading the communication performance between the GT SoftGOT2000 module and PLC.
The following countermeasures may improve the communication performance.
Use a switching hub.
Configure the system compliant with the high-speed 100BASE-TX (100 Mbps) standard.
Reduce the number of devices monitored by GT SoftGOT2000.
When multiple GT SoftGOT2000 modules are connected to the same Ethernet network, set a different station number for each module.
When a GT SoftGOT2000 module is used with a GOT1000 series model, do not set IP address 192.168.0.18 for the GT SoftGOT2000 module.
Doing so may cause a communication error on the GOT1000 series model.

Setting on the personal computer

Set the IP address.

Settings in GT Designer3

Configure the settings in GT Designer3 as shown below.



Item	Description	Range
[Manufacturer]	Select the manufacturer of the controller connected to GT SoftGOT2000.	[Others]
[Controller Type]	Select the type of the controller connected to GT SoftGOT2000.	[Computer]

For the setting method, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Settings in GT SoftGOT2000

To establish communication between GT SoftGOT2000 and the host by using the microcomputer connection (Ethernet), configure the communication settings.

Refer to the following, and configure the communication settings in GT SoftGOT2000.

Page 83 [Ethernet]

Precautions for Ethernet connection

For the precautions for the Ethernet connection, refer to the following.

Page 296 Precautions

Precautions

Clock control in GT SoftGOT2000

The time setting and time notification set in GT Designer3 will be disabled.

To read or write the clock data between GT SoftGOT2000 and a host, use the dedicated command.

UDP/IP connection

When the commands are sent from multiple controllers simultaneously using the UDP/IP connection, GT SoftGOT2000 may not receive all the commands.

Resend the commands from the controllers so that GT SoftGOT2000 can receive the commands.

Station monitoring function

The microcomputer connection (Ethernet) does not support the station monitoring function.

Interrupt output

The interrupt output is available only for the TCP/IP connection.

The interrupt output cannot be executed in the UDP/IP connection.

Channels available in GT SoftGOT2000 (Multiple channels)

Two of channels 1 to 4 are available for the microcomputer connection (Ethernet).

Simultaneous use of other connections

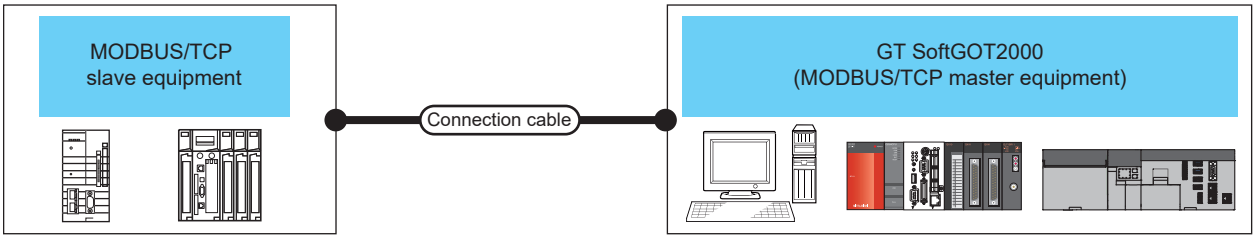
When one device is connected with the microcomputer connection (Ethernet), only one more device can be connected with any of the following connections simultaneously.

- Microcomputer connection (serial)
- Connection to TOSHIBA PLCs
- Barcode reader connection
- RFID connection

More than three devices in total cannot be connected.

3.30 MODBUS/TCP Master Connection

System configuration



Controller	Communication type	Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per channel	
					Personal computer *4	PLC *5
MODBUS/TCP slave equipment *3	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*7 PC CPU module MELIPC	Depending on the MODBUS/TCP slave equipment used *6	128 *1

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*3 For the connectable MODBUS/TCP slave equipment, refer to the following Technical News.
List of Valid Devices Applicable for GOT2000 Series with MODBUS Connection (GOT-A-0037)
For Technical News, contact your local distributor.

*4 Indicates the number of personal computers connectable to one controller.

*5 Indicates the number of controllers connectable to one personal computer.

*6 For the details, refer to the manual of the MODBUS/TCP slave equipment used.

*7 An Ethernet board/card is required.
Page 557 Ethernet board/card

Ethernet board/card

The Ethernet port built in the personal computer can be used.

Use an Ethernet board or Ethernet card compatible with the MODBUS/TCP slave equipment used.

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

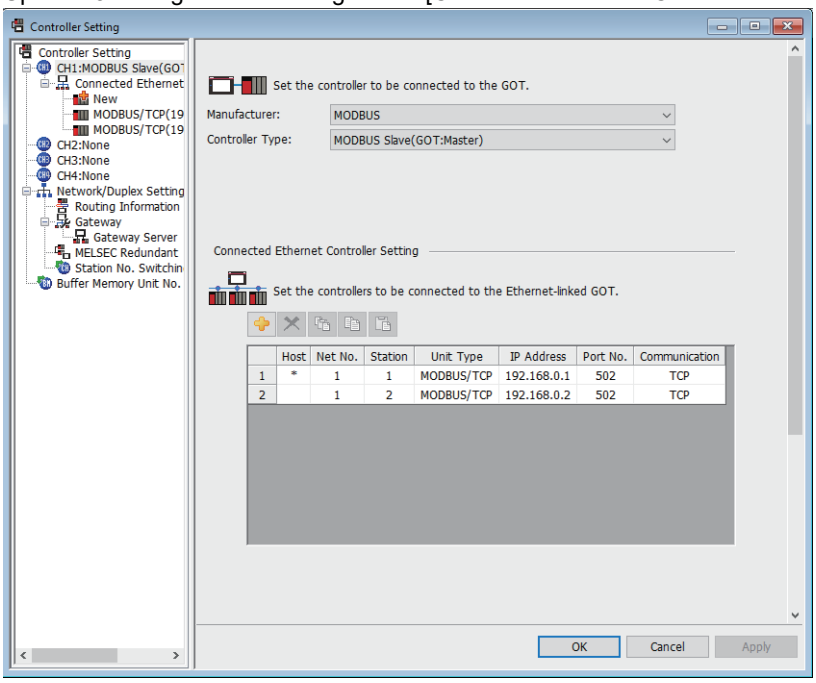
Connection cable

Use a cable compatible with the Ethernet module or MODBUS/TCP slave equipment used.

Controller setting

Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as *.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module	[1] to [247]
[Unit Type] *1	Select a target Ethernet module.	[MODBUS/TCP], [MODBUS/TCP(unit ID fixed)]
[IP Address]	Set the IP address of the target MODBUS/TCP equipment.	IP address of the MODBUS/TCP equipment side
[Port No.]	Displays the port number of the MODBUS/TCP equipment.	[1] to [65535]
[Communication]	Displays the connection method.	[TCP]

*1 To fix the unit ID at 255, select [MODBUS/TCP(unit ID fixed)].

Setting on GT SoftGOT2000

Set the communication setting in the [Communication Setup] dialog of GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

MODBUS/TCP slave equipment settings

For the MODBUS/TCP slave equipment settings, refer to the manual of the MODBUS/TCP slave equipment used.

MODBUS communication control function on the GOT special register (GS device)

This function is to prevent the communication response delay that occurs because the devices on the MODBUS network differ from each other in network specification.

This function is effective for the MODBUS network conditions as described below:

When only a part of function codes is supported (Example: "0F" is not supported)

When the maximum transfer size of function code is small (Example: The maximum number of coil read times is 1000)

■Communication setting

The device (GS579.b0) switches between two communication settings.

When GS579.b0 is off, the communication setting 1 (GS570 to GS576) is applied.

When GS579.b0 is on, the communication setting 2 (GS590 to GS596) is applied.

The following shows the communication setting.

GS device		Description	Set value
Communication setting 1	Communication setting 2		
GS570	GS590	Command selection	Bit0: 0 Using Function Code "0F" 1 Not using Function Code "0F" Bit1: 0 Using Function Code "10" 1 Not using Function Code "10"
GS571	GS591	Function Code "01" Specification for the max. number of coil read times	0:1000 1 to 2000: Specify the maximum number. Other than above: 2000
GS572	GS592	Function Code "02" Specification for the max. number of input relay read times	0:1000 1 to 2000: Specify the maximum number. Other than above: 2000
GS573	GS593	Function Code "03" Specification for the max. number of holding register read times	0:125 1 to 125: Specify the maximum number. Other than above: 125
GS574	GS594	Function Code "04" Specification for the max. number of input register read times	0:125 1 to 125: Specify the maximum number. Other than above: 125
GS575	GS595	Function Code "0F" Specification for the max. number of multiple-coil write times	0:800 1 to 800: Specify the maximum number. Other than above: 800 When Bit0 of GS570 is "1", the function code "0F" is not used, and therefore the setting of GS575 will be disabled.
GS576	GS596	Function Code "10" Specification for the max. number of multiple-holding register write times	0:100 1 to 100: Specify the maximum number. Other than above: 100 When Bit1 of GS570 is "1", the function code "10F" is not used, and therefore the setting of GS576 will be disabled.

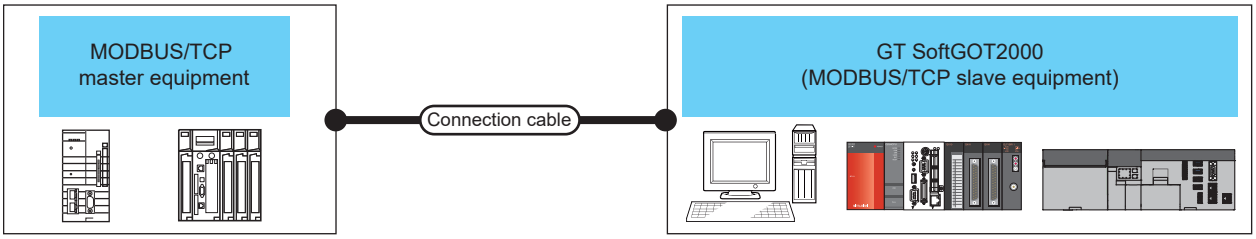
Precautions

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

3.31 MODBUS/TCP Slave Connection

System configuration



Controller	Communication type	Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per channel	
					Personal computer *4	PLC *5
MODBUS/TCP master equipment *3	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*7 PC CPU module MELIPC	Depending on the MODBUS/TCP master equipment used *6	16 *1

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*3 For the connectable MODBUS/TCP master equipment, refer to the following Technical News.
List of Valid Devices Applicable for GOT2000 Series with MODBUS Connection (GOT-A-0037)
For Technical News, contact your local distributor.

*4 Indicates the number of personal computers connectable to one controller.

*5 Indicates the number of controllers connectable to one personal computer.

*6 For the details, refer to the manual of the MODBUS/TCP master equipment used.

*7 An Ethernet board/card is required.
Page 560 Ethernet board/card

Ethernet board/card

The Ethernet port built in the personal computer can be used.

Use an Ethernet board or Ethernet card compatible with the MODBUS/TCP master equipment used.

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

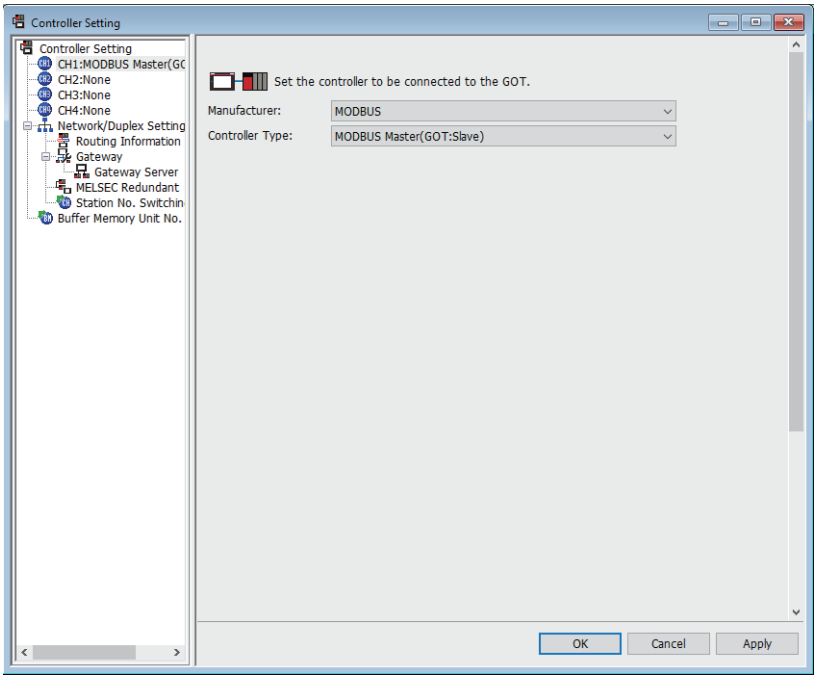
Connection cable

Use a cable compatible with the Ethernet module or MODBUS/TCP master equipment used.

Controller setting

Settings in GT Designer3

Configure the settings on GT Designer3 as shown below.



Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

MODBUS/TCP master equipment settings

For the MODBUS/TCP master equipment settings, refer to the manual of the MODBUS/TCP master equipment used.

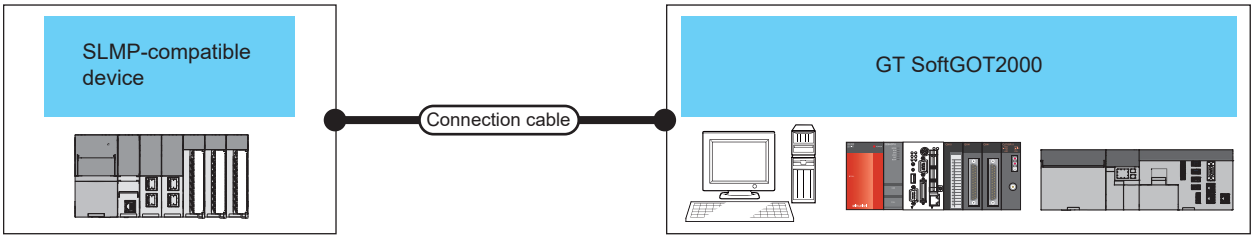
Precautions

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

3.32 SLMP Connection

System configuration



Controller	Communication type	Connection cable *2	Max. distance	GT SoftGOT2000	Number of connectable devices per channel	
					Personal computer *4	SLMP-compatible device *5
SLMP-compatible device *3	Ethernet	Twisted pair cable	100 m (max. segment length)	Windows-compatible personal computer*7 PC CPU module MELIPC	Depending on the SLMP-compatible device used *6	128 *1

*1 When starting up multiple GT SoftGOT2000 modules, monitoring is enabled on the multiple screens.

*2 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*3 For the connectable SLMP-compatible devices, refer to the following Technical News.
List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0085)
For Technical News, contact your local distributor.

*4 Indicates the number of personal computers connectable to one SLMP-compatible device.

*5 Indicates the number of SLMP-compatible devices connectable to one personal computer.

*6 For the details, refer to the manual of the SLMP-compatible device in use.

*7 An Ethernet board/card is required.
Page 562 Ethernet board/card

Ethernet board/card

The Ethernet port built in the personal computer can be used.

Use an Ethernet board or Ethernet card compatible with the SLMP-compatible device to be connected.

Point

• When using PC CPU module

A interface board is not required.

For the system configuration of the PC CPU module, refer to the manual of the PC CPU module.

• When using a MELIPC

To use a MELIPC, no interface board is required.

For the system configuration of a MELIPC, refer to the following.

User's manual of MELIPC

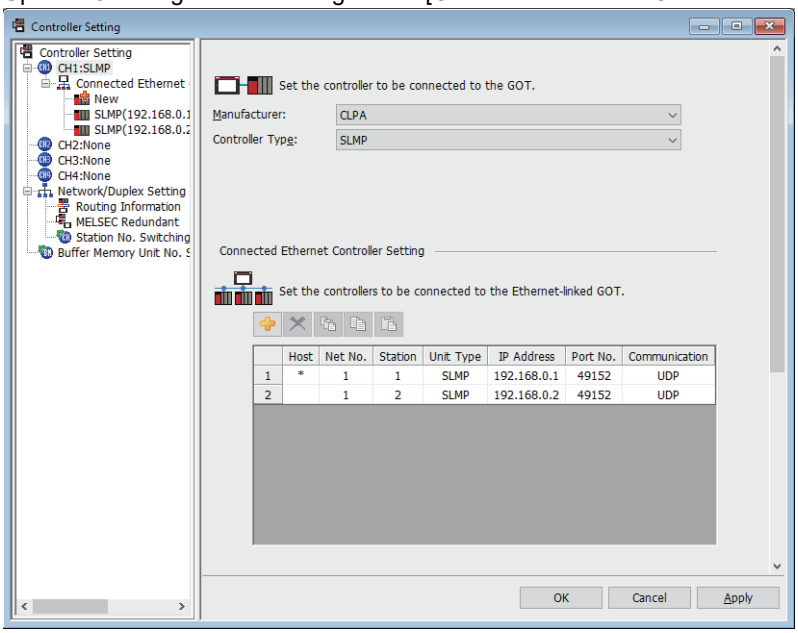
Connection cable

Use a cable compatible with the Ethernet module or SLMP-compatible device in use.

Controller setting

Settings in GT Designer3

Up to 128 settings can be configured in [Connected Ethernet Controller Setting].



Item	Description	Range
[Host]	Indicate the host station. (The host station is indicated as.)	-
[Net No.]	Set the network number of the target Ethernet module.	[1] to [239]
[Station]	Set the station number of the target Ethernet module	[1] to [120], [125] *1
[Unit Type]	Select [SLMP].	[SLMP]
[IP Address]	Set the IP address of the target SLMP-compatible device.	IP address of the SLMP-compatible device side
[Port No.]	Displays the port number of the SLMP-compatible device.	[1] to [65535]
[Communication]	Displays the connection method.	[UDP], [TCP]

*1 When 125 is set in [Station], GT SoftGOT2000 (Multiple channels) can access the master station on the CC-Link IE TSN network.

Setting on GT SoftGOT2000

Configure the settings in the [Communication Setup] dialog in GT SoftGOT2000.

For the details of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Ethernet]

SLMP-compatible device settings

For the SLMP-compatible device settings, refer to the manual of the SLMP-compatible device in use.

Routing Parameter Setting

Set the routing parameter in [Routing Information] in the [Controller Setting] window on GT Designer3.

Up to 64 transfer destination network numbers are settable.

However, you cannot set duplicate transfer destination network numbers.

The GOT (host station) can access other networks that have the transfer destination network numbers specified in the routine parameter setting.

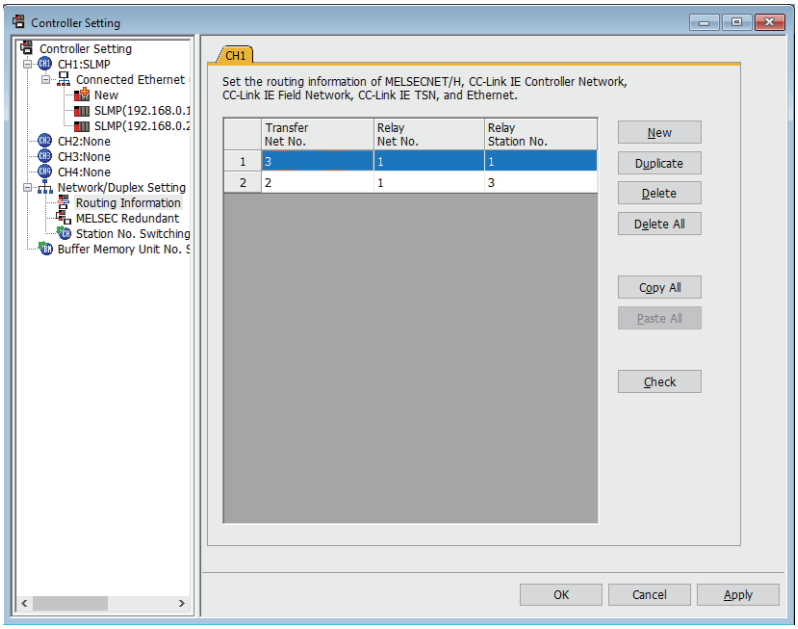
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

For the details of the routing parameter setting, refer to the following.

Manuals of SLMP-compatible



Setting item	Range
[Transfer Net No.]	[1] to [239]
[Relay Net No.]	[1] to [239]
[Relay Station No.]	[0] to [120]

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.

For the setting, refer to the following.

Manuals of SLMP-compatible

Precautions

Communication with the SLMP-compatible device

Do not use GT SoftGOT2000 with other MELSOFT applications when SLMP-compatible devices are connected.

To start multiple GT SoftGOT2000 modules connected by Ethernet, set a different port number for each module.

Precautions for the Ethernet connection

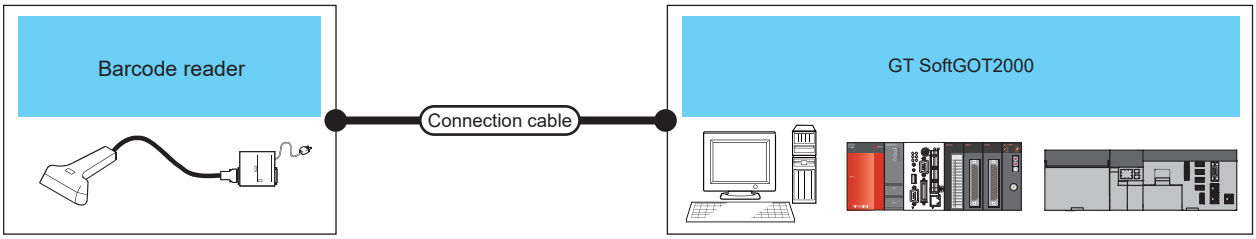
For the precautions for the Ethernet connection, refer to the following.

Page 296 Precautions

3.33 Barcode Reader Connection

Serial connection

System configurations and connection conditions



Controller	Connection cable	GT SoftGOT2000	Number of connectable devices
Barcode reader *1	Varies according to the specifications of the barcode reader used. *1	Windows-compatible personal computer PC CPU module MELIPC*2	1 barcode reader for 1 GT SoftGOT2000 module

*1 For connectable bar code readers, system equipment, available bar code types and connection cables, refer to the following Technical News.
📖List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)
For Technical News, contact your local distributor.

*2 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.

Controller setting

■Barcode function setting on GT Designer3

Before connecting the barcode reader, make the barcode function and system data settings.

For details, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

■Setting on GT SoftGOT2000

Set the [Communication Setup] dialog of GT SoftGOT2000.

For details on the [Communication Setup] dialog, refer to the following manual.

☞ Page 98 [Barcode Reader]

■Barcode reader setting

For details on the barcode reader setting, refer to the following manual.

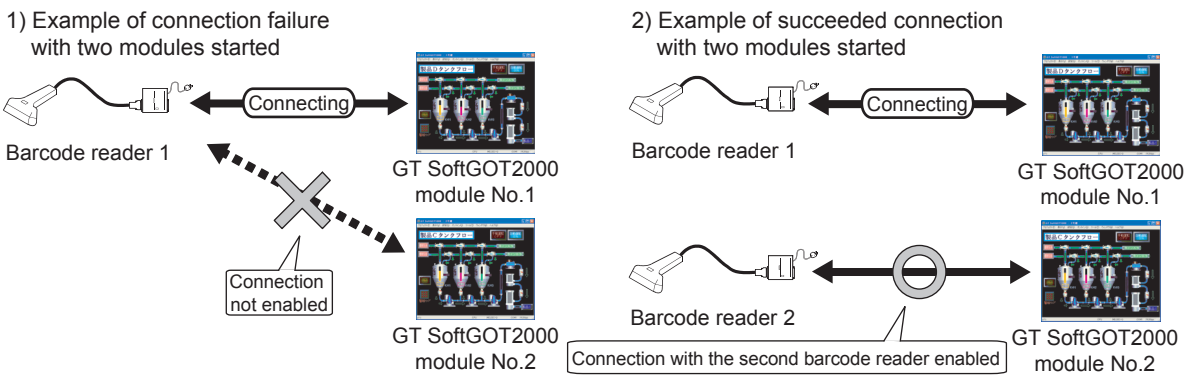
📖 Manual of the barcode reader used

Precautions

■Using barcode reader connection on multiple started GT SoftGOT2000 modules

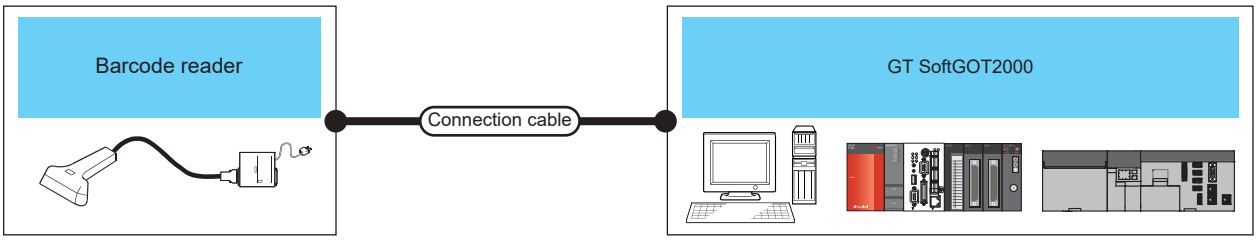
A barcode reader cannot be used by multiple started GT SoftGOT2000 modules or other applications simultaneously.

The barcode reader communicates with the GT SoftGOT2000 which first establishes the connection.



USB connection

System configuration



Controller	Connection cable	GT SoftGOT2000	Number of connectable devices
Barcode reader *1	Varies according to the specifications of the barcode reader used. *1	Windows-compatible personal computer PC CPU module MELIPC	1 barcode reader for 1 GT SoftGOT2000 module

*1 For connectable bar code readers, system equipment, available bar code types and connection cables, refer to the following Technical News.
📖List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)
For Technical News, contact your local distributor.

Controller setting

■Setting on GT SoftGOT2000

A USB barcode reader can be used by enabling the keyboard input function.

For the details of the settings, refer to the following.

☞ Page 581 Keyboard Input

■Barcode reader setting

For details on the barcode reader setting, refer to the following manual.

📖 Manual of the barcode reader used

Precautions

■Restriction on using the USB barcode reader

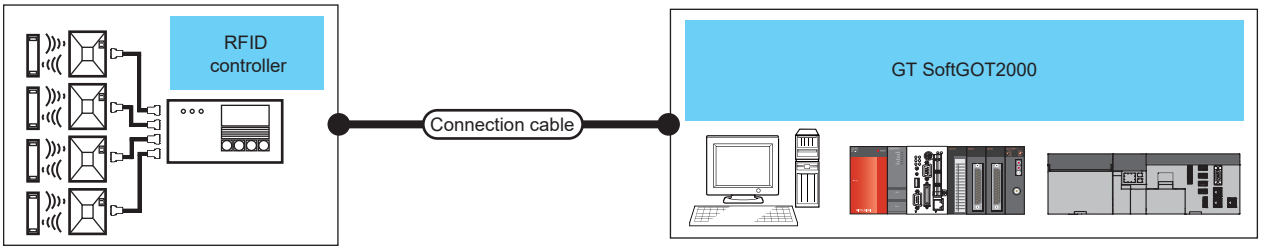
A USB barcode reader can be used only for the text input and the numerical input.

To use the barcode function, connect the barcode reader to the RS-232 interface.

☞ Page 565 Serial connection

3.34 RFID Connection

System configurations



Controller	Connection cable	GT SoftGOT2000	Number of connectable devices
RFID controller *1	Varies according to the specifications of the RFID controller used. *1	Windows-compatible personal computer PC CPU module MELIPC*2	1 RFID controller for 1 GT SoftGOT2000 module

*1 For connectable RFID controllers, system equipment, and connection cables, refer to the following Technical News.
📖List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)
For Technical News, contact your local distributor.

*2 To establish connection via RS-232, assign the RS-232 port on a MELIPC to the Windows part.

Controller setting

RFID function setting on GT Designer3

Before connecting the RFID controller, make the RFID function and system data settings.

For details, refer to the following manual.

📖 GT Designer3 (GOT2000) Screen Design Manual

Setting on GT SoftGOT2000

Set the [Communication Setup] dialog of GT SoftGOT2000.

For details on the [Communication Setup] dialog, refer to the following manual.

☞ Page 99 [RFID]

RFID controller setting

For details on the RFID controller setting, refer to the following manual.

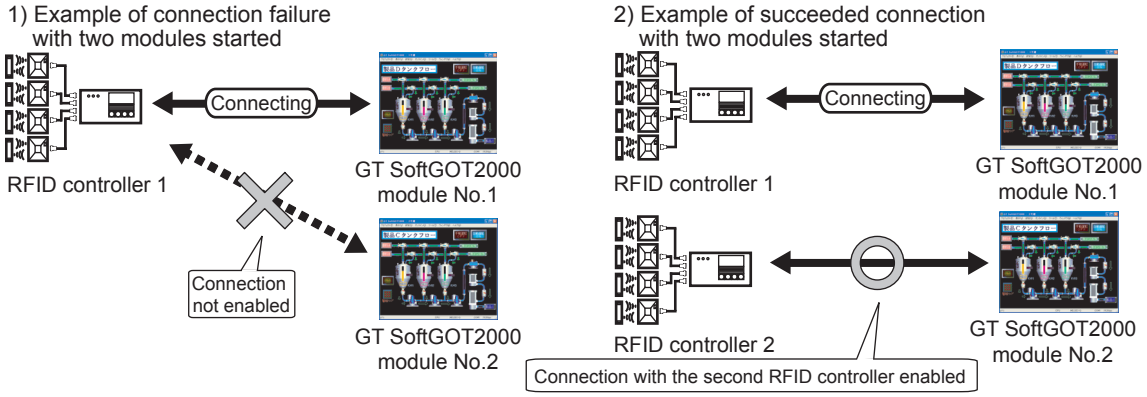
📖 Manual of the RFID controller used

Precautions

Using RFID connection on multiple started GT SoftGOT2000 modules

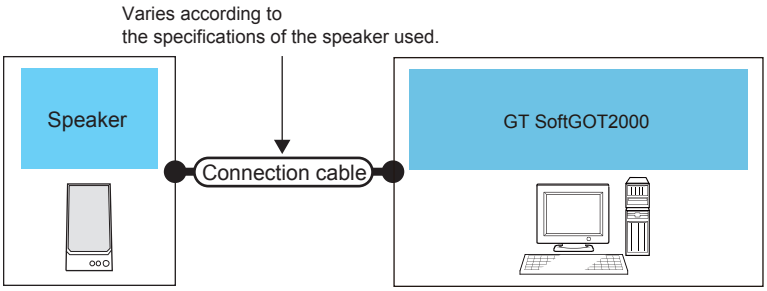
An RFID controller cannot be used by multiple started GT SoftGOT2000 modules or other applications simultaneously.

The RFID controller communicates with the GT SoftGOT2000 which first establishes the connection.



3.35 Sound Output Device Connection

System configurations



Controller	Connection cable	GT SoftGOT2000
Speaker built in a personal computer and external speaker *1	Varies according to the specifications of the external speaker used.	Windows-compatible personal computer

*1 If your personal computer has no sound function, use a sound card.

Controller setting

Sound output function setting on GT Designer3

Before connecting the sound output, make the sound output function settings.

For details, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

MEMO

4 FUNCTIONS OF GT SoftGOT2000

☞ Page 572 Snap Shot
☞ Page 573 Print
☞ Page 575 License Registration Information
☞ Page 576 Property
☞ Page 577 Resource Data
☞ Page 579 Displaying File Information in PLC
☞ Page 581 Keyboard Input
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☞ Page 612 SoftGOT-GOT Link Function
☞ Page 656 Interaction with PX Developer
☞ Page 663 Edgecross Interaction Function
☞ Page 668 Full Screen Mode
☞ Page 673 Close Menu
☞ Page 674 Back Screen Mode
☞ Page 675 Enabling or Disabling the Exit Key
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☞ Page 682 Monitor-only Mode

4.1 Snap Shot

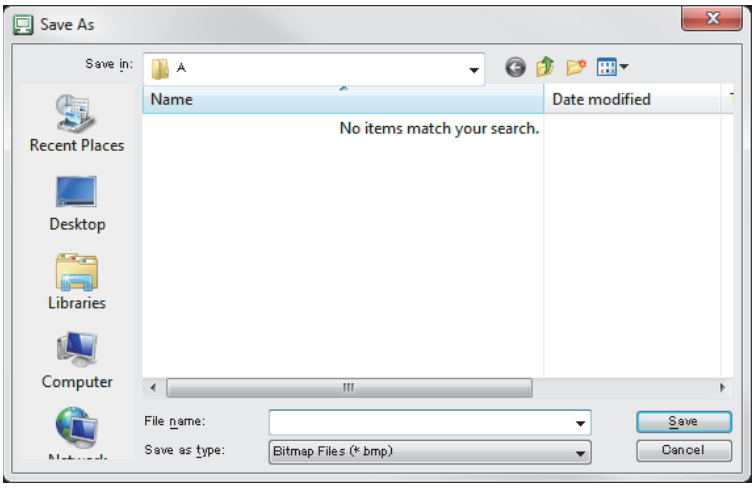
The screen image being monitored is saved into BMP or JPEG format file.

1. Perform the following operation.

Select [Project] → [Snap Shot...] from the menu.

2. The [save as] dialog is displayed.

Set the following items and click the [Save] button.



Item	Description
[Save in]	Selects the area where the file is saved.
[File name]	Selects the file name to be saved.
[Save as type]	Selects a format of the file. • [Bitmap Files (*.bmp)]: BMP format • [JPEG Files (*.jpg)] : JPEG format-

4.2 Print

The screen image being monitored is output to a printer.

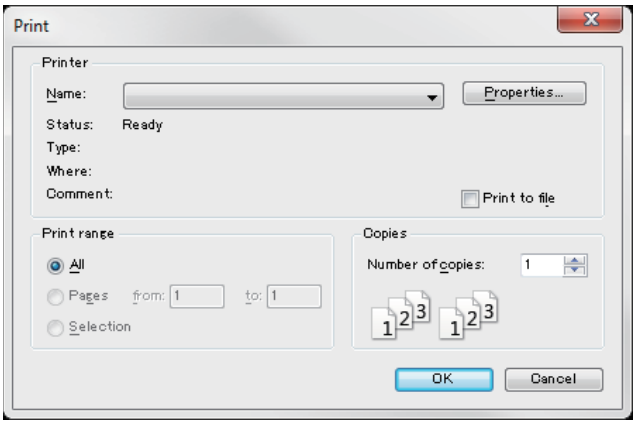
Printing

1. Perform the following operation.

Select [Project] → [Print...] from the menu.

2. The [Print] dialog of Windows is displayed.

Click the [OK] button to start printing.

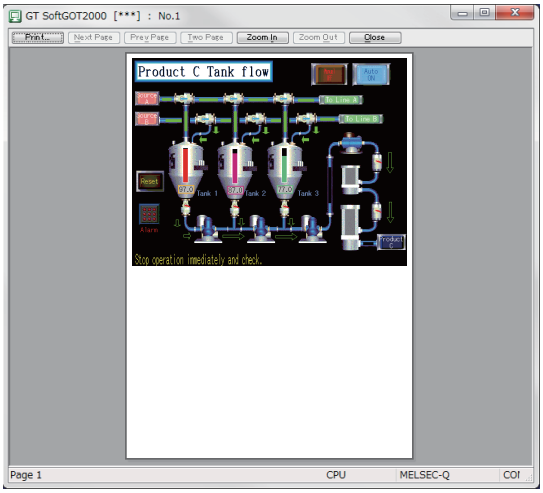


Displaying the print preview

1. Perform the following operation.

Select [Project] → [Print Preview] from the menu.

2. The print preview is displayed.



Point

Precautions for using the print preview

The print preview of the GT SoftGOT2000 screen may look smaller than the actual GT SoftGOT2000 screen depending on the paper type or size, and the screen resolution.

Therefore, what is printed may not match the print preview.

Check what has been printed.

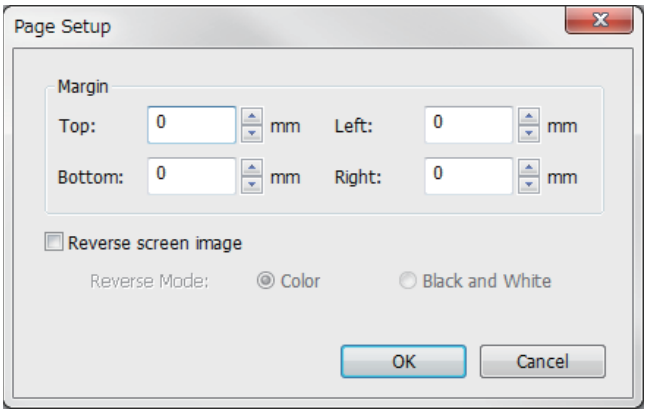
Performing page setup

1. Perform the following operation.

Select [Project] → [Page Setup] from the menu.

2. The [Page Setup] dialog is displayed.

Set the following items and click the [OK] button.



Item		Description
[Margin]		Set the margins on a page to be printed.
[Reverse screen image]		Select this item to reverse the colors of screen image when printing.
	[Reverse Mode]	Set the reverse mode for screen image. • [Color] : Reverse all the colors of screen image to be printed. • [Black and White] : Reverse the black and white colors of screen image to be printed.

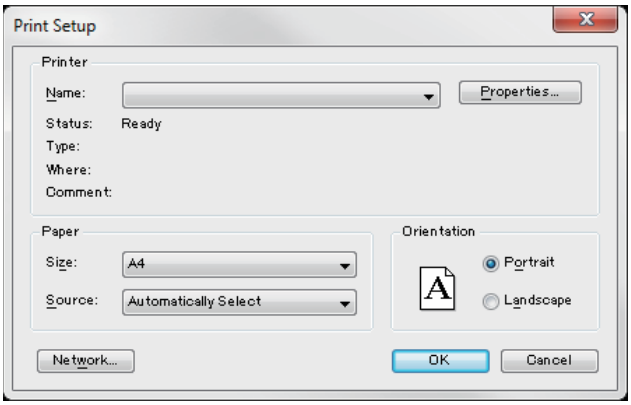
Performing print setup

1. Perform the following operation.

Select [Project] → [Print Setup] from the menu.

2. The [Print Setup] dialog of Windows is displayed.

3. Configure the print settings (such as selecting a printer, paper size, and orientation), and then click the [OK] button.



Point

• Precautions for the printer used

Each GT SoftGOT2000 module has its own print settings.

However, when you perform one of the following operations, the printer selected for [Set as default printer] in Windows is specified.

Deleting the selected printer

Selecting a printer whose name contains 31 characters or more

• Precautions for the print settings

Depending on the printer used, some print settings are not retained.

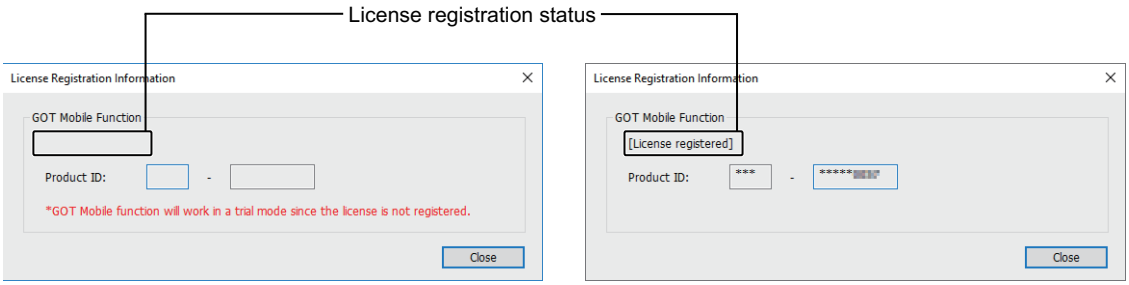
4.3 License Registration Information

Displays the license registration status of the GOT Mobile function.

1. Perform the following operations.

Select [Project] → [License Registration Information] from the menu.

2. The [License Registration Information] dialog appears.



When the license is not registered

When the license is registered

Item	Description
License registration status	When the license is registered, [License registered] is displayed.
[Product ID]	When the license is registered, the product ID is displayed.

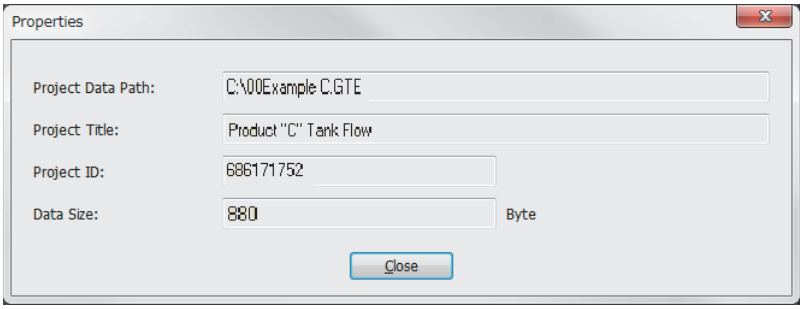
4.4 Property

The project title, project ID and data size of project data being monitored are displayed.

1. Perform the following operation.

Select [Project] → [Properties...] from the menu.

2. The [Properties] dialog is displayed.



Item	Description
[Project Data Path]	Displays the path of the read project data.
[Project Title]	Displays the project title.
[Project ID]	Displays the project ID.
[Data Size]	Displays the data size of project data.

Point

When the [Properties] dialog is displayed before starting monitoring

When the [Properties] dialog is displayed before starting monitoring, the [Project Data Path], [Project Title], [Project ID] and [Data Size] of project data monitored previously are displayed.

(If project data has not been loaded, the [Project Data Path], [Project Title], [Project ID] and [Data Size] are not displayed.)

4.5 Resource Data

The following data saved in the personal computer can be referenced.

Alarm log

Recipe

Data log

Operation log

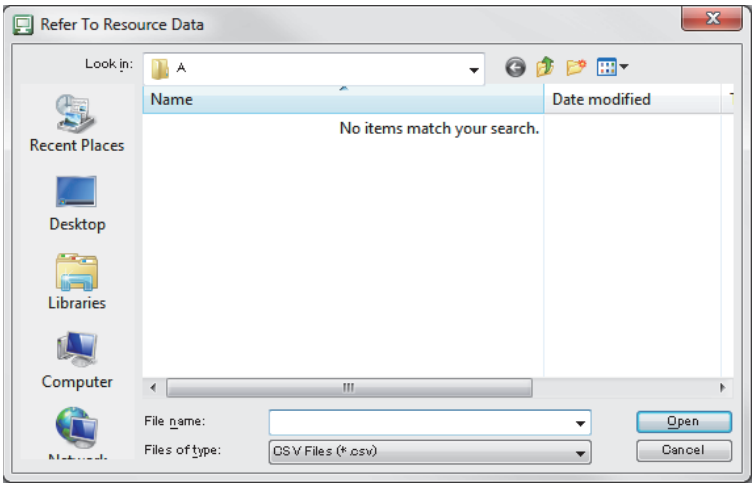
Image file (Hard copy and etc)

1. Perform the following operation.

Select [Tool] → [Resouce Data] from the menu.

Right-click the mouse to select [Tool] → [Resource Data].

2. The [Refer To Resource Data] dialog is displayed.



Item	Description
[Look in]	Selects the location to which the resource data is stored.
[File name]	Specifies the file to be read.
[Files of type]	Selects the file format of the resource data. • [CSV Files (*.csv)] : CSV format • [Unicode Text Files (*.txt)] : Unicode text file format • [Bitmap Files (*.bmp)] : BMP format • [JPEG Files (*.jpg)] : JPEG format

Point

Resource data

The black and white inversion is not available for image files of the hard copy function.

Data cannot be updated while being referenced. (The data is held.)

(The held data is reflected when the print data is updated after the data reference is over.)

When creating a table in the report function, create the table as shown in example 1.

A table as shown in example 2 cannot be properly displayed in a CSV file.

(Example 1) Table created with GT Designer3

	A	B
X	1	2
Y	3	4

CSV file table

	A	B
X	1	2
Y	3	4

(Example 2) Table created with GT Designer3

	A	B
X	1	2
Y	3	4

CSV file table

A	B	
X	1	2
Y	3	4

When outputting the characters specified with a text print object by using the report function, store the characters in the specified devices according to the setting of [Display in order of High -> Low].

If the characters are not stored in the specified byte order, the characters are displayed incorrectly in the output CSV file.

If the [Fail in the start of application.] message is displayed during data reference, check the application relating setting or hard disk/memory capacity.

4.6 Displaying File Information in PLC

GT SoftGOT2000 displays the file information in the connected PLC (QCPU or QSCPU).
This function is supported by GT SoftGOT2000 (Single channel) only.

Point

• Requirements to display file information

The file information is displayed when the host station is set to a MITSUBISHI ELECTRIC PLC (QCPU or QSCPU) and GT SoftGOT2000 is in the online mode after monitoring is started.

• Displaying the dialog by using the GOT special register (GS device)

Turning on the PLC file display signal (GS500.b2) displays the [File Information in PLC] dialog.

Setting method

1. Perform either of the following operations.

Select [Tool] → [File Information in PLC] from the menu.

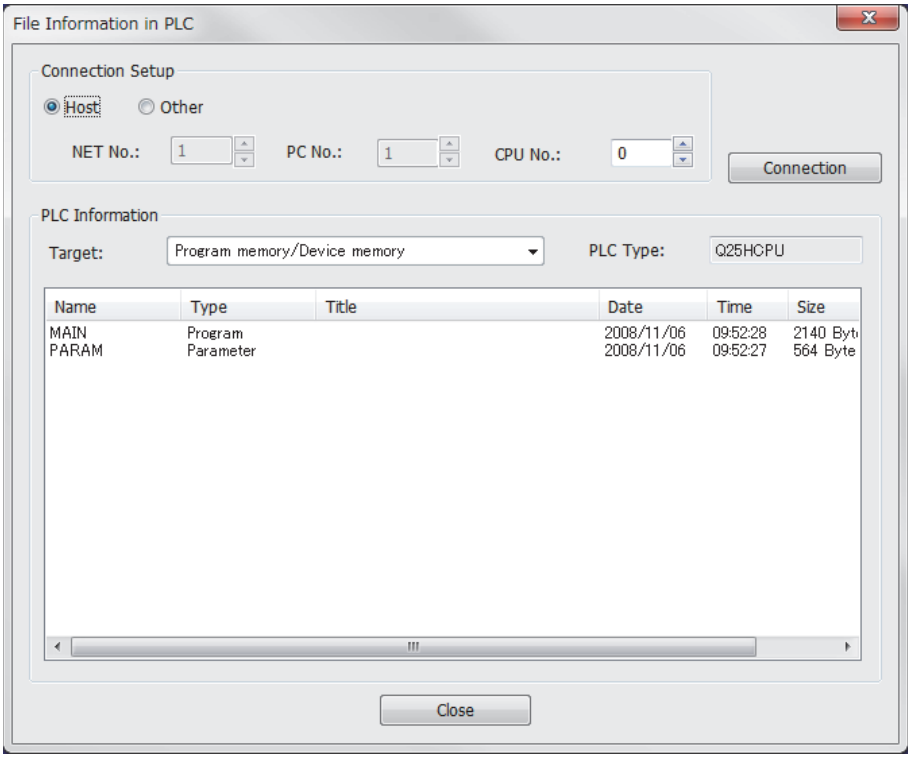
Right-click the mouse and select [Tool] → [File Information in PLC] from the menu.

2. The [File Information in PLC] dialog is displayed.

Set the connection setup by referring to the table on the next page, and then click the [Connection] button.

3. With successful communication, the PLC CPU model, the default target memory ([Program memory/Device memory]), and the file information in the memory are displayed.

4. To display file information in a memory other than the program memory/device memory, change the target memory.



Item		Description
[Connection Setup]		Set the connected station to the host station or another station. (The default is [Host].)
	[Host]	Check this item to set the connected station to the host station.
	[Other]	Check this item to set the connected station to another station.
	[NET No.]	When the connected station is set to another station, set the network No. of the PLC that has the file information to be displayed. [0] to [239] (The default is [1].)
	[Station number]	When the connected station is set to another station, set the station No. of the PLC that has the file information to be displayed. [1] to [255] (The default is [1].)
	[CPU No.]	Select the target CPU No. [0] to [4] (The default is [0].)
[PLC Information]		Displays the file information in the target PLC CPU.
	[Target]	Select the PLC CPU memory that has files to be displayed on the GOT. [Program memory/Device memory], [Memory card(RAM)], [Memory card(ROM)], [Standard RAM], [Standard ROM] (The default is [Program memory/Device memory].)
	[PLC Type]	Displays the target PLC CPU model.
	[Name]	Displays the names of the files.
	[Type]	Displays the types of the files. (The files are displayed in the order of type priorities starting from the left as shown below.) [Program], [Device comment], [Parameter], [Device init], [File register]
	[Title]	Displays the titles of the files.
	[Date]	Displays the last modified dates of the files.
	[Time]	Displays the last modified time of the files.
	[Size]	Displays the sizes of the files.

Precautions for use

Communication processing of monitor screen while file information is displayed

Displaying file information in the PLC interrupts communication processing of the monitor screen.

Therefore, communication processing of the monitor screen takes more time.

When connecting to redundant system

Even if system switching occurs, the currently displayed file list is not updated.

To display the file information in the new monitor target, set the connection setup and click the [Connection] button again.

Updating read information

Even if the program and others are updated on the PLC side while the File Information in PLC dialog is displayed, the currently displayed file list is not updated.

To display the latest file information, click the [Connection] button again to update the displayed information.

4.7 Keyboard Input

The following can be operated using the keyboard input function.
Inputting text or a value on the numerical input object or text input object by operating a keyboard or a USB barcode reader
Operations, including displaying a ladder with the alarm display, can be operated with function keys of a keyboard.

Keyboard input enabling/disabling procedure

1. When switching the keyboard input enable/disable, perform the following operation.

Click [Keyboard].
Select [Set] → [Keyboard] from the menu.
Right-click the mouse to select [Set] → [Keyboard] from the menu.

Operations on numerical and text input objects

Keyboard

Text or numerical values can be input using the keyboard of the personal computer when numerical input objects or text input objects are used.
The following lists the operation when each key is pressed.

Keyboard operation	GOT key code	Operation on the numerical input	Operation on the text input
[Back space]	0008h	Delete the character on the cursor.	
[Enter] *1	000Dh	Write the entry to a specified device, display the cursor on the target object, move the cursor to a different object, or close the key window.	
[Esc]	001Bh	Cancel the entry.	
[-] (Hyphen)	002Dh	Reverse the sign of the value.	–
[.] (Period)	002Eh	Enter a decimal point.	–
[0] to [9]	0030h to 0039h	Enter a numeric character.	Enter a character. (ASCII or Unicode 2.1-compatible)
[A] to [Z], [a] to [z]	0041h to 005Ah, 0061h to 007Ah	Enter a numeric character in hexadecimal ([A] to [F], [a] to [f]).	
Symbol keys	Character codes (ASCII)	–	
Enter text (such as hiragana or kanji characters).	Character codes (Unicode)	–	Enter text. (Unicode 2.1-compatible)
[→], [←], [↑], [↓]	0080h, 0081h, 0082h, 0083h	Move the cursor to a different object.	
[Home]	0084h	–	Convert the entry to kanji characters.
[Page Up]	0085h	–	Select the previous candidate.
[Page Down]	0086h	–	Select the next candidate.
[End]	0087h	–	Confirm the entry, or select the next group of hiragana characters to be converted to kanji characters.
[Delete]	0088h	Delete all the entered characters.	
[Ctrl]+[←], [Ctrl]+[→]	0090h, 0091h	Move the cursor on the target object.	
[Ctrl]+[↑], [Ctrl]+[↓]	FFFAh, FFFBh	Increment or decrement the value.	–

*1 The operation on the target object varies depending on the setting in the [Environmental Setting] window ([Key Windows]) on GT Designer3.
For the details, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual

USB barcode reader

If numerical input objects or text input objects are used, a USB barcode reader can be used as a keyboard to input text or numerical values.

For the details of the USB barcode reader, refer to the following.

☞ Page 566 USB connection

With a USB barcode reader, you can input a key code to an object or a key window, move the cursor, delete text, and determine or cancel an input value.

For the details of the settings, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

How to use function keys

With assigning key codes to the following function keys, objects, including the alarm history, can be operated with a keyboard.

F1 to F8

Shift + F1 to F8

Ctrl + F1 to F8

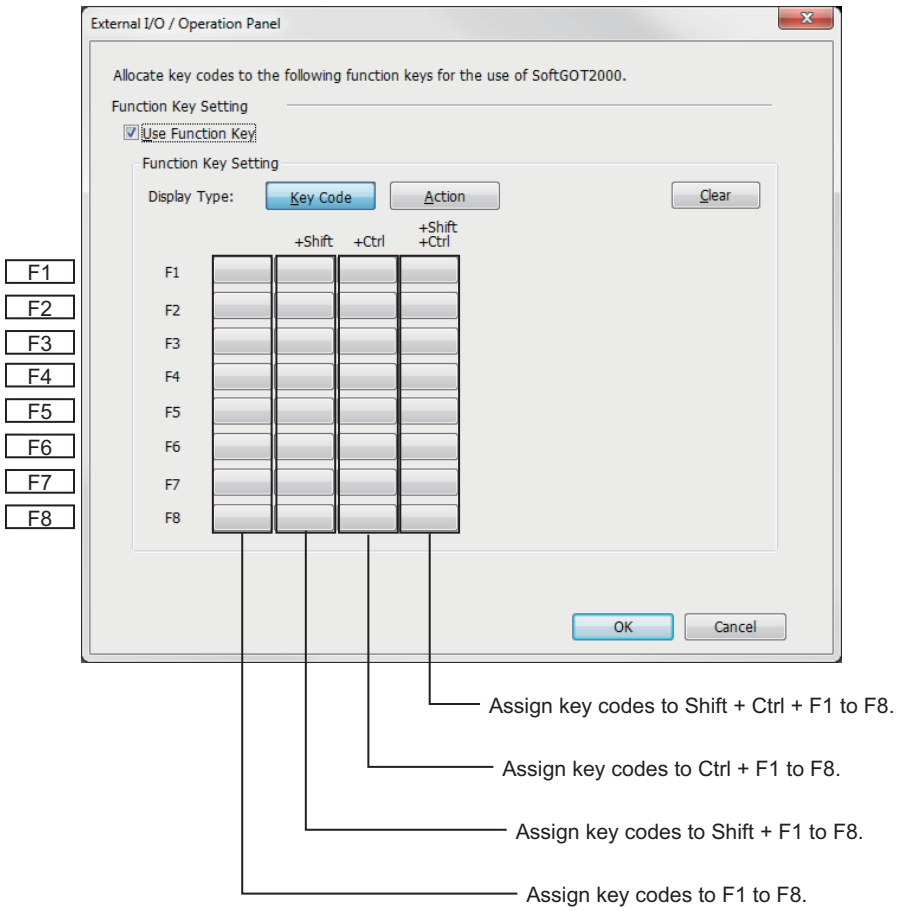
Ctrl + Shift + F1 to F8

How to assign key codes

Key codes are assigned in the OperationPanel screen on GT Designer3.

For settings in the OperationPanel dialog, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual



Precautions

When displaying a window screen on a base screen

When displaying a window screen on a base screen, and the alarm list display function or the alarm history display function has been set up on both the screens, key input is enabled for the alarm list display function or the alarm history display function on the base screen.

When a touch switch to which the simultaneous press disable setting has been made is ON

The touch switch will not operate when pressing a key in the case the simultaneous press disable setting has been made to the touch switch and the touch switch is ON.

Precautions on screen saving

When the screen save is set on GT SoftGOT2000, the monitor screen does not turn black as GOT even though the screen save operates. (The monitor screen keeps the same screen as before setting the screen save.)
The first input operation (touch, mouse, or keyboard) while GT SoftGOT2000 is in screen saver mode is not recognized as an input because the input is recognized as clearing the screen saver mode.
Be sure not to make inputs incorrectly when canceling the screen saves.
The GT SoftGOT2000 screen save and Windows screen save are different functions.
If the GT SoftGOT2000 screen save and Windows screen save are being active, it is required to cancel the respective screen saves.

Keyboard inputs

The keyboard input function is not compatible with the utility screen.
Operate the utility screen with the mouse.
Do not use software keyboards (keyboard applications).

Precautions for function keys

Function keys cannot be used during clicking the mouse.
For an input with a function key, the input is executed when the function key is released.
As a result, operations are not correctly executed even though the following are set on GT Designer3.
Setting [Operation Timing] of [Action of Go To Screen Switch] in [Screen Switching/Window] of [Environmental Setting].
Setting [Momentary] for the action of the bit in the [Action] tab of the Edit Action/Key Code screen for the operation panel setting
Setting [Auto Repeat] in the [Trigger] tab of the Edit Action/Key Code screen for the operation panel setting
When input methods, including IME of Windows, are enabled, inputs with function keys cannot be executed.
For inputs with function keys, disable input methods, including IME of Windows.

4.8 Popup Menu

The right-click of the mouse can be disabled (the menu can be hidden).
When the Popupmenu is set to be disabled, the menu is not displayed if you right-click the mouse.
This setting is also enabled when you exit and then restart GT SoftGOT2000.

Popup menu effective/ineffective

1. Perform the following operation.

Select [Set] → [Popup Menu] from the menu.
Right-click the mouse to select [Set] → [Popup Menu] from the menu.

2. The right-click of the mouse is disabled.

3. When you want to enable the right-click of the mouse again, choose [Set] - [Popup Menu].

Precautions

When the full screen mode and Popupmenu disable are set, the operations of the menu bar and mouse right-click menu cannot be performed.
Therefore, the pop-up menu cannot be enabled until the full screen mode is canceled.
When you want to enable the pop-up menu, cancel the full screen mode in the following method.

When the keyword of the full screen mode was added to the property of the GT SoftGOT2000 icon.

After exiting GT SoftGOT2000 (pressing the [F12] key or turning ON the GOT internal device GS500.b0), delete the added keyword.

When the full screen mode was executed from the menu.

As the full screen mode is canceled by pressing the [Alt] + [F9] key, enable the Popupmenu from the menu.

4.9 Script Error Information

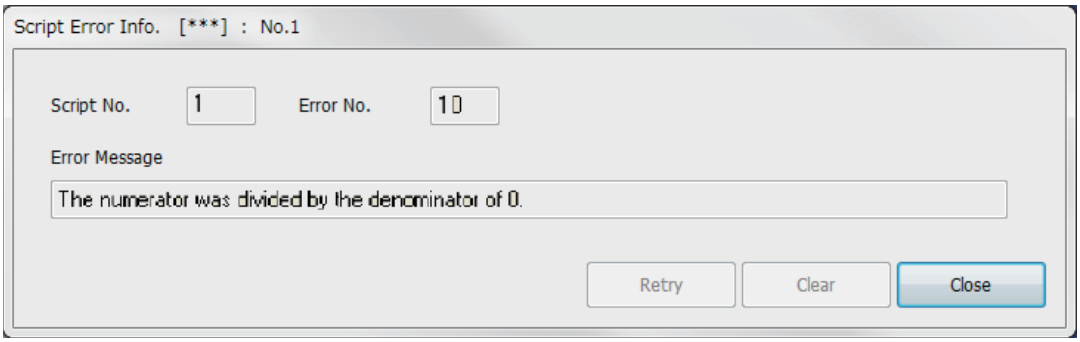
Monitor the execution status of a script (Error Information) to display the current status.

1. Perform the following operation.

Select [Tool] → [Script Error] menu.

Right-click the mouse to select [Tool] → [Script Error] from the menu.

2. The [Script Error Info.] dialog is displayed.



Item	Description
[Script No.] *1	Script No. where error occurs is displayed.
[Error No.]	Error code of occurring error is displayed.
[Error Message]	Error contents are displayed.
[Retry]	Retries the script. If a screen in which no scrip runs is displayed, the retry is not performed.
[Clear]	Clears the displayed error message by performing the following. If a screen in which no scrip runs is displayed, the retry is not performed. • GS14.b0, b7, b8, and b12 store 0 • GS15 stores -1 • GS16 to GS47 store 0 For the details of the GOT internal devices, refer to the following. 📖 GT Designer3 (GOT2000) Screen Design Manual When the error has not been cleared, the error message is displayed again.
[Close]	The dialog is closed.

*1 Refer to the following manual for script function.
📖 GT Designer3 (GOT2000) Screen Design Manual

4.10 Object Script Error Information

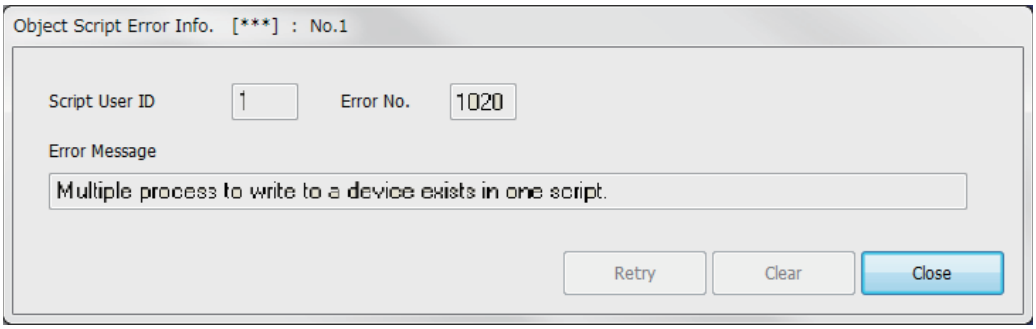
Monitor the execution status of an object script (Error Information) to display the current status.

1. Perform the following operation.

Select [Tool] → [Object Script Error] from the menu.

Right-click the mouse to select [Tool] → [Object Script Error] from the menu.

2. The [Object Script Error Info.] dialog is displayed.

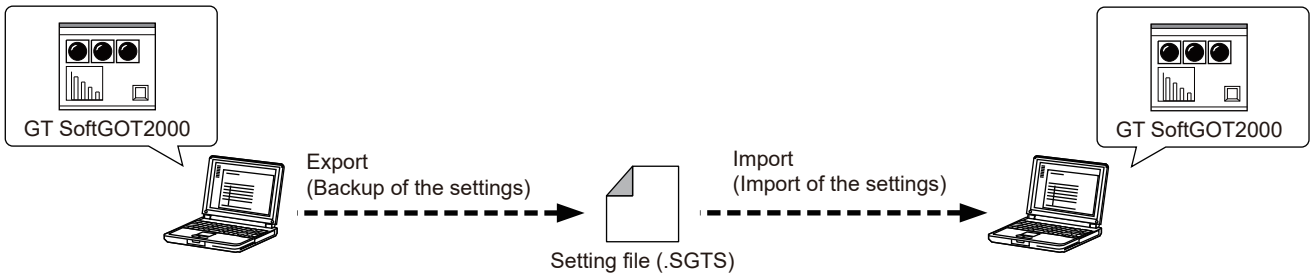


Item	Description
[Script number] *1	User ID of the object script where error occurs is displayed.
[Error No.]	Error code of occurring error is displayed.
[Error Message]	Error contents are displayed.
[Retry]	Retries the object script. If a screen in which no scrip runs is displayed, the retry is not performed.
[Clear]	Clears the displayed error message by performing the following. If a screen in which no scrip runs is displayed, the retry is not performed. • GS80.b0, b7, b8, and b12 store 0 • GS81 stores -1 • GS82 to GS113 store 0 For the details of the GOT internal devices, refer to the following. GT Designer3 (GOT2000) Screen Design Manual When the error has not been cleared, the error message is displayed again.
[Close]	The dialog is closed.

*1 Refer to the following manual for object script function and corrective actions for error messages.
GT Designer3 (GOT2000) Screen Design Manual

4.11 Importing and Exporting the Settings

This function is used to import and export the settings of GT SoftGOT2000as a setting file (.SGTS).
Settings can be backed up per module number, restored when an error occurs, or imported to another module.
By importing the settings to GT SoftGOT2000 in another personal computer, the same system as the import source can be configured.



Importable and exportable settings

The following shows importable and exportable settings of GT SoftGOT2000.
For details on each setting menu, refer to the following.
☞ Page 64 Menu Bar

○: Available, -: Not available

Menu			Availability
[Project]	[Open]	[Open a Project]	-
		[Open a File]	-
	[Snap Shot]		-
	[Print Setup]		○
	[Page Setup]		○
	[Print Preview]		-
	[Print]		○*1
	[Properties]		-
	[License Registration Information]		-
	[Exit]		-
[View]	[Toolbar]		○
	[Status Bar]		○
	[Scroll Bar]		○
	[Full Screen Mode]		○
	[Back Screen Mode]		○
	[Switch Display Langage]		-

Menu			Availability
[Set]	[Environment Setup]		○*2
	[Mail Setup]	[Mail Setup]	○
		[Mail Condition]	○
		[Mail History]	-
	[Application Setup]	[Application Start-up Setting]	○
		[Application Start-up History]	-
	[PX Developer Function Setting]	[PX Developer Function Call Setting]	-
		[PX Developer Function Call Sub-Setting]	○
		[PX Developer Function Call History]	-
	[SoftGOT-GOT Link Function Setting]		○
	[Edgecross Interaction Function Setting]		○
	[Keyboard]		○
	[Monitor-only Mode]		○
	[Popup Menu]		○
	[Close Menu]		○
	[Exit Key [F12]]		○
[Online]	[Monitor Start]		-
	[Monitor Stop]		-
	[Startup in Online Mode]		○*3
	[Comm. Error Dialog]		○
	[Communication Setup]		○*4
[Tool]	[Resource Data]		-
	[File Information in PLC]		○
	[SoftGOT-GOT Link Function]	[GOT Project Data Acquisition]	-
		[Resource Data Upload Status]	-
	[Script Error]		-
	[Object Script Error]		-
	[Import]		-
	[Export]		-
[Window]	[Cascade]		-
	[Minimize All Windows]		-
	[Move Window]		-
	[Move to Start-up Display Position]		-
	[Move to Previous Display]		-
	[Move to Next Display]		-
	Move to Display □		-
[Help]	[GT SoftGOT2000 Help]		-
	[Manual List]		-
	[Connection to MITSUBISHI ELECTRIC FA Global Website]		-
	[About GT SoftGOT2000]		-

*1 [Print to file] and [Print range] in the [Print] dialog are not available.

*2 [Display the start-up selection dialog (GT SoftGOT2000 Start-up) when starting GT SoftGOT2000] in the [Environment Setup] dialog ([Auxiliary Setup] tab) is not available.

*3 It is recommended to perform export with this setting disabled.
For the details, refer to the following.
☞ Page 594 Export of the startup in online mode setting

*4 When [Connection] in the [Communication Setup] dialog ([Connection Setup] tab) is set to [OPC], [Step1: Access destination device setting] and [Step2: Client certificate setting] are not available.

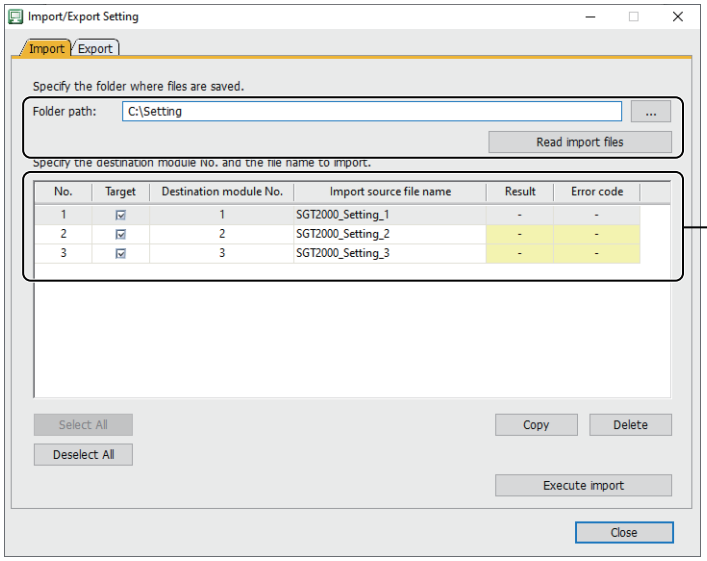
Import and export procedure

Import procedure

1. Store the setting file (.SGTS) to be imported to a folder.
2. Perform one of the following operations to display the [Import/Export Setting] dialog.

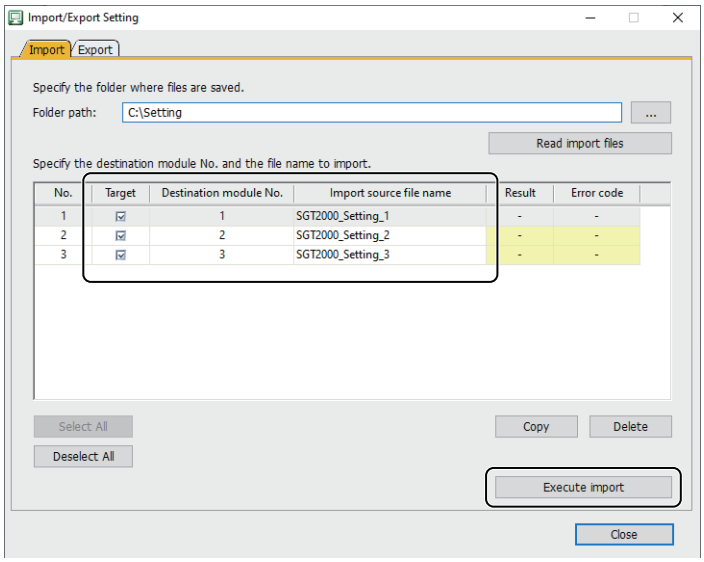
- Click the [Import/Export Setting] button in the [GT SoftGOT2000 Start-up] dialog.
- Select [Tool] → [Import] from the menu.

3. Set the storage folder of the setting files to be imported to [Folder path] and click the [Read import files] button to list the setting files in the specified folder.



4. Select the checkbox of the setting file to be imported in the [Target] column, and set [Destination module No.] and [Import source file name].

Click the [Execute import] button to import the setting file.



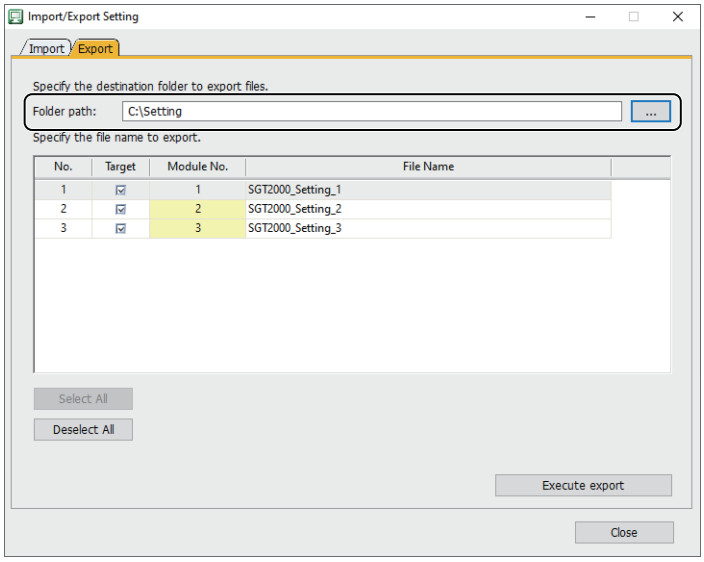
5. The imported settings are applied to the applicable GT SoftGOT2000 module at its next startup.

Export procedure

1. Perform one of the following operations to display the [Import/Export Setting] dialog.

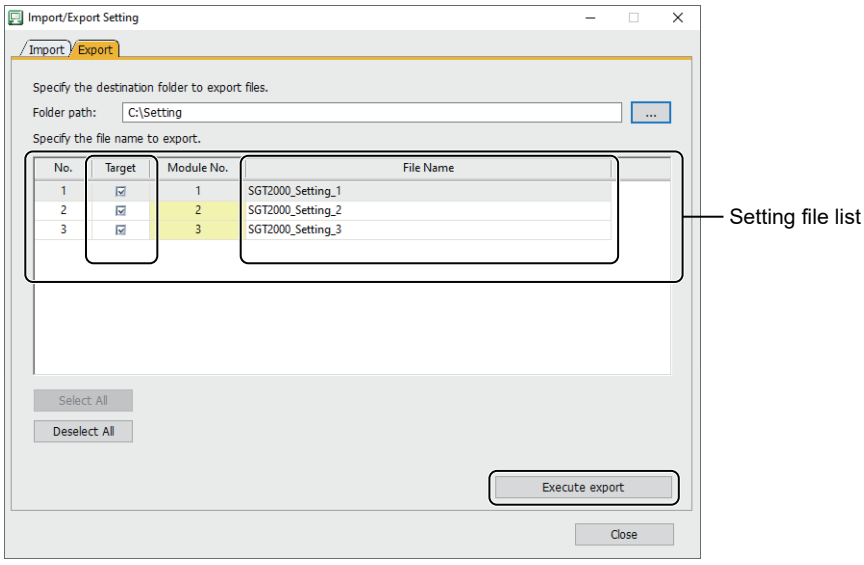
- Click the [Import/Export Setting] button in the [GT SoftGOT2000 Start-up] dialog.
- Select [Tool] → [Export] from the menu.

2. Set the path to the storage folder of the setting file to be exported to [Folder path].



3. In the setting file list, select the checkbox of the setting file to be exported in the [Target] column. Rename the file if desired.

Click the [Execute export] button to export the setting file.



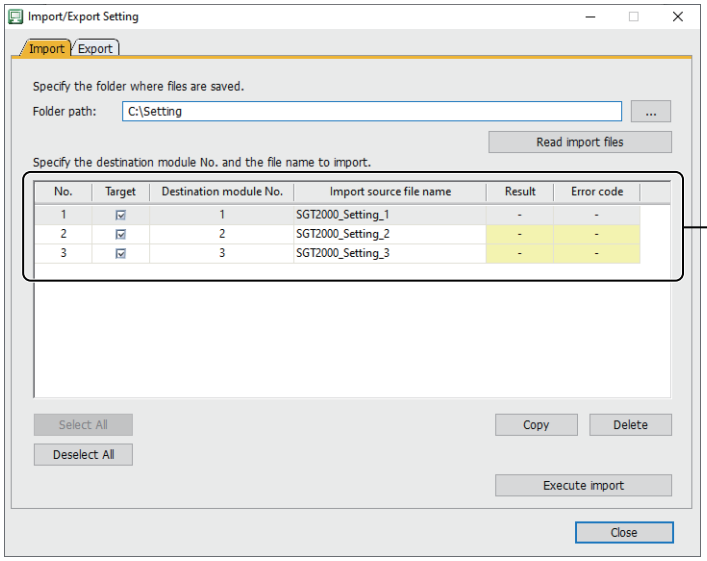
[Import/Export Setting] dialog

1. Perform one of the following operations.

- Click the [Import/Export Setting] button in the [GT SoftGOT2000 Start-up] dialog.
- Select [Tool] → [Import] from the menu.
- Select [Tool] → [Export] from the menu.

2. The [Import/Export Setting] dialog is displayed. Refer to the following description to configure the settings.

[Import] tab



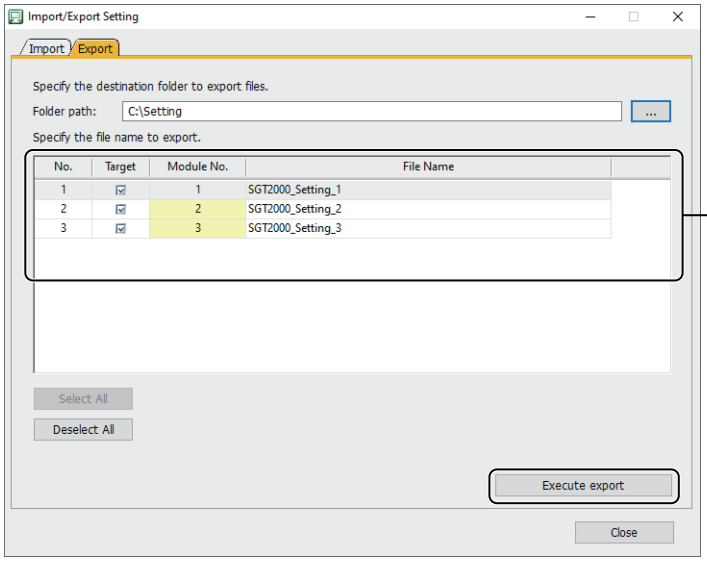
Item	Description
[Folder path]	Set the path to the folder that stores the setting file to be imported by directly entering the path (170 characters max.) or clicking the [...] button.
[Read import files] button	Displays the setting files stored in the folder specified in [Folder path] in the setting file list.
[Target]	Select the checkbox of the setting file to enable import. Up to 30 setting files can be imported at a time.
[Destination module No.]	Set the module number of the setting file import destination. The setting range is [1] to [32767].
[Import source file name]	Select the setting file to be imported.
[Result]	Displays the import result.
[Error code]	Displays the error code if the [Result] is [Failed] or [Warning].*1
[Select All] button	Enables import of all the setting files.
[Deselect All] button	Disables import of all the setting files.
[Copy] button	Copies the selected row and pastes it to the new row in the bottom of the list.
[Delete] button	Deletes the selected row.
[Execute import] button	Imports the setting file with the settings configured in the setting file list. The import result is displayed in the [Result] and [Error code].

*1 The following shows the error causes and corrective actions.

[Result]	[Error code]	Error cause	Corrective action
[Warning]	0x01	The version of GT SoftGOT2000 in the setting file import destination is older than that in the import source.	Install the latest version of GT SoftGOT2000, and then import the setting file. When performing import to GT SoftGOT2000 old version, display the setting dialog of the imported setting file, check the setting details, and click the [OK] button after the import. Then, validate the operation of GT SoftGOT2000. For the settings to be imported, refer to the following. ☞ Page 587 Importable and exportable settings

[Result]	[Error code]	Error cause	Corrective action
[Failed]	0x80	A file access error.	Perform the following. • Wait for some time, and then click the [Execute import] button again. • Restart the personal computer. • Stop the real-time monitoring of the anti-virus software, and click the [Execute import] button again.
[Failed]	0x81	The setting file is corrupt.	Export the setting file again.
		The setting file cannot be accessed.	Check the access privilege for the setting file.
[Failed]	0x82	The setting file for which import is enabled in the setting file list does not exist in the folder specified in [Folder Path].	Check the folder specified in [Folder Path].

[Export] tab



Item	Description
[Folder path]	Set the path to the setting file to be exported by directly entering the path (170 characters max.) or clicking the [...] button.
[Target]	Selecting the checkbox enables export of the settings of the module with the selected module number. Up to 30 setting files can be exported at a time.
[Module No.]	Module number to be exported
[File Name]	Set the name of the setting file to be exported. Up to 120 characters can be used to name the setting file. The following characters cannot be used for the setting file name. \ / : * ? " < > |
[Select All] button	Enables export of all the modules in the list.
[Deselect All] button	Disables export of all the modules in the list.
[Execute export] button	Exports the setting file with the settings configured in the setting file list.

Precautions

Different module numbers between the setting file import source and import destination

Check that the settings of the import destination (virtual drive) are configured as intended.

A folder created for each module number is handled as a virtual drive. If module numbers differ between the import source and import destination, the settings of the import destination (virtual drive) may not be configured as intended.

For details on virtual drives, refer to the following.

☞ Page 68 [Environment Setup] dialog

Different personal computers used between the setting file import source and import destination

GT SoftGOT2000 may operate differently in the import source and import destination depending on the environment and settings of the personal computer used.

Check that the following settings are enabled in the import destination.

Dialog name	Setting item	Setting item display method	Reference
[Environment Setup] dialog ([Action Setup] tab)	[Virtual Drive Setting]	-	☞ Page 68 [Action Setup] tab
[Communication Setup] dialog ([Connection Setup] tab)	[Comm. Port]	• Select [RS232] or [C24] for [Connection]. • Select [Use Bar Code]. • Select [Use RFID].	☞ Page 76 [Communication Setup] dialog ([Connection Setup] tab)
	[Port No.]	Select [Ethernet] or [MELIPC Direct] for [Connection].	
	[Type]	Select [NET/H], [CC IE Control], or [CC IE Field] for [Connection].	
	[GX Developer Project]	Select [GX Simulator] for [Connection].	
	[Project Name]	Select [GX Simulator2] or [GX Simulator2/MT Simulator2] for [Connection].	
[Communication Setup] dialog ([Gateway Server Function Setting] tab)	[IP Address]	-	☞ Page 101 [Communication Setup] dialog ([Gateway Server Function Setting] tab)
[Print Setup] dialog	[Name]	-	☞ Page 574 Performing print setup
[Application Start-up Setting] dialog ([APP Setup 1] and [APP Setup 2] tabs)	[File Name]	-	☞ Page 596 [APP Setup 1] and [APP Setup 2] tabs
	[Option]	-	
[Application Start-up Setting] dialog ([Advanced APP Setup] tab)	Advanced APP setup file to be set in [Advanced APP Setup]	-	☞ Page 599 [Advanced APP Setup] tab
[Edgecross Interaction Function Setting] dialog	Edgecross interaction configuration file to be set in [Allocation Setting]	-	☞ Page 667 Settings on GT SoftGOT2000

Different personal computer OSs used between the setting file import source and import destination

GT SoftGOT2000 may operate differently in the import source and import destination because supported functions differ by OS.

Check that the following settings are set as intended.

- [Environment Setup] dialog ([Display Setup] tab)

☞ Page 70 [Display Setup] tab

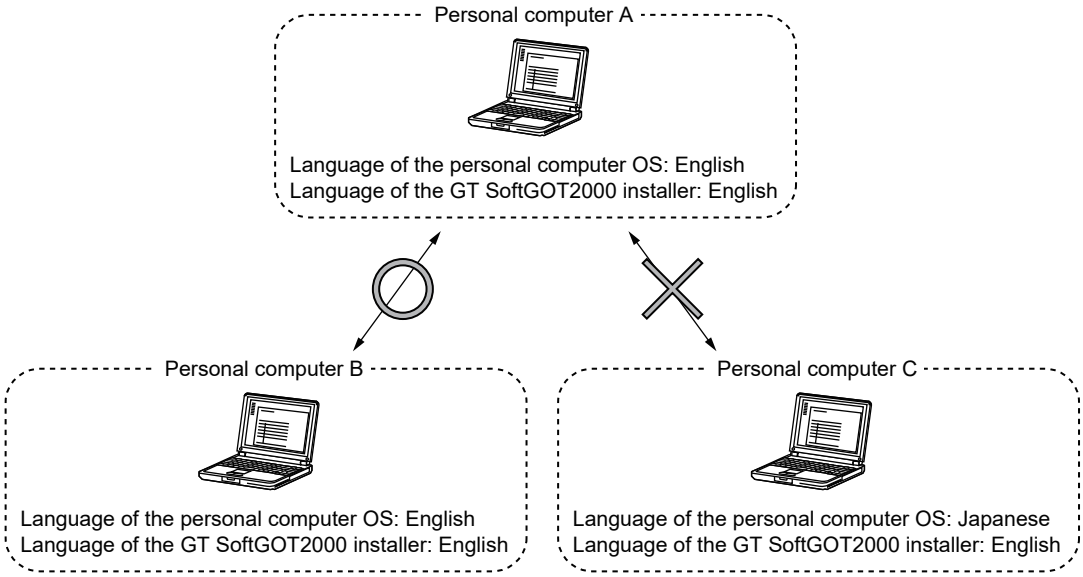
- [Environment Setup] dialog ([Touch Operation Setup] tab)

☞ Page 73 [Touch Operation Setup] tab

Different languages used between the GT SoftGOT2000 installer and OS of the personal computer

Import or export a setting file under the condition that the languages are the same between the GT SoftGOT2000 installer and the OS of the personal computer.

If the languages differ, GT SoftGOT2000 may not operate properly.



Different languages used between the import source GT SoftGOT2000 installer and the import destination GT SoftGOT2000 installer

If the languages differ between the import source GT SoftGOT2000 installer and the import destination GT SoftGOT2000 installer, the following settings will be changed to the default values in the import destination GT SoftGOT2000.

- [Application Start-up Setting] dialog ([Advanced APP Setup] tab)

☞ Page 599 [Advanced APP Setup] tab

- [Mail Setup] dialog

☞ Page 607 Mail setup

Version of GT SoftGOT2000 older in the import destination than in the import source

If the version of GT SoftGOT2000 in the import destination is older than the version of the software in the import source, the software may not operate properly.

Install the latest version of GT SoftGOT2000, and then import the setting file.

When performing import to GT SoftGOT2000 old version, display the setting dialog of the imported setting file, check the setting details, and click the [OK] button after the import.

Then, validate the operation of GT SoftGOT2000.

For the settings to be imported, refer to the following.

☞ Page 587 Importable and exportable settings

Export of the startup in online mode setting

It is recommended to disable the startup in online mode before exporting a setting file.

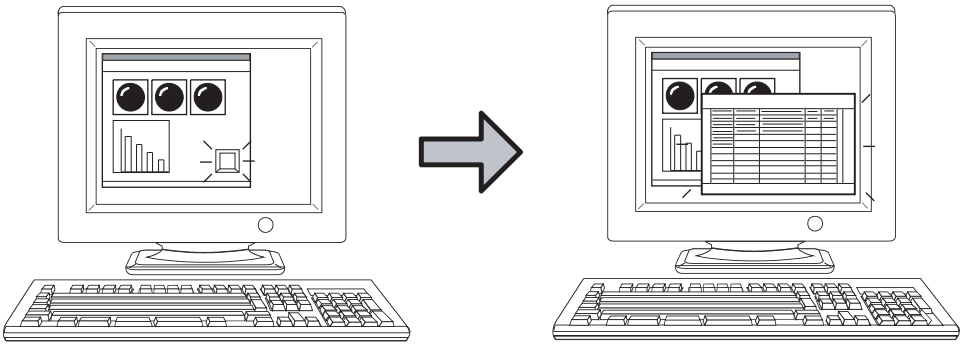
When a setting file for which the startup in online mode is enabled is imported, monitoring starts automatically at GT SoftGOT2000 startup in the import destination. You cannot check the imported settings in advance.

4.12 Application Start-up

Various applications (such as Microsoft Excel) can be started from GT SoftGOT2000GOT2000 while GT SoftGOT2000 monitor is running.

A file to be started up can be specified.

This allows reference to the resource data of each function in CSV or BMP format.



An application can be started up by clicking a touch switch, for example.

Trigger and setting points of application start-up

For the application start-up, GOT internal devices are used as a trigger to start applications.

Set the trigger in the [APP Setup 1]/[APP Setup 2]/[Advanced APP Setup] tabs of the [Application Start-up Setting] dialog.

The following shows the GOT internal devices to be used in each tab and the number of applications whose start-up setting can be set.

Tab	Description	Reference
[APP Setup 1]	Up to 16 applications can be allotted for the device GS501.	☞ Page 596 [APP Setup 1] and [APP Setup 2] tabs
[APP Setup 2]	Up to 16 applications can be allotted for the device GS502.	
[Advanced APP Setup]	Up to 8160 applications can be allotted for the devices GS505 to GS507.	☞ Page 599 [Advanced APP Setup] tab

For details of GOT internal devices and the method of device settings, refer to the following manual.

📖 GT Designer3 (GOT2000) Screen Design Manual

Setting method

1. Follow the procedure below.

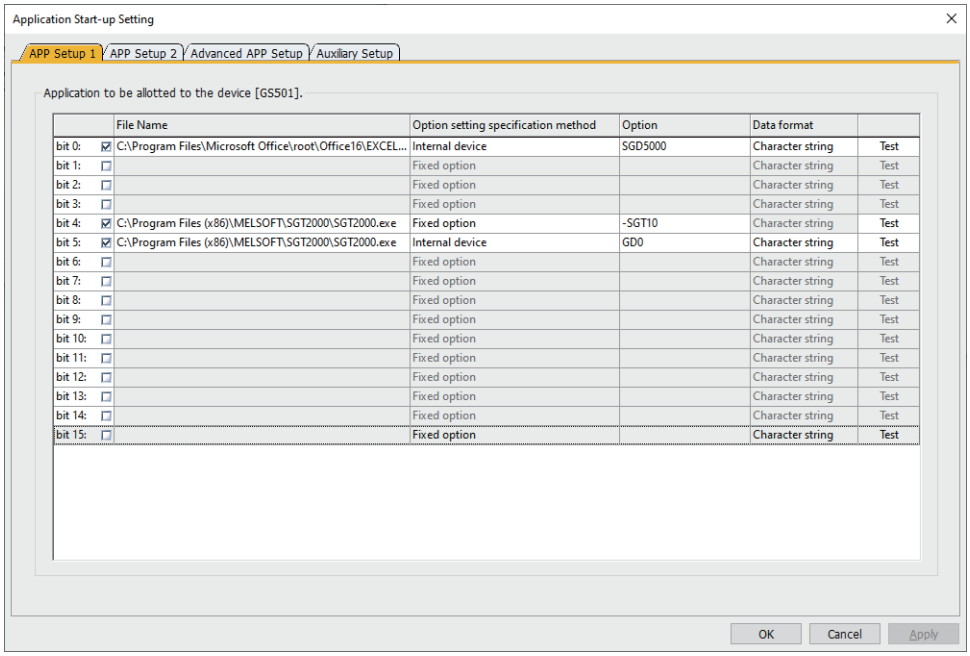
Select [Set] → [Application Start-up Setting] from the menu.

Right-click the mouse, and select [Set] → [Application Start-up Setting] from the menu.

2. The [Application Start-up Setting] dialog is displayed.

Make the settings referring to the explanation below.

[APP Setup 1] and [APP Setup 2] tabs



Item	Description
[Application to be allotted to the device [GS501]] [Application to be allotted to the device [GS502]]	Specify an application to be allotted to the bit of device GS501 or GS502.Up to 32 applications can be allotted. Applications allotted start up when these bits turn ON. The bits which were turned ON will automatically turn OFF after the application is started up.

Item		Description
	[File Name]	Specify the path to the application to be started up by typing (Up to 1023 characters can be entered.) or clicking [...] . Available file extensions are as follows: * .exe, * .com, * .bat Numeric characters, A to Z, a to z, one-byte spaces, and the following symbols are usable. !#$%&'()-^@[;],.=~`{+}_
	[Option setting specification method]	Select how to specify option settings at application startup. • [Fixed option]: Specify option settings with character strings. • [Internal device]: Specify option settings with character strings or numerical values stored in the GOT internal devices or SoftGOT2000 internal devices.
	[Option]	By specifying a file name, the specified file is opened simultaneously with start-up of the application. Also, the mode or processing of the application can be specified by specifying options for the application. Available options and characters differ depending on the application to be used. For options available for each application, refer to the manual or Help of the application to be used. The setting method depends on the selection for [Option setting specification method]. • When [Fixed option] is selected Set a character string to specify the option setting. Up to 1023 characters can be entered. • When [Internal device] is selected Set the start device number of the GOT internal devices (GB or GD) or SoftGOT2000 internal devices (SGB or SGD) to specify option settings. Option settings are enabled according to the values stored in the internal devices.
	[Data format]	Set this item when [Option setting specification method] is [Internal device]. Select the data type of the values stored in the internal devices. The following shows selectable items. • [Character string]: The values stored in the internal devices are handled as character strings. Unicode is supported. Data will be read from the specified devices starting from the higher-order bits. NULL (0x00) is supported as the termination character. Up to 1023 characters except the termination character can be entered. • [Numerical value]: The values stored in the internal devices are handled as numerical values. The setting range is 0 to 65535. Values are read as a decimal number.
	[Test]	Click this button to check if the set application operates normally. Before executing monitoring with the GT SoftGOT2000, click this button to confirm the normal operation of the set application.

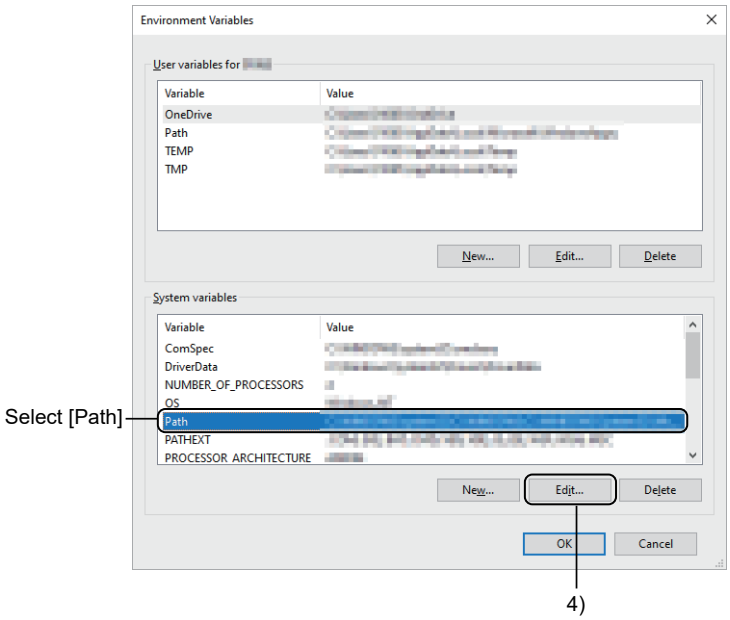
■Using environment variables

Using the environment variables (Path) provided by Windows, paths no longer need to be set each time.

For details of environment variables, refer to the manual or Help of Windows.

The following shows an example setting of environment variables.

1. In the Windows Control Panel, select [System and Security] → [System] to display the [System] window.
2. Select [Advanced system settings] to display the [System Properties] dialog.
3. In the [Advanced] tab, click the [Environment Variables] button to display the [Environment Variables] dialog.
4. In [Environment Variables], select [Path] and click the [Edit] button to display the [Edit environment variable] dialog.

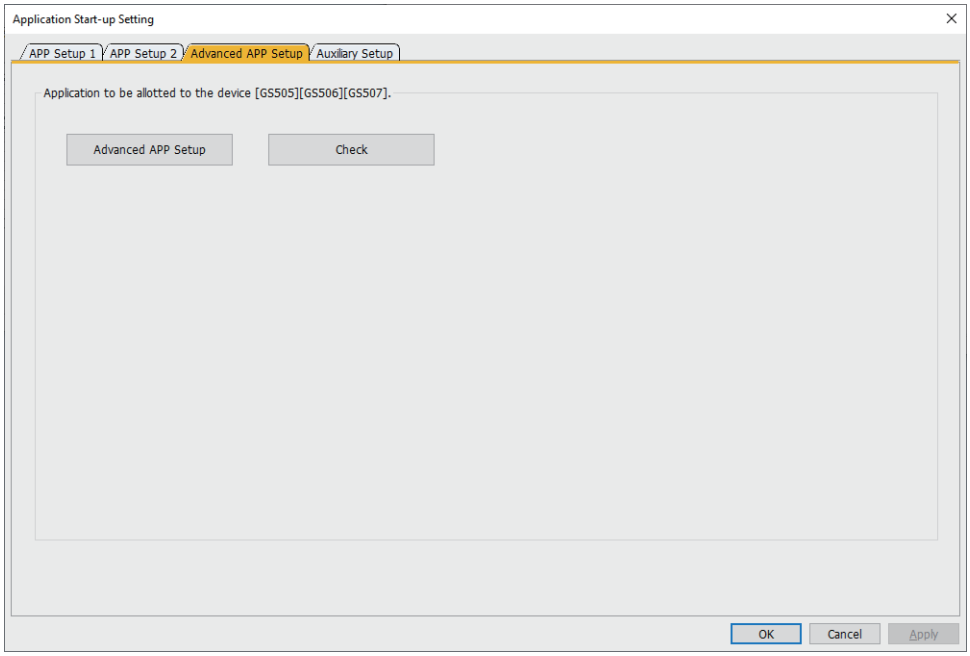


5. Click the [New] button, and add a path containing an executable file to the variable value.

(To set multiple paths, place ; (semi-colon) between paths.)

Example) C:\Program Files\MyProgram

[Advanced APP Setup] tab



Item	Description
[Advanced APP Setup]	Click this item to open the Advanced APP setup file (AppStartSet.csv). Use the program for opening CSV files, which is set in the personal computer, to open the Advanced APP setup file. Allot GOT internal devices and applications in the Advanced APP setup file. ☞ Page 600 Advanced application settings ☞ Page 600 Setting method of Advanced APP setup file ☞ Page 601 Precautions for advanced application settings
[Check]	Click this item to check the setting contents of the Advanced APP setup file (AppStartSet.csv).

Point

• Creation and storage destination of Advanced APP setup file

When GT SoftGOT2000 is started, an Advanced APP setup file (AppStartSet.csv) is created for each module.

Example) Path of the Advanced APP setup file when starting the module No.1.

C:\Program Files\MELSOFT\SGT2000\Multi\00001\AppStartSet.csv

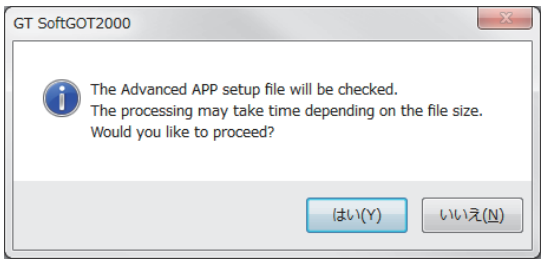
The advanced application setting can be changed by editing the Advanced APP setup file directly.

• Setting check

The setting check may take few minutes according to the file size of the Advanced APP setup file (AppStartSet.csv).

Click [No] in the confirmation dialog when not executing the setting check.

Returns to the [Advanced APP Setup] tab.



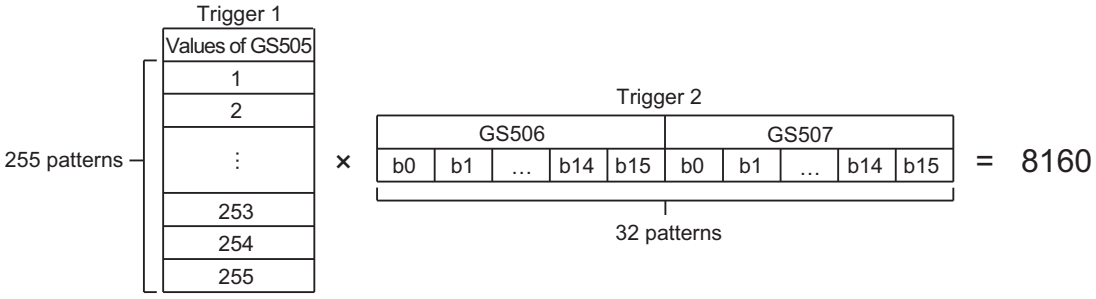
■Advanced application settings

In the advanced application settings, use the combination of the following two triggers for the application start-up.

Trigger 1: Values of GS505 (1 to 255)

Trigger 2: Bit ON of either GS506.b0 to b15 or GS507.b0 to b15

Up to 8160 application start-up settings can be set by the combination of Trigger 1 and Trigger 2.



The application starts when both Trigger 1 and Trigger 2 are approved.

After the application starts, 0 is stored to GS505.

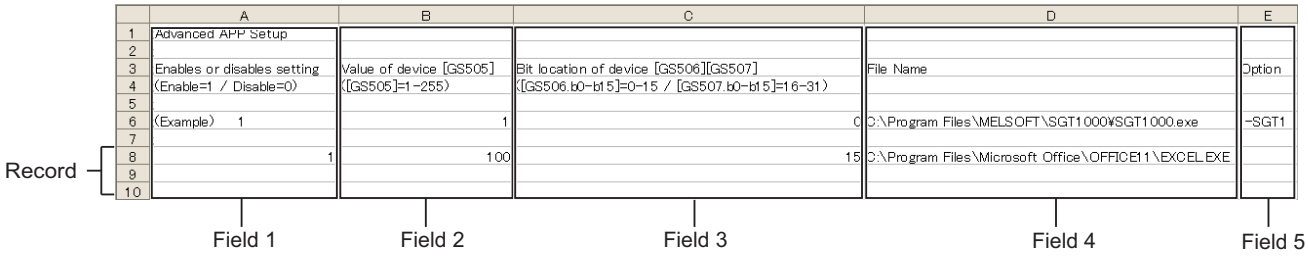
Bits of Trigger 2 which were turned ON (GS506.b0 to b15 and GS507.b0 to b15) will automatically turn OFF.

■Setting method of Advanced APP setup file

In the Advanced APP setup file, rows and columns are referred to as Record and Field, respectively.

For Record, up to 8160 settings can be set by the combination of Trigger 1 and Trigger 2.

The following explains the method of setting the Advanced APP setup file in case of opening the file with Microsoft Excel.



Item	Description
Record	One Record is configured with Field 1 to 5.
Field 1	Set whether to enable or disable the setting of record. • 0: Disabled • 1: Enabled
Field 2	Set Trigger 1 to start the application. Set the value of GS505 as Trigger 1. (1 to 255)
Field 3	Set Trigger 2 to start the application. Set the bit position of GS506/GS507 as Trigger 2. (0 to 31) • GS506.b0 to b15 :0 to 15 • GS507.b0 to b15 :16 to 31
Field 4	Set the path of the application to be started. The following applications can be started. * .exe, * .com, * .bat Up to 1023 characters can be input.
Field 5	By specifying a file name, the specified file is opened simultaneously with start-up of the application. Also, the mode or processing of the application can be specified by specifying options for the application. Up to 1023 characters can be entered in [Option]. Availability of options differs depending on the application. For options available for each application, refer to the manual or Help of the application to be used.

Example) When the following two records are set

	A	B	C	D	E
1	;Advanced APP Setup				
2	;				
3	;Enables or disables setting	Value of device [GS505]	Bit location of device [GS506][GS507]	File Name	Option
4	;(Enable=1 / Disable=0)	([GS505]=1-255)	([GS506.b0-b15]=0-15 / [GS507.b0-b15]=16-31)		
5	;				
6	;(Example) 1	1	0	C:\Program Files\MELSOFT\SGT1000¥SGT1000.exe	-SGT1
7	;				
8	1	100	15	C:\Program Files\Microsoft Office\OFFICE11\EXCEL.EXE	
9	1	200	15	C:\Program Files\Microsoft Office\OFFICE11\WINWORD.EXE	
10					

Setting 1
Setting 2

Item	Description
Setting 1	• Trigger 1: 100 • Trigger 2: 15 (GS506.b15) • Application to be started: EXCEL.EXE
Setting 2	• Trigger 1: 200 • Trigger 2: 15 (GS506.b15) • Application to be started: WINWORD.EXE

In the status that 100 is stored in GS505, the application (EXCEL.EXE) set in Setting 1 starts when GS506.b15 is turned ON.
In the status that 200 is stored in GS505, the application (WINWORD.EXE) set in Setting 2 starts when GS506.b15 is turned ON.

■Precautions for advanced application settings

• Settings of Field 1 to 3 which disable record

The record including Field 1 to 3 in the following status is disabled.

The value is not set.

Invalid characters are included.

A value outside of the range is set.

• Settings of Field 4 in which an error occurs at the application startup

The record including Field 4 in the following status causes an error at the application startup.

The path is not set.

Invalid characters are included.

The specified file does not exist.

The specified file cannot be executed.

• Settings of Field 5 in which an error occurs at the application startup

The record including Field 5 in the following status causes an error at the application startup.

A line feed is included.

• When multiple records with the same setting exist

When multiple records have the same settings of Field 2 and 3, only the top record is valid.

• When Field 5 does not exist

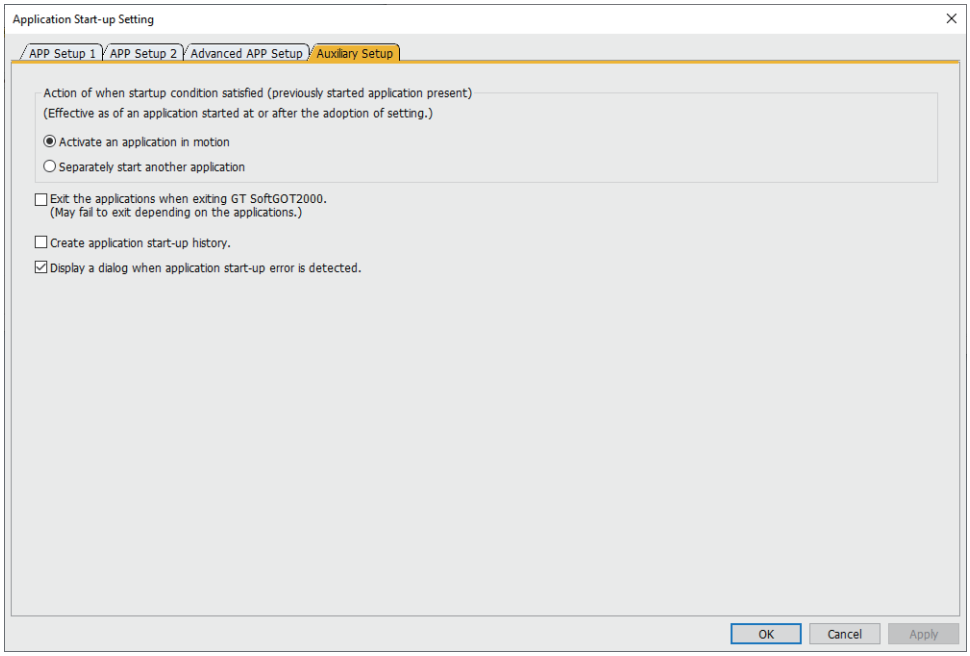
When the settings are configured correctly for Field 1 to Field 4 in the record, and when Field 5 does not exist, Field 5 is processed with no data.

Although Field 5 does not exist, the record is processed.

• When the record begins with a semicolon

The record is invalid.

[Auxiliary Setup] tab



Item	Description
[Action of when startup condition satisfied]	Select how the application that was started up from GT SoftGOT2000 behaves when its start-up condition is satisfied again. Activate an application in motion: Select this item to make an application that is already in motion active. Separately start another application: Select this item to start up the same application in addition to the one currently running.
[Exit the applications when exiting GT SoftGOT2000]	Check this item to terminate GT SoftGOT2000 together with applications that were started up from GT SoftGOT2000. Note that applications that are started up after checking [Separately start another application] in [Action of when startup condition satisfied] are not terminated.
[Create application start-up history]	Check this item to store a startup status of an application in a history. Data that can be stored in a history differ by the selection made in [Action of when startup condition satisfied]. For details of data storable in a history, refer to the following. ☞ Page 603 Application start-up history
[Display a dialog when application start-up error is detected.]	Check this item to display an error dialog when an error occurs at application start-up.

Application start-up history

Information involving application start-ups can be stored in a history.

Information storable in a history

The following lists information storable in a history.

Successful application start-ups

Erroneous application start-ups

Activation processing of applications *1

Termination processing of applications *1

*1 This applies only for applications that are started up after [Activate an application in motion] is selected in [Action of when startup condition satisfied].

Referring to history data

The following explains how to refer to history data.

1. Follow the procedure below.

Select [Set] → [Application Start-up History] from the menu.

Right-click the mouse, and select [Set] → [Application Start-up History] from the menu.

2. History data are displayed.

```
2013/08/01 19:56:26 No.1 GS501.b0 : The application has been started.
2013/08/01 20:10:30 No.1 GS501.b0 : The application has been terminated.
2013/08/01 13:51:28 No.10000 GS501.b10 : The application has been started.
2013/08/01 14:00:30 No.10000 GS501.b10 : The application has been terminated.
2013/08/01 16:47:02 No.1 GS501.b0 : The application has been started.
2013/08/01 16:57:07 No.1 GS501.b0 : The application has been activated.
```

Point

History data

Any application start-up history cannot be referred to when no history data are stored.

To create history data, check [Create application start-up history] in the application start-up setting.

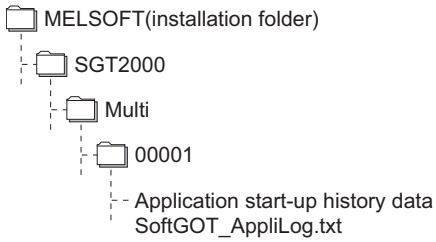
For details of the application start-up setting, refer to the following section.

☞ Page 596 Setting method

Historical data are stored for each module as follows.

They are not deleted even when GT SoftGOT2000 is closed.

Delete unnecessary history data.



Precautions

Duplication of the internal devices

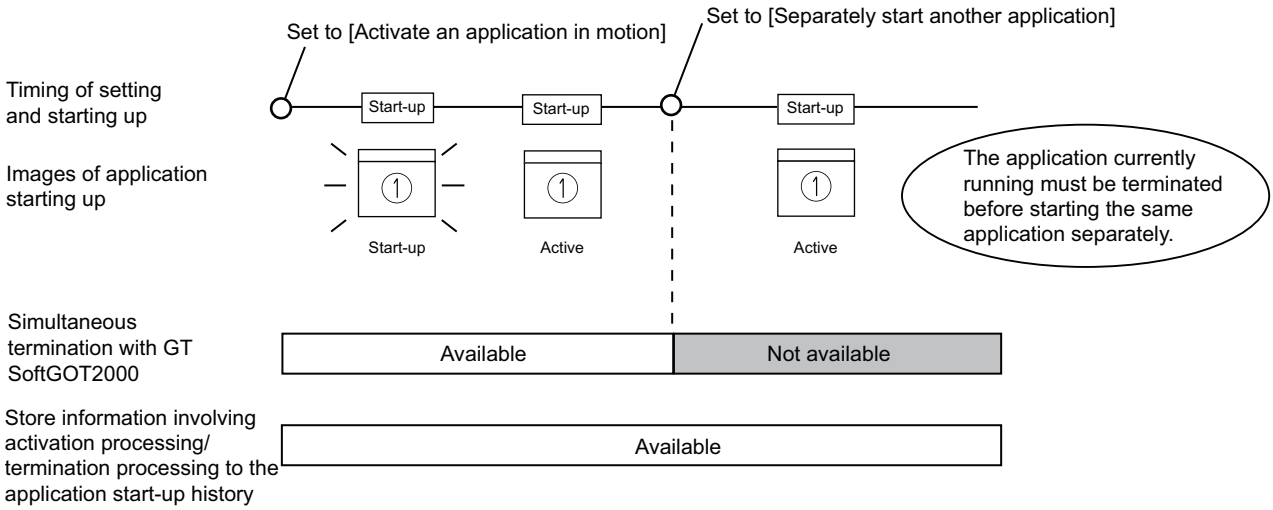
When setting the GOT internal devices (GB or CD) or SoftGOT2000 internal devices (SGB or SGD) in the [Application Start-up Setting] dialog ([APP Setup 1] or [APP Setup 2] tab), do not set the internal devices that are used for other functions.
If you set the internal devices that are used for a function, the function may not operate as intended.

Operation when the data type of the internal device data is [Numerical value]

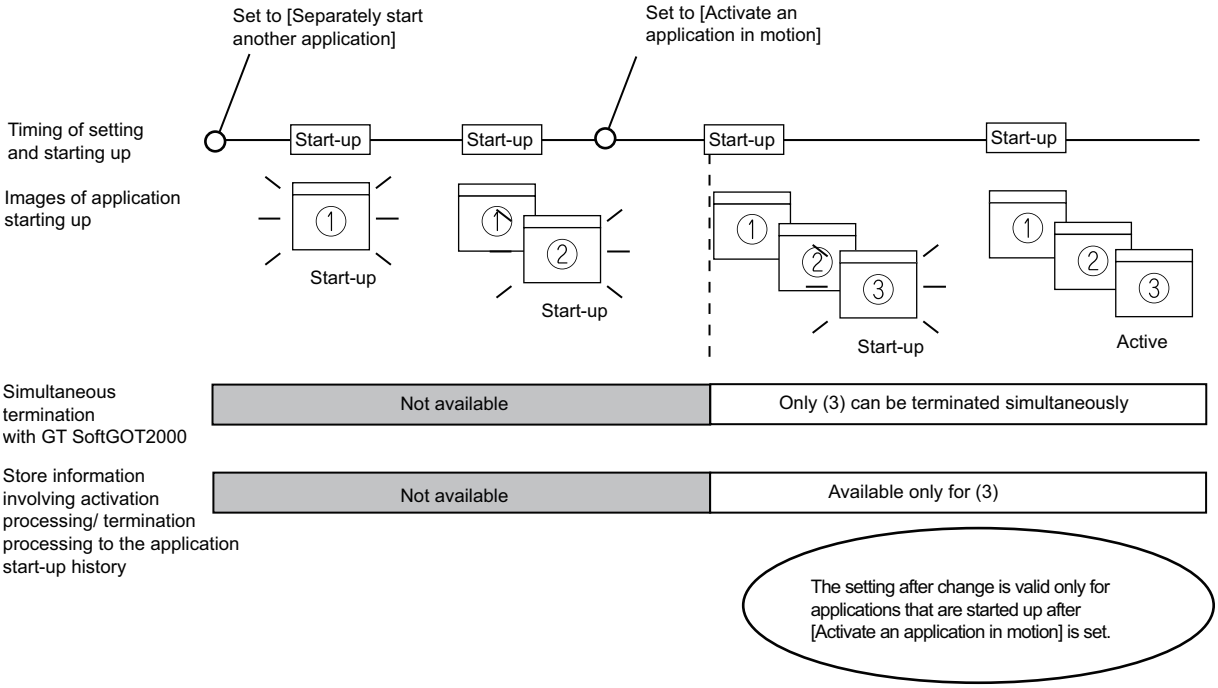
When [Data format] is [Numerical value] in the [Application Start-up Setting] dialog ([APP Setup 1] or [APP Setup 2] tab), the internal device stores 0 until a value is set.
Therefore, the application always starts on the assumption that an option setting is specified.
If no option setting is necessary, select [Character string] for the [Data format].

Timing for reflecting the application startup setting

When a setting is changed while GT SoftGOT2000 is operating, the setting after change is valid only for applications started up after the change.
For this reason, even when [Exit the applications when exiting GT SoftGOT2000.] is enabled, some applications may not be terminated simultaneously with termination of GT SoftGOT2000.
Example) When changed from [Activate an application in motion] to [Separately start another application]



Example) When changed from [Separately start another application] to [Activate an application in motion]



Precautions for setting

With personal computers employing VGA (640 x 480) resolution, the Application Start-up Setting dialog cannot entirely seen on the screen.

Move the dialog with the mouse to make settings, or employ resolutions of SVGA (800 x 600) or higher to the display.

Precautions for creating application start-up history data

If an application fails to start up, the error dialog is displayed.

The application cannot be restarted in this state.

Close the error dialog before starting the application.

Choose not to display the error dialog in the application start-up setting, if necessary.

Precautions for exiting applications when exiting GT SoftGOT2000

Applications started from other than GT SoftGOT2000 are not terminated.

Also, some applications may not be terminated with this function.

Precautions for use

Applications may not be started up if device ON time is too short.

Keep the device ON until applications are started up.

4.13 Mail Send Function

Point

Before using the mail send function

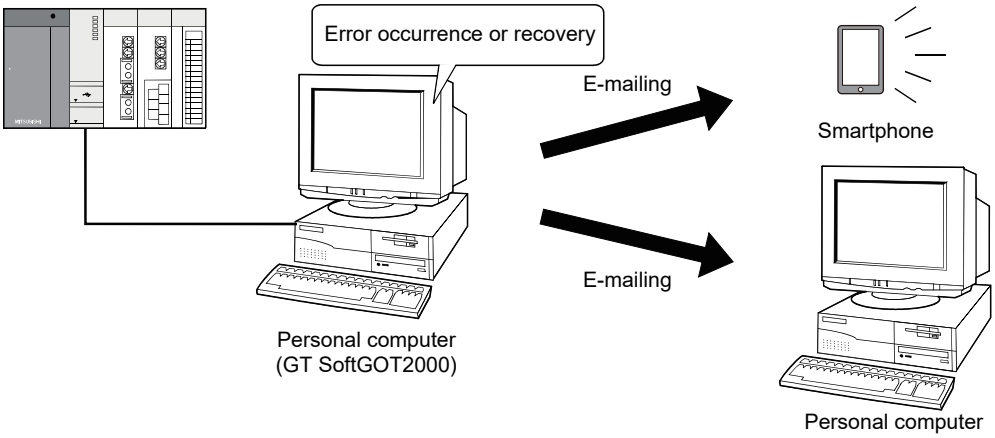
GT SoftGOT2000 sends an e-mail using the mail send function, and therefore no additional e-mail software is required.

To use the mail send function, make a contract with a provider and establish an environment in which the mail send function is usable.

Mail send function overview

You can e-mail a message from GT SoftGOT2000 to a personal computer or smartphone.

The mail send function is usable in the user alarm observation.



Language used in the mail send function

A language set in the [Mail Send Language Setting] dialog of GT Designer3 is used.

For the details of the [Mail Send Language Setting] dialog, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

How to use the mail send function

1. Create a monitor screen with GT Designer3.

(Configure the mail send setting in the user alarm observation.)

GT Designer3 (GOT2000) Screen Design Manual

2. Start GT SoftGOT2000.

GT Designer3 (GOT2000) Screen Design Manual

3. Set the mail destination.

Page 607 How to set up the mail send function

4. Perform a transmission test.

Page 607 How to set up the mail send function

5. Check the conditions for sending an e-mail as necessary.

Page 607 How to set up the mail send function

6. Start monitoring with GT SoftGOT2000.

An e-mail is sent to a personal computer or smartphone when the conditions are met.

Page 103 Opening the Project

How to set up the mail send function

The following explains how to set up the mail send function to send an e-mail on GT SoftGOT2000.

Mail setup

Used to set the mail send destination and perform a mail transmission test.

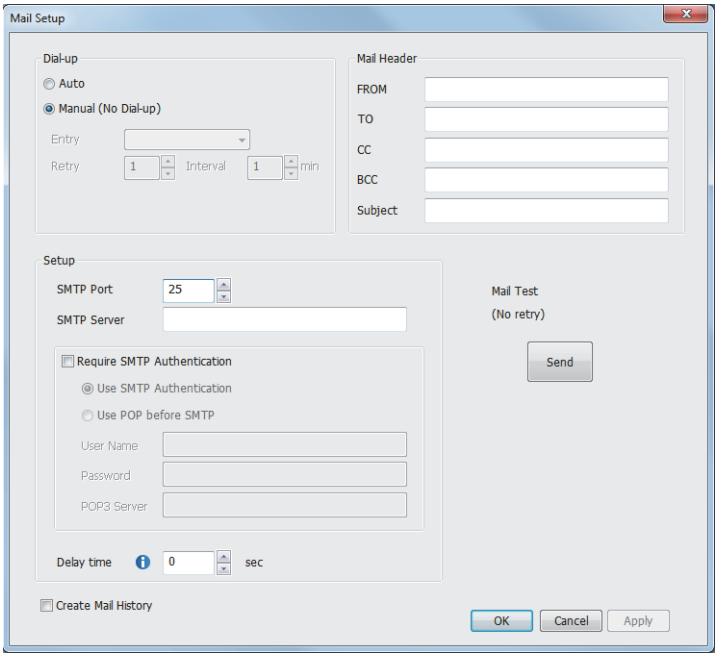
1. Perform the following operation.

Click [Mail Setup].

Select [Set] → [Mail Setup] → [Mail Setup] from the menu.

Right-click the mouse to select [Set] → [Mail Setup] from the menu.

2. The [Mail Setup] dialog is displayed.



Item		Description
[Dial-up]		Set whether or not to send e-mail via dialup. (The default is [Manual].)
	[Auto]	Check this radio button to send e-mail via dialup. If [Auto] is checked, a connection to the mail server is made and e-mail is sent when the mail conditions are established. The connection to the server is canceled after e-mail is sent. It is necessary to set [Entry,] [Retry,] and [Interval.]
	[Manual (No Dial-up)]	Check this radio button to send e-mail without using dialup. If [Manual] is set, the connection to the mail server is always active when e-mail is sent. The connection to the server is not canceled even after e-mail is sent.
	[Entry]	Select the dialup connection entry name in Windows. Refer to the Help function in Windows for how to create a dial up entry.
	[Retry]	Set the number of retries made if a dialup fails. "0" to "10" (The default is "1.")
	[Interval]	Set the interval between retries. "1" to "10" (minutes) (The default is "1.")
[Mail Header]		Enter the origin, destination, server name, and title of mail.

Item			Description
	[FROM]		Enter the address of the mail origin.
	[TO] *1		Enter the address of the mail destination.
	[CC] *1		Enter the address of the mail destination (copy). (E-mail can be sent even this field is blank.)
	[BCC] *1		Enter the address of the mail destination (blind copy). (E-mail can be sent even this field is blank.)
	[Subject]		Enter the title of the mail.
[Setup]			Enable the check box and enter the necessary information if POP3 authentication is required when sending e-mail. (The check box is disabled by default.)
	[SMTP Port]		Enter the port No. for SMTP.
	[SMTP Server]		Enter the SMTP server name.
	[Require SMTP Authentication]		Enable the check box and enter the necessary information if SMTP Server authentication is required when sending e-mail. (The default is "Use SMTP Authentication")
	[Use SMTP Authentication]		Check the SMTP Server circumstances automatically and send according to following precedence. [SMTP-AUTH CRAM-MD5] → [SMTP-AUTH LOGIN] → [SMTP-AUTH PLAIN]
		[Use POP before SMTP]	Send by Use POP before SMTP to the POP3 server set.
		[User Name]	Enter the user name.
		[Password]	Enter the password corresponding to the user name.
		[POP3 Server]	Enter the POP3 server name used for [Use POP before SMTP].
	[Delay time]		Specify the send interval between e-mails. [0] to [10] (seconds) (Default: [0]) The mail server may restrict you to send many e-mails at once to avoid suspicious e-mails. With this setting, e-mails are sent at specified intervals.
[Create Mail History]			Enable this check box to create a mail transmission history. (The check box is disabled by default.)
[Mail Test]			Test e-mail is sent to the destination by clicking the [Send] button.
[OK]			Used to update the settings and close the dialog.
[Cancel]			Used to cancel the settings and close the dialog.
[Apply]			Used to update the settings.

*1 If more than one address is entered, they should be separated with a space or a comma.
Up to 32 addresses are applicable to each setting.
Up to 64 characters can be used for one address.

Point

Mail settings

• Precautions for mail settings

The setting contents made by selecting [Common] → [Gateway] → [Mail...] in GT Designer3 are not reflected on GT SoftGOT2000.

• Dialup settings

Refer to the manual of the service provider and the Help function in Windows for how to set the dialup network connection.

• Setup

GT SoftGOT2000 is not compatible with the SSL encrypted communication (SMTP over SSL, TLS) when sending e-mails.

For the items to be set, check the server specifications.

■Mail test

It is possible to check whether e-mail can be sent properly before starting monitoring by GT SoftGOT2000.
In the mail test, the following sample massage of GT SoftGOT2000 is sent to the destination based on the definition set in the Mail Setup dialogue box.
GT SoftGOT2000 sample message displayed at the destination.

```
GT SoftGOT2000 TEST MAIL

This is a test message.
```

Point

Mail history
If [Create mail history] is checked in the Mail Setup dialogue box, the status of the mail test is saved as one of the history data items.
Refer to the following for mail history.
☞ Page 607 How to set up the mail send function

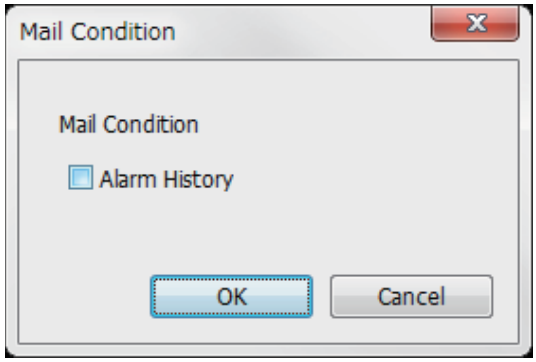
Mail Condition

Set the mail send conditions.
If the mail transmission is set with GT SoftGOT2000, it is possible to set not to send e-mail for certain functions without modifying the monitor screen data.
Disable the functions for which e-mail is not to be sent.
(Check boxes are enabled by default.)

1. Perform the following operation.

Click [Mail Condition].
Select [Set] → [Mail Setup] → [Mail Condition] from the menu.
Right-click the mouse to select [Set] → [Mail Condition].

2. The [Mail Condition] dialog is displayed.



Item		Description
[Mail Condition]		Set whether the mail function will be used or not with each function.
	[Alarm History]	Turn on this checkbox to use the alarm history display function with the mail function.

Point

Precautions for setting mail conditions
If the mail function is not set by Alarm history display function, this setting is ignored for that function (e-mail is not sent even if the check boxes are checked).
For the object setting, refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

Sending e-mail

When e-mail is sent from GT SoftGOT2000 to the target device, the reception header part shown at the destination displays a message that shows that the e-mail is from GT SoftGOT2000.
Example of display in the reception header part at the destination

```
From:****************

To:******************

Cc:******************

Subject:GT SoftGOT2000 Mail.

        :

X-Mailer:GT SoftGOT2000(Version1)
```

Point

Precautions for mail sending
The format and contents of the display of e-mail sent vary depending on the mailer specifications used at the destination.
When a smartphone receives an e-mail from the GOT, the display details of the received e-mail may differ depending on the specifications (screen size) of the smartphone.
GT SoftGOT2000 can send up to 64 e-mails at once.

Sending an e-mail using the alarm history display function

If an alarm occurs in GT SoftGOT2000, the time and information of the alarm are sent to the destination by e-mail.
Moreover, if the alarm recovers, the time and information of the alarm recovery are sent to the destination by e-mail.
For the alarm history display function settings, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual

■Example of the header part display in the mail send destination when an alarm occurred

```
  [Alarm history: Occurrence Notification]
  [Occurrence Data and Time]
 2013/08/01 14:23:13
1)[Alarm Information]
An error occurred in the tank.
2)[Detailed Information]
The hydraulic pressure of tank is low.
```

1) The comment entered in the alarm history display function is displayed.
2) The content of detailed display entered in the alarm history display function is displayed.
[Detailed Information] is not displayed if the detail display setting of the alarm history display function has not been made or if it has been made to the base screen or window screen.
[detail comment nothing] appears under [Detailed Information]
Set the details to be displayed in the comment window in order to display the [Detailed Information].

■Example of display at destination (when an alarm recovered)

```
 [Alarm History: Restoration Notification]
 [Restored Time]
2013/08/01 15:05:47
 [Restoration Information]
Alarm of the tank has been restored.
 [Detailed Information]
The hydraulic pressure of tank is low.
```

Mail history

It is possible to reference the operation history data of the e-mail sent from GT SoftGOT2000.
It is also possible to reference the errors generated at the time e-mail was sent.
The mail history data can be displayed using Notepad or a similar editor in Windows.

How to reference mail history

The following explains how to reference the mail history data.

1. Perform the following operation.

Click (Mail History).
Select [Set] → [Mail Setup] → [Mail History] from the menu.
Right-click the mouse to select [Set] → [Mail History] from the menu.

2. The mail history information is displayed.

■Example of mail history data display

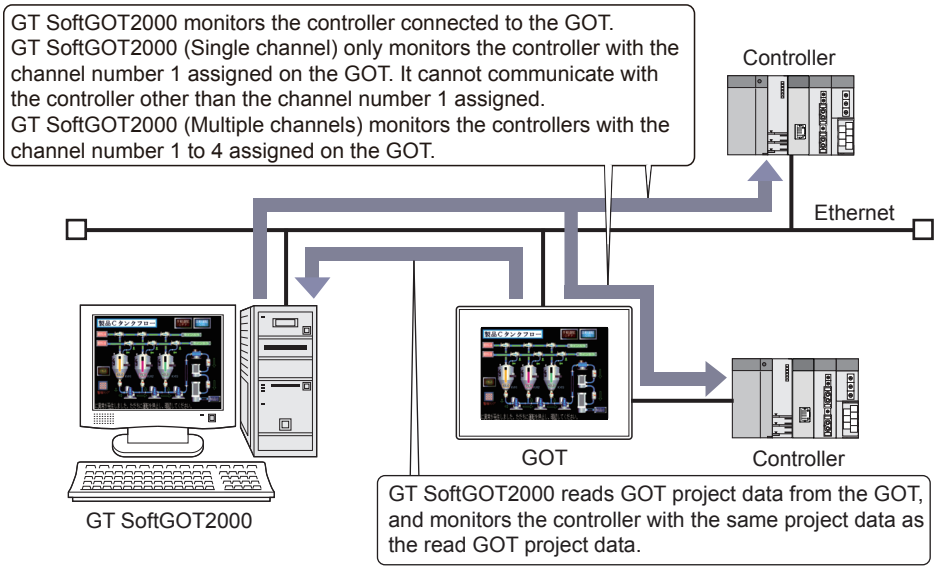
```
:
2013/8/1 15:10:52 No.1 POP:##### Searching...
2010/8/1 15:10:52 No.1 POP:##### Connecting...
2010/8/1 15:10:52 No.1 POP:##### Connection is completed.
2010/8/1 15:10:52 No.1 SMTP:##### Searching...
2010/8/1 15:10:52 No.1 SMTP:##### Connecting...
2010/8/1 15:10:52 No.1 SMTP:##### Connection is completed.
2010/8/1 15:10:52 No.1 Mail was sent successfully.
:
```

Point

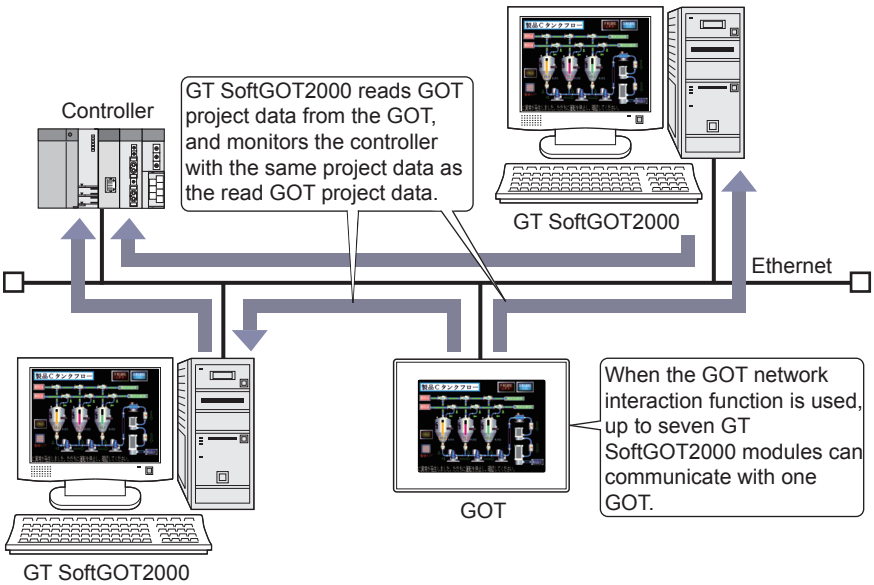
Mail history
The mail history cannot be referenced if the data does not exist.
To create a mail history, enable [Create Mail History] in the Mail Setup dialogue box.
For the Mail Setup dialog, refer to the following.
☞ Page 607 How to set up the mail send function
The mail history data is not deleted even if GT SoftGOT2000 is exited.
The unnecessary history data is required to delete by the user.

4.14 SoftGOT-GOT Link Function

The SoftGOT-GOT link function enables GT SoftGOT2000 to connect the GOT via Ethernet.
And then, the function synchronizes GT SoftGOT2000 data with GOT project data and resource data.
To prevent simultaneous operations from GT SoftGOT2000 and the GOT, the authorization (operational authority) is required to operate input objects (the touch switch, numerical input, and text input).
GT SoftGOT2000 can monitor a controller connected to the GOT.



With the GOT network interaction function, multiple GT SoftGOT2000 modules can communicate with one GOT.
For the GOT network interaction function, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual



GT SoftGOT2000 project data

GT SoftGOT2000 uses project data read from the GOT.
Creating new GT SoftGOT2000 project data is not required.

Number of GT SoftGOT2000 modules that can communicate with one GOT

The following shows the number of GT SoftGOT2000 modules that can communicate with one GOT.

■When the GOT network interaction function is used

Up to seven GT SoftGOT2000 modules can communicate with one GOT.
In this case, each GT SoftGOT2000 module must be run on different personal computers.
If multiple modules of GT SoftGOT2000 are run on one personal computer, the modules cannot connect to the same GOT simultaneously.

■When the GOT network interaction function is not used

Only one GT SoftGOT2000 module can communicate with one GOT.
A GT SoftGOT2000 module cannot communicate with a GOT that is communicating with another GT SoftGOT2000 module.

Controller monitored by SoftGOT2000 (Single channel/Multiple channels)

GT SoftGOT2000 (Single channel) only monitors a controller connected to the GOT that assigns channel number 1 to the controller.
It cannot communicate with the controller other than the channel number 1 assigned.
GT SoftGOT2000 (Multiple channels) monitors the controllers connected to the GOT that assigns channel numbers 1 to 4 to the controllers.
Configure the common controller settings for each channel between the GOT and GT SoftGOT2000.

When the GOT uses the multi-channel function

GT SoftGOT2000 (Single channel) cannot monitor a controller of channel number other than 1. Therefore, objects are not displayed on the screen when devices of a controller other than channel number 1 are assigned.
With a touch switch or others, when devices are written to the controller other than the channel number 1 assigned, a system alarm occurs.

Communication status between the GOT and a controller

To monitor a controller connected to the GOT by using GT SoftGOT2000, enable communications between the GOT and the controller.
If the GOT cannot communicate with the controller, the SoftGOT-GOT link function is not available.
For how to connect the controller to the GOT, refer to the following.
📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

Support of the base screen size expansion

GT SoftGOT2000 does not support the base screen size expansion.
Note that the expanded base screen of the GOT can be operated on GT SoftGOT2000 by using the SoftGOT-GOT link function.
For details on the base screen size expansion, refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

Differences between functions for remotely operating a GOT

You can use the following three functions to operate the GOT screen with a personal computer connected by Ethernet.

VNC server function

SoftGOT-GOT link function

GOT Mobile function

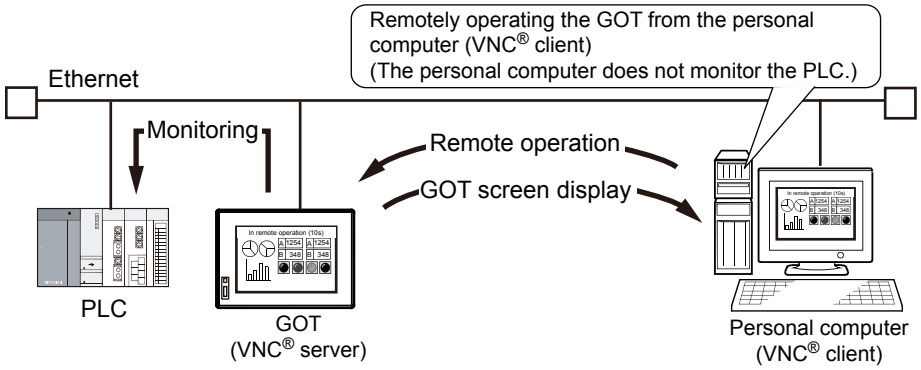
The following shows differences between the functions.

Item	Function		
	SoftGOT-GOT link function	VNC server function	GOT Mobile function
Equipment	Personal computer, PC CPU module, or MELIPC on which GT SoftGOT2000 is installed	Information device (such as a tablet and personal computer) on which an applicable VNC client is installed	Information device (such as a tablet and personal computer) on which an applicable browser is installed
Number of modules or clients connectable to one GOT	One GT SoftGOT2000 module is connectable. Up to seven GT SoftGOT2000 modules are connectable when the GOT network interaction function is enabled.	One VNC client is connectable.	Counting one browser as one client: GOT: 5 clients GT SoftGOT2000: 15 clients
Required number of licenses	One license key is required for one personal computer.	One license is required for one GOT.	One license is required for one GOT.
Screen display contents	The GOT and a GT SoftGOT2000 module can display different contents.	The GOT and the remote screen on the personal computer display the same contents.	The GOT and each client display different contents. (The client displays the dedicated mobile screens.)
Screen targeted for the exclusive authorization control	All screens	All screens	Screen in which the exclusive authorization control is enabled (This control can be enabled for each screen.)
Creation of dedicated screens (project data setting)	Not needed	Not needed	Mobile screens must be created.
Storage location of project data	The GOT and a GT SoftGOT2000 module each store project data. (The GT SoftGOT2000 module reads project data from the GOT.)	Only the GOT stores project data.	The GOT or GT SoftGOT2000 stores project data.
Storage location of resource data	When a GT SoftGOT2000 module reads project data from the GOT, the module also reads resource data. Accordingly, the GOT and the GT SoftGOT2000 module each store the resource data.	Only the GOT stores resource data.	The GOT or GT SoftGOT2000 stores project data.
Availability of extended functions for equipment	Limited ☞ Page 46 Function that can be used in GT SoftGOT2000, features that are not available	Not limited	Limited GT Designer3 (GOT2000) Screen Design Manual

The following shows the details and references of each function.

■VNC server function

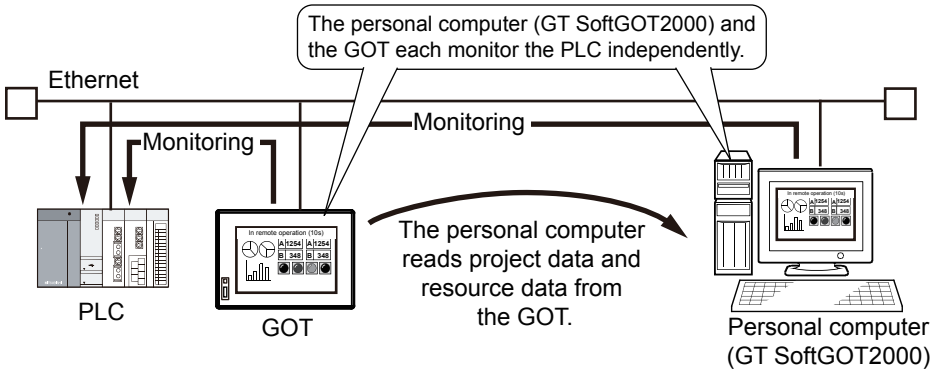
With the VNC server function, the remote screen of the personal computer displays the GOT screen.
You can view the data collected by the GOT, including alarm data and logging data, on the personal computer in real time.
Even though an extended function is used, you can also remotely operate the GOT from the personal computer.



Since the VNC server function increases the processing load on the GOT, the GOT can delay displaying data and collecting data, including alarm data and logging data.
The GOT can also delay responding to an operation from the VNC client (personal computer).

■SoftGOT-GOT link function

With the SoftGOT-GOT link function, GT SoftGOT2000 and the GOT each have a project data and monitor a controller.
Since GT SoftGOT2000 displays the GOT screen on the personal computer, the processing load on the GOT is reduced.
By using a GOT internal device for the screen switching device, GT SoftGOT2000 and the GOT can display different screens.



The GOT and GT SoftGOT2000 each operate independently.
Therefore, collecting data, including alarm data and logging data, can make a difference in the collection result between the GOT and the personal computer.
The extended functions which are unavailable for GT SoftGOT2000 cannot be used with the SoftGOT-GOT link function.

■GOT Mobile function

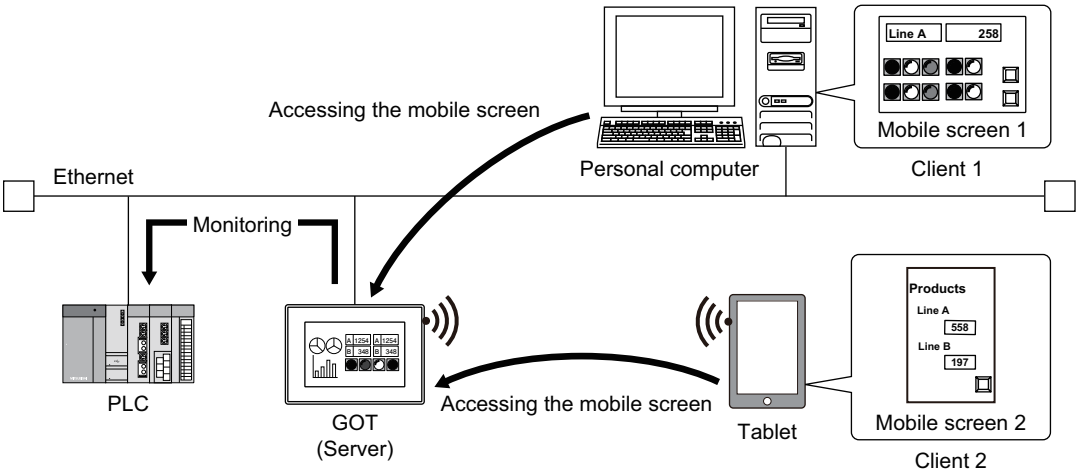
It is recommended to use GT SoftGOT2000 (Multiple channels) for this function.

With the GOT Mobile function, an information device, such as a tablet, displays mobile screens that are stored in the server (GOT).

One browser is handled as one client. Up to 5 clients (GOTs) or 15 clients (GT SoftGOT2000 modules) can make access simultaneously.

Each client can display different mobile screens.

The information device does not store project data and resource data, and the server (GOT) stores the data for management.



You cannot use the functions that are incompatible with the GOT Mobile function, such as objects incapable of being placed on mobile screens.

For the details of the GOT Mobile function, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Point

Up to 20 Pocket GOT modules (mobile terminals) can be simultaneously connected to one personal computer on which GT SoftGOT2000 runs.

When Pocket GOT and the GOT Mobile function are used, up to 20 mobile terminals can be simultaneously connected to one personal computer on which GT SoftGOT2000 runs.

Example: When 15 mobile terminals using the GOT Mobile function are connected, up to 5 mobile terminals using Pocket GOT can be connected.

Project data/resource data synchronization

When the SoftGOT-GOT link function is used, GT SoftGOT2000 reads project data or resource data from the GOT, and synchronizes GT SoftGOT2000 data with the GOT data.
When the project data is synchronized, GT SoftGOT2000 can display the same screen as that of the GOT.
Because the project data used for GT SoftGOT2000 is read from the GOT, creating new GT SoftGOT2000 project data is not required.

Project data synchronization

Project data is synchronized at the following timing.
○: Synchronized, ×: Not synchronized

Synchronization timing		Setting of [Synchronize project data at the start of initial monitoring only] *1		Reference
		Deselected	Selected	
Starting the monitor with GT SoftGOT2000	First time	○	○	☞ Page 617 Synchronization when GT SoftGOT2000 starts monitoring
	Second or subsequent time	○	×	
Selecting [Tool] →[SoftGOT-GOT Link Function] → [GOT Project Data Acquisition] from the menu		○	○	☞ Page 617 Synchronization by user operation
Changing project data of the GOT that is communicating with GT SoftGOT2000		○	○	☞ Page 618 Synchronization when the project data of the GOT is changed

*1 This setting shortens the time before monitoring by not synchronizing the project data at the start of second or subsequent monitoring. For the setting, refer to the following.
☞ Page 637 SoftGOT-GOT link function setting

Point

Synchronized project data are managed by individual modules.
Manage project data with different module numbers when multiple GOTs are connected.

The following shows the processes of the project data synchronization.

■Synchronization when GT SoftGOT2000 starts monitoring

When GT SoftGOT2000 starts monitoring, if the time stamps of the project data do not match between GT SoftGOT2000 and the GOT, the project data synchronization is performed.
(When [Synchronize project data at the start of initial monitoring only] is selected, project data is not synchronized at the start of the second or subsequent monitoring.)
The following shows the operation when the project data synchronization is performed.

1. Start the project data and monitoring.
2. The confirmation dialog for the project data synchronization appears. Click the [Yes] button.
3. If the data transfer password has been set for the project data, the password entry dialog appears. Enter the password.
4. Click the [OK] button to synchronize the project data and resource data of GT SoftGOT2000 with the ones of the GOT, then start monitoring.

■Synchronization by user operation

The following shows the operation when the user performs project data synchronization.

1. Select [Tool] → [SoftGOT-GOT Link Function] → [GOT Project Data Acquisition] from the menu, and click the [Yes] button in the confirmation dialog that appears for project data synchronization.
2. If the data transfer password has been set for the project data, the password entry dialog appears. Enter the password.
3. Click the [OK] button to synchronize the project data and resource data of GT SoftGOT2000 with the ones of the GOT, then start monitoring.

■Synchronization when the project data of the GOT is changed

If the project data of the GOT is changed during communication with GT SoftGOT2000, project data synchronization is performed.

The following shows the operation when project data synchronization is performed.

1. If the data transfer password has been set for the project data, the input dialog of the password appears. Enter the password.
2. Click the [OK] button to synchronize the project data and resource data of GT SoftGOT2000 with the ones of the GOT, then start monitoring.

Point

• Automatic password entry for project data synchronization

To automatically enter the password when project data are synchronized, enter a password in the [GOT Link Setup] dialog beforehand.

☞ Page 83 [Ethernet]

Resource data synchronization

When resource data are stored in the GOT, the data are also synchronized when project data are synchronized.

Select the timing to synchronize resource data so that the data are synchronized even when project data of the GOT are unchanged.

Resource data are copied from each drive of the GOT to each virtual drive of GT SoftGOT2000.

☞ Page 41 Precautions for using GT SoftGOT2000

■Types of resource data to be synchronized and synchronization timing

The following shows the types of resource data to be synchronized.

- Alarm log file (G2A)
- logging file (G2L)
- image file (JPG, BMP, PNG)
- PDF file (PDF)
- GOT Embedded Memory (SRAM)

The resource data are synchronized at the following timings.

○: Synchronized, ×: Not synchronized

Synchronization timing	Setting of [Synchronize at the start of every monitoring] *1		Reference
	Deselected	Selected	
Starting the monitor with GT SoftGOT2000	○ *2	○	☞ Page 617 Synchronization when GT SoftGOT2000 starts monitoring
Selecting [Tool] →[SoftGOT-GOT Link Function] → [GOT Project Data Acquisition] from the menu	○	○	☞ Page 617 Synchronization by user operation
Changing project data of the GOT that is communicating with GT SoftGOT2000	○ *2	○	☞ Page 618 Synchronization when the project data of the GOT is changed

*1 This setting is used to select the timing to synchronize the resource data.
For the setting, refer to the following.
☞ Page 637 SoftGOT-GOT link function setting

*2 The resource data is synchronized only when the data is different from the project data in the connected GOT.

The type of the resource data to be synchronized and the synchronization timing can be selected in the [SoftGOT-GOT Link Function Setting] dialog.

For how to select the type and timing, refer to the following.

☞ Page 637 SoftGOT-GOT link function setting

After resource data synchronization, GT SoftGOT2000 and the GOT update the resource data independently.

Therefore, the synchronized resource data may differ between GT SoftGOT2000 and the GOT.

Authorization control

When you use the SoftGOT-GOT link function, the authorization (operational authority) is required to operate input objects (the touch switch, numerical input, and text input).
Thus, you can prevent simultaneous operations from GT SoftGOT2000 and the GOT.
For the following operations and functions, the authorization is not required.

Operation/Function	Description
Screen operation	• Moving windows • Switching the order of windows
Function	• Functions controlled by triggers (system information, screen switching device, trigger action function, and others) • GOT internal devices (GS654, 655, and 656)

When you use the GOT network interaction function in combination, the authorization control of the SoftGOT-GOT link function becomes disabled.
The authorization control of the GOT network interaction function becomes enabled.
For the details of the GOT network interaction function, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual

Precaution for authorization control

■Operations not recognized by GT SoftGOT2000/GOT

A touch operation is not recognized as an input when Disable Touch Operation signal (System signal 1-1.b9) is on.

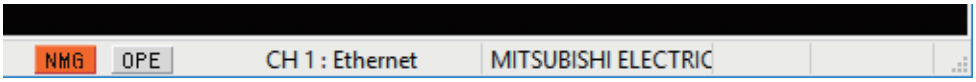
■How to check the authorization status

• How to check the status with GT SoftGOT2000

When the SoftGOT-GOT link function is used, the status bar on GT SoftGOT2000 displays the status whether the authorization or the exclusive authorization is obtained or not.
When the network interaction function is used, the status bar on GT SoftGOT2000 displays whether the software obtains the authorization control.

When the SoftGOT-GOT link function is used

When the network interaction function is used



Item	Description
[OPE]	Displays the status whether GT SoftGOT2000 obtains the authorization or not. Lights in green when GT SoftGOT2000 obtains the authorization.
[PRI]*1	Displays the status whether the GOT obtains the exclusive authorization or not. Lights in blue when the GOT obtains the exclusive authorization.
[NMG]	This item is displayed when GT SoftGOT2000 is the master GOT. If it is not the master GOT, this item will not be displayed.

*1 While the GOT network interaction function is being used, the exclusive authorization status of the GOT is not displayed.
The status is checked by GOT internal devices.
☞ Page 624 Control or notification with GOT internal devices

• How to check the status with the GOT

Whether the GOT obtains the authorization or the exclusive authorization can be checked by the GOT internal devices.
☞ Page 624 Control or notification with GOT internal devices

• Operation status popup notification function

This function notifies whether the authorization is obtained or not and the operation status at the target side with a popup display.

The display position of the operation status popup display is common with the display position set for the advanced alarm popup display, and is displayed in bands either on the bottom, center or bottom of the display.

If the base screen is switched when displaying the operation status popup, the popup is displayed at the display position set for the advanced alarm popup display in the base screen after switching.

If authorization is obtained, the operation status popup display is cleared.

The display is set by using the GOT utility or GOT setup of GT Designer3.

For how to set the utility, refer to the following.

📖User's Manual of GOT used

For how to set GT Designer3, refer to the following.

📖 GT Designer3 (GOT2000) Screen Design Manual

• Popup display when the GOT network interaction function is used

The popup display of the GOT network interaction function is applied to the GT SoftGOT2000 or GOT screen.

For the details of the GOT network interaction function, refer to the following.

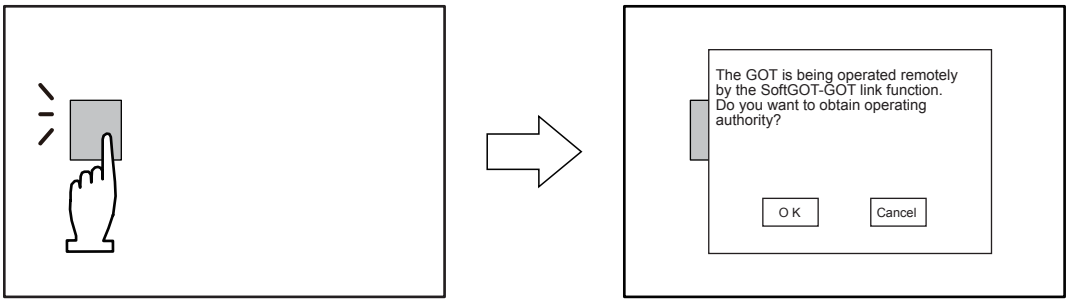
📖GT Designer3 (GOT2000) Screen Design Manual

Obtaining the authorization

■Obtaining the authorization by using the GOT

When GT SoftGOT2000 starts monitoring, the GOT automatically obtains the authorization.

When input objects are input without obtaining the authorization with the GOT, the dialog for obtaining the authorization appears.



In the following cases, the GOT automatically obtains the authorization.

The GOT is restarted.

The GOT obtains the exclusive authorization.

While GT SoftGOT2000 obtains the authorization, the user does not operate GT SoftGOT2000 within the authorization obtained time set in the GOT utility or GOT setup of GT Designer3.

User's Manual of GOT used

GT SoftGOT2000 stops monitoring.

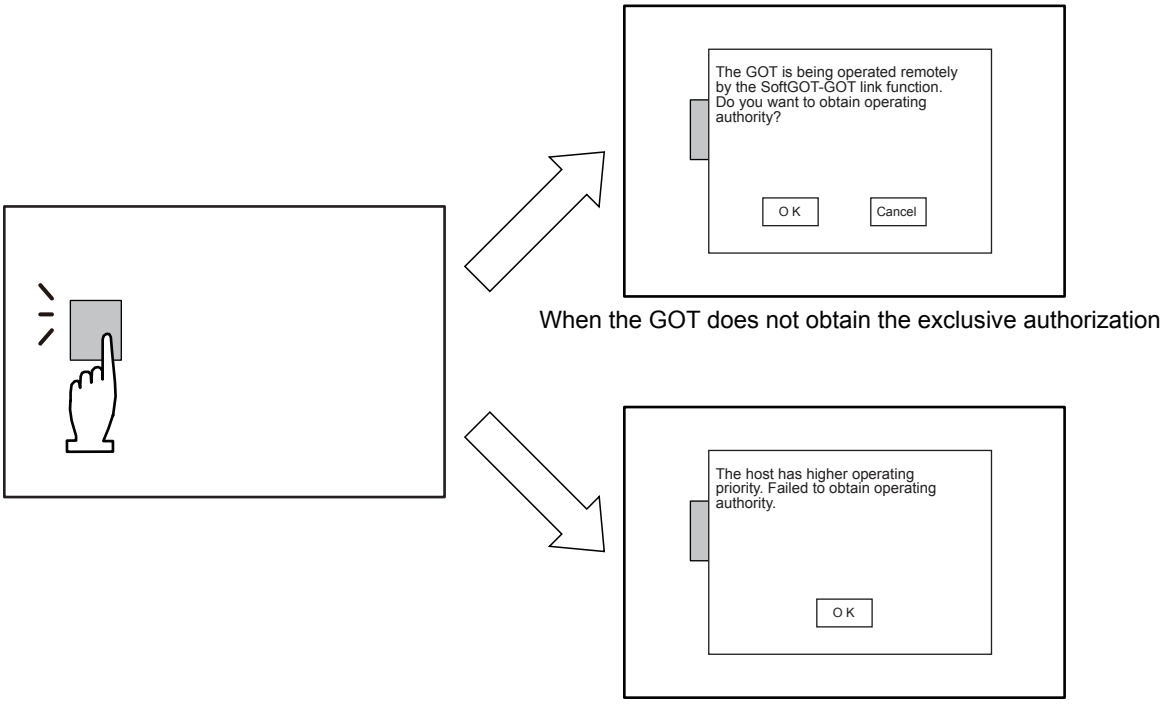
GT SoftGOT2000 is terminated.

The communication between GT SoftGOT2000 and the GOT is disconnected by a communication cable disconnection or others.

■Obtaining the authorization by using GT SoftGOT2000

When input objects are input without obtaining the authorization with the GT SoftGOT2000, the dialog for obtaining the authorization appears.

When the GOT has the exclusive authorization, GT SoftGOT2000 cannot obtain the authorization.



Exclusive authorization for the GOT

■Exclusive authorization

This right allows only the GOT to obtain the authorization. (Exclusive authorization)

When the GOT obtains the exclusive authorization, the GOT automatically obtains the authorization.

■How to obtain the exclusive authorization

The exclusive authorization is obtained by using the GOT internal device (GS447) or the GOT utility.

For how to set the GOT internal device, refer to the following.

☞ Page 624 Control or notification with GOT internal devices

For how to set the utility, refer to the following.

📖the User's Manual for the GOT used

Point

• Operation that automatically obtains the exclusive authorization

When the utility screen or the dedicated screen for any extended function is displayed, the GOT obtains the exclusive authorization regardless of the value of the Exclusive Authorization Control signal (GS447.b0). When such a screen is switched to a user-created screen, the exclusive authorization is controlled according to the value of the signal (GS447.b0).

☞ Page 624 Control or notification with GOT internal devices

• SoftGOT-GOT link function

The following settings are set by using the GOT utility or GOT setup of GT Designer3.

Authorization obtained time

Authorization guarantee time

Operation status popup notification

For how to set the utility, refer to the following.

📖GOT2000 Series User's Manual (Utility)

For how to set GT Designer3, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

Control or notification with GOT internal devices

GOT internal devices enable to check the exclusive authorization control or the communication status between GT SoftGOT2000 and the GOT.

For details of the GOT internal devices, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Exclusive Authorization Control (GS447)

Bit number	Signal name	Description
b0	Exclusive Authorization Control signal *1	Turn on this signal to grant the authorization to the GOT. Not available for GT SoftGOT2000
b1	Authorization Guarantee Time Cancel signal *1	Turn on this signal to cancel the authorization guarantee time setting.
b2 to b15	Use prohibited	-

*1 This control is disabled when the GOT network interaction function is used.

SoftGOT-GOT Link Status Control/Notification (GS244)

Bit number	Signal name	Description
b0	Communication Status Notification signal *1	Turns on while GT SoftGOT2000 communicates with the GOT.
b1	Obtaining Authorization Notification signal *1	Turns on when the GOT or GT SoftGOT2000 obtains the authorization.
b2	GT SoftGOT2000/GOT Identification signal	Notifies that SoftGOT2000 or the GOT is in use. • 0: GOT • 1: GT SoftGOT2000 (Changes to 0 if GT SoftGOT2000 does not communicate with the GOT.)
b3	Obtaining Exclusive AuthorizationNotification signal *1	Turns on when the GOT obtains the exclusive authorization. Always off for GT SoftGOT2000
b4	System Screen Displaying Notificationsignal *1	Turns on when the utility screen or the dedicated screen for any extended function is displayed. Always off for GT SoftGOT2000
b5 to b15	Use prohibited	-

*1 This control is disabled when the GOT network interaction function is used.

Authorization Guarantee Status Notification signal (GS984)

Signal name	Description
Authorization Guarantee Status Notification signal *1	Stores the remaining authorization guarantee time (seconds) when the authorization guarantee time is set in GT SoftGOT2000 (Single channel) or the GOT.

*1 This control is disabled when the GOT network interaction function is used.

■How to utilize GOT internal devices

Objects or others displayed only on the GOT can be set by using the GT SoftGOT2000/GOT identification signal (GS244.b2).

Example) Bit switch displayed only on the GOT

1. Register a shape to a part to display the shape when the bit switch turns on or off.

For how to register the part, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

2. Create the following objects.

Object	Setting item
Bit switch	• Set [Device] on the [Device] tab. • Select [None] in [Shape] on the [Style] tab. • Set [OFF] in [Trigger Type], or set GS244.b2 in [Trigger Device] on the [Trigger] tab.
Parts display (Bit parts)	• Set the same device as that of the bit switch in [Parts Switching Device] on the [Device/Style] tab. • Set the part registered in the step 1. to the part for [ON] or [OFF] on the [Device/Style] tab. • Set [OFF] in [Trigger Type], or set GS244.b2 in [Trigger Device] on the [Trigger] tab.

For how to set objects, refer to the following.

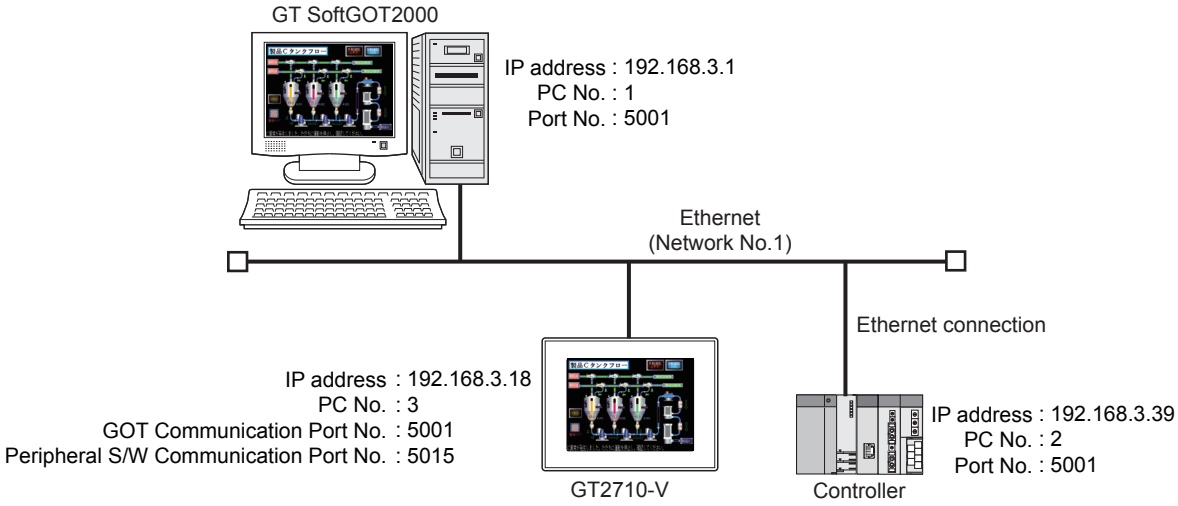
GT Designer3 (GOT2000) Screen Design Manual

3. Arrange the bit switch on the created parts display.

Setting method

This section explains the system configuration and setting method to use the SoftGOT-GOT link function.

The SoftGOT-GOT link function in the following system configuration is used as an example to explain the procedures.



How to use the SoftGOT-GOT link function

1. Connect the GOT and controllers.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

2. Connect the GOT and a personal computer on which GT SoftGOT2000 is installed.

Page 626 GOTs available with the SoftGOT-GOT link function

Page 627 Controllers that can be monitored and connection types

3. Create project data with GT Designer3, and write the data to the GOT.

GT Designer3 (GOT2000) Screen Design Manual

4. Configure the communication setting and environmental setting on GT SoftGOT2000.

Page 636 Operation and setting on GT SoftGOT2000

5. Start monitoring with GT SoftGOT2000.

Page 636 Operation and setting on GT SoftGOT2000

GOTs available with the SoftGOT-GOT link function

The following shows the supported GOTs.

- GT27
- GT25
- GS25

■Communication interface of the GOT

The following shows the communication interfaces of the GOT that are used for the communication with GT SoftGOT2000.

Item	Type
GT27	- (Built-in interface)
	GT25-J71E71-100 (Ethernet communication unit) *1
	GT25-WLAN (Wireless LAN communication unit)
GT25 (except GT25-W)	- (Built-in interface)
	GT25-J71E71-100 (Ethernet communication unit) *1*2
	GT25-WLAN (Wireless LAN communication unit) *2
GT25-W, GS25	- (Built-in interface: Port 1, port 2)
	GT25-WLAN (Wireless LAN communication unit)

*1 The Ethernet communication unit is usable only when the connected GOT satisfies the following conditions.
Version Z or later of BootOS
Project data created with GT Designer3 Version 1.175H or later

*2 Not available to GT25HS-V.

■Cables connecting a personal computer (GT SoftGOT2000) with the GOT

Use the cables applicable to an interface of the GOT to be used.

■Connection conditions for a personal computer (GT SoftGOT2000) and the GOT

Connection type	Connection conditions	
	Distance between controller and PC	Number of connectable PCs
Ethernet connection	100 m (max. segment length)	1

Controllers that can be monitored and connection types

The controller that can be monitored by GT SoftGOT2000 varies with the following conditions.

Connection type between a GOT and the monitored controller

Communication route from GT SoftGOT2000 to the monitored controller

For the communication route setting, refer to the following.

☞ Page 639 Communication setting

The following shows the communication routes to the monitored controller supported by GT SoftGOT2000 (Single channel) and GT SoftGOT2000 (Multi channels).

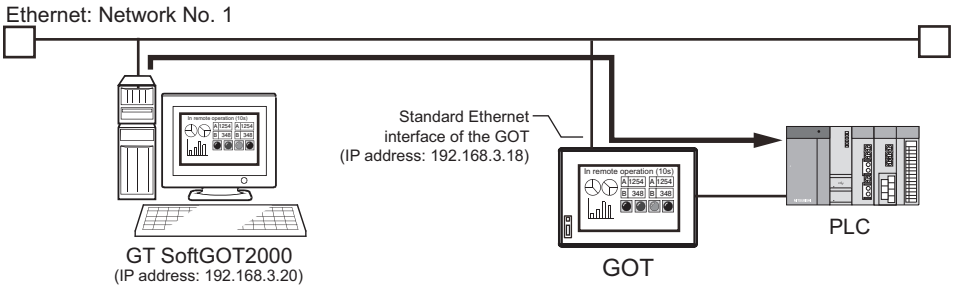
○: Supported, ×: Not supported

Communication route from GT SoftGOT2000 to the monitored controller	GT SoftGOT2000 (Single channel)	GT SoftGOT2000 (Multiple channels)	Reference
Monitoring a PLC through a GOT	○	×	☞ Page 627 Monitoring a PLC through a GOT
Monitoring a PLC on a different network through a GOT and a relay station	○	×	☞ Page 629 Monitoring a PLC on a different network through a GOT and a relay station
Monitoring a PLC directly	○	○	☞ Page 631 Monitoring a PLC directly

When the GOT network interaction function is used, the controller cannot be monitored through the GOT using the SoftGOT-GOT link function.

■Monitoring a PLC through a GOT

Not available to GT SoftGOT2000 (Multiple channels).



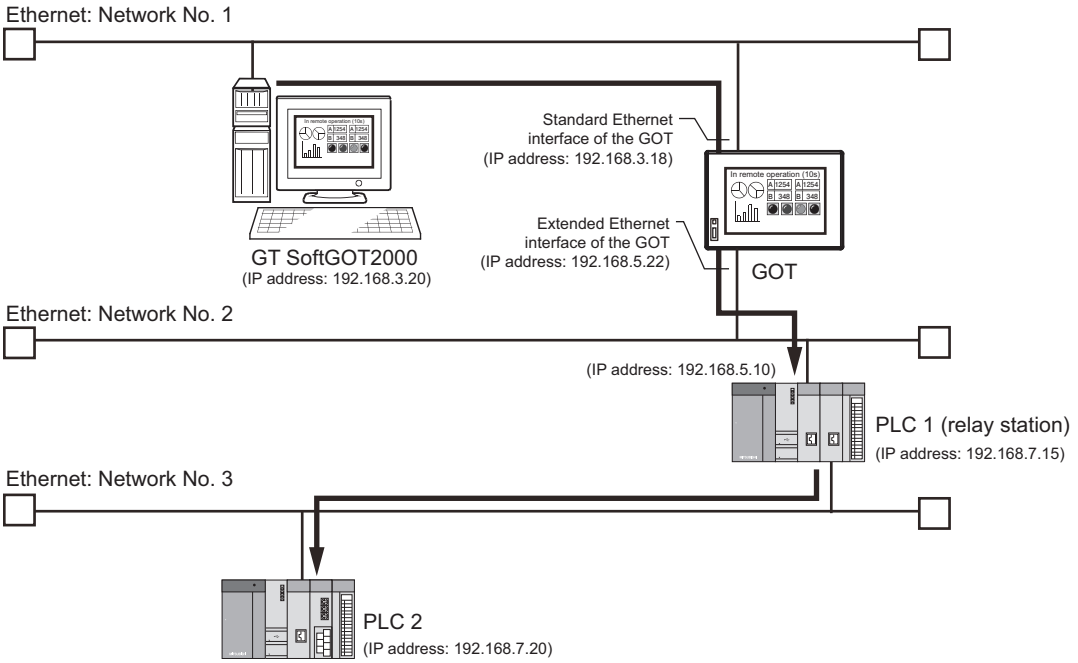
○: Can be monitored, ×: Cannot be monitored

Controller monitored		Connection type between a GOT and the monitored controller (Communication route from GT SoftGOT2000 to the monitored controller)			
		Bus connection	Direct CPU connection (RS-232, USB)	Serial communication connection	Ethernet connection
RCPU	R□CPU	×	×	○	○
	R□PCPU	×	×	×	×
	In the redundant system	×	×	×	×
	R□SFCPU	×	×	×	×
	R□ENCPU	×	×	○	○
C Controller module (MELSEC iQ-R series)		×	×	×	×
MELSECWinCPU (MELSEC iQ-R series)		×	×	×	×
QCPU (Q mode)	Not in the redundant system	○	○	○	○
	In the redundant system	×	×	×	×
QCPU (A mode)		×	×	×	×
C Controller module (Q series)		×	○	○	○
QSCPU		×	×	×	×
LCPU		×	○	○	○
QnACPU		×	×	×	×

Controller monitored		Connection type between a GOT and the monitored controller (Communication route from GT SoftGOT2000 to the monitored controller)			
		Bus connection	Direct CPU connection (RS-232, USB)	Serial communication connection	Ethernet connection
ACPU	Other than A1FXCPU	×	×	×	×
	A1FXCPU	×	×	×	×
MELSEC iQ-F series		×	×	×	×
FXCPU		×	×	×	×
Motion CPU	MELSEC iQ-R series	×	×	×	×
	MELSEC-Q series	×	×	×	×
	MELSEC-A series	×	×	×	×
MELSECNET/H remote I/O station		×	×	×	×
CC-Link IE Field Network head module		×	×	×	×
CC-Link IE Field Network Ethernet adapter module		×	×	×	×
MELIPC		×	×	×	○
OMRON PLC		×	×	×	×
KEYENCE PLC		×	×	×	×
TOSHIBA PLC		×	×	×	×
YASKAWA PLC		×	×	×	×
YASKAWA robot controller		×	×	×	×
YOKOGAWA PLC		×	×	×	×
LS Industrial Systems PLC		×	×	×	×
ALLEN-BRADLEY PLC		×	×	×	×
SIEMENS PLC		×	×	×	×
Microcomputer		×	×	×	×
CNC	CNC C80	×	×	×	×
	CNC C70	○	○	○	○
	MELDAS C6/C64	×	×	×	×
Robot controller	CR800-R (R16RTCPU)	×	×	×	×
	CR800-D	×	×	×	×
	CRnQ-700	○	○	○	○
	CR750-Q	○	○	○	×
	CR751-Q	○	○	○	×
	CRnD-700	×	×	×	×
	CR750-D	×	×	×	×
	CR751-D	×	×	×	×
	CR800-Q (Q172DSRCPU)	○	○	○	○
Servo amplifier		×	×	○	×
Inverter		×	×	×	×

■Monitoring a PLC on a different network through a GOT and a relay station

Not available to GT SoftGOT2000 (Multiple channels).



○: Can be monitored, ×: Cannot be monitored

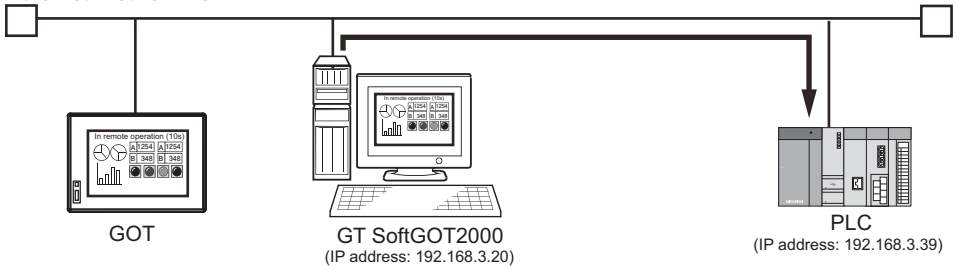
Controller monitored		Connection type between a GOT and the monitored controller (Communication route from GT SoftGOT2000 to the monitored controller)
		Ethernet connection
RCPU	R□CPU	×
	R□PCPU	×
	In the redundant system	×
	R□SFCPU	×
	R□ENCPU	×
C Controller module (MELSEC iQ-R series)		×
MELSECWinCPU (MELSEC iQ-R series)		×
QCPU (Q mode)	Not in the redundant system	○
	In the redundant system	×
QCPU (A mode)		×
C Controller module (Q series)		○
QSCPU		×
LCPU		○
QnACPU		×
ACPU	Other than A1FXCPU	×
	A1FXCPU	×
MELSEC iQ-F series		×
FXCPU		×
Motion CPU	MELSEC iQ-R series	×
	MELSEC-Q series	×
	MELSEC-A series	×
MELSECNET/H remote I/O station		×
CC-Link IE Field Network head module		×
CC-Link IE Field Network Ethernet adapter module		○
MELIPC		×
OMRON PLC		×
KEYENCE PLC		×
TOSHIBA PLC		×

Controller monitored		Connection type between a GOT and the monitored controller (Communication route from GT SoftGOT2000 to the monitored controller)
		Ethernet connection
YASKAWA PLC		×
YASKAWA robot controller		×
YOKOGAWA PLC		×
LS Industrial Systems PLC		×
ALLEN-BRADLEY PLC		×
SIEMENS PLC		×
Microcomputer		×
CNC	CNC C80	×
	CNC C70	○
	MELDAS C6/C64	×
Robot controller	CR800-R (R16RTCPU)	×
	CR800-D	×
	CRnQ-700	○
	CR750-Q	×
	CR751-Q	×
	CRnD-700	×
	CR750-D	×
	CR751-D	×
	CR800-Q (Q172DSRCPU)	○ *1
Servo amplifier		×
Inverter		×

*1 This controller cannot be used as a relay station when it is connected through the Ethernet port built in the CPU.

■Monitoring a PLC directly

Ethernet: Network No. 1



○: Can be monitored, ×: Cannot be monitored

Controller monitored		Connection type between a GOT and the monitored controller (Communication route from GT SoftGOT2000 to the monitored controller)
		Ethernet connection
RCPU	R□CPU	○
	R□PCPU	×
	In the redundant system	×
	R□SFCPU	×
	R□ENCPU	○
C Controller module (MELSEC iQ-R series)		×
MELSECWinCPU (MELSEC iQ-R series)		○
QCPU (Q mode)	Not in the redundant system	○
	In the redundant system	×
QCPU (A mode)		×
C Controller module (Q series)		○
QSCPU		×
LCPU		○
QnACPU		×
ACPU	Other than A1FXCPU	×
	A1FXCPU	×
MELSEC iQ-F series		×
FXCPU		×
Motion CPU	MELSEC iQ-R series	×
	MELSEC-Q series	×
	MELSEC-A series	×
MELSECNET/H remote I/O station		×
CC-Link IE Field Network head module		×
CC-Link IE Field Network Ethernet adapter module		○ *1
MELIPC		○
OMRON PLC		○
KEYENCE PLC		×
TOSHIBA PLC		×
YASKAWA PLC		×
YASKAWA robot controller		×
YOKOGAWA PLC		×
LS Industrial Systems PLC		×
ALLEN-BRADLEY PLC		×
SIEMENS PLC		×
Microcomputer		×
CNC	CNC C80	×
	CNC C70	○
	MELDAS C6/C64	×

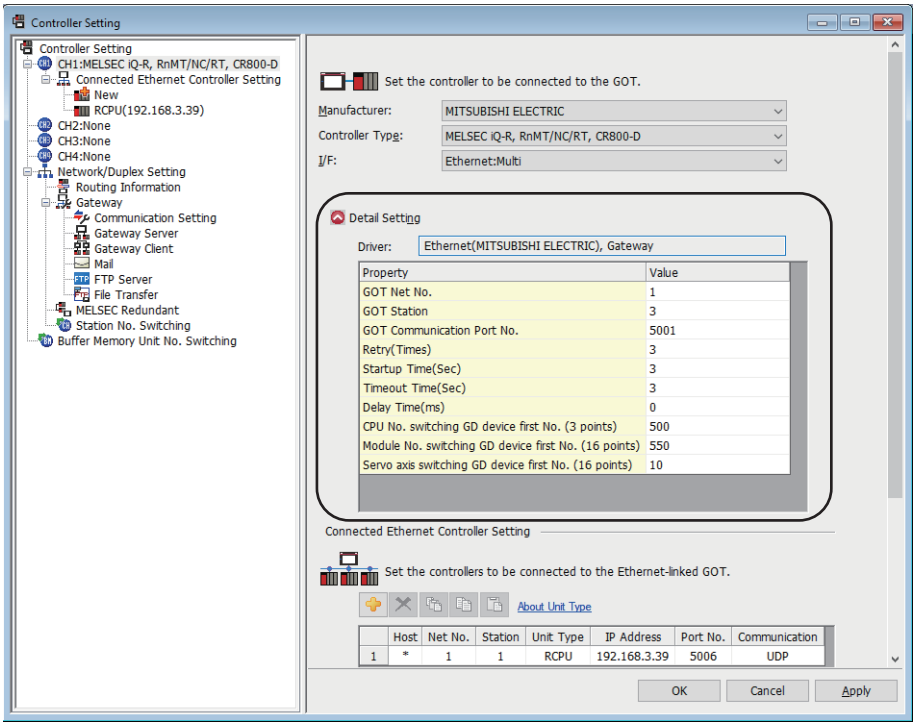
Controller monitored		Connection type between a GOT and the monitored controller (Communication route from GT SoftGOT2000 to the monitored controller)
		Ethernet connection
Robot controller	CR800-R (R16RTCPU)	×
	CR800-D	×
	CRnQ-700	○
	CR750-Q	○
	CR751-Q	○
	CRnD-700	○
	CR750-D	○
	CR751-D	○
	CR800-Q (Q172DSRCPU)	○
Servo amplifier		○
Inverter		×

*1 Only access to other stations via NZ2GF-ETB is available.

■Settings in the [Controller Setting] window

Configure the communication setting between the GOT and the controller.

1. Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.
2. Set the following items in [Detail Setting], and click the [OK] button.



Item	Description
[GOT NET No.]	[1]
[GOT PC No.]	[3]
[GOT Communication Port No.]	[5001]

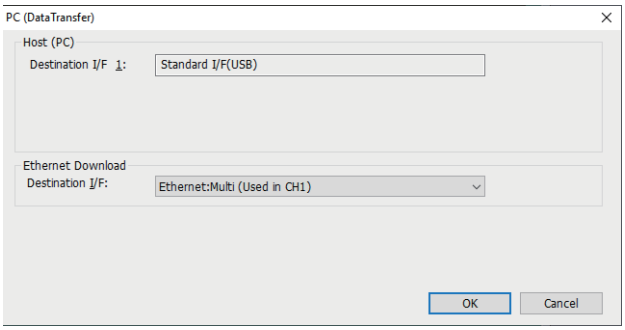
For details of the communication setting, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3

■Settings in the [PC (Data Transfer)] dialog

Configure the settings to connect GT SoftGOT2000 to the Ethernet interface of the GOT to transfer data between them.

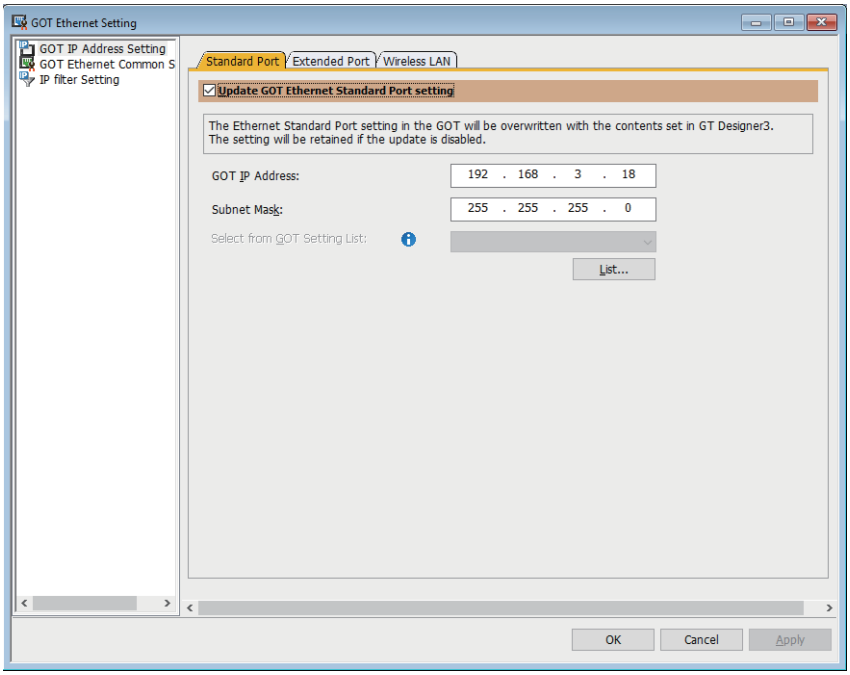
1. Select [Common] → [Peripheral Setting] → [PC (Data Transfer)] from the menu to display the [PC (Data Transfer)] dialog.
2. Select [Ethernet: Multi] for [Destination I/F] in [Ethernet Download], and click the [OK] button.



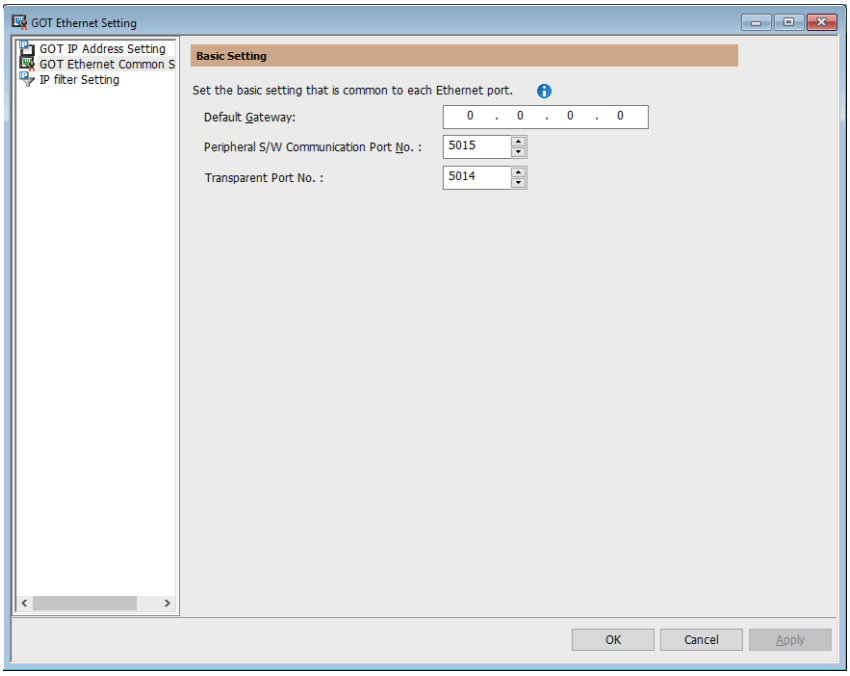
■Settings in the [GOT Ethernet Setting] window

Set [GOT IP Address Setting] and [Peripheral S/W Communication Port No.].

1. Select [Common] → [GOT Ethernet Setting] → [GOT IP Address Setting] from the menu to display the [GOT Ethernet Setting] window ([GOT IP Address Setting]).
2. In the [Standard Port] tab, set [GOT IP Address] to [192.168.3.18].



3. In [GOT Ethernet Common Setting] in the [GOT Ethernet Setting] window, set [Peripheral S/W Communication Port No.] to [5015].



4. Click the [OK] button to complete the settings.

Point

• Setting the firewall

When the port for the Ethernet communication is blocked by the firewall, a communication error occurs. Disable the firewall or configure the setting to open the port.

• Unusable port No. (Port No.49154, 49158)

The GOT port No.49154 and 49158 are used for the command communication port.

Do not use these port No. for the communication or others between the GOT and the controller.

• Communication interface of the GOT

The extended Ethernet interface of the GOT cannot be used for the communication with GT SoftGOT2000. To communicate with GT SoftGOT2000, use the standard Ethernet interface of the GOT.

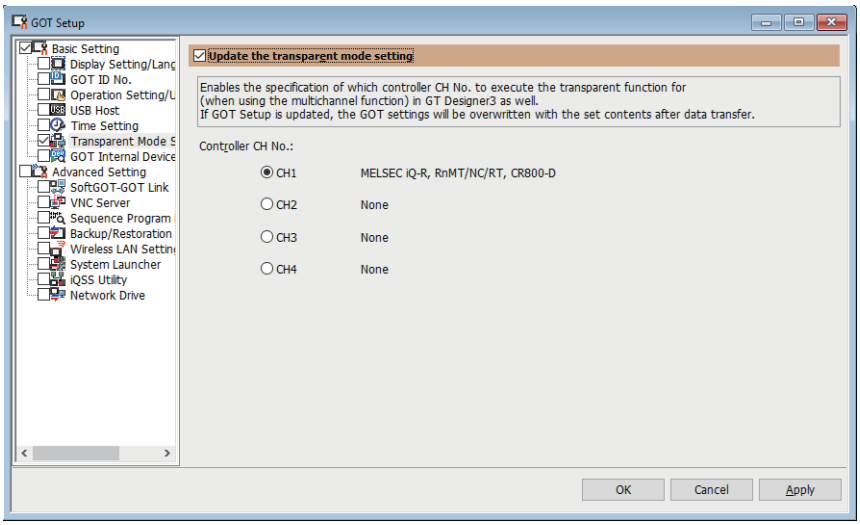
■Transparent mode setting

When you use the SoftGOT-GOT link function to monitor a controller through a GOT, specify [CH1] in the GOT transparent mode setting.

Otherwise, a communication timeout error occurs, or an unintended controller is monitored.

The following shows the setting procedure on GT Designer3.

1. Select [Common] → [GOT Setup] → [Basic Setting] → [Transparent Mode Setting] from the menu to display [Transparent Mode Setting] of the [GOT Setup] window.
2. Select [Update the transparent mode setting].
3. Select [CH1] for [Controller CH No.], and click the [OK] button.



■Writing project data and install the extended function OS to the GOT

Write the created project data and install the extended function OS (SoftGOT-GOT Link Function) to the GOT.

For writing project data and OS to the GOT, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

Operation and setting on GT SoftGOT2000

■Environmental setting

For setting items of the [Environment Setup] dialog, refer to the following.

☞ Page 68 [Environment Setup] dialog

1. Perform either of the following operations to display the [Environment Setup] dialog.

Clicking [Environment Setup]

Selecting [Set] → [Environment Setup] from the menu

Right-clicking the mouse to select [Environment Setup] from the menu

Point

• When the resolutions of GT SoftGOT2000 and the GOT differ

The resolution of GT SoftGOT2000 is automatically changed according to the resolution of the GOT when GT SoftGOT2000 starts monitoring.

• When a vertically-installed GOT is connected

When GT SoftGOT2000 is connected to a vertically-installed GOT, GT SoftGOT2000 displays the startup logo and the utility screen in the vertical orientation.

■SoftGOT-GOT link function setting

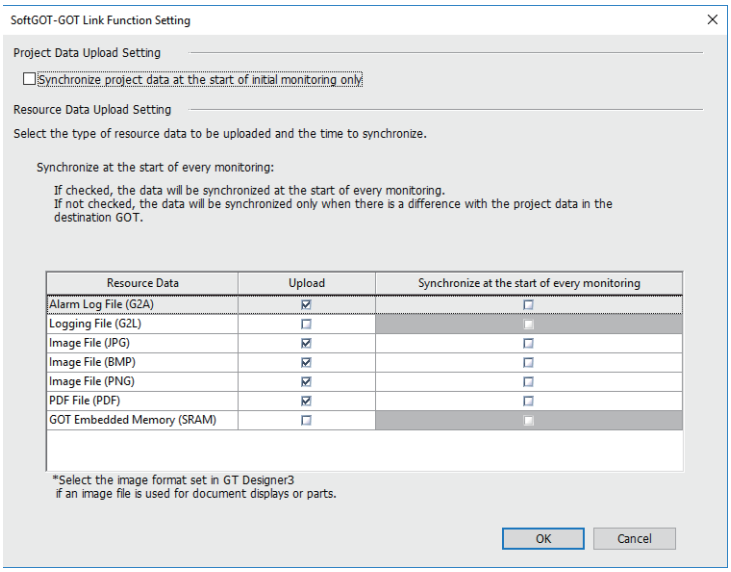
Select the type of the resource data to be synchronized with the GOT and the synchronization timing.

1. Perform one of the following operations to display the [SoftGOT-GOT Link Function Setting] dialog.

Select [Set] → [SoftGOT-GOT Link Function Setting] from the menu.

Right-click the mouse to select [Set] → [SoftGOT-GOT Link Function Setting] from the menu.

2. Select the type of the resource data to be synchronized and the synchronization timing.



Item	Description
[Project Data Upload Setting]	-
[Synchronize project data at the start of initial monitoring only]	Project data is synchronized only at the start of the initial monitoring in GT SoftGOT2000. Since the second or subsequent monitoring starts with the initially synchronized project data, the time required to start monitoring can be shortened. For the precautions for this setting, refer to the following. ☞ Page 654 Precautions for setting the SoftGOT-GOT link function
[Resource Data Upload Setting]	-
[Resource Data] *1	The following lists the selectable resource data. • [Alarm log file (G2A)] • [Logging file (G2L)] • [Image file (JPG)] • [Image file (BMP)] • [Image file (PNG)] • [PDF file (PDF)] • [GOT Embedded Memory (SRAM)]
[Upload]	Select the type of resource data to be synchronized.
[Synchronize at the start of every monitoring]	Select the timing to synchronize the resource data. If this item is deselected, the resource data is synchronized only when the data is different from the project data in the connected GOT. If this item is selected, the resource data is synchronized at every synchronization timing.

*1 When the file save and power-failure backup settings are configured in the GOT, select the files such as [Alarm Log File] and [GOT Embedded Memory (SRAM)] applicable to the settings as the synchronization targets.
In [Synchronize at the start of every monitoring], select both the target files and [GOT Embedded Memory (SRAM)].

Point

Large resource data size affects the time required to start monitoring.

For a large amount of resource data, either of the following settings is recommended.

- Deselect [Upload].
- Deselect [Synchronize at the start of every monitoring].

■Operation at logging file (G2L) synchronization

• Synchronizing a logging file (G2L)

When you synchronize a logging file (G2L), only its management file is uploaded before the start of monitoring.

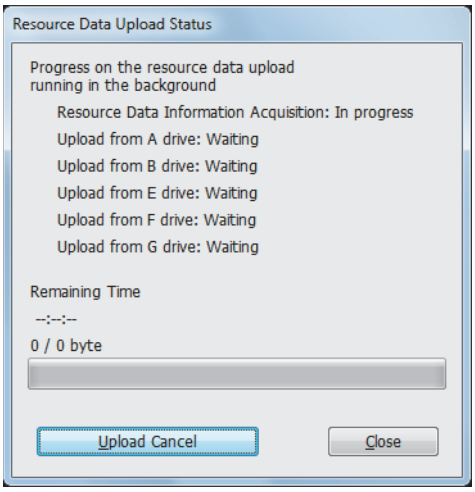
The logging file (G2L) is uploaded in the background after the start of monitoring.

• Upload status of a logging file (G2L)

To check the upload status of a logging file (G2L), select [Tool] → [SoftGOT-GOT Link Function] → [Resource Data Upload Status] from the menu.

To cancel the upload, click the [Upload Cancel] button.

If you cancel the upload of resource data, the resource data may not be uploaded even though the upload progress indicates that the upload has been completed.



If you cancel the upload of the logging file (G2L), the logging file is uploaded again when project data is synchronized next time.

■Communication setting

For setting items of the [Communication Setup] dialog, refer to the following.

☞ Page 83 [Communication Setup] dialog ([Connection Setup] tab)

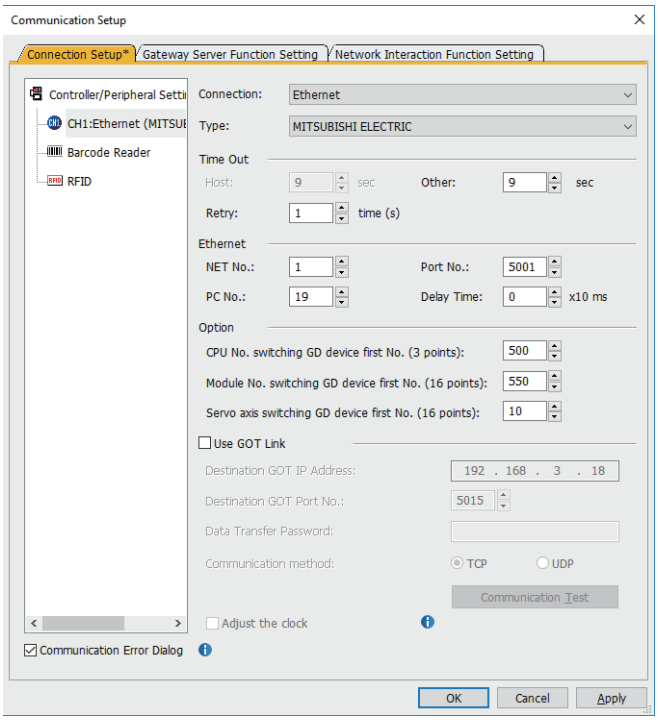
1. Perform either of the following operations to display the [Communication Setup] dialog.

Clicking [Communication Setup]

Selecting [Online] → [Communication Setup] from the menu

Right-clicking the mouse to select [Communication Setup] from the menu

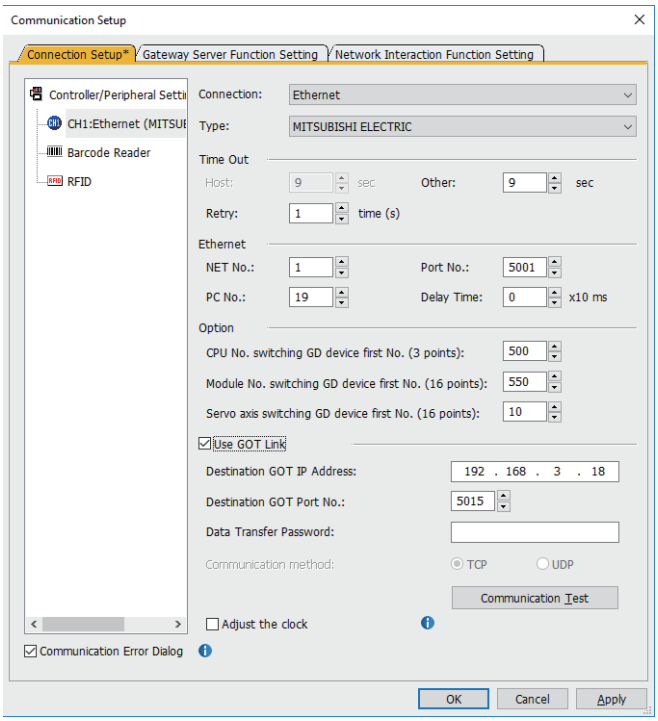
2. Set the following items.



Item	Description	
[Connection]	[Ethernet]	
[Type]	Set the communication route from GT SoftGOT2000 to a controller as shown below. • For monitoring a controller through a GOT (Ethernet connection, bus connection, direct CPU connection (serial), or serial communication connection) *1 [GOT] • For monitoring a controller directly (Ethernet connection) [MITSUBISHI ELECTRIC] or [OMRON SYSMAC] • For using the GOT network interaction function [MITSUBISHI ELECTRIC]	
[Ethernet]	[NET No.]	[1]
	[PC No.]	[1]
	[Port No.]	[5001]
	[Wait Time]	Transmission wait time
[Option]	[CPU No. switching GD device first No. (3 points)]	Set the values that are specified in the [Controller Setting] window in GT Designer3. GT Designer3 (GOT2000) Screen Design Manual
	[Module No. switching GD device first No. (16 points)]	
	[Servo axis switching GD device first No. (16 points)]	

*1 Not available to GT SoftGOT2000 (Multiple channels).

3. Select [Use GOT Link], and then set the following items.



Item	Description
[Destination GOT IP Address]	[192.168.0.18]
[Destination GOT Port No.]	[5015]
[Communication method]	[TCP]

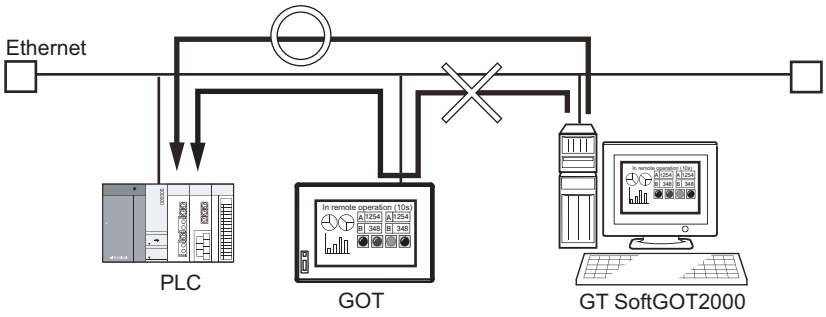
4. Click the [Communication Test] button to execute the communication test between GT SoftGOT2000 and the GOT.

Point

Precautions for the Ethernet connection

When a controller is connected to a GOT by Ethernet, use GT SoftGOT2000 to monitor the controller within the access range of GT SoftGOT2000 directly.

If you monitor the controller through the GOT, the communication speed decreases.



■Starting the monitor

1. GT SoftGOT2000 starts monitoring when either of the following operations is executed.

Click [Monitor Start]

Select [Online] → [Monitor Start] from the menu.

Right-click the mouse and select [Monitor Start] from the menu.

2. The project data of GT SoftGOT2000 and the GOT are synchronized when monitoring starts.

When a password is set for a GOT project data, enter the password.

Point

- When using the SoftGOT-GOT link function, the project data saved in a personal computer cannot be opened on GT SoftGOT2000.

To open the project data in GT SoftGOT2000, deselect [Use GOT Link] in the [Communication Setup] dialog.

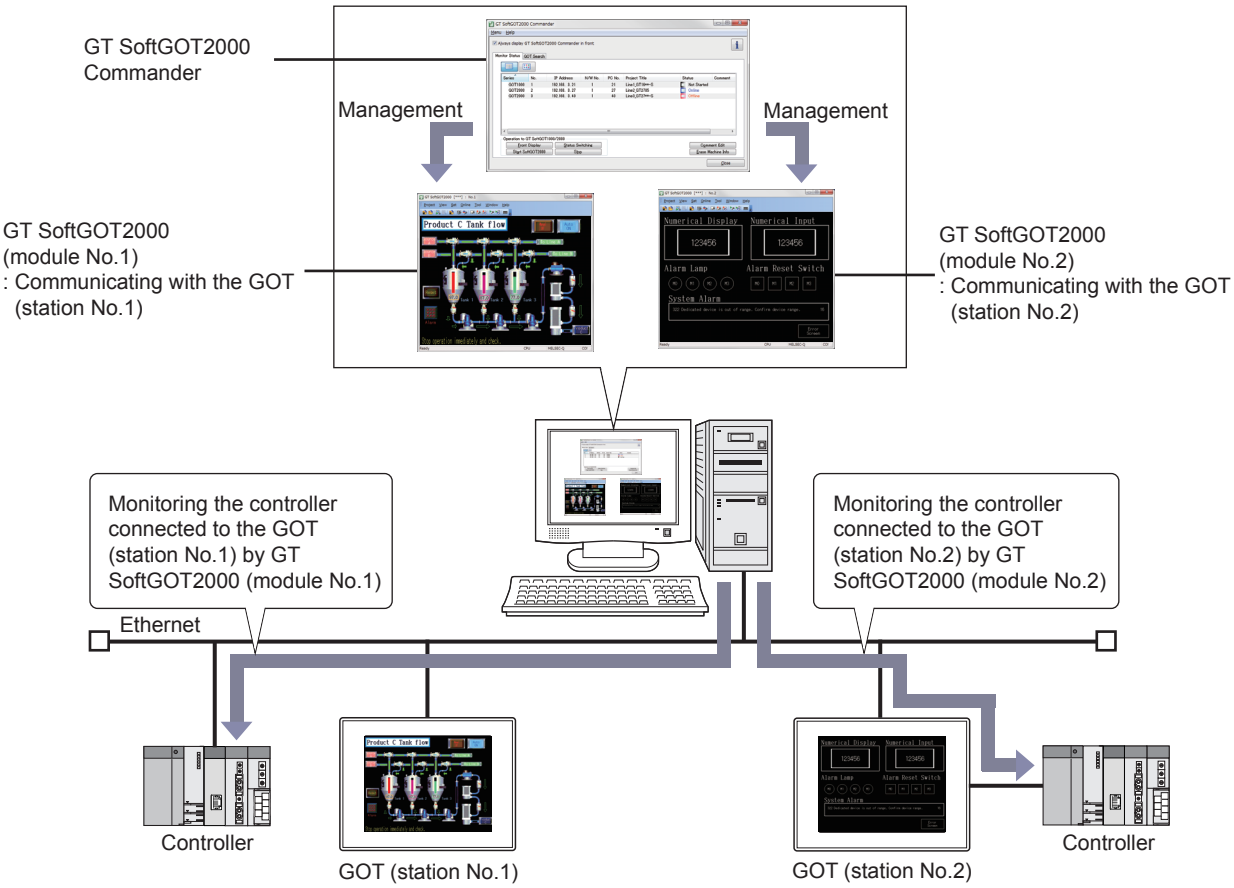
- To automatically enter the password when project data are synchronized, enter a password in the [GOT Link Setup] dialog beforehand.

☞ Page 83 [Ethernet]

Managing GT SoftGOT2000 and GT SoftGOT1000 modules that use the SoftGOT-GOT link function (GT SoftGOT2000 Commander)

GT SoftGOT2000 Commander is used to manage multiple modules of GT SoftGOT2000 and GT SoftGOT1000 that use the SoftGOT-GOT link function.

On GT SoftGOT2000 Commander, you can check the monitoring status of GT SoftGOT2000 and GT SoftGOT1000 modules, and start or stop monitoring on the modules.



Operating environment

The operating environment is the same as that of GT SoftGOT2000.

For details of the operating environment of GT SoftGOT2000, refer to the following.

☞ Page 30 Operating environment

The following restrictions apply to GT SoftGOT1000 modules to be managed with GT SoftGOT2000 Commander.

Use version 3.64S or later of GT SoftGOT1000.

For details of the operating environment of GT SoftGOT1000, refer to the following.

📖GT SoftGOT1000 Version3 Operating Manual for GT Works3

How to install or uninstall the tool

SoftGOT2000 Commander is installed or uninstalled automatically when GT SoftGOT2000 is installed or uninstalled.

However, if comments are set by GT SoftGOT2000 Commander, the comments are not deleted even if GT SoftGOT2000 Commander is unstalled.

Starting or exiting the tool

From the Windows start menu], select [MELSOFT] → [GT Works3] → [GT SoftGOT2000 Commander] to start GT SoftGOT2000 Commander. *1*2

To exit GT SoftGOT2000 Commander, perform either of the following operations.

- Click [Menu] → [Stop] in GT SoftGOT2000 Commander.
- Click the [×] button or the [Close] button.

*1 How to open the start menu differs depending on the Windows version.
Check how to operate Windows.

*2 For GT Works3 version 1.136S or earlier, [MELSOFT Application] appears instead of [MELSOFT].

Software license agreement

The software license agreement screen appears at the first startup of GT SoftGOT2000 Commander on MI3000.

Click the [Agree] button to start GT SoftGOT2000.

The screen does not appear if you already accepted the software license agreement on GT SoftGOT2000.

Operating procedure

The following shows the procedure to start GT SoftGOT2000 or GT SoftGOT1000 from GT SoftGOT2000 Commander.

For details on the menu, refer to the following.

☞ Page 645 Menu item

For details on the setting items, refer to the following.

☞ Page 646 Setting item

For details on the [Monitor Status] tab, refer to the following.

☞ Page 647 [Monitor Status] tab

For details on the [GOT Search] tab, refer to the following.

☞ Page 651 [GOT Search] tab

■Starting a GT SoftGOT2000 or GT SoftGOT1000 module

1. Click the [Start SoftGOT2000] button on the [Monitor Status] tab in GT SoftGOT2000 Commander.
2. The [Start SoftGOT2000] dialog appears. Configure the settings and click the [OK] button.
3. A GT SoftGOT2000 or GT SoftGOT1000 module will start.

■Exiting a GT SoftGOT2000 or GT SoftGOT1000 module

1. Select a GT SoftGOT2000 or GT SoftGOT1000 module to exit on the monitor status list in GT SoftGOT2000 Commander.
2. Perform either of the following operations to exit the GT SoftGOT2000 or GT SoftGOT1000 module.

- Click the [Stop] button.
- Right-click the row of the selected GOT and select [Stop] from the context menu.

3. The GT SoftGOT2000 or GT SoftGOT1000 module will end.

Point

For the ended GT SoftGOT2000 or GT SoftGOT1000 module, [Status] becomes [Not Started], and the module information remains displayed in the monitor status list.

To delete the information of the "Not Started" module from the monitor status list, select the row of the module and click the [Erase Machine Info] button.

To start a "Not Started" GT SoftGOT2000 or GT SoftGOT1000 module from the monitor status list, refer to the following.

☞ Page 644 Starting a "Not Started" GT SoftGOT2000 or GT SoftGOT1000 module from the monitor status list

■Starting a "Not Started" GT SoftGOT2000 or GT SoftGOT1000 module from the monitor status list

1. Select a GT SoftGOT2000 or GT SoftGOT1000 module whose [Status] is "Not Started" on the monitor status list in GT SoftGOT2000 Commander.
2. Perform one of the following operations to switch [Status] from [Not started] to [Online] or [Offline].

- Click the [Status Switching] button.
- Right-click the row of the selected GOT and select [Status Switching] from the context menu.
- Double-click the [Status] column of the row of the selected GOT.

3. The previously started GT SoftGOT2000 or GT SoftGOT1000 module will start.

For exiting the GT SoftGOT2000 or GT SoftGOT1000 module, refer to the following.

☞ Page 643 Exiting a GT SoftGOT2000 or GT SoftGOT1000 module

■Searching for network-connected GOTs and starting GT SoftGOT2000 or GT SoftGOT1000

1. Click the [Auto Acquisition] button on the [GOT Search] tab in GT SoftGOT2000 Commander.
2. The found GOTs are displayed in the GOT Search list. Select the target GOT and perform either of the following operations.

- Click the [Start SoftGOT2000] button.
- Double-click the row of the selected GOT.

3. The [Start SoftGOT2000] dialog appears. Configure the settings and click the [OK] button.

The settings of [GOT Type], [IP Address], and [Port No.] of the found GOTs are reflected.

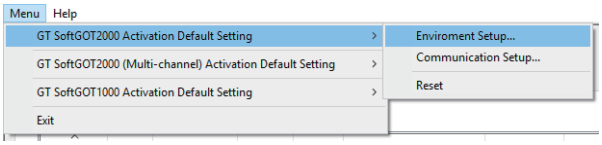
4. GT SoftGOT2000 or GT SoftGOT1000 to be synchronized with the found GOTs will start.

For exiting the GT SoftGOT2000 or GT SoftGOT1000 module, refer to the following.

☞ Page 643 Exiting a GT SoftGOT2000 or GT SoftGOT1000 module

Menu item

■[Menu]

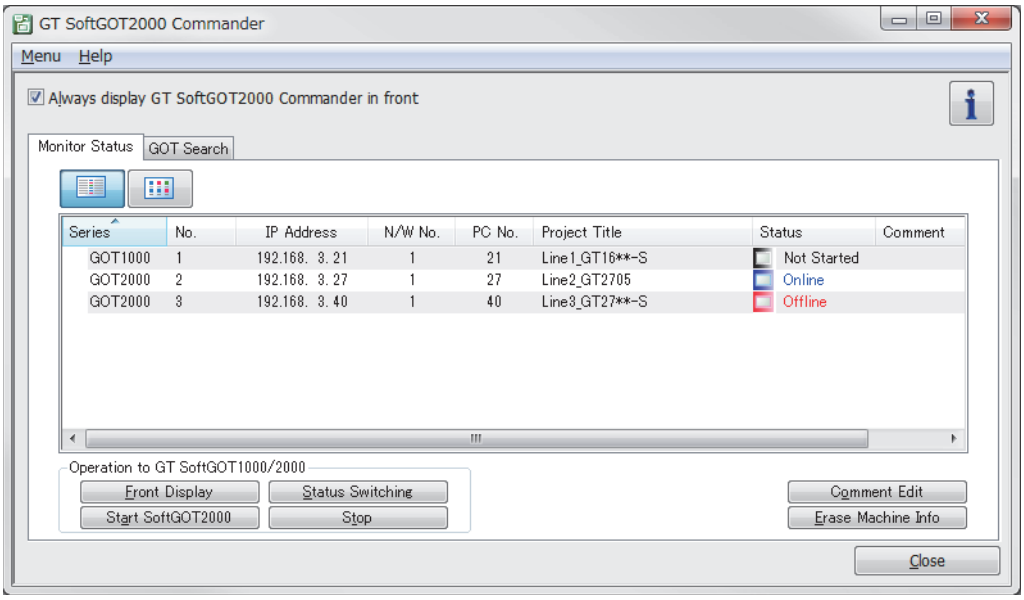


Item	Description
[GT SoftGOT2000 Activation Default Setting]	• [Environment Setup] [Environment Setup] of GT SoftGOT2000 (Single channel) can be registered as default. The default value registered can be applied as a set value when GT SoftGOT2000 (Single channel) is started from GT SoftGOT2000 Commander. • [Communication Setup] [Communication Setup] of GT SoftGOT2000 (Single channel) can be registered as default. The default value registered can be applied as a set value when GT SoftGOT2000 (Multiple channels) is started from GT SoftGOT2000 Commander. • [Reset] Restores the setting of [Environment Setup] and [Communication Setup] to the initial value.
[GT SoftGOT2000 (Multi-channel) Activation Default Setting]	• [Environment Setup] [Environment Setup] of GT SoftGOT2000 (Multiple channels) can be registered as default. The default value registered can be applied as a set value when GT SoftGOT2000 (Multiple channels) is started from GT SoftGOT2000 Commander. • [Communication Setup] [Communication Setup] of GT SoftGOT2000 (Multiple channels) can be registered as default. The default value registered can be applied as a set value when GT SoftGOT2000 (Multiple channels) is started from GT SoftGOT2000 Commander. • [Reset] Restores the setting of [Environment Setup] and [Communication Setup] to the initial value.
[GT SoftGOT1000 Activation Default Setting]	• [Environment Setup] [Environment Setup] of GT SoftGOT1000 can be registered as default. The default value registered can be applied as set value when starting GT SoftGOT1000 from GT SoftGOT2000 Commander. • [Communication Setup] [Communication Setup] of GT SoftGOT1000 can be registered as default. The default value registered can be applied as set value when starting GT SoftGOT1000 from GT SoftGOT2000 Commander. • [Reset] Restores the setting of [Environment Setup] and [Communication Setup] to the initial value.
[Exit]	• Exits GT SoftGOT2000 Commander.

■[Help]

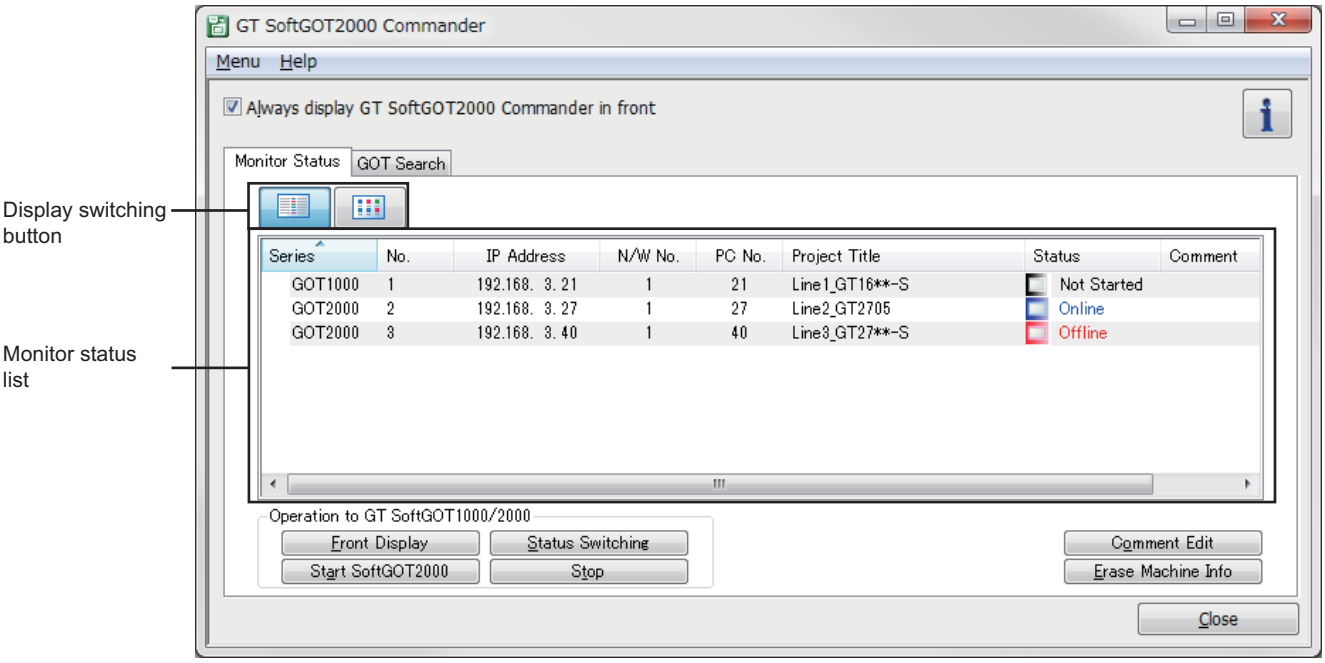
Item	Description
[About GT SoftGOT2000 Commander]	The version information of GT SoftGOT2000 Commander can be checked.

Setting item



Item	Description
[Always display GT SoftGOT2000 Commander in front]	Select this item to display the GT SoftGOT2000 Commander window on the top front.
	Checks the version information of GT SoftGOT2000 Commander.
[Monitor Status]	Displays the monitoring status of GT SoftGOT2000 and GT SoftGOT1000 modules that use the SoftGOT-GOT link function. ☞ Page 647 [Monitor Status] tab
[GOT Search]	Searches GOTs connected to the Network. ☞ Page 651 [GOT Search] tab
[Close]	Exits GT SoftGOT2000 Commander.

[Monitor Status] tab



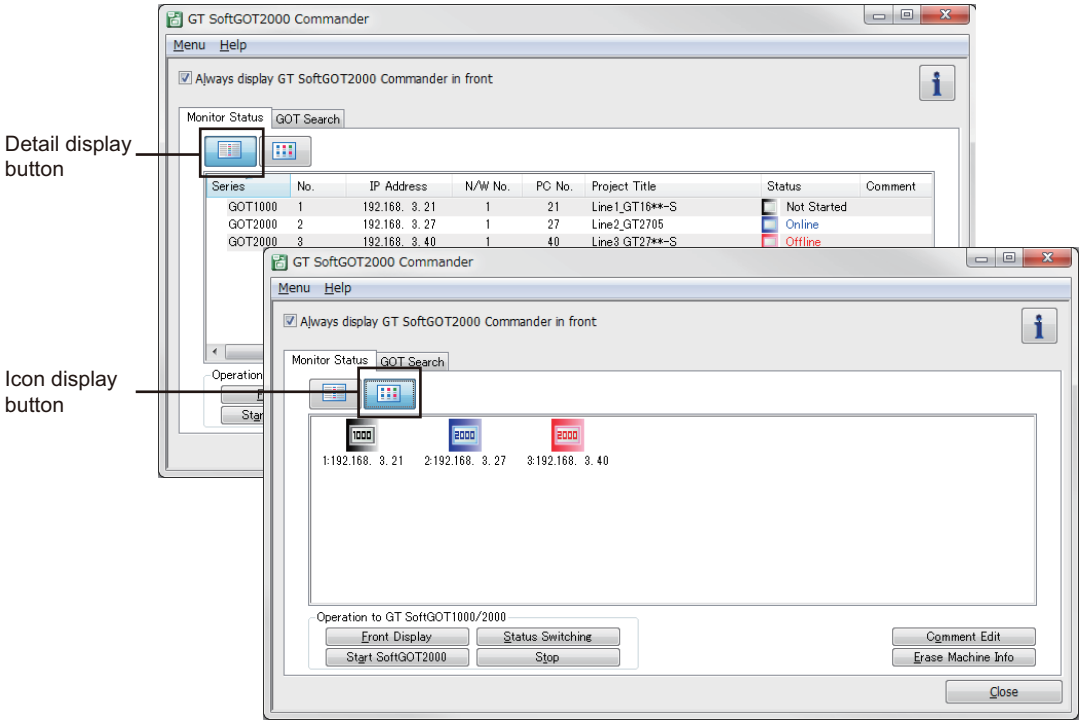
Item	Description	
Monitor status list	Displays GT SoftGOT2000 and GT SoftGOT1000 modules that use the SoftGOT-GOT link function. When any of rows are clicked, the clicked row is highlighted and selected. The display contents of the monitor status list displayed in icon display by the display switching button differs from the same in detail display. ☞ Page 648 Display switching button	
	[Series]	Displays the GOT series. • [GOT2000] • [GOT1000]
	[No.]	Displays the module numbers of GT SoftGOT2000 and GT SoftGOT1000.
	[IP Address]	Displays the IP addresses of the GOTs that communicate with GT SoftGOT2000 and GT SoftGOT1000 modules.
	[N/W No.]	Displays the network numbers of the GOTs that communicate with GT SoftGOT2000 and GT SoftGOT1000 modules. When the connection type between the GOT and controller is the bus connection or direct CPU connection (serial), [-] is displayed.
	[PC No.]	Displays the station numbers of the GOTs that communicate with GT SoftGOT2000 and GT SoftGOT1000 modules. When the connection type between the GOT and controller is the bus connection or direct CPU connection (serial), [-] is displayed.
	[Project Title]	Displays the project title of the project data read by the GOT.
	[Status]	Displays the status of GT SoftGOT2000 and GT SoftGOT1000 modules. • [Online]: During monitoring • [Offline]: Stopped monitoring • [Uploading]: During reading project data from the GOT • [Not Started]: The target GT SoftGOT2000 or GT SoftGOT1000 module is not started.
	[Comment]	Displays the comment entered in the [No. n Property] dialog.
Display switching button	Clicking the button displays the monitor status list in detail. Clicking the button displays the monitor status list with icons. ☞ Page 648 Display switching button	
[Front Display]	Displays the GT SoftGOT2000 or GT SoftGOT1000 module selected in the monitor status list in the foreground. The target module is displayed in the foreground also by double-clicking a cell of the [Series], [No.], [IP Address], [N/W No.], [PC No.], or [Project Title] column in the target module row in the monitor status list. However, the target module in the back screen mode is not displayed in the foreground by clicking the [Front Display] button. If you overlap a GT SoftGOT2000 or GT SoftGOT1000 module in the foreground and GT SoftGOT2000 Commander, GT SoftGOT2000 Commander is displayed in front of the module.	
[Status Switching]	Switches the status of the GT SoftGOT2000 or GT SoftGOT1000 selected from the monitor status list (Online and Offline, or Not Started to Online/Offline). The monitor status can also be switched when [Status] in each row of the monitor status list is double-clicked. However, the monitor status cannot be switched while [Uploading] is displayed on [Status].	

Item	Description
[Start SoftGOT2000]	Displays the [Start SoftGOT2000] dialog. ☞ Page 649 [Start SoftGOT2000]
[Stop]	Ends the GT SoftGOT2000 or GT SoftGOT1000 selected from the monitor status list.
[Comment Edit]	Displays the [No. n - Property] dialog. The [No. n - Property] dialog is displayed also by double-clicking a cell in the [Comment] column in the monitor status list. ☞ Page 650 n module number property
[Erase Machine Info]	Erases the module information of the GT SoftGOT2000 and GT SoftGOT1000 selected from the monitor status list. The information of the GT SoftGOT2000 and GT SoftGOT1000 being activated cannot be erased.

■Display switching button

The display switching button switches the monitor status list between detail display and icon display.

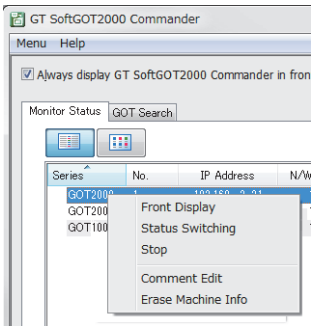
When in icon display, [No.] and [IP Address] are displayed in the monitor status list.

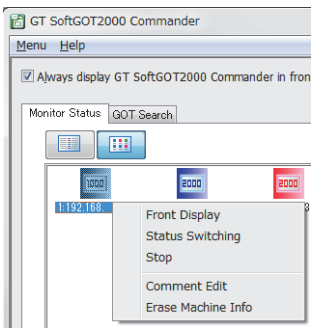


■Context menu

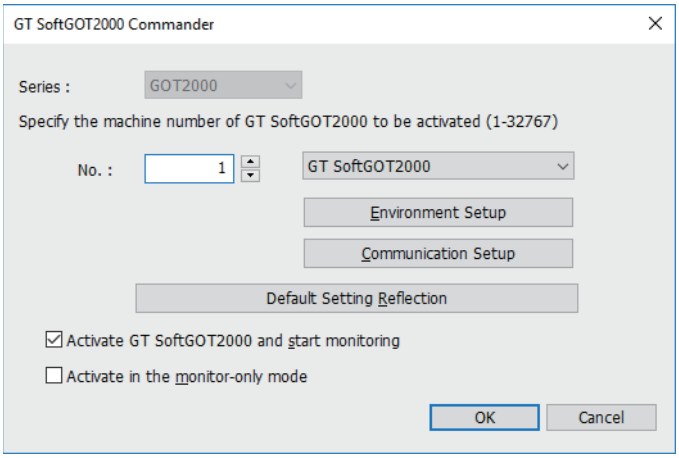
Right-click a row in the detail display or an icon in the icon display in the monitor status list to display the context menu.

In the context menu, [Front Display], [Status Switching], [Stop], [Comment Edit], and [Erase Machine Info] can be selected.





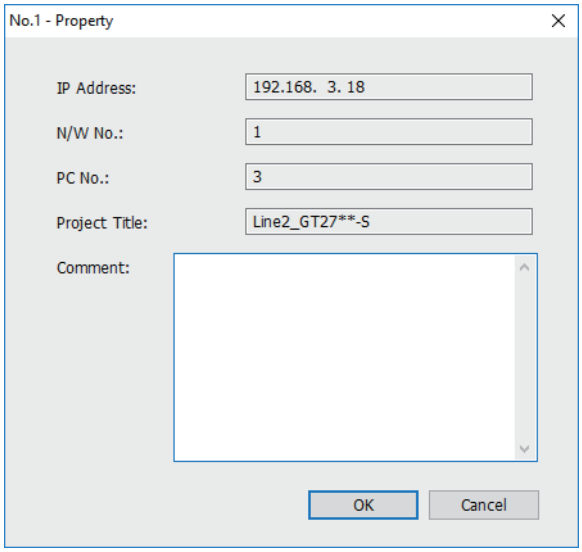
■[Start SoftGOT2000]



Item	Description
[Series]	The software applicable to the selected series is started. • [GOT2000]: GT SoftGOT2000 starts. • [GOT1000]: GT SoftGOT1000 starts.
[No.]	Set the module number of GT SoftGOT2000 or GT SoftGOT1000 to start.
[Environmental Setup]	Configure the environment settings of GT SoftGOT2000 or GT SoftGOT1000 to start. The settings are identical to [Environment Setup] of GT SoftGOT2000 or GT SoftGOT1000. ☞ Page 68 [Environment Setup] dialog
[GT SoftGOT2000], [GT SoftGOT2000 (Multi-channel)]	When [GT SoftGOT2000] is selected, the setting dialog for GT SoftGOT2000 (Single channel) opens. When [GT SoftGOT2000(Multi-channel)] is selected, the setting dialog for GT SoftGOT2000 (Multiple channels) opens.
[Communication Setup]	Configure the communication settings of GT SoftGOT2000 or GT SoftGOT1000 to start. The settings are identical to [Communication Setup] of GT SoftGOT2000 or GT SoftGOT1000. ☞ Page 75 [Communication Setup] dialog
[Default Setting Reflection]	Collectively applies the default settings to the environment setup and the communication setup of GT SoftGOT2000 or GT SoftGOT1000 to start. If the environmental setup or the communication setup has already been configured in the specified software, the setup contents are overwritten with the default settings.
[Activate GT SoftGOT2000 and start monitoring] *1	Starts monitoring automatically after GT SoftGOT2000 is started.
[Activate in the monitor-only mode]	Starts GT SoftGOT2000 or GT SoftGOT1000 in the monitor-only mode.

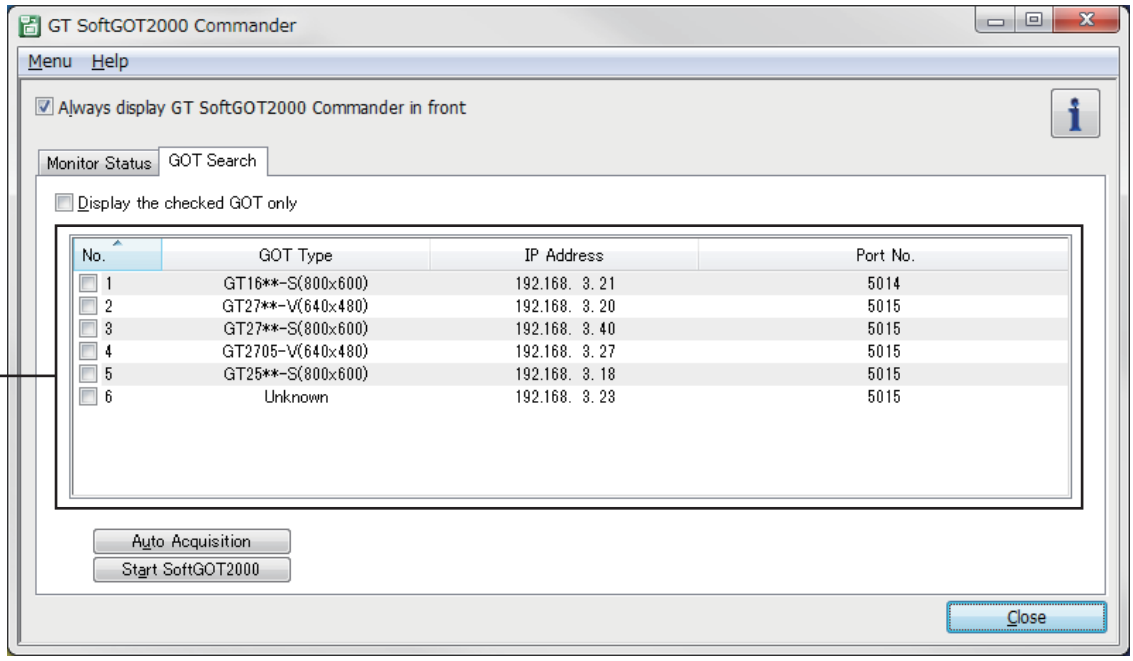
*1 If the setting of [Series] is switched to [GOT1000], the displayed item is changed to [Activate GT SoftGOT1000 and start monitoring].

■n module number property



Item	Description
[Comment]	Up to 255 characters can be entered. One line feed is counted as two characters. The comments are saved with the IP address of the GOT linked. Comments are related to the IP addresses of GOTs. Therefore, even though the module numbers of the GT SoftGOT2000 and GT SoftGOT1000 to communicate with the GOTs have been changed, the comments set to the modules before the changes will be displayed.

[GOT Search] tab



Item	Description	
[Display the checked GOT only]	The GOT Search list displays only the GOTs corresponding to the [No.] checkboxes selected. *1 Once this item is selected, the displayed GOTs will remain the same even when GT SoftGOT2000 Commander is started again or the [Auto Acquisition] button is clicked.	
GOT Search list	Displays found GOTs. Click the row to select and highlight it.	
	[No.]	Displays the number of found GOTs.
	[GOT type]	Displays the type of found GOTs.
	[IP Address]	Displays the IP address of found GOTs.
	[Port No.]	Displays the port No. used for uploading the project data of found GOTs.
[Auto Acquisition]	Clicking the [Auto Acquisition] button displays the [GOT Type], [IP Address] and [Port No.] of the searched GOT.	
[Start SoftGOT2000]	Displays the [Start SoftGOT2000] dialog. The [Start SoftGOT2000] dialog can be also displayed by double-clicking the GOT row selected in the GOT Search list. The settings are identical to the [Start SoftGOT2000] dialog in the [Monitor Status list] tab. ☞ Page 649 [Start SoftGOT2000]	

*1 When no [No.] checkbox is selected, selecting [Display the checked GOT only] will display nothing in the GOT Search list.

■Search target GOT

The auto acquisition searches only GOT2000 (GT27, GT25, and GS25) and GOT1000 (GT16) models.

GOTs that do not use the SoftGOT-GOT link function will also be searched for, and [GOT Type], [IP Address], and [Port No.] will be displayed.

■IP Address duplication

If a duplicated IP address is found in the search result, the applicable GT SoftGOT2000 or GT SoftGOT1000 module cannot be started from the GOT Search list.

Also, the duplication of [IP Address] may not be found, even if existing.

Therefore, make sure to check the whole system before searching again.

■Settings on Resolution, IP Address and Destination GOT Port No.

Clicking [Communication Setup], [Environment Setup] or [OK] on the [Start SoftGOT2000] dialog displays the following dialog.

• Select [Yes].

Changes [Resolution] in the environmental setting to [GOT Type] of the row selected in the GOT Search list.

Changes [Destination GOT IP Address] and [Destination GOT Port No.] in the [Communication Setup] dialog to [IP Address] and [Port No.] of the row selected in the GOT Search list.

• Select [No].

GT SoftGOT2000 and GT SoftGOT1000 are started with the values set in the [Communication Setup] and [Environment Setup] dialogs.

Precautions

Settings and OS required for the GOT

■Ethernet setting

Set [GOT IP Address] and [Ethernet Download Port No.] for project data.

☞ Page 634 Settings in the [GOT Ethernet Setting] window

■Extended function OS

Install the extended function OS (SoftGOT-GOT Link Function) on the GOT.

📖GT Designer3 (GOT2000) Screen Design Manual

Precautions for the Ethernet connection

For the precautions for the Ethernet connection, refer to the following.

☞ Page 296 Precautions

Setting devices which affect the control of GOT/GT SoftGOT2000

It is recommended to set a GOT internal device for a control device of the function which affects the control of the GOT/GT SoftGOT2000 (including the system signal, screen switching device, or security level device).

When a controller device is set for the device which affects the control of the GOT/GT SoftGOT2000, due to an operation of either GT SoftGOT2000 or the GOT, an unexpected behavior may be caused to the other.

The following shows the setting example of how to enable the function which affects the control of the GOT/GT SoftGOT2000 only when the authorization is obtained by using a GOT internal device and the script function.

Example: When the authorization is obtained, the screens of GT SoftGOT2000 and the GOT are switched according to the value (screen number) of a controller device (D1000)

Function	Setting
Screen switching device	Set a GOT internal device (GD1000).

Script function	Set the following project script in which the trigger type is set to [Ordinary].
	if([b:GS244.b1] == ON){
	[w:GD1000] = [w:D1000];
	}

For the screen switching device, refer to the following.

📖 GT Designer3 (GOT2000) Screen Design Manual

For the script function, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

Function not available with the SoftGOT-GOT link function

The following functions cannot be used with the SoftGOT-GOT link function.

- Gateway server function
- PX developer function call
- GOT Mobile function

Operation without the authorization

Clicking and touching an input object are not recognized as input operations if the authorization is not obtained.

The dialog for obtaining the authorization appears.

(When the GOT has the exclusive authorization, GT SoftGOT2000 cannot obtain the authorization.)

Precautions for project data/resource data synchronization

■Precautions during project data synchronization

Do not perform the following operations during the project data synchronization.

- Turn off the GOT or a controller.
- Press the reset button of the GOT.
- Disconnect the communication cable.
- Turn off the personal computer.

If the operations listed above are performed during the project data synchronization, GT SoftGOT2000 project data and GOT project data may differ.

Select [Tool] → [GOT Project Data Acquisition], and synchronize GT SoftGOT2000 project data with GOT project data again.

■Synchronization when the GOT network interaction function is used

When the GOT network interaction function is used together with the SoftGOT-GOT link function, multiple GT SoftGOT2000 modules can communicate with one GOT.

When the GOT project data is synchronized, the SoftGOT2000 modules start reading the data from the GOT in sequence.

■When the GOT network interaction function is enabled or disabled

During the project data synchronization, if you enable or disable the GOT network interaction function while the GOT is in online mode, restart GT SoftGOT2000.

■Timing of which the project data synchronization is not executed

During the following operations, project data are not synchronized.

The project data synchronization is executed when the operation ends.

While displaying the print preview

While displaying the dialog which disables operation of other screens if the dialog is displayed

■Resource data in drive N

The resource data in drive N is not synchronized.

To synchronize the resource data, copy the necessary data in drive N to a virtual drive before starting monitoring.

■Resource data in drive V

The resource data in drive V is not synchronized.

■Resource data when the multi-channel function is used for the GOT

Regardless of the number of channels for controllers connected to the GOT, GT SoftGOT2000 data is synchronized with all GOT resource data.

After resource data synchronization, GT SoftGOT2000 only monitors a controller of channel number 1. Therefore, GT SoftGOT2000 only updates resource data for the controller of channel number 1.

(In GT SoftGOT2000 (Single channel), the resource data are not updated for controllers of channel numbers other than 1.)

■Precautions for setting the SoftGOT-GOT link function

- The SoftGOT-GOT link function cannot be set after the start of monitoring.

Set the function before starting the monitoring.

- When an image file is used for the document display or parts, select the image file format that is set with GT Designer3.
- Store up to 499 files in one folder.

If you store 500 files or more in one folder, file access performance may be slowed down.

- When [Synchronize project data at the start of initial monitoring only] is selected in the [SoftGOT-GOT Link Function Setting] dialog

When [Synchronize project data at the start of initial monitoring only] is selected, monitoring starts with initially synchronized project data without subsequent synchronization.

Therefore, the data may differ from the project data in the connected GOT.

☞ Page 637 SoftGOT-GOT link function setting

To synchronize the project data in the connected GOT, perform one of the following operations.

◇Deselect [Synchronize project data at the start of initial monitoring only] and start monitoring again.

◇After the start of monitoring, select [Tool] - [SoftGOT-GOT Link Function] - [GOT Project Data Acquisition] to synchronize the project data.

■Precautions for logging file (G2L) synchronization

The logging file (G2L) in GT SoftGOT2000 may be overwritten with the one uploaded from the GOT, if the file names are the same.

To avoid overwriting the logging file (G2L) in GT SoftGOT2000, select [Add date information to the file name] in the [Logging] dialog on GT Designer3.

For details of the [Logging] dialog, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

■Precautions for synchronizing the built-in memory (SRAM) of the GOT

When the built-in memory (SRAM) of the GOT is synchronized, the data in the SRAM user area of GT SoftGOT2000 will be deleted.

In this case, GT SoftGOT2000 operates with the settings configured in the GOT.

For the functions that use the built-in memory of the GOT, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

When [Initialize SRAM user area at the time of initial monitoring] in the [Environment Setup] dialog is selected, GT SoftGOT2000 starts monitoring after deleting the data acquired in the built-in memory (SRAM) of the GOT.

To synchronize the built-in memory (SRAM) of the GOT, deselect [Initialize SRAM user area at the time of initial monitoring].

Using the SoftGOT-GOT link function in the system that requires the quick communication response

When the SoftGOT-GOT link function is used in the system that requires the quick communication response, the Ethernet connection is recommended between the GOT and the monitor PLC.

If a PLC connected to a GOT by the direct CPU connection (serial) is monitored by the SoftGOT-GOT link function, the response of GT SoftGOT2000 becomes slow.

When the started GOT has project data protected with a security key

GT SoftGOT2000 cannot read the project data.

To read the project data from the GOT, delete the security key from the project data, and then start the GOT.

For the details of the security key, refer to the following.

📖GT Designer3 (GOT2000) Screen Design Manual

When using the SoftGOT-GOT link function of GT SoftGOT1000

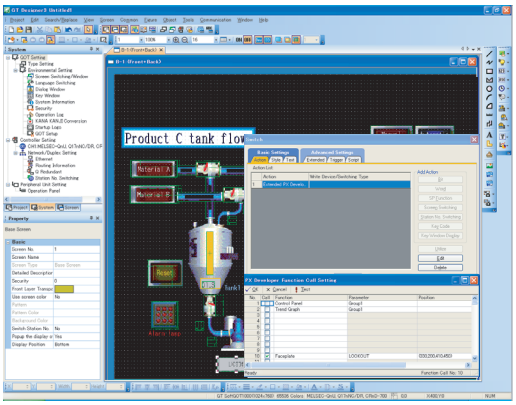
For the precautions and restrictions for using the SoftGOT-GOT link function of GT SoftGOT1000, refer to the following.

📖GT SoftGOT1000 Version3 Operating Manual for GT Works3

4.15 Interaction with PX Developer

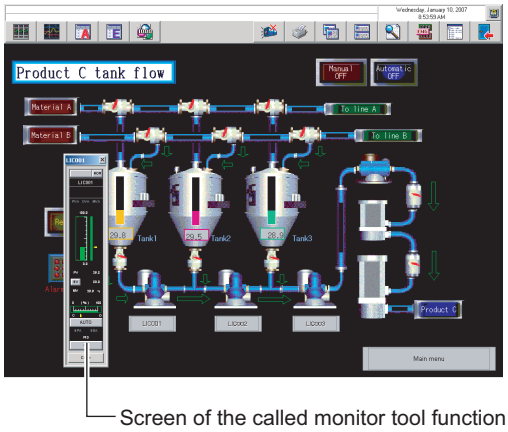
The monitor tool function of PX Developer can be called on GT SoftGOT2000.
In PX Developer, when registering GT SoftGOT2000 as the user graphic screen, the registered GT SoftGOT2000 can be started up.
With interaction between GT SoftGOT2000 and PX Developer, their functions can be shared.
Thus, the interaction improves the operational performance for combining the functions.

<Setting on GT Designer3>



Set the PX Developer function call for a special function switch on GT Designer3.

<Interaction between GT SoftGOT2000 and PX Developer>



Touch the special function switch, and then the monitor tool function for PX Developer set on GT Designer2 is called.

For methods of interaction between GT SoftGOT2000 and PX Developer, refer to the following manual.
📖 PX Developer Version □ Operating Manual (Monitor Tool)
To call monitor tool functions for PX Developer on GT SoftGOT2000, the setting for the special function switch is required.
For details on the setting, refer to the following.
📖 GT Designer3 (GOT2000) Screen Design Manual

Security level change

By changing the mode with the monitor tool of PX Developer, the security level of GT SoftGOT2000 can be changed to the level corresponding to the mode.
For how to change the security level when changing the mode, refer to the following.
📖 PX Developer Version □ Operating Manual (Monitor Tool)
When changing the security level, use PX Developer Version1.31H or later.

Setting method

Before interaction with PX Developer

For interaction with PX Developer, the setting is required respectively for GT SoftGOT2000 and PX Developer.
The following describes the settings required for interaction with PX Developer.

■Settings on GT SoftGOT2000

Set to the online mode at start-up.
☞ Page 56 Starting GT SoftGOT2000 automatically when starting Windows
Do not check the [Display dialog when starting GT SoftGOT2000, specified with the module that has been activated.] of the [Auxiliary Setup] tab on the environment setup dialog.
☞ Page 67 Environment Setup
Do not check [Display dialog when closing GT SoftGOT2000.].
☞ Page 67 Environment Setup
Call project data on GT SoftGOT2000.
☞ Page 103 Opening the Project

Point

Opening project data
Set the PX Developer function call for the current project data opened on the GT SoftGOT2000.
For the following cases, open the project data on GT SoftGOT2000.
When the project data has never been opened on GT SoftGOT2000
When the target project data differs from the last monitored project data

When GT SoftGOT2000 is displayed in the full screen mode for the interaction with PX Developer, set the back screen mode for GT SoftGOT2000, and then monitor tool windows are not behind GT SoftGOT2000.
☞ Page 674 Back Screen Mode

■Settings on PX Developer

For the settings on PX Developer, refer to the following manual.
📖 PX Developer Version □ Operating Manual (Monitor Tool)

PX Developer function call setting

Set to call monitor tool functions on GT SoftGOT2000.

To call monitor tool functions for PX Developer on GT SoftGOT2000, the special function switch to which the [PX Developer function call] is set is required.

Set the special function switch with GT Designer3.

For details on the setting, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

After setting the PX Developer function call in the special function switch with GT Designer3, the settings can be changed on GT SoftGOT2000.

(To change the settings, starting GT Designer3 is not needed.)

The following describes the method for changing the settings on GT SoftGOT2000.

1. Operate any of the followings.

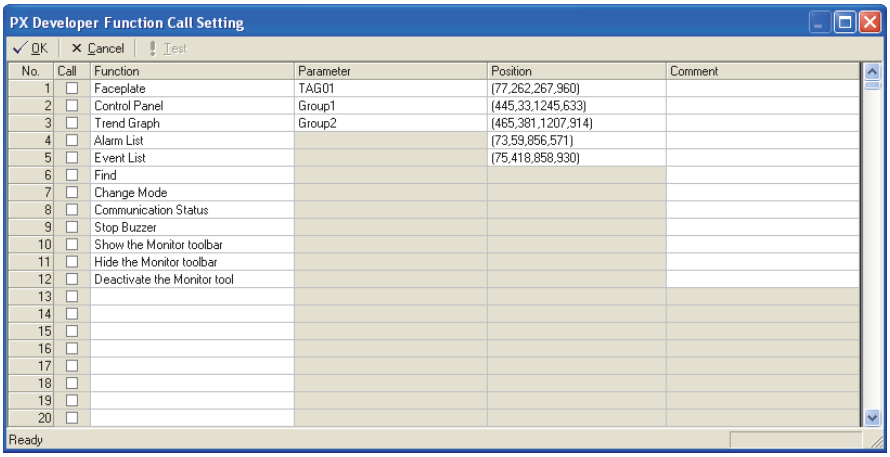
Click [PX Developer Function Call Setting].

Select [Set] → [PX Developer Function Setting] → [PX Developer Function Call Setting] from the menu.

Right-click the mouse and select [Set] → [PX Developer Function Call Setting] from the menu.

2. The dialog appears for the [PX Developer function call setting].

Set the dialog with reference to the following list.



Item		Description
[Toolbar]		The functions of the toolbar are shown.
	[OK]	Press the button to accept the settings and close the dialog.
	[Cancel]	Press the button to cancel the setting and close the dialog.
	[Test]	Call the monitor tool function that is checked in the [Call] column. The name of the function is shown in the [Function] column. The function is used to check a monitor tool function to be called and the position to be displayed when setting with GT Designer3. The display position for the monitor tool is always at the upper left of screen. ([Set to the relative coordinates to GT SoftGOT2000] checked in [Display Position Setting] are disabled.) For restrictions for calling monitor tool functions, refer to the following manual. PX Developer Version □ Operating Manual (Monitor Tool)
[Call]		Assign the functions that is checked in the [Call] column to the special function switch. The setting is available only with GT Designer3.

Item	Description
[Function]	Select monitor tool functions to be called when touching the special function switch. The following indicates the applicable functions. • [Faceplate] • [Control Panel] • [Trend Graph] • [Alarm List] • [Event List] • [Find] • [Change Mode] • [Communication Status] • [Stop Buzzer] • [Show the Monitor toolbar] • [Hide the Monitor toolbar] • [Deactivate the Monitor tool] For details for each function, refer to the following manual. PX Developer Version □ Operating Manual (Monitor Tool)
[Parameter]	Input an argument when calling a monitor tool function. The following indicates the applicable functions and their settings. • Faceplate : Tag name • Control Panel : Group name • Trend Graph : Group name
[Position]	Set the display position of monitor tool windows to be called. Click the [...] button to show the setting dialog for the display position. For the details, refer to the following. Page 659 Setting for display position
[Comment]	Comments can be entered arbitrarily. (Up to 512 characters regardless of whether single-byte or double-byte)
[Status bar]	The function call number, which is checked in the [Call] column, is indicated. Double-click the displayed function call number to show the column checked in [Call]. The setting is available with GT Designer3.

Point

Precautions for changing PX Developer function call setting

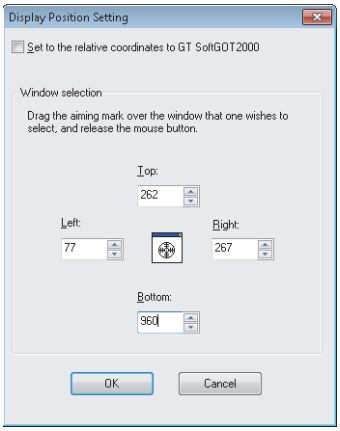
During changing the PX Developer function call setting on GT SoftGOT2000, do not change the PX developer function call setting of the same project data on other GT SoftGOT2000 or GT Designer3.

When the PX Developer function call setting of the same project data is changed on multiple software, the setting saved at the last is enabled.

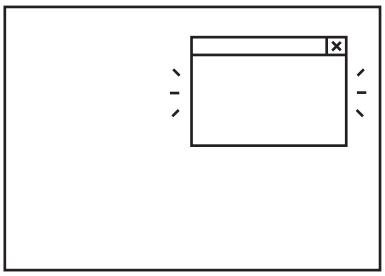
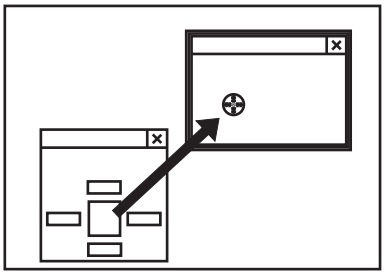
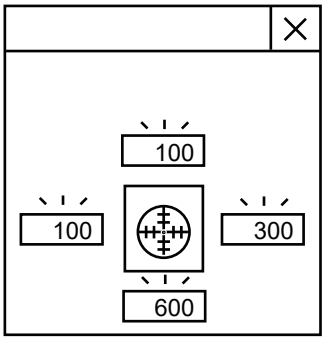
The settings saved before the last one are deleted.

■Setting for display position

In the setting dialog for the display position, the position can be set for displaying monitor tool windows to be called.



Item	Description
[Set to the relative coordinates to GT SoftGOT 2000.]	To display monitor tool windows in the fixed position on the display regardless of whether display is GT SoftGOT2000, do not check the item. If not checked, the coordinates of the display position can be set with their origin at the upper left on the display of a personal computer. Check the item to always display monitor tool windows in the fixed position on GT SoftGOT2000. If checked, the coordinates of the display position can be set with their origin at the upper left on the display of a personal computer.

Item		Description
[Window selection]		Set the display position when calling monitor tool functions. To display monitor tool windows, Set the coordinates in [Top], [Left], [Right] and [Bottom]. The coordinates can be automatically set with the (Aiming mark). The following describes how to use aiming mark. 1) Set a window at the position of a monitor tool window to be displayed. (Any windows, including monitor tool windows, can be positioned.)  2) Drag the aiming mark to the set window. If dragged, the window is surrounded with a black frame. Release the mouse button on the window surrounded with a black flame. 
		3) The coordinates of the set window are input in the setting dialog for the display position.  Do not use (Aiming mark) if [Set to the relative coordinates to GT SoftGOT2000.] is checked. Directly input the coordinates. (Applicable range: -32768 to 32767)
	[Top]	Set X-coordinate on the upper left of the window.
	[Left]	Set Y-coordinate on the upper left of the window.
	[Right]	Set X-coordinate on the upper right of the window.
	[Bottom]	Set Y-coordinate on the upper right of the window.

PX Developer function call sub-setting

1. Operate any of the followings.

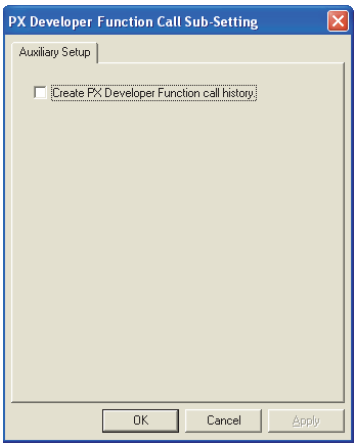
Click [PX Developer Function Call Sub-Setting].

Select [Set] → [PX Developer Function Setting] → [PX Developer Function Call Sub-Setting] from the menu.

Right-click the mouse and select [Set] → [PX Developer Function Call Sub-Setting] from the menu.

2. The dialog appears for the [PX Developer function call sub-setting].

Set the dialog with reference to the following explanation.



Item	Description
[Create PX Developer Function call history.]	Check the item to register the calling status of monitor tool functions as a history. For available information as history, refer to the following. ☞ Page 662 PX Developer function call history

PX Developer function call history

Histories for calling monitor tool functions can be registered.

Available information as history

The following information can be registered as a history.

Success of calling monitor tool functions

Failure of calling monitor tool functions

Referencing history data

The following describes the reference method of the history data.

1. Operate any of the followings.

Click [PX Developer Function Call History].

Select [Set] → [PX Developer Function Setting] → [PX Developer Function Call History] from the menu.

Right-click the mouse and select [Set] → [PX Developer Function Call History] from the menu.

2. The history data appears.

```
2007/01/10 10:56:47 No.1 Function Call No.1 : Failed to call PX Developer Function.
2007/01/10 10:57:39 No.1 Function Call No.1 : PX Developer Function has been called.
2007/01/10 10:57:53 No.1 Function Call No.2 : Failed to call PX Developer Function.
2007/01/10 11:07:56 No.1 Function Call No.2 : PX Developer Function has been called.
2007/01/11 17:10:35 No.1 Function Call No.3 : PX Developer Function has been called.
2007/01/12 13:25:11 No.1 Function Call No.4 : PX Developer Function has been called.
```

Point

History data

When history data is not registered, the PX Developer function call history cannot be referenced.

To reference the history data, check [Create PX Developer Function call history.] in the PX Developer function call sub-setting.

For the PX Developer function call sub-setting, refer to the following.

☞ Page 657 Setting method

The history data is managed for each module as shown below.

The data is not deleted even if GT SoftGOT2000 is exited.

The unnecessary data is required to delete by the user.

Precautions

Manipulation of the setting file for calling the PX Developer function

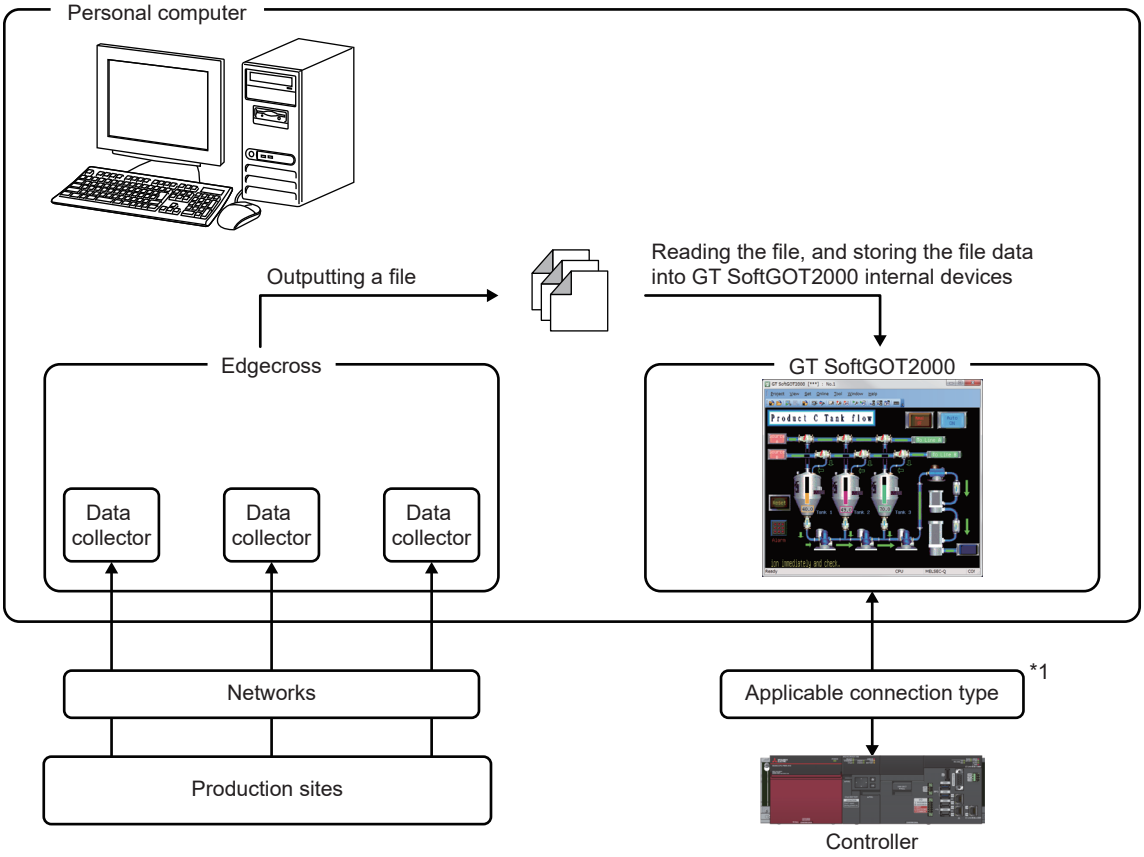
When you save the project for GT SoftGOT2000 in the single file format (*.GTX), a setting file (*.dat) for calling the PX Developer function is created in the same folder.

Do not delete the setting file (*.dat).

If you copy or move the project to another folder, also copy or move the setting file (*.dat) to the folder.

4.16 Edgecross Interaction Function

The Edgecross interaction function enables GT SoftGOT2000 to monitor the data collected by Edgecross.
To use this function, install GT SoftGOT2000 on an Edgecross-installed personal computer or MELIPC.
The data collected by Edgecross is stored into SoftGOT2000 internal devices (SGB and SGD).
You can perform real-time diagnostics or feedback from GT SoftGOT2000 to a controller.
The Edgecross interaction function is supported by Edgecross version 1.00.
The following illustrates a system configuration.



*1 The Edgecross interaction function is usable without physical connection between GT SoftGOT2000 and a controller.

Setup procedure

The following outlines how to configure the Edgecross interaction function.

1. On Real-time Flow Designer, configure the settings of data to be collected.

📖Manual of Edgecross

2. On Real-time Flow Designer, specify the file format in which the collected data will be saved.

📖Manual of Edgecross

3. On GT SoftGOT2000, assign the data items to be collected by Edgecross to GT SoftGOT2000 internal devices.

☞ Page 667 Settings on GT SoftGOT2000

4. Create an Edgecross interaction configuration file.

For the format of the configuration file, refer to the following.

☞ Page 665 Format of an Edgecross interaction configuration file

5. On GT Designer3, create a project.

Specify the SoftGOT2000 internal devices set in step 3 for objects and common settings.

📖GT Designer3 (GOT2000) Screen Design Manual

6. On GT SoftGOT2000, configure the communication settings between GT SoftGOT2000 and a controller.

☞ Page 74 Setting the Communication Method

7. On GT SoftGOT2000, start monitoring using the project created in step 5.

Point

• When using the Edgecross interaction function

If you use the Edgecross interaction function without physical connection between GT SoftGOT2000 and a controller, configure the settings as shown below.

Doing so will allow you to use the Edgecross interaction function without a communication error.

In GT Designer3, set [Manufacturer] to [MODBUS], and set [Controller Type] to [MODBUS Slave(GOT:Master)] in the [Controller Setting] window.

On GT SoftGOT2000, set [Connection] to [Ethernet], and set [Type] to [MODBUS Master(GOT:Slave)] in the [Communication Setup] dialog.

• When shortening the refresh cycle of Edgecross monitoring

Edgecross monitoring is refreshed every time a file is created.

To shorten the refresh cycle, set the following in Real-time Flow Designer.

Minimize the cycle of saving files.

Specify the number of rows of data output to a file to 1.

Specifications of an Edgecross interaction configuration file and SoftGOT2000 internal devices

Supported data types

The following shows the data types handled by Edgecross and their availability on GT SoftGOT2000.

○: Supported, ×: Not supported

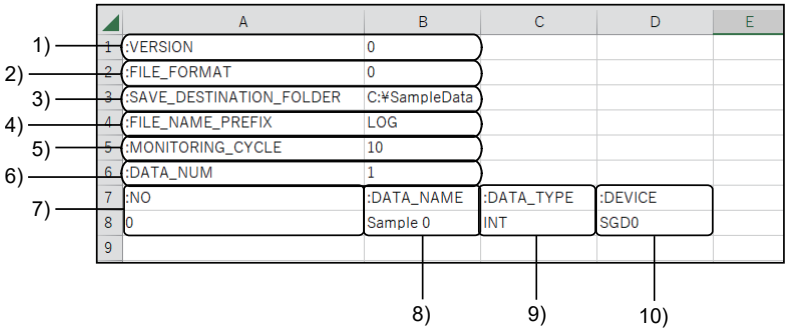
Data type handled by Edgecross	Output format	Use on GT SoftGOT2000
BOOL (Bit)	ON: 1OFF: 0	○
UINT (Word [Unsigned])	Integer	○
	Hexadecimal	×
UDINT (Double word [Unsigned])	Integer	○
	Hexadecimal	×
ULINT	Integer	×
	Hexadecimal	×
INT (Word [Signed])	Integer	○
DINT (Double word [Signed])	Integer	○
LINT	Integer	×
REAL (Single-precision real number)	Decimal (number of digits: n)	○
	Exponent (number of digits: n)	×
LREAL	None	×
STRING	None	×
WSTRING	None	×

Format of an Edgecross interaction configuration file

An Edgecross interaction configuration file must be in Shift-JIS CSV (comma-separated) format.

Configure the settings in the file according to the data collection settings made on Real-time Flow Designer.

The following shows the format of the configuration file.



1):VERSION

Version of the data structure.

Specify 0.

2):FILE_FORMAT

Specify the file format of the real-time data that is set on Real-time Flow Designer.

The following shows the setting range.

0: CSV format (Character code: Shift JIS)

1: CSV format (Character code: UTF-8 with BOM)

3):SAVE_DESTINATION_FOLDER

Specify the storage folder of the real-time data that is specified on Real-time Flow Designer.

4):FILE_NAME_PREFIX

Specify a string to be prefixed to the filename of the real-time data that is set on Real-time Flow Designer.

5):MONITORING_CYCLE
Specify the monitoring interval for the files output from Edgecross.
The setting range is 1 to 100 (× 100 ms).
6):DATA_NUM
Specify the number of data items to be monitored.
The setting range is 1 to 256.
Match the number of data items set for [:DATA_NUM] with the number of data items set for [:NO], [:DATA_NAME] and [:DATA_TYPE].
7):NO
Specify a consecutive number.
The setting range is 0 to 255.
8):DATA_NAME
Specify a data item name that is set on Real-time Flow Designer.
Up to 32 characters can be set.
9):DATA_TYPE
Specify the data type of a SoftGOT2000 internal device to which a data item is assigned.
For the usable data types, refer to the following.
☞ Page 665 Supported data types
10):DEVICE
Specify a SoftGOT2000 internal device to which a data item is assigned.
The following shows the setting ranges.
SGB0 to SGB65535
SGD0 to SGD65535

Specifications of accessing the files output from Edgecross

The data collected by Edgecross is written into SoftGOT2000 internal devices according to the allocation settings made in the [Edgecross Interaction Function Setting] window.
If inconsistency exists between the data collection settings of Real-time Flow Designer and the allocation settings, the relevant data will not be written into the specified SoftGOT2000 internal device.
When consecutive SoftGOT2000 internal devices are required to store data, if any of the devices is out of the device range, the relevant data will not be written into the devices.
In this case, no write error message appears.
Example) If a double-word data item is assigned to SGD65535, the value of the data item will not be written.

SoftGOT2000 internal devices (SGB and SGD)

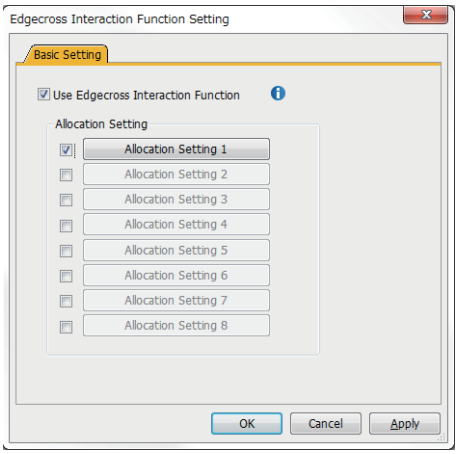
SoftGOT2000 internal device refers to a data storage area used by GT SoftGOT2000.
SoftGOT2000 internal devices are usable for any connection type, but they cannot be controlled by the sequenceprogram of a controller.
When you exit GT SoftGOT2000, these devices are reset to 0.
The SoftGOT2000 internal devices are classified into two types: SoftGOT bit registers and SoftGOT data registers.

Device	Description
SoftGOT bit register (SGB)	Can be used as bit devices. The devices come in useful if they are used in processing that does not need connection by way of a controller, such as the following. • Screen switching device • Work area for the script function • Read value storage area for bar codes.
SoftGOT data register (SGD)	Can be used as word devices. The devices come in useful if they are used in processing that does not need connection by way of a controller, such as the following. • Screen switching device • Work area for the script function • Read value storage area for bar codes.

Settings on GT SoftGOT2000

To use the Edgecross interaction function, configure the following settings.

Select [Set] → [Edgecross Interaction Function Setting] from the menu to display the following window.



Item	Description
[Use Edgecross Interaction Function]	Enables the Edgecross interaction function.
[Allocation Setting]	Select the checkbox for the allocation setting to be used. Click the corresponding allocation setting button to create an Edgecross interaction configuration file. The default application for CSV files will open a new file. In the file, assign Edgecross data items to SoftGOT2000 internal devices. ☞ Page 665 Specifications of an Edgecross interaction configuration file and SoftGOT2000 internal devices An Edgecross interaction configuration file is created for the GT SoftGOT2000 module in use. Example) Path to the Edgecross interaction configuration file when [Allocation Setting 1] is selected on GT SoftGOT2000 module No. 1 (Installation path of the module)\Multi\00001\EdgecrossSet\EdgecrossSet_001.csv You can copy an Edgecross interaction configuration file, and edit the copied file to configure another allocation setting.

Point

Configuring the settings during monitoring

Configure the settings in this window before start monitoring.

The settings cannot be configured during monitoring.

Precautions

Settings in an Edgecross interaction configuration file

■Settings of DATA_TYPE and DEVICE

Ensure consistency in the data collection settings of Real-time Flow Designer and the SoftGOT2000 internal device settings.

If any data type or device type is inconsistent, values may be written into unexpected areas.

■Settings of DATA_NAME

Do not set TIME and INDEX in DATA_NAME.

Doing so disables the correct monitoring.

■Invalid character code

Use Shift-JIS characters for an Edgecross interaction configuration file.

The Edgecross interaction function may not operate properly if any character other than Shift-JIS characters are used.

Specifying the maximum number of files to be saved on Real-time Flow Designer

Specify the maximum number of files to be saved to 2 or more on Real-time Flow Designer.

If 1 is specified, the Edgecross interaction function may not operate properly.

4.17 Full Screen Mode

The full monitor screen of GT SoftGOT2000 can be displayed on the personal computer screen.

When the full screen mode function is not use

When the full screen mode function is not used, the part of the frame is displayed.

When the full screen mode function is used

When the full screen mode function is used, the part of the frame is hidden and the full monitor screen can be displayed on the personal computer.

Operations in full screen mode

Full screen mode hides the menu bar, toolbar and status bar, and so you cannot perform some operations such as exiting GT SoftGOT2000.

The following shows how to operate GT SoftGOT2000 in full screen mode.

Displaying the menu bar and toolbar

Right-click anywhere in the window.

Press and hold anywhere on the screen to display the right-click context menu.

To display the right-click context menu with press-and-hold operation, configure settings in the [Environment Setup] dialog.

☞ Page 73 [Touch Operation Setup] tab

Minimizing the window

Hold down the [Shift] key and double-click anywhere in the window.

Exiting GT SoftGOT2000

Press the [F12] key.

Point

Resolution of the project data

To display a monitor screen in full screen mode, set the same resolution for the personal computer display and the project data.

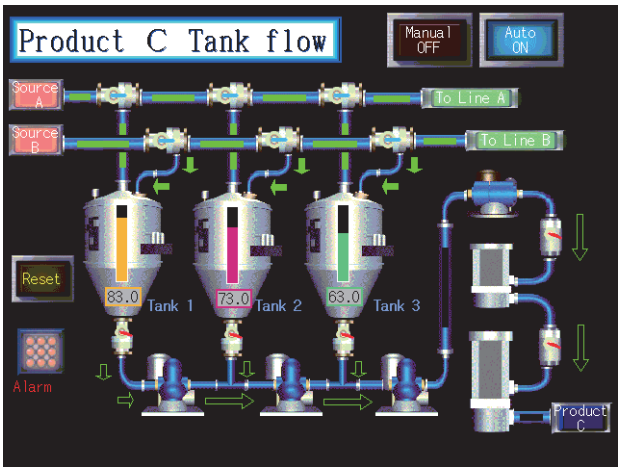
Full screen mode types

There are three full screen modes: full screen 1, full screen 2, and full screen 3.

Full screen 1

Only a monitor screen is displayed fully on the screen.

Use this function with the personal computer or panel computer where a mouse and keyboard are connected.



Full screen 2

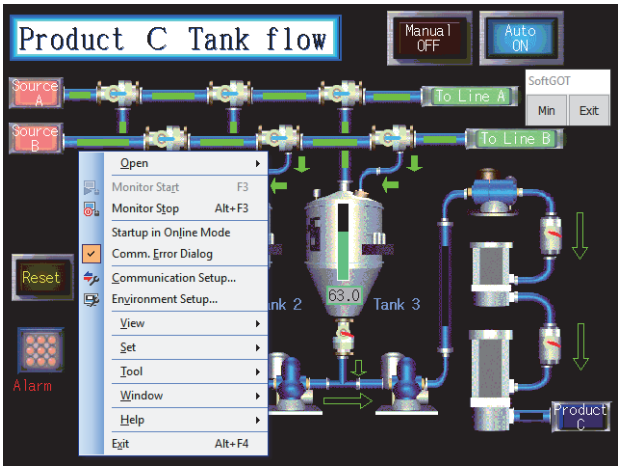
A monitor screen is displayed fully on the screen, and a small dialog is displayed.

The following operations are available in the small dialog.

[Min]: Minimizes the window of GT SoftGOT2000.

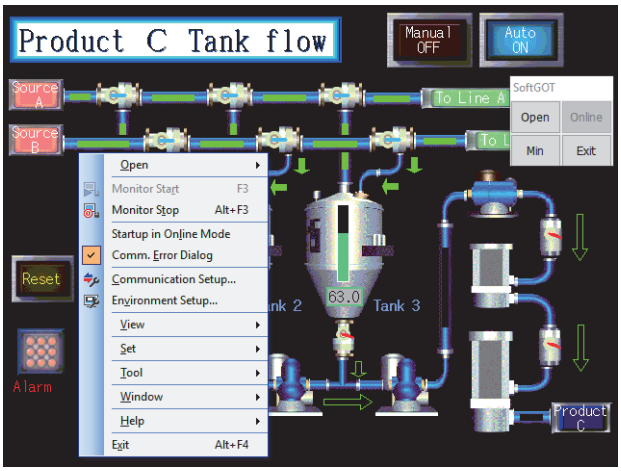
[Exit]: Exits GT SoftGOT2000.

Since GT SoftGOT2000 can be exited on the monitor screen, it can be used for the panel computer where a mouse and keyboard are not connected.



Full screen 3

A monitor screen is displayed fully on the screen, and a small dialog is also displayed.
The following operations are available in the small dialog.
[Open]: Opens a project.
[Online]: Starts monitoring. (Not selectable during monitoring)
[Min]: Minimizes the window of GT SoftGOT2000.
[Exit]: Exits GT SoftGOT2000.
Since GT SoftGOT2000 can be exited on the monitor screen, it can be used for the panel computer where a mouse and keyboard are not connected.



Point

Exiting the full screen mode
Turning ON the GOT internal device (system information area of GT SoftGOT2000: GS500.b0) exit GT SoftGOT2000.
By setting the above device as a touch switch, GT SoftGOT2000 can be exited without using a mouse and keyboard.
For details of the GOT internal device, refer to the following manual
GT Designer3 (GOT2000) Screen Design Manual

Setting method

The full screen mode can be set either before or after starting GT SoftGOT2000.

Setting before starting GT SoftGOT2000

The following shows how to start GT SoftGOT2000 in full screen mode from a shortcut.
In the following procedure, you start GT SoftGOT2000 (Single channel) in full screen 1 as an example.

1. Create a shortcut to GT SoftGOT2000.

For GT SoftGOT2000 (Single channel): SGT2000.exe

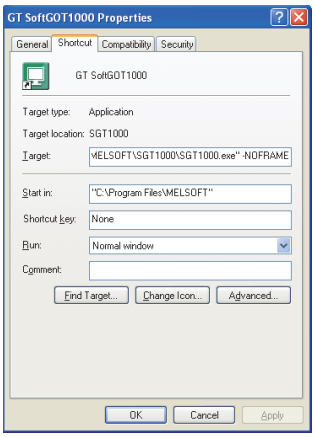
For GT SoftGOT2000 (Multiple channels): SGT2000_MultiCH.exe

2. Right-click the shortcut, and select [Properties].

3. As the GT SoftGOT2000 properties appear, choose the [Shortcut] tab and add the keyword of the mode to be used to [Target].

Keyword	Description
-NOFRAME *1	Displays the screen in full screen 1.
-NOFRAMEDLG *1	Displays the screen in full screen 2.
-NOFRAMEDLGMENU *1	Displays the screen in full screen 3.

*1 A one-byte blank is required to be prefixed to "-".



4. After addition, click the [OK] button.

5. When GT SoftGOT2000 is started next, GT SoftGOT2000 is started in the full screen mode.

6. When you cancel the full screen mode, delete the keyword added to [Target].

Point

When starting the GT SoftGOT2000 with the specified module number in the full-screen mode
The specified module of GT SoftGOT2000 can be started in the full-screen by entering the keyword for both full screen mode and module No. in the [Target] of [GT SoftGOT2000 Properties].
(There are no rules for the order of entering keywords.)
Example) Starting GT SoftGOT2000 (Single channel) module No. 3 in full screen 1

C:\Program Files\MELSOFT\SGT2000\SGT2000.exe -SGT3 -NOFRAME

A one-byte space is necessary in front of keyword

Refer to the following for module keyword.
☞ Page 58 Directly starting the specified GT SoftGOT2000 module

Setting after starting GT SoftGOT2000

1. Select either of the following.

Select [View] → [Full Screen Mode] from the menu.

Right-click the mouse to select [View] → [Full Screen Mode] from the menu.

2. The GT SoftGOT2000 is displayed in full screen 1 mode.

3. To cancel the full screen mode, right-click the mouse to select [View] → [Full Screen Mode] from the menu.

Point

Enabling and disabling full screen mode with GOT internal device

The full screen mode of GT SoftGOT2000 can be switched between enabled and disabled states by turning on and off the GOT internal device (GS500.b1).

ON: GT SoftGOT2000 is displayed in the full screen mode.

OFF: The full screen mode of GT SoftGOT2000 is canceled.

For GOT internal devices, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

Precautions

Small dialog

The small dialog is movable but cannot be closed.

It is always displayed on the front position.

Switching to the standard screen display

When the GT SoftGOT2000 was started with a keyword, the screen cannot be switched to the standard screen display.

([Full Screen Mode] in the menu is displayed in gray.)

Full screen mode setting

The full screen mode setting is valid even when exiting the GT SoftGOT2000 and restarting it.

Display position in full screen mode

When switching to full screen mode under the environment where the resolution of the PC display and GT SoftGOT2000 are different, the GT SoftGOT2000 window is displayed so that the upper-left corner of the window is on the upper-left of the PC display.

When displaying the screen in full screen mode after starting the GT SoftGOT2000

When displaying the screen in full screen mode after starting the GT SoftGOT2000, the screen is displayed in full screen 1.

To display the screen in full screen 2 or 3, set the full screen mode with the procedure shown in Page 668 Full Screen Mode.

When multiple GT SoftGOT2000 modules are started up in the full screen mode

If multiple modules of GT SoftGOT2000 are started up in the full screen mode, only the very front screen is accessible.

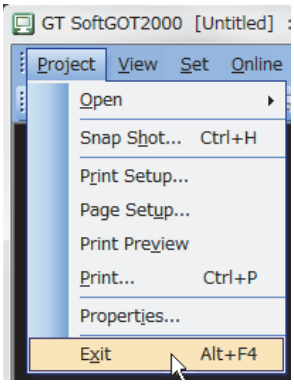
To access other windows, rearrange the windows so that the window of the module to be operated is at the very front.

Refer to the following section for how to move the windows.

Page 677 Moving the Window

4.18 Close Menu

The Close menu at the upper right of the title bar can be disabled (enabled).
The Close menu at the upper right of the title bar is grayed out when it is disabled.
Clicking the Close menu in this status does not terminate GT SoftGOT2000.
The setting selected here remains valid even after GT SoftGOT2000 is terminated and then restarted.
After making this setting, [Exit] provided in the right-click menu and the Project menu is enabled.



Close menu on the title bar

1. Follow the procedure below.

Select [Set] → [Close Menu] from the menu.

Right-click the mouse, and select [Set] → [Close Menu] from the menu.

2. The Close menu at the upper right of the title bar is disabled.

3. To enable back the Close menu at the upper right of the title bar, select [Set] → [Close Menu].

4.19 Back Screen Mode

The monitor screen of GT SoftGOT2000 is always displayed behind all the other screens.
In this mode, other applications can be used while GT SoftGOT2000 is displayed in full-screen.

1. Operate any of the followings.

Select [View] → [Back Screen Mode] from the menu.

Right-click the mouse and select [View] → [Back Screen Mode] from the menu.

2. GT SoftGOT2000 is displayed behind all other screens.

3. To cancel the settings, operate any of the followings.

Select [View] → [Back Screen Mode] from the menu.

(Note that the settings cannot be canceled in the menu bar if displayed in full screen.)

Right-click the mouse and select [View] → [Back Screen Mode] from the menu.

4.20 Enabling or Disabling the Exit Key

Disable (or enable) exiting GT SoftGOT2000 with the [F12] key of the keyboard.

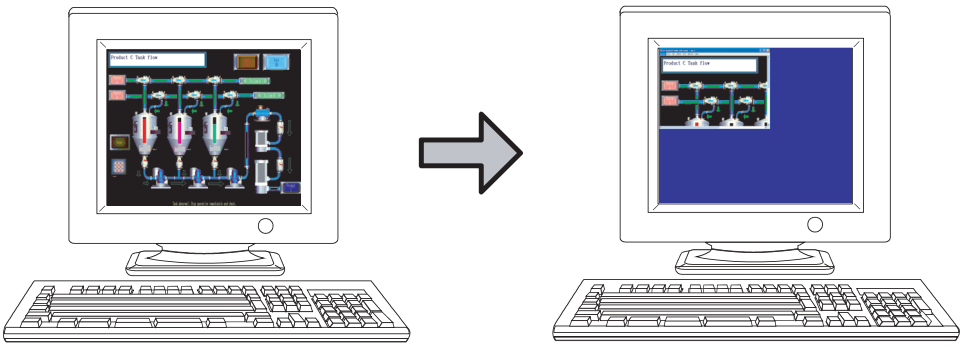
1. Select [Set] → [Exit Key [F12]] from the menu.
2. Exiting GT SoftGOT2000 with the [F12] key is disabled.

To exit GT SoftGOT2000, use other methods such as clicking the relevant menu command.

3. To enable exiting GT SoftGOT2000 with the [F12] key again, select [Set] → [Exit Key [F12]] from the menu.

4.21 Scroll Function

The scroll bars are displayed when GT SoftGOT2000 pane is resized to a smaller size.



1. Operate the following.

Select [View] → [Scroll Bar] from the menu.

2. The scroll bars are displayed when GT SoftGOT2000 pane is resized to a smaller size.

Scroll the monitor screen with the scroll bars, and then the hidden part of the monitor screen is displayed.

The scroll bars cannot be operated with keyboards.

The scroll bars are not displayed with the full screen mode.

3. For hiding the scroll bars, select [View] → [Scroll Bar] from the menu.

4.22 Moving the Window

GT SoftGOT2000 can be moved by operating the mouse.

GT SoftGOT2000 can also be moved when the full screen display function, where the title bar is not displayed, is used.

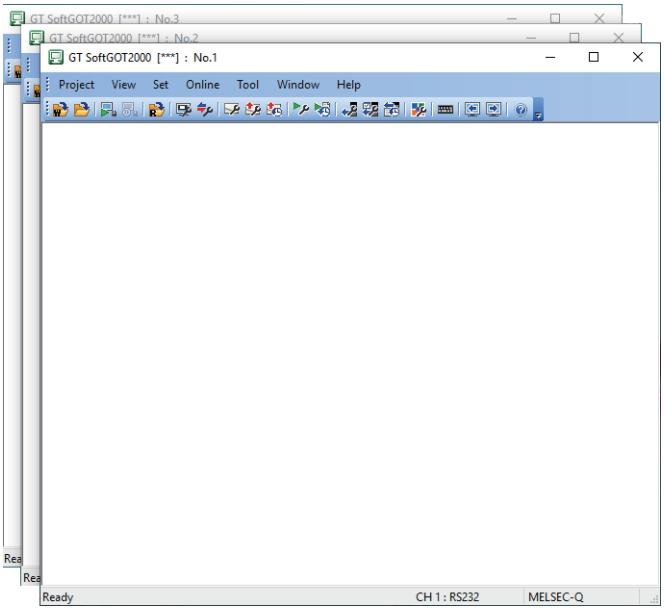
Window movement types and operating procedures

There are the following window movement types.

Cascade

Cascades the windows of the active GT SoftGOT2000.

(These windows may not necessarily be in the order of module numbers, depending on the Windows specifications.)



The following shows the operating procedure.

1. Perform one of the following operations.
- Select [Window] → [Cascade] from the menu.
- Right-click the mouse to select [Window] → [Cascade] from the menu.

2. All the active GT SoftGOT2000 windows are displayed in a stack.

Minimize all windows

Minimizes all the windows of the active GT SoftGOT2000 modules.

The following shows the operating procedure.

1. Perform one of the following operations.
- Select [Window] → [Minimize All Windows] from the menu.
- Right-click the mouse to select [Window] → [Minimize All Windows] from the menu.

2. All the active GT SoftGOT2000 windows are minimized.

Window movement

A window is moved in either of the following methods.

• Movement with mouse

Setting the cursor of the mouse to the Move mode and moving the mouse also moves GT SoftGOT2000 with the motion of the mouse.

Clicking the mouse cancels the Move mode.

• Movement with Move buttons

The UP, DOWN, LEFT or RIGHT button in the [Move window] dialog moves GT SoftGOT2000 on a 10-dot every clicking.

A window can also be moved on a panel computer that cannot use a mouse.

Set the moving method on the [Auxiliary Setup] tab in the [Environment Setup] dialog.

For the setting details, refer to the following.

☞ Page 67 Environment Setup

The following shows the operating procedure.

■Movement with a mouse

1. Perform one of the following operations.

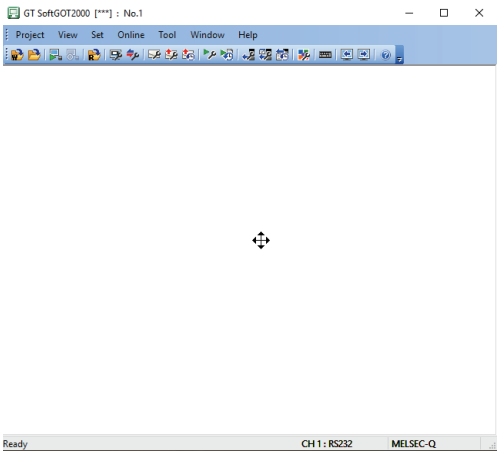
• Select [Window] → [Move Window] from the menu.

• Right-click the mouse to select [Move Window] from the menu.

After the operation, the cursor enters in the movement mode.

2. As the mouse is moved, the window moves at the same time.

Click the mouse at the window move destination to complete the movement.



■Movement with the move buttons

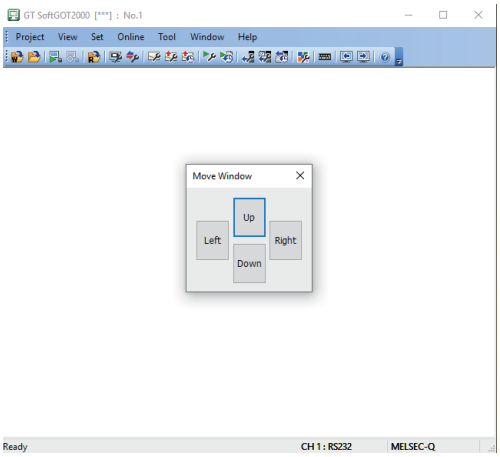
1. Perform one of the following operations.

- Select [Window] → [Move Window] from the menu.
- Right-click the mouse to select [Move Window] from the menu.

After the operation, the [Move Window] dialog appears.

2. Click the UP, DOWN, LEFT or RIGHT button to move the window in units of 10 dots.

Close the [Move Window] dialog with the [×] button to complete the movement.



Movement to the startup display position

Moves the window to the startup display position.

The window startup display position can be set on the [Display Setup] tab in the [Environment Setup] dialog.

For the setting details, refer to the following.

☞ Page 67 Environment Setup

The following shows the operating procedure.

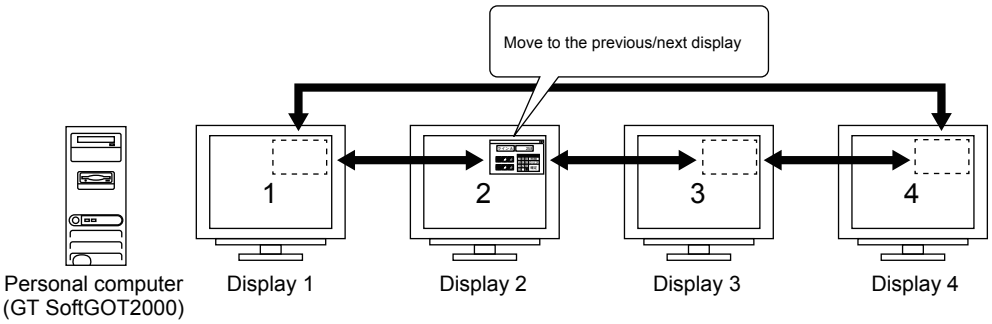
1. Perform one of the following operations.

- Select [Window] → [Move to Start-up Display Position] from the menu.
- Right-click the mouse to select [Window] → [Move to Start-up Display Position] from the menu.

2. The window moves to the startup display position.

Movement to the previous/next display

When multiple displays are used, move the window to the display with the previous or next display No.



The following shows the operating procedure.

■Movement to the previous display

1. Perform one of the following operations.

- Select [Window] → [Move to Previous Display] from the menu.
- Right-click the mouse to select [Window] → [Move to Previous Display] from the menu.

2. The window moves to the previous display.

■Movement to the next display

1. Perform one of the following operations.

- Select [Window] → [Move to Next Display] from the menu.
- Right-click the mouse to select [Window] → [Move to Next Display] from the menu.

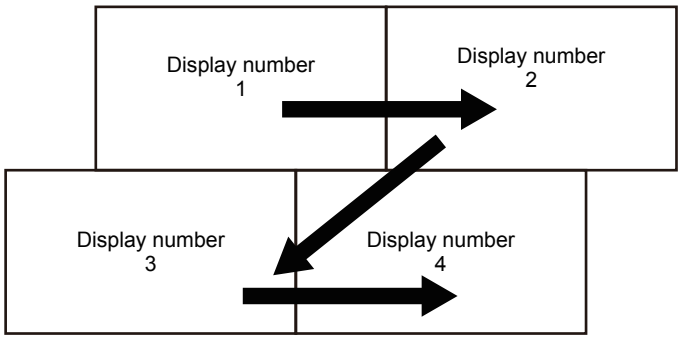
2. The window moves to the next display.

Point

Display number

Display numbers are assigned according to the display arrangement.

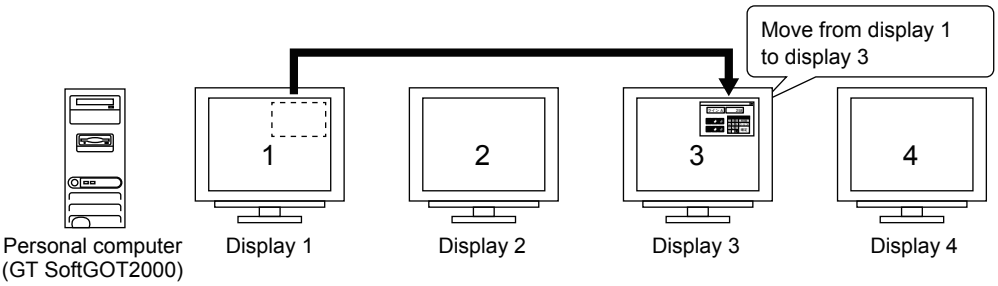
With the top leftmost display as [Display 1], the other displays are numbered in ascending order as shown below.



Up to 8 display numbers can be assigned.

Movement to the specified display

When multiple displays are used, move the window by specifying the display number.



1. Perform one of the following operations.

(□ indicates the display number of the move destination.)

- Select [Window] → Move to Display □ from the menu.
- Right-click the mouse to select [Window] → Move to Display □ from the menu.

2. The window moves to the display with the selected display number.

Precautions

Precautions for using multiple displays

To change the mounting state of the display while GT SoftGOT2000 is running, restart GT SoftGOT2000.
Otherwise, the display numbers assigned in GT SoftGOT2000 do not match those of the actual displays.

4.23 Monitor-only Mode

In the monitor-only mode, you cannot operate the monitor screen with a mouse or keyboard, or via the touchscreen.
It is useful when using GT SoftGOT2000 only for monitoring.
When the monitor-only mode is enabled, and when the mouse cursor is moved on the monitor screen, the mouse cursor is disabled. (The mouse cursor appearance is the same as the appearance set on the personal computer.)
Even if the mouse cursor is disabled, the menu can be displayed by clicking the right mouse button.

After starting GT SoftGOT2000

1. Enable the monitor-only mode by either of the following operations.

Select [Set] → [Monitor-only Mode] from the menu.

Right-click the mouse, and select [Set] → [Monitor-only Mode] from the menu.

2. Start monitoring.

☞ Page 107 Starting Monitoring

Before starting GT SoftGOT2000

The following shows how to start GT SoftGOT2000 in the monitor-only mode from a shortcut.
In the following procedure, you start GT SoftGOT2000 (Single channel) in the monitor-only mode as an example.

1. Create a shortcut to GT SoftGOT2000.

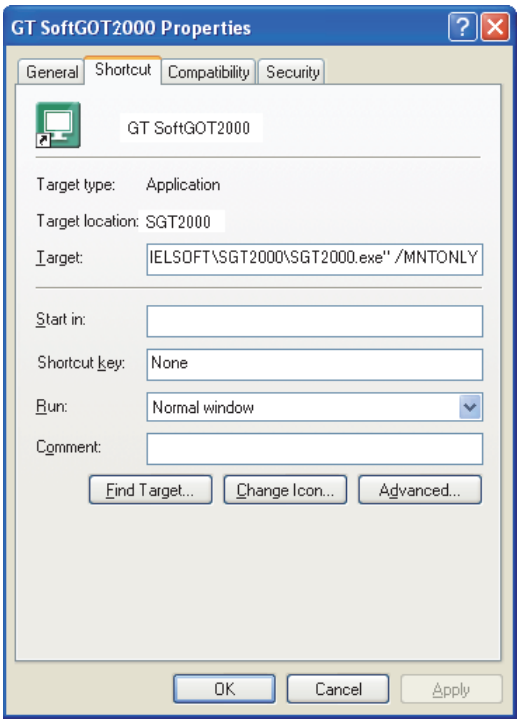
For GT SoftGOT2000 (Single channel): SGT2000.exe

For GT SoftGOT2000 (Multiple channels): SGT2000_MultiCH.exe

2. Right-click the shortcut, and select [Properties].

3. The [GT SoftGOT2000 Properties] dialog appears.

Select the [Shortcut] tab, and then add [/MNTONLY] to the end of the character strings in [Target].
(A one-byte space is required before "/".)



4. After adding [/MNTONLY], click the [OK] button.

5. At the next GT SoftGOT2000 startup, GT SoftGOT2000 starts with the monitor-only mode enabled.

Point

• Precautions for the monitor-only mode

Once monitoring starts, the monitor-only mode cannot be switched between enabled and disabled.

When the monitor-only mode is enabled, the keyboard input function cannot be set.

• Confirmation dialog displayed at monitor startup in the monitor-only mode

The confirmation dialog appears when monitoring starts with the monitor-only mode enabled.

Whether to display the confirmation dialog or not can be set by selecting the following item in the [Environment Setup] dialog.

[Display dialog at the start of monitoring in the monitor-only mode.] in the [Auxiliary Setup] tab

☞ Page 72 [Auxiliary Setup] tab

MEMO

5 APPENDICES

☞ Page 686 Internal Device Interface Function
☞ Page 722 Troubleshooting
☞ Page 734 Applicable Project Data
☞ Page 735 Open Source Software

5.1 Internal Device Interface Function

Internal device interface functions can be used with Microsoft Visual C++, Microsoft Visual C#, Microsoft Visual Basic, Embarcadero C++ Builder, and Microsoft Excel.

A user-created application with the internal device interface function can read data from or write data to GT SoftGOT2000 internal devices.

Development environment

The following shows development environment for an application using the internal device interface function.

Development environment		
Language	**Software**	**Framework**
C++	Microsoft Visual C++ 6.0	.NET Framework2.0
	Microsoft Visual C++ .NET(2002)	
	Microsoft Visual C++ .NET 2003	
	Microsoft Visual C++ 2005	
	Microsoft Visual C++ 2008	
	Microsoft Visual C++ 2010	
	Microsoft Visual C++ 2012	.NET Framework4.0 .NET Framework4.5 .NET Framework4.5.1 .NET Framework4.5.2 .NET Framework4.6
	Microsoft Visual C++ 2013	
	Microsoft Visual C++ 2015	
	Microsoft Visual C++ 2017	.NET Framework4.6
	Microsoft Visual C++ 2019	
	Embarcadero C++ Builder XE	-
C#	Microsoft Visual C# .NET(2002)	.NET Framework2.0
	Microsoft Visual C# .NET 2003	
	Microsoft Visual C# 2005	
	Microsoft Visual C# 2008	
	Microsoft Visual C# 2010	
	Microsoft Visual C# 2012	.NET Framework4.0 .NET Framework4.5 .NET Framework4.5.1 .NET Framework4.5.2 .NET Framework4.6
	Microsoft Visual C# 2013	
	Microsoft Visual C# 2015	
	Microsoft Visual C# 2017	.NET Framework4.6
	Microsoft Visual C# 2019	
BASIC	Microsoft Visual Basic 6.0	.NET Framework2.0
	Microsoft Visual Basic .NET(2002)	
	Microsoft Visual Basic .NET 2003	
	Microsoft Visual Basic 2005	
	Microsoft Visual Basic 2008	
	Microsoft Visual Basic 2010	
	Microsoft Visual Basic 2012	.NET Framework4.0 .NET Framework4.5 .NET Framework4.5.1 .NET Framework4.5.2 .NET Framework4.6
	Microsoft Visual Basic 2013	
	Microsoft Visual Basic 2015	
Microsoft Excel VBA	Microsoft Excel 2007	-
	Microsoft Excel 2010 *1	
	Microsoft Excel 2013 *1	
	Microsoft Excel 2019 *2	

*1 Only available to the 32-bit version.

*2 Only available to the 64-bit version.

Accessible devices

The following devices are accessible: GB, GD, GS, SGB, and SGD.
For the GT SoftGOT2000 internal devices whose data can be read or written with a user-created application, refer to the following.
GT Designer3 (GOT2000) Screen Design Manual

Point

Access to internal devices
Internal devices can be accessed only while GT SoftGOT2000 is running.
Internal devices hold their values while GT SoftGOT2000 is running.
Internal devices can be accessed irrespective of the connection type of GT SoftGOT2000.

Internal device interface function

Internal device interface functions are usable in a user-created program for operating internal devices.
The following describes the internal device interface functions.

Internal device interface function	Description	Reference
unsigned long GDev_OpenMapping()	Opens and maps the shared memory of the GOT internal device.	☞ Page 692 GDev_OpenMapping (Opening and mapping the internal device shared memory)
long GDev_Read()	Reads from the GOT internal device.	☞ Page 694 GDev_Read (Reading data from internal devices)
long GDev_Write()	Writes to the GOT internal device.	☞ Page 698 GDev_Write (Writing data to internal devices)
void GDev_CloseUnMapping()	Unmaps and closes the shared memory of the GOT internal device.	☞ Page 702 GDev_CloseUnMapping (Unmapping and closing the internal device shared memory)
long sgt_GDevOpenMapping()*2	Opens and maps the shared memory of the GOT internal device.	☞ Page 704 sgt_GDevOpenMapping (Opening and mapping the internal device shared memory)
void sgt_GDevCloseUnMapping()*2	Unmaps and closes the shared memory of the GOT internal device.	☞ Page 706 sgt_GDevCloseUnMapping (Unmapping and closing the internal device shared memory)
long sgt_ReadDeviceRandom()*2	Reads data from individual GOT internal devices.	☞ Page 707 sgt_ReadDeviceRandom (Reading data from individual internal devices)
long sgt_WriteDeviceRandom()*2	Writes data to individual GOT internal devices.	☞ Page 709 sgt_WriteDeviceRandom (Writing data to individual internal devices)
long sgt_ReadDeviceBlock() *1	Reads data from consecutive GOT internal devices.	☞ Page 711 sgt_ReadDeviceBlock (Reading data from consecutive internal devices)
long sgt_WriteDeviceBlock() *1	Writes data to consecutive GOT internal devices.	☞ Page 714 sgt_WriteDeviceBlock (Writing data to consecutive internal devices)

*1 Only Microsoft Excel VBA is supported.
*2 The function is usable for the following applications.
- Microsoft Visual C++ 2017
- Microsoft Visual C++ 2019
- Microsoft Visual C# 2017
- Microsoft Visual C# 2019
- Microsoft Excel VBA

The following files are required to use internal device interface functions.

32-bit version

File name	Description
GDevlib_GT27.dll	DLL for the internal device interface
GDevlib_GT27.lib	LIB for the internal device interface
GDevlib_GT27.h	Header file for the internal device interface

64-bit version

The following lists the software applications compatible with the 64-bit OS.

Microsoft Visual C++ 2008
Microsoft Visual C++ 2010
Microsoft Visual C++ 2012
Microsoft Visual C++ 2013
Microsoft Visual C++ 2015
Microsoft Visual C++ 2017
Microsoft Visual C++ 2019
Microsoft Visual C# 2008
Microsoft Visual C# 2010
Microsoft Visual C# 2012
Microsoft Visual C# 2013
Microsoft Visual C# 2015
Microsoft Visual C# 2017
Microsoft Visual C# 2019
Microsoft Visual Basic 2008
Microsoft Visual Basic 2010
Microsoft Visual Basic 2012
Microsoft Visual Basic 2013
Microsoft Visual Basic 2015
Microsoft Excel 2019

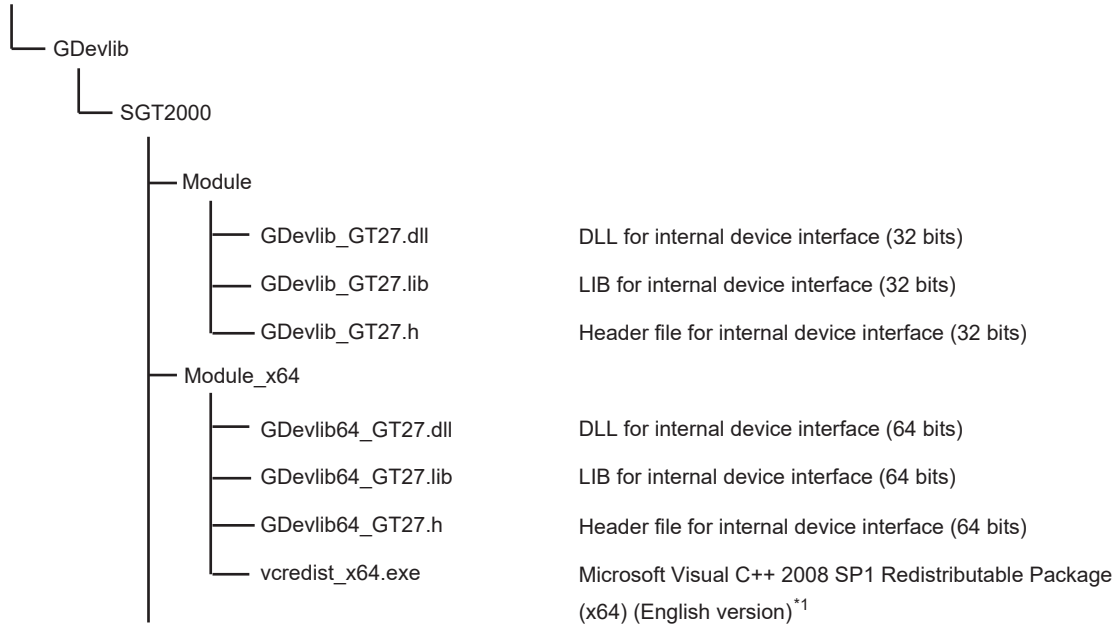
File name	Description
GDevlib64_GT27.dll	DLL for the internal device interface
GDevlib64_GT27.lib	LIB for the internal device interface
GDevlib64_GT27.h	Header file for the internal device interface

The above files are stored in the GT Works3 DVD (Disk4 folder). If GT Works3 is downloaded, the files are stored in a folder into which GT Works3 is unpacked.

To use an application that includes the internal device interface function, store GDevlib_GT27.dll or GDevlib64_GT27.dll in the folder where the application is stored or the folder specified in the application.

The folder storing the above files is shown below.

For the GT Works3 DVD, the files are stored in the Disk4 folder.
For the downloaded GT Works3, the files are stored in a folder into which GT Works3 is unpacked.



*1 To use GDevlib64_GT27.dll, run this EXE file to install relevant modules.

Before using the internal device interface function

Make sure to use the following files in the GT Works3 software package that contains GT SoftGOT2000 to be used.

■32-bit version

GDevlib_GT27.dll
GDevlib_GT27.lib
GDevlib_GT27.h

■64-bit version

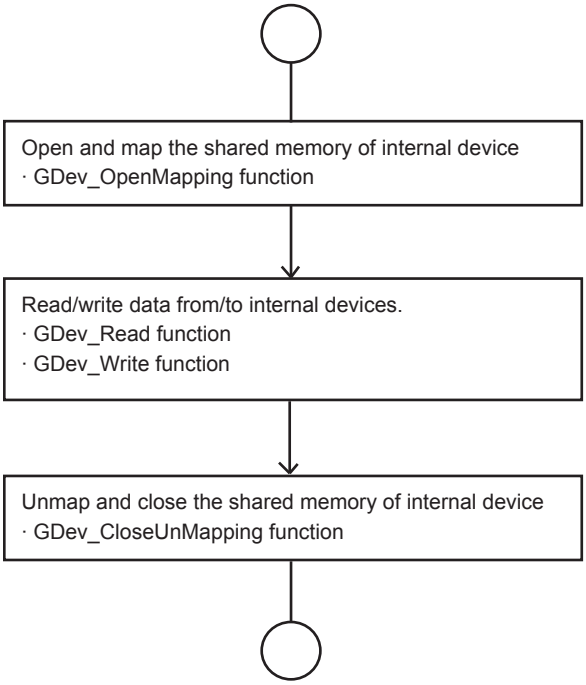
GDevlib64_GT27.dll
GDevlib64_GT27.lib
GDevlib64_GT27.h

If you copy the target files from another GT Works3 software package, an application error may occur.

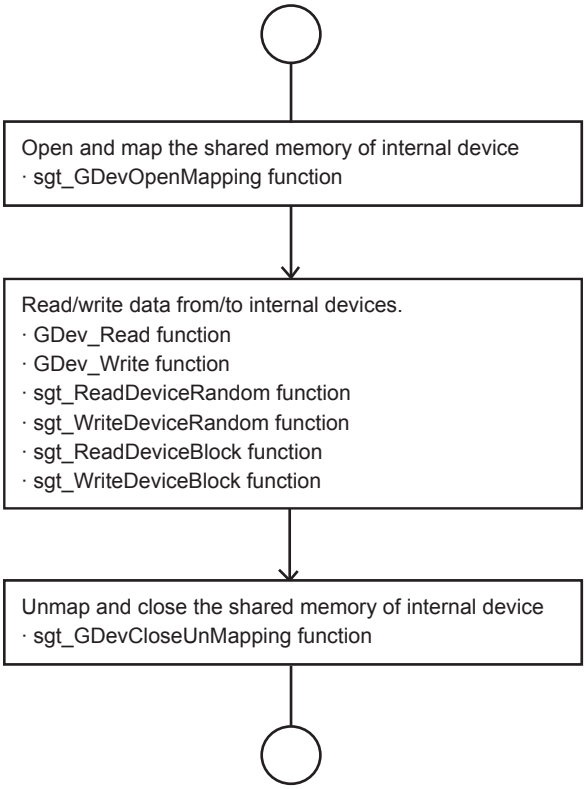
Processing flow when the internal device interface function is used

The following shows the processing flow when the internal device interface function is used in a program.
The following (1) and (2) can be processed simultaneously.

■When using GB, GD, and GS devices



■When using GB, GD, GS, SGB, and SGD devices



Structure

The following shows the details of the structures of the internal device interface functions.

For information on how to specify a structure, refer to sample programs.

☞ Page 718 Sample program

■Structure for storing the shared memory handle and shared memory address

• For 32 bit

```
typedef struct _STMAPINFO{
 HANDLE          hMapFile;       Shared memory handle
 unsigned long   ulMapPointer;   Shared memory address
} STMAPINFO, *LPSTMAPINFO;
```

• For 64 bit

```
typedef struct _STMAPINFO{
 HANDLE          hMapFile;       Shared memory handle
 ULONG_PTR       ulMapPointer;   Shared memory address
} STMAPINFO, *LPSTMAPINFO;
```

■Structure for storing device information

• For 32 bit

```
typedef struct _STDEVINFO{
 long        lDevNameID;     Device name ID
 long        lDevNum;        Device number
 long*       lplDataValue;   Device value
 long        lError;         Error code
} STDEVINFO, *LPSTDEVINFO;
```

• For 64 bit

```
typedef struct _STDEVINFO{
 long          lDevNameID;     Device name ID
 long          lDevNum;        Device number
 LONG_PTR*     lplDataValue;   Device value
 long          lError;         Error code
} STDEVINFO, *LPSTDEVINFO;
```

GDev_OpenMapping (Opening and mapping the internal device shared memory)

The following shows details of the GDev_OpenMapping function.

Function

Opens and maps the shared memory of the GOT internal device.

The target devices are GB, GD, and GS.

Format

■32-bit version

• For Visual C++ and C++ Builder

ulMapPointer = GDev_OpenMapping(*lphMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	unsigned long	Return value (shared memory address)	Output
*lphMapFile	HANDLE	Shared memory handle	Output
sGotNo	short	Module No. of GT SoftGOT2000 (1 to 32767)	Input

• For Visual C#

ulMapPointer = GDev_OpenMapping(*lphMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	uint32	Return value (shared memory address)	Output
*lphMapFile	intPtr	Shared memory handle	Output
sGotNo	int16	Module No. of GT SoftGOT2000 (1 to 32767)	Input

• For Visual Basic and Excel VBA

ulMapPointer = GDev_OpenMapping(hMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	unsigned long	Return value (shared memory address)	Output
hMapFile	HANDLE	Shared memory handle	Output
sGotNo	short	Module No. of GT SoftGOT2000 (1 to 32767)	Input

■64-bit version

• For Visual C++

ulMapPointer = GDev_OpenMapping(*lphMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	ULONG_PTR	Return value (shared memory address)	Output
lphMapFile	HANDLE*	Shared memory handle	Output
sGotNo	short	Module No. of GT SoftGOT2000 (1 to 32767)	Input

• For Visual C#

ulMapPointer = GDev_OpenMapping(*lphMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	UInt64	Return value (shared memory address)	Output
lphMapFile	IntPtr*	Shared memory handle	Output
sGotNo	Int16	Module No. of GT SoftGOT2000 (1 to 32767)	Input

• For Visual Basic

ulMapPointer = GDev_OpenMapping(hMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	UInt64	Return value (shared memory address)	Output
lphMapFile	IntPtr*	Shared memory handle	Output
sGotNo	short	Module No. of GT SoftGOT2000 (1 to 32767)	Input

• For Excel VBA

ulMapPointer = GDev_OpenMapping(*lphMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	LongPtr	Return value (shared memory address)	Output
lphMapFile	LongPtr	Shared memory handle	Output
sGotNo	Integer	Module No. of GT SoftGOT2000 (1 to 32767)	Input

Explanation

The shared memory handle for the internal device of GT SoftGOT2000 that is specified by sGotNo is obtained, and map processing is performed with the handle.

The obtained shared memory handle is stored to lphMapFile or hMapFile, and the obtained shared memory address is stored to ulMapPointer.

Variable

Variable name	Description
lphMapFile	Shared memory handle
sGotNo	Module No. of GT SoftGOT2000 (1 to 32767)

Return value

Normal termination: A number other than "0" (shared memory address) is returned.

Abnormal termination: "0" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the GDev_OpenMapping function

After the GDev_OpenMapping function is called and required processings are performed, the GDev_CloseUnMapping function must always be called.

If it is not called, a memory leak may result and an error such as application error may occur.

GDev_Read (Reading data from internal devices)

The following shows details of the GDev_Read function.

Function

Reads data from GOT internal devices.

The target devices are GB, GD, GS, SGB, and SGD.

Format

■32-bit version

• For Visual C++and C++ Builder

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	long	Device number	Input
*lpsDataTable	short	Device value read	Output
lDataSize	long	Amount of data to be read	Input

• For Visual C#

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	int32	Return value	Output
ulMapPointer	uint32	Shared memory address	Input
sDevNameID	int16	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	int32	Device number	Input
*lpsDataTable	int16	Device value read	Output
lDataSize	int32	Amount of data to be read	Input

• For Visual Basic and Excel VBA

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, sDataTable(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device (settable for Excel VBA only) • 4: SGD device (settable for Excel VBA only)	Input
lDevNum	long	Device number	Input
sDataTable(n)	short	Device value read	Output
lDataSize	long	Amount of data to be read	Input

■64-bit version

• For Visual C++

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	ULONG_PTR	Shared memory address	Input
sDevNameID	short	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	long	Device number	Input
lpsDataTable	INT_PTR*	Device value read *1	Output
lDataSize	long	Amount of data to be read	Input

*1 Specify the short (Int16) type for the device to store a read value. The value is casted to the short (Int16) type when the function is called.

• For Visual C#

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Int32	Return value	Output
ulMapPointer	UInt64	Shared memory address	Input
sDevNameID	Int16	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	Int32	Device number	Input
lpsDataTable	IntPtr*	Device value read *1	Output
lDataSize	Int32	Amount of data to be read	Input

*1 Specify the short (Int16) type for the device to store a read value. The value is casted to the short (Int16) type when the function is called.

• For Visual Basic

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, sDataTable(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Int32	Return value	Output
ulMapPointer	Short	Shared memory address	Input
sDevNameID	Int16	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	Int32	Device number	Input
lpsDataTable	IntPtr*	Device value read *1	Output
lDataSize	Int32	Amount of data to be read	Input

*1 Specify the short (Int16) type for the device to store a read value. The value is casted to the short (Int16) type when the function is called.

• For Excel VBA

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
ulMapPointer	LongPtr	Shared memory address	Input
sDevNameID	Integer	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device	Input
lDevNum	Long	Device number	Input
lpsDataTable	LongPtr	Device value read *1	Output
lDataSize	Long	Amount of data to be read	Input

*1 Specify the short (Int16) type for the device to store a read value. The value is casted to the short (Int16) type when the function is called.

Explanation

This function accesses the shared memory of the specified devices, and reads device values by batch.

The shared memory address, the devices, and the amount of data to be read are specified with ulMapPointer, sDevNameID and lDevNum, and lDataSize.

The read device values are stored to lpsDataTable or sDataTable.

Specify the shared memory address that has been obtained by the GDev_OpenMapping function.

Variable

Variable name	Description
ulMapPointer	• When reading data from GB, GD, or GS devices: Specify the shared memory address obtained by GDev_OpenMapping function. • When reading data from SGB or SGD devices: Specify the shared memory address obtained by the sgt_GDevOpenMapping function.
sDevNameID	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device
lDevNum	Start device number
lpsDataTable	Stores the read device values.
lDataSize	Amount of data to be read ☞ Page 697 Precautions for using the GDev_Read function

Return value

Normal termination: "0" is returned.

Abnormal termination: "-1", "-2", "-3", or "-9" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the GDev_Read function

When you specify the amount of data to be read using lDataSize, make sure that the end device number of the devices from which the data is read falls within the following range.

For bit device (GB/SGB) specification

Start device number + (Amount of data to be read × 16) - 1 ≤ Maximum valid device number

For word device (GD/GS/SGD) specification

Start device number + Amount of data to be read - 1 ≤ Maximum valid device number

For bit devices (GB or SGB), specify the device number in multiples of 16.

Secure the area for lpsDataTable with the same size as lDataSize or more.

If the area is insufficient, an error such as application error may occur.

Device specifying method

For bit device (GB/SGB) specification

Example) Reading 1-word (16-bit) data from the devices starting from GB64

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be read (lDataSize)	Device from which data is read
lpsDataTable[0]	0	64	1	GB64 to GB79

Example) Reading 3-word (48-bit) data from the devices starting from GB80

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be read (lDataSize)	Device from which data is read
lpsDataTable[0]	0	80	3	GB80 to GB95
lpsDataTable[1]				GB96 to GB111
lpsDataTable[2]				GB112 to GB127

For word device (GD/GS/SGD) specification

Example) Reading 3-word data from the devices starting from GD5

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be read (lDataSize)	Device from which data is read
lpsDataTable[0]	1	5	3	GD5
lpsDataTable[1]				GD6
lpsDataTable[2]				GD7

Example) Reading 1-word data from GS500

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be read (lDataSize)	Device from which data is read
lpsDataTable[0]	2	500	1	GS500

GDev_Write (Writing data to internal devices)

The following shows details of the GDev_Write function.

Function

Writes data to GOT internal devices.

The target devices are GB, GD, GS, SGB, and SGD.

Format

■32-bit version

• For Visual C++and C++ Builder

lReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	long	Device number	Input
*lpsDataTable	short	Device value to be written	Input
lDataSize	long	Amount of data to be written	Input

• For Visual C#

lReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	int32	Return value	Output
ulMapPointer	uint32	Shared memory address	Input
sDevNameID	int16	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	int32	Device number	Input
*lpsDataTable	int16	Device value to be written	Input
lDataSize	int32	Amount of data to be written	Input

• For Visual Basic and Excel VBA

lReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, sDataTable(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device (settable for Excel VBA only) • 4: SGD device (settable for Excel VBA only)	Input
lDevNum	long	Device number	Input
sDataTable(n)	short	Device value to be written	Input
lDataSize	long	Amount of data to be written	Input

■64-bit version

• For Visual C++

IReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	ULONG_PTR	Shared memory address	Input
sDevNameID	short	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	long	Device number	Input
lpsDataTable	INT_PTR*	Device value to be written *1	Input
lDataSize	long	Amount of data to be written	Input

*1 Secure the areas in the short (Int16) type, and cast them before calling a function.

• For Visual C#

IReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Int32	Return value	Output
ulMapPointer	UInt64	Shared memory address	Input
sDevNameID	Int16	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	Int32	Device number	Input
lpsDataTable	IntPtr*	Device value to be written *1	Input
lDataSize	Int32	Amount of data to be written	Input

*1 Secure the areas in the short (Int16) type, and cast them before calling a function.

• For Visual Basic

IReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Int32	Return value	Output
ulMapPointer	UInt64	Shared memory address	Input
sDevNameID	Short	Device name ID • 0: GB device • 1: GD device • 2: GS device	Input
lDevNum	Int32	Device number	Input
lpsDataTable	IntPtr*	Device value to be written *1	Input
lDataSize	Int32	Amount of data to be written	Input

*1 Secure the areas in the short (Int16) type, and cast them before calling a function.

• For Excel VBA

IReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
ulMapPointer	LongPtr	Shared memory address	Input
sDevNameID	Integer	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device	Input
lDevNum	Long	Device number	Input
lpsDataTable	IntPtr*	Device value to be written *1	Input
lDataSize	Long	Amount of data to be written	Input

*1 Secure the areas in the short (Int16) type, and cast them before calling a function.

Explanation

This function accesses the shared memory of the specified devices, and writes data to the devices by batch.
The shared memory address, the devices, and the amount of data to be written are specified with ulMapPointer, sDevNameID and lDevNum, and lDataSize.
The device values to be written are stored to lpsDataTable or sDataTable.
Specify the shared memory address that has been obtained by the GDev_OpenMapping function.

Variable

Variable name	Description
ulMapPointer	• When reading the values of the GB, GD, and GS devices: Specify the shared memory address obtained by GDev_OpenMapping function. • When reading the values of the SGB and SGD devices: Specify the shared memory address obtained by sgt_GDevOpenMapping function.
sDevNameID	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device
lDevNum	Start device number
lpsDataTable	Stores the device values to be written. The size of the area reserved for lpsDataTable must be equal to or larger than the data size specified with lDataSize. If the area is insufficient, an error such as application error may occur.
lDataSize	Amount of data to be written ☞ Page 700 Precautions for using the GDev_Write function

Return value

Normal termination: "0" is returned.
Abnormal termination: "-1", "-2", "-3", or "-9" is returned.
For error codes, refer to the following.
☞ Page 733 Error code list when using the internal device interface function

Precautions for using the GDev_Write function

When you specify the amount of data to be written using lDataSize, make sure that the end device number of the devices to which the data is written falls within the following range.
For bit device (GB/SGB) specification
Start device number + (Amount of data to be written × 16) - 1 ≤ Maximum valid device number
For word device (GD/GS/SGD) specification
Start device number + Amount of data to be written - 1 ≤ Maximum valid device number
For bit devices (GB or SGB), specify the device number in multiples of 16.
Secure the area for lpsDataTable with the same size as lDataSize or more.
If the area is insufficient, an error such as application error may occur.

Device specifying method

For bit device (GB/SGB) specification

Example) Writing 1-word (16-bit) data to the devices starting from GB64

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be written (lDataSize)	Device to which data is written
lpsDataTable[0]	0	64	1	GB64 to GB79

Example) Writing 3-word (48-bit) data to the devices starting from GB80

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be written (lDataSize)	Device to which data is written
lpsDataTable[0]	0	80	3	GB80 to GB95
lpsDataTable[1]				GB96 to GB111
lpsDataTable[2]				GB112 to GB127

For word device (GD/GS/SGD) specification

Example) Writing 3-word data to the devices starting from GD5

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be written (lDataSize)	Device to which data is written
lpsDataTable[0]	1	5	3	GD5
lpsDataTable[1]				GD6
lpsDataTable[2]				GD7

Example) Writing 1-word data to GS500

Variable name	Device name ID (sDevNameID)	Start device number (lDevNum)	Amount of data to be written (lDataSize)	Device to which data is written
lpsDataTable[0]	2	500	1	GS500

GDev_CloseUnMapping (Unmapping and closing the internal device shared memory)

The following shows details of the GDev_CloseUnMapping function.

Function

Unmaps and closes the shared memory of the GOT internal device.

The target devices are GB, GD, and GS.

Format

■32-bit version

• For Visual C++ and C++ Builder

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
hMapFile	HANDLE	Shared memory handle	Input
ulMapPointer	unsigned long	Shared memory address	Input

• For Visual C#

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
hMapFile	intPtr	Shared memory handle	Input
ulMapPointer	uint32	Shared memory address	Input

• For Visual Basic and Excel VBA

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
hMapFile	HANDLE	Shared memory handle	Input
ulMapPointer	unsigned long	Shared memory address	Input

■64-bit version

• For Visual C++

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
lphMapFile	HANDLE*	Shared memory handle	Input
ulMapPointer	ULONG_PTR	Shared memory address	Input

• For Visual C#

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
lphMapFile	IntPtr*	Shared memory handle	Input
ulMapPointer	UInt64	Shared memory address	Input

• For Visual Basic

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
lphMapFile	IntPtr*	Shared memory handle	Input
ulMapPointer	UInt64	Shared memory address	Input

• For Excel VBA

GDev_CloseUnMapping(lphMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
lphMapFile	LongPtr	Shared memory handle	Input
ulMapPointer	LongPtr	Shared memory address	Input

Explanation

This function performs unmapping on the shared memory address specified with ulMapPointer, and releases the shared memory handle specified with hMapFile.
Specify the shared memory address and shared memory handle that have been obtained by the GDev_OpenMapping function.

Variable

Variable name	Description
lphMapFile	Shared memory handle obtained by the GDev_OpenMapping function
ulMapPointer	Shared memory address obtained by the GDev_OpenMapping function

Return value

None

Precautions for using the GDev_CloseUnMapping function

After the GDev_OpenMapping function has completed the required processing, make sure to call the GDev_CloseUnMapping function.
Not doing so may result in a memory leak and an application error or other errors.

sgt_GDevOpenMapping (Opening and mapping the internal device shared memory)

The following shows the details of the sgt_GDevOpenMapping function.

Function

Opens and maps the shared memory of the GOT internal device.

The target devices are GB, GD, GS, SGB, and SGD.

Format

■For Visual C++

lReturn = sgt_GDevOpenMapping(*lpstMapInfo, sGotNo)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Output
sGotNo	short	GT SoftGOT2000 module No.	Input

■For Visual C#

lReturn = sgt_GDevOpenMapping(*lpstMapInfo, sGotNo)

Variable name	Variable type	Description	I/O
lReturn	Int32	Return value	Output
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Output
sGotNo	Int16	GT SoftGOT2000 module No.	Input

■For Excel VBA

lReturn = sgt_GDevOpenMapping(lpstMapInfo(0),sGotNo)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
lpstMapInfo(n)	STMAPINFO	Shared memory handle and shared memory address	Output
sGotNo	Integer	GT SoftGOT2000 module No. (1 to 32767)	Input

Explanation

This function obtains the shared memory handle for accessing the internal devices of the GT SoftGOT2000 module specified with sGotNo, and performs mapping on the handle.

The shared memory handle and shared memory address that have been obtained are stored in lpstMapInfo.

Variable

Variable name	Description
lpstMapInfo	Pointer to the structure for storing the shared memory handle and shared memory address ☞ Page 705 How to specify the shared memory handle and shared memory address
sGotNo	Module No. of GT SoftGOT2000 (1 to 32767)

Return value

Normal termination: "1" is returned.

Abnormal termination: "0" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the sgt_GDevOpenMapping function

Reserve a 4-word or more area for lpstMapInfo.

If the area is insufficient, an error such as application error may occur.

After the sgt_GDevOpenMapping function has completed the required processing, make sure to call the sgt_GDevCloseUnMapping function.

Not doing so may result in a memory leak and an application error or other errors.

How to specify the shared memory handle and shared memory address

Example) Specifying a 4-word area with lpstMapInfo

Variable name	Structure member	Description
lpstMapInfo[0]	hMapFile	Shared memory handle for accessing GB/GD/GS devices
	ulMapPointer	Shared memory address for accessing GB/GD/GS devices
lpstMapInfo[1]	hMapFile	Shared memory handle for accessing SGB/SGD devices
	ulMapPointer	Shared memory address for accessing SGB/SGD devices

sgt_GDevCloseUnMapping (Unmapping and closing the internal device shared memory)

The following shows the details of the sgt_GDevCloseUnMapping function.

Function

Unmaps and closes the shared memory of the GOT internal device.
The target devices are GB, GD, GS, SGB, and SGD.

Format

■For Visual C++

sgt_GDevCloseUnMapping(*lpstMapInfo)

Variable name	Variable type	Description	I/O
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Output

■For Visual C#

sgt_GDevCloseUnMapping(*lpstMapInfo)

Variable name	Variable type	Description	I/O
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Output

■For Excel VBA

sgt_GDevCloseUnMapping(lpstMapInfo(0))

Variable name	Variable type	Description	I/O
lpstMapInfo(n)	STMAPINFO	Shared memory handle and shared memory address	Input

Explanation

This function performs unmapping on the shared memory address and releases the shared memory handle, which are specified with lpstMapInfo.

Variable

Variable name	Description
lpstMapInfo	• Pointer to the structure for storing the shared memory handle and shared memory address • Specify the shared memory address and shared memory handle obtained by the sgt_GDevOpenMapping function.

Return value

None

Precautions for using the sgt_GDevCloseUnMapping function

After the sgt_GDevOpenMapping function has completed the required processing, make sure to call the sgt_GDevCloseUnMapping function.
Not doing so may result in a memory leak and an application error or other errors.

sgt_ReadDeviceRandom (Reading data from individual internal devices)

The following shows the details of the sgt_ReadDeviceRandom function.

Function

Reads data from GOT internal devices.

The target devices are GB, GD, GS, SGB, and SGD.

Format

■For Visual C++

lReturn = sgt_ReadDeviceRandom(*lpstMapInfo, *lpstDevInfo, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Input
*lpstDevInfo	STDEVINFO	Device name ID, device number, read device value, and error code	Input/Output
lDataSize	long	Amount of data to be read	Input

■For Visual C#

lReturn = sgt_ReadDeviceRandom(*lpstMapInfo, *lpstDevInfo, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	int32	Return value	Output
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Input
*lpstDevInfo	STDEVINFO	Device name ID, device number, read device value, and error code	Input/Output
lDataSize	int32	Amount of data to be read	Input

■For Excel VBA

lReturn = sgt_ReadDeviceRandom(lpstMapInfo(0),lpstDevInfo(0),lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
lpstMapInfo(n)	STMAPINFO	Shared memory handle and shared memory address	Input
lpstDevInfo(n)	STDEVINFO	Device name ID, device number, read device value, and error code	Input/Output
lDataSize	Long	Amount of data to be read	Input

Explanation

This function accesses the shared memory of the specified devices, and reads the device values.

The shared memory address, the devices, and the amount of data to be read are specified with lpstMapInfo, lpstDevInfo, and lDataSize.

The read device values and error codes are stored in lpstDevInfo.

If any of the lpstDevInfo structure members has an invalid value, an error code is stored into lpstDevInfo.

A value indicating an abnormal termination is returned in the above case.

If all the lpstDevInfo structure members have a valid value, the read device values are stored into lpstDevInfo.

Variable

Variable name	Description
lpstMapInfo	• Pointer to the structure for storing the shared memory handle and shared memory address • Specify the shared memory address and shared memory handle obtained by the sgt_GDevOpenMapping function.
lpstDevInfo	Pointer to the structure for storing device information ☞ Page 708 Device specifying method
lDataSize	Amount of data to be read (1 to 1024) ☞ Page 708 Precautions for using the sgt_ReadDeviceRandom function

Structure member

The variable lpstDevInfo has structure members.

The following shows the structure members.

Structure member	Description
lDevNameID	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device
lDevNum	Device number
lplDataValue	Device value read
lError	Error code • 0: Reading succeeded. • -1: The specified device name ID is invalid. • -4: The specified device number is invalid. • -5: The address of the specified device value is invalid.

For the structures, refer to the following.

☞ Page 691 Structure

Return value

Normal termination: "0" is returned.

Abnormal termination: "-9", "-10", or "-11" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the sgt_ReadDeviceRandom function

For lplDataValue, reserve the area for lDataSize or more.

If the area is insufficient, an error such as application error may occur.

Device specifying method

Example) When GB64, GB80, SGB90, SGB600, GD50, GD5, GS500, SGD60, and an invalid device (invalid device name ID or device number) are specified

The variable lDataSize is set to 10.

The following shows other variables.

When the following arguments are specified, -11 will be returned to lReturn.

Variable name	Device name (lDevNameID)	Device number (lDevNum)	Device value read (lplDataValue)	Error code (lError)	Device from which data is read
	Input	Input	Output	Output	
lpstDevInfo[0]	0	64	1	0	GB64
lpstDevInfo[1]	0	80	0	0	GB80
lpstDevInfo[2]	3	90	0	0	SGB90
lpstDevInfo[3]	6	100	0	-1	-
lpstDevInfo[4]	3	600	1	0	SGB600
lpstDevInfo[5]	1	50	30	0	GD50
lpstDevInfo[6]	1	5	500	0	GD5
lpstDevInfo[7]	2	500	0	0	GS500
lpstDevInfo[8]	4	60	900	0	SGD60
lpstDevInfo[9]	2	6000	0	-4	GS6000

sgt_WriteDeviceRandom (Writing data to individual internal devices)

The following shows the details of the sgt_WriteDeviceRandom function.

Function

Writes data to GOT internal devices.

The target devices are GB, GD, GS, SGB, and SGD.

Format

■For Visual C++

lReturn = sgt_WriteDeviceRandom(*lpstMapInfo, *lpstDevInfo, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Input
*lpstDevInfo	STDEVINFO	Device name ID, device number, device value to be written, and error code	Input/Output
lDataSize	long	Amount of data to be written	Input

■For Visual C#

lReturn = sgt_WriteDeviceRandom(*lpstMapInfo, *lpstDevInfo, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	int32	Return value	Output
*lpstMapInfo	STMAPINFO	Shared memory handle and shared memory address	Input
*lpstDevInfo	STDEVINFO	Device name ID, device number, device value to be written, and error code	Input/Output
lDataSize	int32	Amount of data to be written	Input

■For Excel VBA

lReturn = sgt_WriteDeviceRandom(lpstMapInfo(0), lpstDevInfo(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
lpstMapInfo(n)	STMAPINFO	Shared memory handle and shared memory address	Input
lpstDevInfo(n)	STDEVINFO	Device name ID, device number, device value to be written, and error code	Input/Output
lDataSize	Long	Amount of data to be written	Input

Explanation

This function accesses the shared memory of the specified devices, and writes data to the devices.

The shared memory address, the devices, and the amount of data to be written are specified with lpstMapInfo, lpstDevInfo, and lDataSize.

The error codes are stored in lpstDevInfo.

If any of the lpstDevInfo structure members has an invalid value, an error code is stored into lpstDevInfo.

A value indicating an abnormal termination is returned in the above case.

If all the lpstDevInfo structure members have a valid value, the device values are correctly written to lpstDevInfo.

Variable

Variable name	Description
lpstMapInfo	• Pointer to the structure for storing the shared memory handle and shared memory address • Specify the shared memory address and shared memory handle obtained by the sgt_GDevOpenMapping function.
lpstDevInfo	Pointer to the structure for storing device information ☞ Page 710 Device specifying method
lDataSize	Amount of data to be written (1 to 1024) ☞ Page 710 Precautions for using the sgt_WriteDeviceRandom function

Structure member

The variable lpstDevInfo has structure members.

The following shows the structure members.

Structure member	Description
lDevNameID	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device
lDevNum	Device number
lplDataValue	Device value to be written
lError	Error code • 0: Writing succeeded. • -1: The specified device name ID is incorrect. • -4: The specified device number is incorrect. • -5: The address of the specified device value is incorrect. • -6: The specified device value is incorrect.

For the structures, refer to the following.

☞ Page 691 Structure

Return value

Normal termination: "0" is returned.

Abnormal termination: "-9", "-10", or "-11" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the sgt_WriteDeviceRandom function

For lplDataValue, reserve the area for lDataSize or more.

If the area is insufficient, an error such as application error may occur.

Device specifying method

Example) When GB64, GB80, SGB90, SGB600, GD50, GD5, GS500, SGD60, and an invalid device (invalid device name ID or device number) are specified

The variable lDataSize is set to 10.

The following shows other variables.

When the following arguments are specified, -11 will be returned to lReturn.

Variable name	Device name (lDevNameID)	Device number (lDevNum)	Device value to be written (lplDataValue)	Error code (lError)	Device to which data is written
	Input	Input	Input	Output	
lpstDevInfo[0]	0	64	1	0	GB64
lpstDevInfo[1]	0	80	0	0	GB80
lpstDevInfo[2]	3	90	0	0	SGB90
lpstDevInfo[3]	6	100	0	-1	-
lpstDevInfo[4]	3	600	1	0	SGB600
lpstDevInfo[5]	1	50	30	0	GD50
lpstDevInfo[6]	1	5	500	0	GD5
lpstDevInfo[7]	2	500	0	0	GS500
lpstDevInfo[8]	4	60	900	0	SGD60
lpstDevInfo[9]	2	6000	0	-4	GS6000

sgt_ReadDeviceBlock (Reading data from consecutive internal devices)

The following shows the details of the sgt_ReadDeviceBlock function.

Function

Reads data from GOT internal devices.

The target devices are GB, GD, GS, SGB, and SGD.

Format

The following shows the formats for Excel VBA.

lReturn = sgt_ReadDeviceBlock(lpstMapInfo(0), lpstDevInfo(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
lpstMapInfo(n)	STMAPINFO	Shared memory handle and shared memory address	Input
lpstDevInfo(n)	STDEVINFO	Device name ID, device number, read device value, and error code	Input/Output
lDataSize	Long	Number of read data points	Input

Explanation

This function accesses the shared memory of the specified devices, and reads the device values.

The shared memory address, the devices, and the amount of data to be read are specified with lpstMapInfo, lpstDevInfo, and lDataSize.

The read device values and error codes are stored in lpstDevInfo.

If any of the lpstDevInfo structure members has an invalid value, an error code is stored into lpstDevInfo.

A value indicating an abnormal termination is returned in the above case.

If the specified lpstDevInfo structure member is normal, the read device values are stored in lpstDevInfo.

Variable

Variable name	Description
lpstMapInfo	• Pointer of structure for storing the shared memory handle and shared memory address • Specify the shared memory address and shared memory handle that have been obtained by the sgt_GDevOpenMapping function.
lpstDevInfo	Pointer of the structure for storing device information ☞ Page 713 Device specifying method
lDataSize	Amount of data to be read ☞ Page 712 Precautions for using the sgt_ReadDeviceBlock function

Structure member

The variable lpstDevInfo has structure members.

The following shows the structure members.

Structure member	Description
lDevNameID	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device
lDevNum	Start device number
lplDataValue	Stores the read device values.
lError	Error code • 0: Reading succeeded. • -1: The specified device name ID is incorrect. • -2: The specified start device is outside the range. • -3: The specified end device is outside the range. • -5: The address of the specified device value is incorrect.

For the structures, refer to the following.

☞ Page 691 Structure

Return value

Normal termination: "0" is returned.

Abnormal termination: "-9", "-10", or "-11" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the sgt_ReadDeviceBlock function

When you specify the amount of data to be read using lDataSize, make sure that the end device number of the devices from which the data is read falls within the following range.

For bit device (GB/SGB) specification

Start device number + (Amount of data to be read × 16) - 1 ≤ Maximum valid device number

For word device (GD/GS/SGD) specification

Start device number + Amount of data to be read - 1 ≤ Maximum valid device number

For bit devices (GB or SGB), specify the device number in multiples of 16.

For lplDataTable, reserve the area for lDataSize or more.

If the area is insufficient, an error such as application error may occur.

Device specifying method

For bit device (GB/SGB) specification

Example) Reading 1-word (16-bit) data from the devices starting from GB64

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be read (IDataSize)	Device from which data is read
lplDataValue[0]	0	64	1	GB64 to GB79

Example) Reading 3-word (48-bit) data from the devices starting from GB80

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be read (IDataSize)	Device from which data is read
lplDataValue[0]	0	80	3	GB80 to GB95
lplDataValue[1]				GB96 to GB111
lplDataValue[2]				GB112 to GB127

For word device (GD/GS/SGD) specification

Example) Reading 1-word data from GS500

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be read (IDataSize)	Device from which data is read
lplDataValue[0]	2	500	1	GS500

Example) Reading 3-word data from the devices starting from GD5

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be read (IDataSize)	Device from which data is read
lplDataValue[0]	1	5	3	GD5
lplDataValue[1]				GD6
lplDataValue[2]				GD7

sgt_WriteDeviceBlock (Writing data to consecutive internal devices)

The following shows the details of the sgt_WriteDeviceBlock function.

Function

Writes data to GOT internal devices.

The target devices are GB, GD, GS, SGB, and SGD.

Format

The following shows the formats for Excel VBA.

lReturn = sgt_WriteDeviceBlock(lpstMapInfo(0), lpstDevInfo(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	Long	Return value	Output
lpstMapInfo(n)	STMAPINFO	Shared memory handle and shared memory address	Input
lpstDevInfo(n)	STDEVINFO	Device name ID, device number, device value to be written, and error code	Input/Output
lDataSize	Long	Amount of data to be written	Input

Explanation

This function accesses the shared memory of the specified devices, and writes data to the devices.

The shared memory address, the devices, and the amount of data to be written are specified with lpstMapInfo, lpstDevInfo, and lDataSize.

The error codes are stored in lpstDevInfo.

If any of the lpstDevInfo structure members has an invalid value, an error code is stored into lpstDevInfo.

A value indicating an abnormal termination is returned in the above case.

If the specified lpstDevInfo structure member is normal, the device values to be written are written to lpstDevInfo correctly.

Variable

Variable name	Description
lpstMapInfo	• Pointer to the structure for storing the shared memory handle and shared memory address • Specify the shared memory address and shared memory handle obtained by the sgt_GDevOpenMapping function.
lpstDevInfo	Pointer to the structure for storing device information ☞ Page 716 Device specifying method
lDataSize	Amount of data to be written ☞ Page 715 Precautions for using the sgt_WriteDeviceBlock function

Structure member

The variable lpstDevInfo has structure members.

The following shows the structure members.

Structure member	Description
lDevNameID	Device name ID • 0: GB device • 1: GD device • 2: GS device • 3: SGB device • 4: SGD device
lDevNum	Start device number
lplDataValue	Stores the device values to be written.
lError	Error code • 0: Writing succeeded. • -1: The specified device name ID is incorrect. • -2: The specified start device is outside the range. • -3: The specified end device is outside the range. • -5: The address of the specified device value is incorrect. • -6: The specified device value is incorrect.

For the structures, refer to the following.

☞ Page 691 Structure

Return value

Normal termination: "0" is returned.

Abnormal termination: "-9", "-10", or "-11" is returned.

For error codes, refer to the following.

☞ Page 733 Error code list when using the internal device interface function

Precautions for using the sgt_WriteDeviceBlock function

When you specify the amount of data to be written using lDataSize, make sure that the end device number of the devices to which the data is written falls within the following range.

For bit device (GB/SGB) specification

Start device number + (Amount of data to be written × 16) - 1 ≤ Maximum valid device number

For word device (GD/GS/SGD) specification

Start device number + Amount of data to be written - 1 ≤ Maximum valid device number

For bit devices (GB or SGB), specify the device number in multiples of 16.

For lplDataTable, reserve the area for lDataSize or more.

If the area is insufficient, an error such as application error may occur.

Device specifying method

For bit device (GB/SGB) specification

Example) Writing 1-word (16-bit) data to the devices starting from GB64

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be written (IDataSize)	Device to which data is written
lplDataValue[0]	0	64	1	GB64 to GB79

Example) Writing 3-word (48-bit) data to the devices starting from GB80

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be written (IDataSize)	Device to which data is written
lplDataValue[0]	0	80	3	GB80 to GB95
lplDataValue[1]				GB96 to GB111
lplDataValue[2]				GB112 to GB127

For word device (GD/GS/SGD) specification

Example) Writing 1-word data to GS500

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be written (IDataSize)	Device to which data is written
lplDataValue[0]	2	500	1	GS500

Example) Writing 3-word data to the devices starting from GD5

Variable name	Device name ID (IDevNameID)	Start device number (IDevNum)	Amount of data to be written (IDataSize)	Device to which data is written
lplDataValue[0]	1	5	3	GD5
lplDataValue[1]				GD6
lplDataValue[2]				GD7

Precautions for the internal device interface function

The following shows precautions for using an application that uses the internal device interface function.

When using GB, GD, and GS devices

■When the GDev_OpenMapping function is called

The GDev_OpenMapping function must be called after GT SoftGOT2000 is started.

■When the GDev_Read function or the GDev_Write function is called

The following functions must be called during GT SoftGOT2000 startup.

■When exiting GT SoftGOT2000

If the sgt_GDevOpenMapping function is being executed, make sure to call the sgt_GDevCloseUnMapping function before exiting GT SoftGOT2000.

Not doing so may cause GT SoftGOT2000 to operate abnormally when you start it again.

In such a case, call the sgt_GDevCloseUnMapping function and then exit GT SoftGOT2000.

When using GB, GD, GS, SGB, and SGD devices

■When the sgt_GDevOpenMapping function is called

The sgt_GDevOpenMapping function must be called after GT SoftGOT2000 is started.

■When other functions are called

The following functions must be called while GT SoftGOT2000 is running.

GDev_Read function

GDev_Write function

sgt_ReadDeviceRandom function

sgt_WriteDeviceRandom function

sgt_ReadDeviceBlock function

sgt_WriteDeviceBlock function

■When exiting GT SoftGOT2000

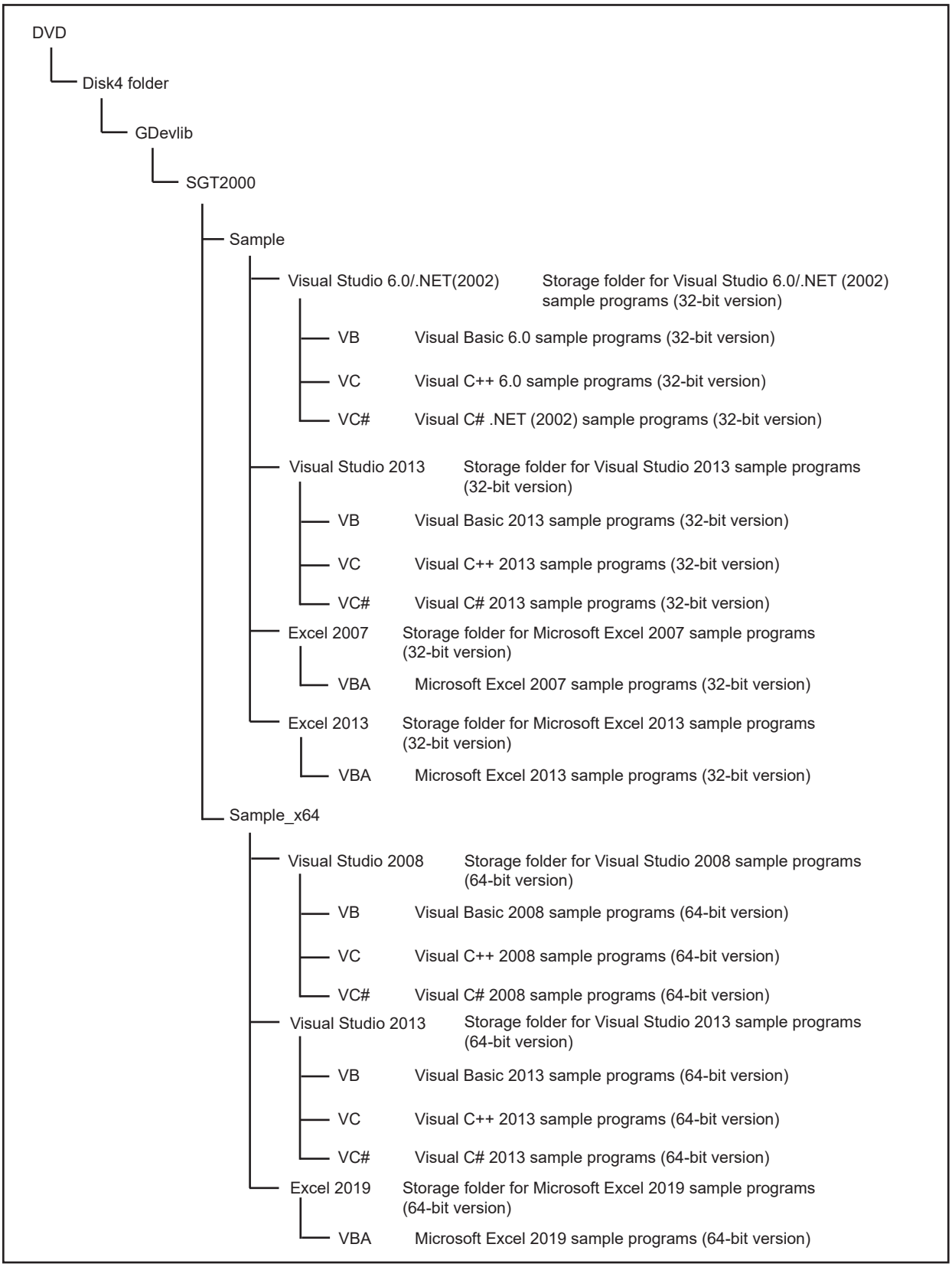
If GT SoftGOT2000 has been exited with the sgt_GDevOpenMapping function called, the sgt_GDevCloseUnMapping function must be called immediately.

If GT SoftGOT2000 is started again without calling the sgt_GDevCloseUnMapping function, after GT SoftGOT2000 is exited, GT SoftGOT2000 may not operate normally.

If GT SoftGOT2000 does not operate normally, the sgt_GDevCloseUnMapping function should be called before GT SoftGOT2000 is exited.

Sample program

A sample program using the internal device interface function is stored in the DVD (Disk4 folder) of GT Works3.
Use the sample program as a reference when creating an application using the internal device interface function.
The following shows folders storing the sample programs.



Point

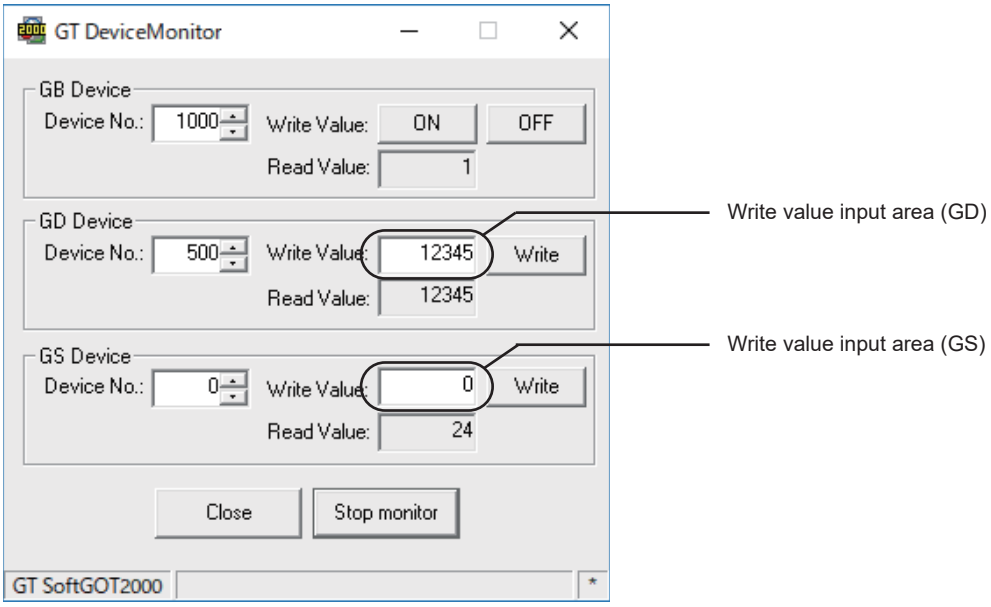
Sample program

When using a sample program, store GDevlib_GT27.dll or GDevlib64_GT27.dll in the folder where the application and xmls files are stored.

Visual Studio 6.0/.NET(2002), Visual Studio 2013, or Microsoft Excel 2007

The following sample program reads/writes data from/to the internal devices (GB, GD, and GS) of GT SoftGOT2000 module No. 1.

Example) Sample program for Visual C++



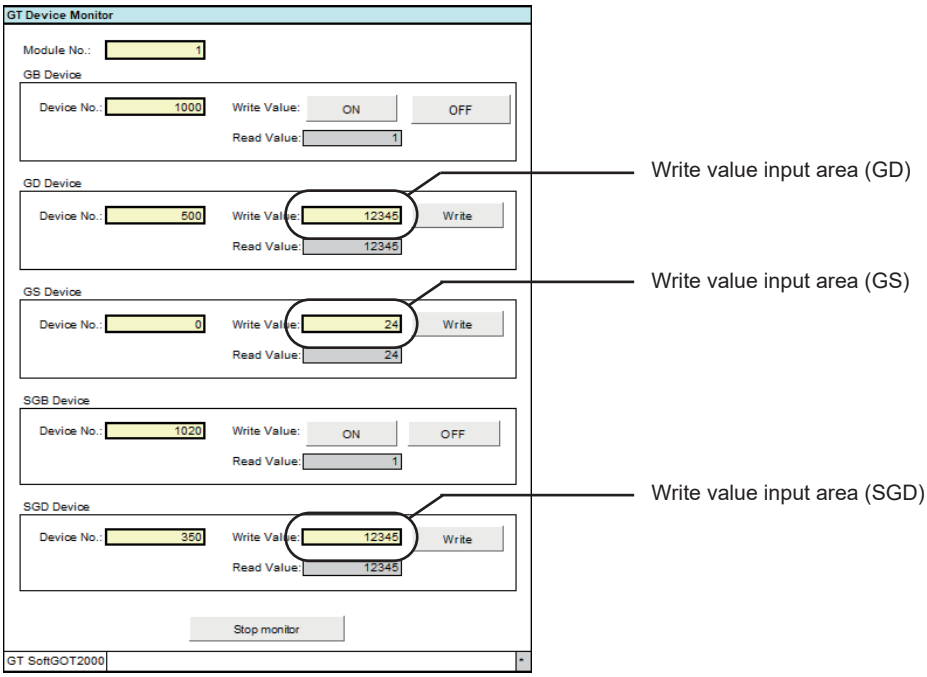
Monitor execution status

Setting item			Description
[GB Device]			GB device monitor area
	[Device No.]		Specify a device number (GB0 to GB65535).
	[Write Value]	[ON]	Turns on the device specified with [Device No.].
		[OFF]	Turns off the device specified with [Device No.].
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Bit device status • [1]: ON • [0]: OFF
[GD Device]			GD device monitor area
	[Device No.]		Specify a device number (GD0 to GD65535).
	[Write Value]	Write value input area (GD)	Specify a value to be written to the device specified with [Device No.]. Input format: Signed decimal number (-32768 to 32767)
		[Write]	Writes the specified value to the specified device.
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Display format: Signed decimal number (-32768 to 32767) The value is read from the internal device specified with [Device No.].
[GS Device]			GS device monitor area
	[Device No.]		Specify a device number (GS0 to GS2047).
	[Write Value]	Write value input area (GS)	Specify a value to be written to the device specified with [Device No.]. Input format: Signed decimal number (-32768 to 32767)
		[Write]	Writes the specified value to the specified device.
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Display format: Signed decimal number (-32768 to 32767) The value is read from the internal device specified with [Device No.].

Setting item	Description
[Start monitor]	Starts monitoring.
[Start monitor]	Stops monitoring.

Microsoft Excel 2013, Microsoft Excel 2019

The following sample program reads or writes data from or to the internal devices (GB, GD, GS, SGB, and SGD) of the specified GT SoftGOT2000 module.



Monitor execution status

Setting item			Description
[Module No.]			Specify a GT SoftGOT2000 module number (1 to 32767) to read data from the internal devices of the module.
[GB Device]			GB device monitor area
	[Device No.]		Specify a device number (GB0 to GB65535).
	[Write Value]	[ON]	Turns on the device specified with [Device No.].
		[OFF]	Turns off the device specified with [Device No.].
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Bit device status • [1]: ON • [0]: OFF
[GD Device]			GD device monitor area
	[Device No.]		Specify a device number (GD0 to GD65535).
	[Write Value]	Write value input area (GD)	Specify a value to be written to the device specified with [Device No.]. Input format: Signed decimal number (-32768 to 32767)
		[Write]	Writes the specified value to the specified device.
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Display format: Signed decimal number (-32768 to 32767) The value is read from the internal device specified with [Device No.].
[GS Device]			GS device monitor area

Setting item			Description
	[Device No.]		Specify a device number (GS0 to GS2047).
	[Write Value]	Write value input area (GS)	Specify a value to be written to the device specified with [Device No.]. Input format: Signed decimal number (-32768 to 32767)
		[Write]	Writes the specified value to the specified device.
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Display format: Signed decimal number (-32768 to 32767) The value is read from the internal device specified with [Device No.].
[SGB Device]			SGB device monitor area
	[Device No.]		Specify a device number (SGB0 to SGB65535).
	[Write Value]	[ON]	Turns on the device specified with [Device No.].
		[OFF]	Turns off the device specified with [Device No.].
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Bit device status • [1]: ON • [0]: OFF
[SGD Device]			SGD device monitor area
	[Device No.]		Specify a device number (SGD0 to SGD65535).
	[Write Value]	Write value input area (SGD)	Specify a value to be written to the device specified with [Device No.]. Input format: Signed decimal number (-32768 to 32767)
		[Write]	Writes the specified value to the specified device.
	[Read Value]		Displays the value read from the specified device. The value is updated only while monitoring is performed. Display format: Signed decimal number (-32768 to 32767) The value is read from the internal device specified with [Device No.].
[Start monitor]			Starts monitoring.
[Start monitor]			Stops monitoring.

5.2 Troubleshooting

Error message

The following table indicates the error messages occurred in [GT SoftGOT2000] themselves, the Descriptions and resolutions.

Error message	Error code	Definition and cause	Corrective action
Adobe Reader is not installed properly. Install Adobe Reader included with the product.	-	• Adobe Reader is not installed. • Adobe Reader is not installed correctly.	• Install Adobe Reader. • After uninstalling Adobe Reader, reinstall it.
Easysocket is not installed.	-	Perhaps GT SoftGOT2000 is not installed correctly.	After uninstalling GT SoftGOT2000, reinstall it.
GS###.b##: The .exe file is invalid (not .exe or error in .exe image).	-	• Access to the specified file (application) was not made. • The specified file (application) is corrupted. • The specified file (application) is not an executable file.	• Check the settings of the application start-up setting. • Check the access right of the specified file (application). • Specify an operable file (application). • Specify an executable file (application).
GS###.b##: Failed to start the application. <ErrCode:##>	-	• The specified file (application) is corrupted. • Relevant applications are not installed properly. • There is not sufficient space left in memory/hard disk. • GT SoftGOT2000 was terminated illegally last time.	• Check the settings of the application start-up setting. • Specify an operable file (application). • Install relevant applications again. • Terminate unnecessary applications. • Increase free space in the hard disk. • Restart GT SoftGOT2000. • Restart the personal computer.
GS###.b##: The operating system denied access to the specified file.	-	• Access to the specified file (application) was not made. • The specified file (application) is corrupted. • Relevant applications are not installed properly.	• Check the settings of the application start-up setting. • Check the access right of the specified file (application). • Specify an operable file (application). • Install relevant applications again.
GS###.b##: The specified file was not found.	-	The specified file (application) does not exist.	• Check the settings of the application start-up setting. • Specify an existing file (application). • Install relevant applications again.
GS###.b##: The specified path was not found.	-		
GS###.b##: There was not enough memory to complete the operation.	-	• There is not sufficient space left in memory/hard disk. • GT SoftGOT2000 was terminated illegally last time.	• Terminate unnecessary applications. • Increase free space in the hard disk. • Restart GT SoftGOT2000. • Restart the personal computer.
Please do logoff/the termination of Windows after ending 'GT SoftGOT2000'.	-	Close 'GT SoftGOT2000' before log out or shut down the Windows.	Close 'GT SoftGOT2000' before log out or shut down the Windows.
Advanced APP setup file was not found.	-	• The Advanced APP setup file does not exist.	Create the Advanced APP setup file [<InstallPath>\SGT2000\Multi*****\AppStartSet.csv].
There is no application associated with the extension of Advanced APP setup file (.csv).	-	• The application associated with the extension (.csv) of the Advanced APP setup file does not exist. • The application associated with the file extension is not installed correctly.	Set the application associated with the extension (.csv) of the Advanced APP setup file. Install the application associated with the file extension again.
Failed to start the application.	-	• Access to the Advanced APP setup file is disabled. • The Advanced APP setup file is corrupted. • The application associated with the file extension is not installed correctly. • Not enough free memory or hard disk space. • GT SoftGOT2000 was exited illegally last time. • Illegal process is running.	• Check the access right of the Advanced APP setup file. • Create the Advanced APP setup file again. • Install the application associated with the file extension again. • Exit unnecessary applications. • Increase the free space of the hard disk. • Restart GT SoftGOT2000. • After restarting the personal computer, restart GT SoftGOT2000.

Error message	Error code	Definition and cause	Corrective action
The check result cannot be displayed.	-	Access to the Advanced APP check file is disabled. The Advanced APP setup check file is corrupted. The application associated with the file extension is not installed correctly.	Check the access right of the Advanced APP setup check file. Install the application associated with the file extension again.
Access to the Advanced APP Setup file is denied.	-	Access to the Advanced APP setup file is disabled.	Check the access right of the Advanced APP setup file.
Failed to open the Advanced APP Setup check file.	-	Access to the Advanced APP setup check file is disabled. The Advanced APP setup check file is corrupted.	Check the access right of the Advanced APP setup check file.
Failed to check Advanced APP Setup.	-	The operating environment is not supported.	Install GT SoftGOT2000GOT2000 again.
History file was not found.	-	The application start-up history file cannot be started up.	Check the application start-up history file.
Easysocket has an invalid version.	-	GT SoftGOT2000 may be not installed correctly.	After uninstalling GT SoftGOT2000, reinstall it.
The specified project data was created by using a previous version of the GT Designer3. Some functions may not operate properly. Do you want to proceed?	-	The version of the GT Designer3 on which the project data is created is later than the GT SoftGOT2000.	Select a button on the displayed dialog. Yes: Execute reading and perform monitoring with operable functions. No: Install GT SoftGOT2000 of the same version as GT Designer3 and execute reading again.
The major versions of the specified project data and GT SoftGOT2000 Standard monitor OS do not match. Project data : Ver. ##.## GT SoftGOT2000 Standard monitor OS : Ver. ##.## Specify the project data of the same version.	-	The following OS major versions are not matched. • The major version of OS in GT Designer3 that stores the created project data to be read. • The standard monitor OS in GT SoftGOT2000	• Install GT SoftGOT2000 with the same version as GT Designer3 that stores the created project data, and read the data again. • Create the project data for GT Designer3 that version is same as the version of GT SoftGOT2000, and read the data again.
Failed to take a snap shot.	-	• GT SoftGOT2000 was closed illegally last time. • Illegal process is running.	• Restart GT SoftGOT2000. • After restarting the personal computer, restart GT SoftGOT2000.
A Communication error occurred. Retry : Executes communication again. Cancel : Cancels all communication. To retry communication, restart the GT SoftGOT2000. <ES:0x########>	-	• Cable was disconnected. • Cable was broken. • Transmission speed (Baud rate) is incorrect. • The PLC CPU type is different from that of the project setting.	After checking for the left causes, select the button in the displayed dialog. [Retry] Restarts communication. [Cancel] After Cancel is selected, all communications will not be made. When performing monitoring, restart GT SoftGOT2000.
Path name is too long.	-	Save the GT Designer3 under too many directory levels.	In Option setting, set the project of GT Designer3 again.
Manual file cannot be found. Please install manuals.	-	• GT Manual3 is not installed. • GT Manual3 is not installed properly.	Uninstall GT Manual3, and then reinstall it.
Cannot set up the operating environment. Insufficient disk space or memory may be the cause.	0x1103	• Not enough free disk space. • GT SoftGOT2000 was exited illegally last time. • Illegal process is running.	• Exit unnecessary applications. • Increase the free space of the hard disk. • Restart GT SoftGOT2000. • After restarting the personal computer, restart GT SoftGOT2000.
Failed to set up an operating environment. Check the followings and retry the operation. • Free disk space. • Access privileges to the environment file. • Validity of environment files (invalid files or files not found).	0x1104 0x1200 to 0x120E 0x2601 0x2700	-	• Increase the free space of the hard disk. • Check the file access privilege. • After uninstalling GT SoftGOT2000, reinstall it.

Error message	Error code	Definition and cause	Corrective action
The GT SoftGOT2000 is not installed correctly.	0x2201 0x2401 0x2403 0x2600 0x2A00 0x2B00 0x3700 0x3800	• Configuring the execution environment for GT SoftGOT2000 has failed. • GT SoftGOT2000 is not installed correctly.	• After restarting the personal computer, restart GT SoftGOT2000. • After uninstalling GT SoftGOT2000, reinstall it.
The license key should be installed to operate the GT SoftGOT2000. The GT SoftGOT2000 will be terminated in about 3 hours when operating without the license key. Do you want to proceed?	0x2301 to 0x2304 0x2307 to 0x230D 0x230F to 0x2315 0x231D to 0x2320 0x2327 0x232A 0x232C 0x232D 0x232F 0x2330 0x2339 to 0x233C	• Installing the system driver has failed. • The system driver is not installed.	• Check that the system driver is installed. • Reinstall the system driver. • Check the license key with Windows Device Manager. For troubleshooting the license key-related problems, refer to the following. ☞ Page 726 Troubleshooting for license key
Access to the license key is denied. Possible causes are as follows: • The system driver is not installed. • The parallel port is unusable or does not exist. • The USB port is unusable or does not exist.	0x233D	• The system driver is not installed. • The parallel port is unusable or nonexistent. • The USB port is unusable or nonexistent.	• Install the system driver. • Make sure that the parallel port is usable. • Make sure that the USB port is usable.
Initialization for reading failed. Execute one of the following operations. • Close the dialog if it is displayed. • Switching to offline mode may have been failed. Wait for several seconds and retry the operation.	0x2500	Since the message such as "This function cannot be used now" was displayed on the screen, this function can not be loaded.	After selecting [OK] in the dialog to erase the on-screen message, re-load the function.
	0x2501	Waiting for completion of internal process.	re-load the function after a few minutes.
Failed to read a project data. Check the following items and retry the operation. • Data size and number of the data. • Free disk space. • Access privileges to the environment file. • Validity of project data (invalid file or file not found).	0x3101 0x3165 to 0x318C 0x31FD 0x31FF 0x3201 0x3265 to 0x328C 0x32FD 0x32FF 0x3301 0x3401 0x3465 to 0x348C 0x34FD 0x34FF	-	• Decrease the screen data size to 57MB or less. • Increase the free space of the hard disk. • Check the access privilege of the project data. • Check that the project data has no problems, or use an uncorrupted version of the project data. • Check that the project data exists.
GOT type of the project is different from the one specified in the GT SoftGOT2000. [Project data setting] GOT type : #####(###x###)	0x3500	The GOT type set in the project is different from the GOT type specified in GT SoftGOT2000.	Make correction so that the GOT type of the project created on GT Designer3 is the same as the GOT type of GT SoftGOT2000.

Error message	Error code	Definition and cause	Corrective action
GOT type (Resolution) of the project is different from the one specified in the GT SoftGOT2000. [Project data setting] GOT type : #####(###x###) [GT SoftGOT2000 setting] Resolution : ###x###	0x3501	The GOT type (Resolution) set in the project is different from the GOT type (Resolution) specified in GT SoftGOT2000.	Set the same resolution in the project in GT Designer3 and in GT SoftGOT2000.
Vertical project data is not supported.	0x3502	The project data for vertical display type has been read.	Read project data for horizontal display.
PLC type of the project is different from the one specified in the GT SoftGOT2000. Check the setting and retry. [Project data setting] CH1 : ##### [GT SoftGOT2000 setting] CH1 : #####(#####)	0x3601	The PLC type set in the project is different from that in GT SoftGOT2000.	Make correction so that the PLC type of the project created on GT Designer3 is the same as the CPU type of GT SoftGOT2000.
Controller type of the project is different from the one specified in 'GT SoftGOT2000'. Check the setting and retry. [Project data setting] CH1 : #### CH2 : #### CH3 : #### CH4 : #### [GT SoftGOT2000 setting] CH1 : ####(####) CH2 : ####(####) CH3 : ####(####) CH4 : ####(####)	0x3601	The controller type set in the read project is different from the controller type set in GT SoftGOT2000.	Set the same controller type in the project in GT Designer3 and in GT SoftGOT2000.
Fail in the delete of resource data. • Please close resource data if it is opened. • Check the file access privilege.	0x3801	Failed in erasing resource data after loading screen data.	• If there is resource data opened by another software, close that file. • Check the file access privilege.

Troubleshooting for license key

When attaching a USB license key to the personal computer and it is not recognized, check the following.

Error	Definition and cause	Corrective action
The dialog for starting a wizard to search an added hardware is displayed.	The license key was attached to the PC before the installation of system driver.	Exit the GT SoftGOT2000 without any installation and then remove the license key. When attaching the GT27-SGTKEY-U after installing the system driver, it is recognized as license key.
The GT27-SGTKEY-U is not recognized as license key by the OS when attached to the PC.	The GT27-SGTKEY-U was attached to the PC before the installation of system driver, and an illegal driver was installed.	Install the system driver after removing the GT27-SGTKEY-U. When attaching the GT27-SGTKEY-U after installation, it is recognized as license key.
The GT SoftGOT2000 displays an error message involving license key despite System Driver is installed/license key is installed/the port is ready for use.	System Driver has an error.	Remove the GT27-SGTKEY-U and uninstall System Driver once. Install System Driver again. Install the GT27-SGTKEY-U after installing System Driver. Then it is recognized as license key. For information on how to install and uninstall the system driver, refer to the following. ☞ Page 45 Installing and uninstalling the system driver
When the license key is attached, the dialog asking you to specify the storage location of the system file is displayed.	The automatic detection of the system file failed.	Specify the system file in the following location. C:\Program Files\Common Files\SafeNet Sentinel\Sentinel System Driver\sntnlusb.sys
Although the license key is attached, an error message related to the license key appears in GT SoftGOT2000.	The parallel driver is not installed.	Remove the license key GT27-SGTKEY-U, and install the parallel driver manually from the installer of the system driver. For how to install the parallel driver, refer to the following. ☞ Page 727 Installing the parallel driver

Point

If the system driver is not installed or uninstalled properly even if the above corrective actions are taken, use the installer of the following system driver.
(GT SoftGOT2000 installation folder)\SGT2000\SystemDriver\SPI_771.exe

Installing and uninstalling the parallel driver

For Sentinel Protection Installer 7.6.9 or later, the parallel driver is not automatically installed at the time of automatic installation.

Customers should install it manually.

Before installing or uninstalling the parallel driver, remove the license key GT27-SGTKEY-U.

Otherwise, installation may fail.

If installation fails, uninstall and reinstall the parallel driver with the license key GT27-SGTKEY-U removed.

The following shows the installation procedure for the parallel driver.

■Installing the parallel driver

To install the parallel driver, uninstall the system driver if installed, then install the system driver again.

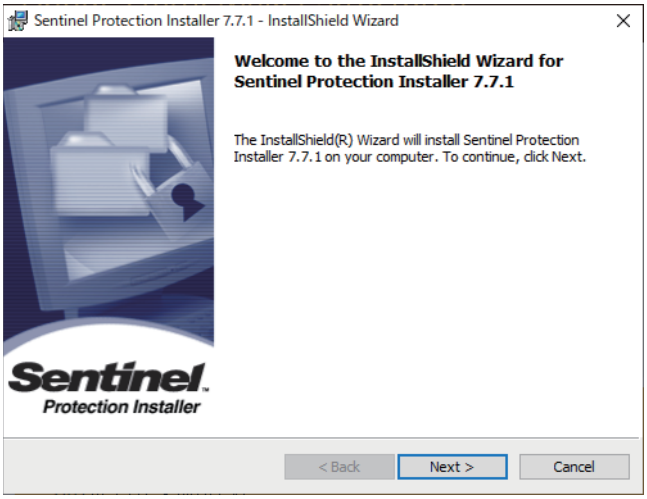
☞ Page 45 Uninstalling the system driver

1. Run the installer of the following system driver.

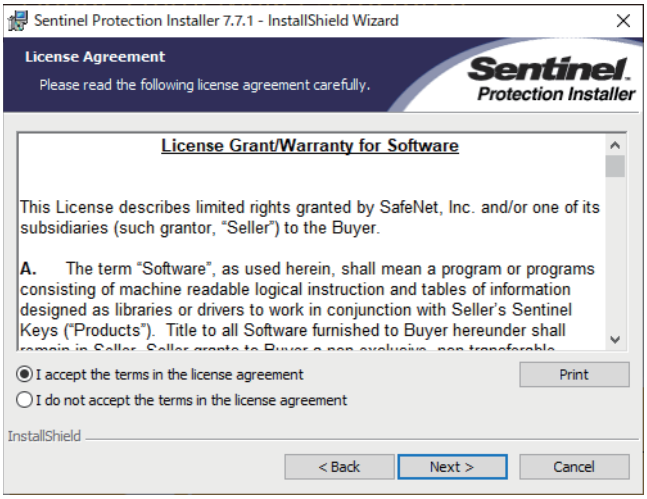
(GT SoftGOT2000 installation folder)\SGT2000\SystemDriver\SPI_771.exe

2. Running the installer displays the following dialog.

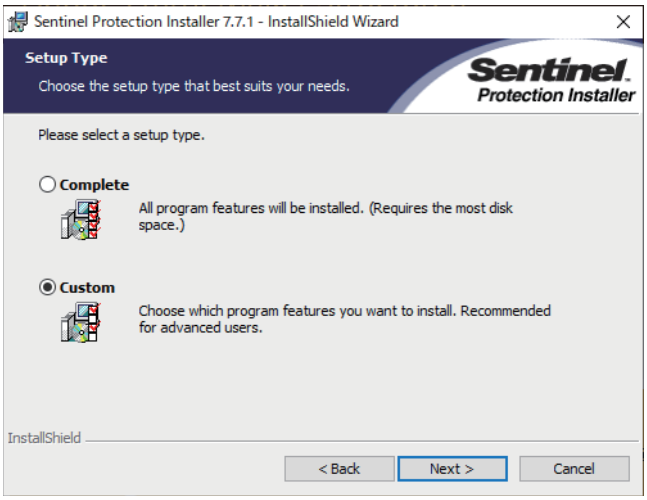
Click the [Next] button.



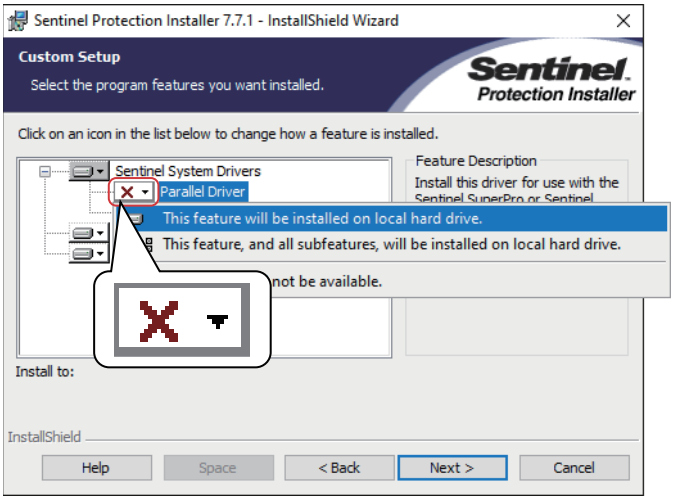
3. Select [I accept the terms in the license agreement], then click the [Next] button.



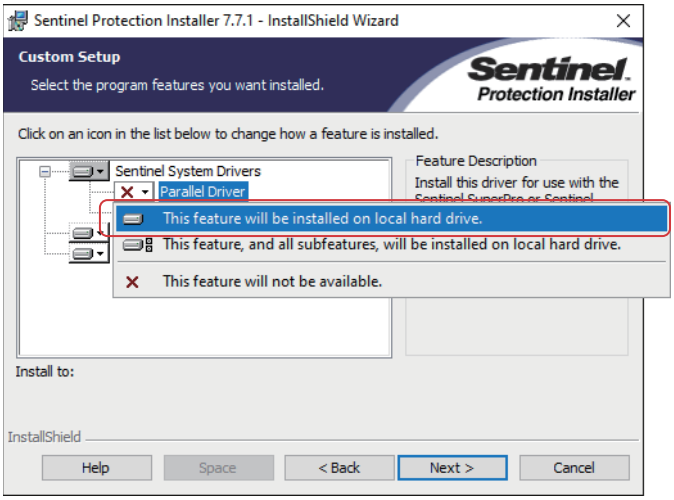
4. Select [Custom], then click the [Next] button.



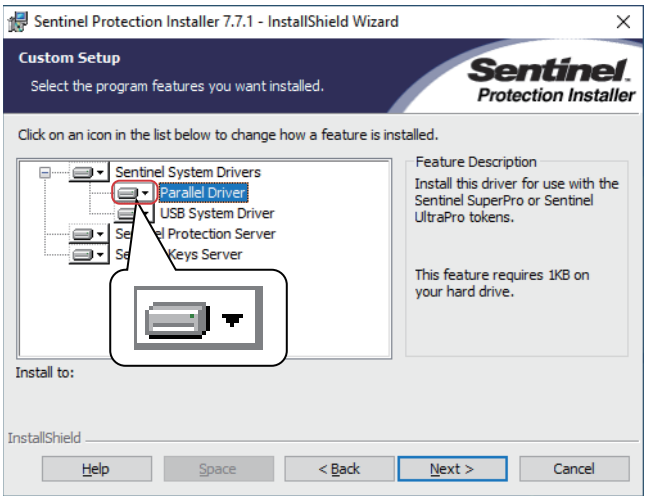
5. Click the icon to the left of [Parallel Driver].



6. Select [This feature will be installed on local hard drive.].

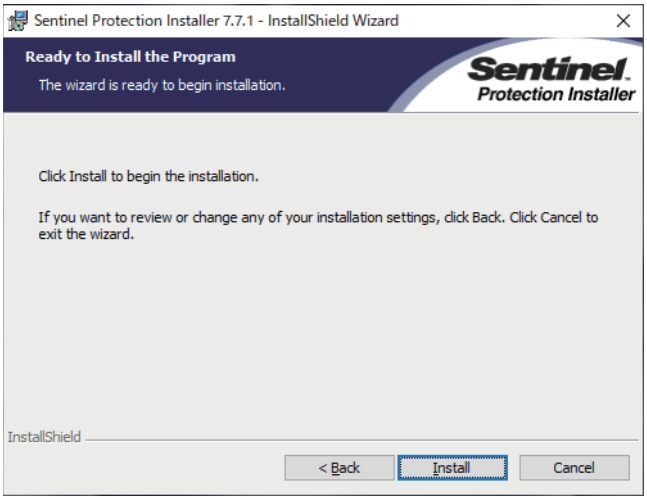


7. The icon changes.



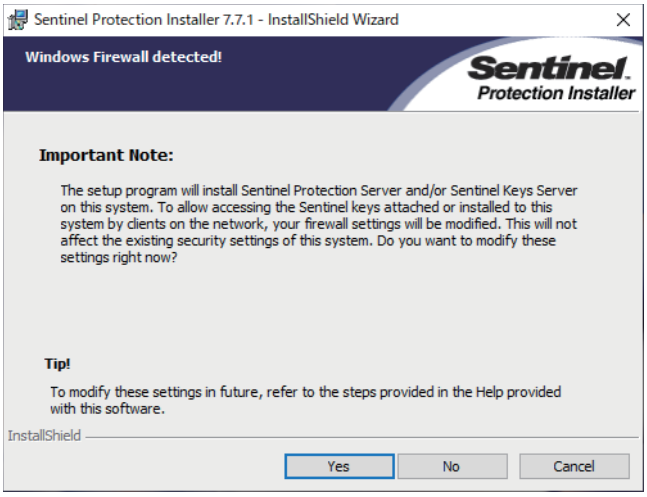
8. Click the [Next] button.

9. Click the [Install] button.

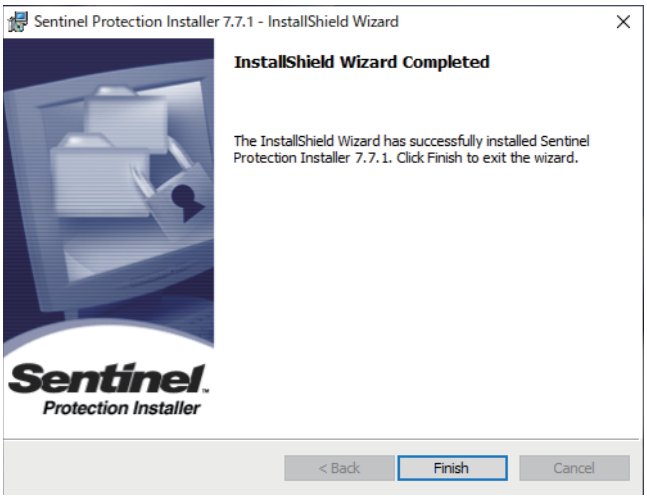


10. Click the [Yes] button.

If the confirmation message appears, follow the on-screen instructions.



11. Click the [Finish] button.



■Uninstalling the parallel driver

In [Programs and Features] in the Windows Control Panel, uninstall [Sentinel Protection Installer □.□.□].

Troubleshooting related to mail transmission

Troubleshooting

Error description	Definition and cause	Corrective action
Mail is not sent.	The mail send setting of GT SoftGOT2000 has not been made.	Make the mail send setting of GT SoftGOT2000.
	Mail send setting has been made on GT Designer3.	
	The mail send setting method is wrong.	Reexamine the mail send setting of GT SoftGOT2000.

Error code

No dialogue boxes are displayed by GT SoftGOT2000 for errors related to mail transmission and dialup.
Refer to the mail history data for error codes and error messages.
Refer to Page 611 Mail history for how to reference the mail history data.
The following table lists the error codes related to mail transmission and dialup, their definitions and causes, and the corrective actions to take:

Error code	Definition and cause	Corrective action
600 to 750s	Setting errors of personal computers and peripheral devices (e.g., modem)	Refer to the Help function in Windows.

Point

Error notifications from the mail server
When an error is notified from the mail server, the error message will be displayed in the mail history data.
The following shows an example.
Example) Error message displayed when an error is notified from the SMTP server

Error message
SMTP Error Report: #####.

When an error as shown above occurs, consult the server administrator.

Troubleshooting for print

Error	Definition and cause	Corrective action
GT SoftGOT2000 does not output data to a printer even when the hard copy is executed from a monitor screen with [Print to printer (Hard Copy Function)] enabled.	Printing is disabled due to a problem in the printer.	• Select [Project] → [Print Setup] on GT SoftGOT2000 to check the settings of the printer. • Print a test page from Windows to check the settings of the printer. • Check if the printer is powered on and online. • Install the printer driver again.
	The output target in the hard copy setting of the project data is set to [File].	Open the project data with GT Designer3, and select [Printer] for [Target] in the hard copy setting.

Troubleshooting for file save problems

Error	Definition and Cause	Corrective action
No files are output when the hard copy command is executed from the monitor screen of the GT SoftGOT2000.	The file cannot be saved due to problems with the output destination disk.	• Check that the folder specified as the virtual drive exists. • Check the access privilege for the folder specified as the virtual drive. • Free up space on the disk where the folder specified as the virtual drive is located.
	The file cannot be saved, since file number external control device value is set to a value outside of the range 1 to 9999.	• Check that the file No. external control device value is set within 1 to 9999.

Troubleshooting for the OPC UA client connection

The following shows the causes of errors occurring when the OPC UA client connection is used and their corrective actions.

Error code	Error	Cause	Corrective action
322	The number of set characters is out of the specification range.	The number of acquired characters is more than 326.	Set the number of characters in a tag name within 326 characters on the server.
326	The data type used for the request does not match with the data type of the target tag.	The data type of the tags set on the client does not match with the data type of the tags set on the server.	• Set tags on the server again. • In GT Designer3, import the latest tag information of the server and set the tags again.
328	The specified tag is invalid.	The tag is nonexistent on the server.	Import the latest tag information of the server to GT Designer3, and set the tags again.
	The access direction does not match.	• You have tried to write data to a read-only tag. • You have tried to read data from a write-only tag.	
401	An abnormal code is received from the server.	The memory is insufficient.	• Restart GT SoftGOT2000. • Restart the personal computer.
402	Initializing OpenSSL has failed.	The server certificate is invalid.	Delete the server certificate, and configure the settings again.
	Reading a client certificate has failed.	• No client certificate has been created. • No client certificate has been imported.	• Create a client certificate in the [Communication Setup] dialog in GT SoftGOT2000. • In the [Communication Setup] dialog in GT SoftGOT2000, import the client certificate created with GT OPC UA Client Setting Tool.
	Obtaining the endpoint URL of the OPC UA server has failed.	• The cable is disconnected. • The cable is broken. • The endpoint URL is invalid. • The port number is invalid. • The server is not started. • The status of the server is abnormal.	• Check the communication environment. • Check that the endpoint URL and port No. are correct. • Check that the status of the server is normal.
	Connection error	• The cable is disconnected. • The cable is broken. • The server is not started. • The status of the server is abnormal. • The security mode does not match. • User authentication has failed. • The client certificate has expired. • The maximum number of sessions allowed on the server has been reached.	• Check the communication environment. • Check that the status of the server is normal. • Set the security mode according to the server. • Check that the user name and password are correct. • Create a client certificate in the [Communication Setup] dialog in GT SoftGOT2000. • Create a client certificate in the [Communication Setup] dialog in GT SoftGOT2000 again. • Disconnect unnecessary clients.
	Read error or write error	• The cable is disconnected. • The cable is broken. • The server is not started. • The status of the server is abnormal. • The client certificate is expired.	• Check the communication environment. • Check that the status of the server is normal. • Create a client certificate in the [Communication Setup] dialog in GT SoftGOT2000.

Troubleshooting for the Edgecross interaction function

The following shows the error messages, definitions and causes, and corrective actions related to the Edgecross interaction function.

Error message	Definition and cause	Corrective action
Access to [Setting for Edgecross Interaction Function] - [Allocation Setting □] file is denied. Check the followings and retry. • File access privilege • The file is invalid or does not exist.	The Edgecross interaction configuration file does not exist.	Check if the Edgecross interaction configuration file exists.
The setting in the row No.□ in [Setting for Edgecross Interaction Function] - [Allocation Setting □] file is invalid. Check the setting and retry.	• The item name is invalid. • The number of items is insufficient. • Necessary items are not set. • A value outside the setting range is set.	Check each setting item of the file.
Access to the save destination folder specified in [Setting for Edgecross Interaction Function] - [Allocation Setting □] file is denied. Check the followings and retry. • File access privilege • The file is invalid or does not exist.	The save destination folder of the real-time data that is specified in Real-time Flow Designer is inaccessible.	Check the access privilege for the save destination folder.

GOT error code list

For the system alarm detected with GOT, refer to the following manual.

GOT2000 Series User's Manual (Utility)

Error code list when using the internal device interface function

The following shows lists of error codes that occur when the internal device interface function is used.

Error code	Definition and cause	Corrective action
1	Succeeded	-
0	Opening or mapping of the shared memory was failed. (Access to internal devices disabled)	• Start GT SoftGOT2000. • Specify a valid GT SoftGOT2000 module number (1 to 32767). • Exit unnecessary applications to secure memory space. • Restart the personal computer.
-1	The specified device name ID is invalid.	• Specify a valid device name ID.
-2	The specified start device is outside the range.	• Specify a valid device number.
-3	The specified end device is outside the range.	• Specify the number of devices within the valid device range.
-4	The specified device number is invalid.	• Specify a valid device number.
-5	The address of the specified device value is invalid.	• Secure the device value storage area and specify the start address of the read device value. • Secure the device value storage area and specify the start address of the device value to be written.
-6	The specified device value is invalid.	• Specify a valid device value.
-9	The specified shared address is illegal.	• Specify the shared memory address obtained by the GDev_OpenMapping function. • Specify the shared memory address obtained by the sgt_GDevOpenMapping function.
-10	The specified number of devices is invalid.	• Specify the number of devices within the range.
-11	The specified argument is invalid.	• Check the error code value (IError) in the structure for storing device information, check the relevant corrective action, and then specify the correct argument.

5.3 Applicable Project Data

Use GT SoftGOT2000 of the same version as the GT Designer3.
When the versions of GT SoftGOT2000 and GT Designer3 are different, install the same version of GT SoftGOT2000/GT Designer3.

Point

When using the project data created on the GT Designer3 version older than the GT SoftGOT2000 version
Open the project data on the GT Desinger3 of the same version as the GT SoftGOT2000, and save the project data.

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Revisions

* The manual number is given on the bottom left of the back cover.

Revision date	* Manual Number	Revision
Sep., 2013	SH(NA)-081201ENG-A	Compatible with GT SoftGOT2000 Version1.100E
Nov., 2013	SH(NA)-081201ENG-B	Compatible with GT SoftGOT2000 Version1.104J • Compatible with PX Developer cooperation
Jan., 2014	SH(NA)-081201ENG-C	Compatible with GT SoftGOT2000 Version1.108N • Compatible with Keycode • Compatible with MT Simulator2
Apr., 2014	SH(NA)-081201ENG-D	Compatible with GT SoftGOT2000 Version1.111R • Writing errors have been corrected
Jun., 2014	SH(NA)-081201ENG-E	Compatible with GT SoftGOT2000 Version1.117X • Compatible with MELSEC iQ-R • Compatible with Q24DHCCPU-VG
Jul., 2014	SH(NA)-081201ENG-F	Compatible with GT SoftGOT2000 Version1.118Y • Writing errors have been corrected.
Oct., 2014	SH(NA)-081201ENG-G	Compatible with GT SoftGOT2000 Version1.122C • The abbreviations, generic terms, and icon indications have been changed. • The display language switching function is supported. • TCP is supported as a communication format for connecting to RCPU in the communication setup for the SoftGOT-GOT link function. • Support for GT SoftGOT2000 running on Windows XP Service Pack2 and Windows 2000 has ended.
Jan., 2015	SH(NA)-081201ENG-H	Compatible with GT SoftGOT2000 Version1.126G • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • The Motion CPU (MELSEC iQ-R series) is supported. • MELSEC iQ-F is supported. • GX Simulator3 is supported. • The internal device interface function is applicable to Micorsoft Excel VBA.
Apr., 2015	SH(NA)-081201ENG-I	Compatible with GT SoftGOT2000 Version1.130L • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • R08PCPU, R16PCPU, R32PCPU, and R120PCPU are supported. • R12CCPU-V is supported.
Jun., 2015	SH(NA)-081201ENG-J	Compatible with GT SoftGOT2000 Version1.134Q • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • TOSHIBA PLC (Unified Controller nv) is supported. • GT SoftGOT2000 Commander supports the management of GT SoftGOT1000. • Visual Studio2010 is supported.
Jul., 2015	SH(NA)-081201ENG-K	Compatible with GT SoftGOT2000 Version1.136S • R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, and R120ENCPU are supported. • The folder name [MELSOFT Application] displayed in the Windows start menu has been changed to [MELSOFT].
Oct., 2015	SH(NA)-081201ENG-L	Compatible with GT SoftGOT2000 Version1.144A • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • R08SFCPU, R16SFCPU, R32SFCPU, and R120SFCPU are supported. • R64MTCPU is supported. • YASKAWA PLC (MP3000 series) is supported. • The GOT network interaction function is supported. • The USB barcode reader connection is supported.
Dec., 2015	SH(NA)-081201ENG-M	Compatible with GT SoftGOT2000 Version1.150G • SAFETY PRECAUTIONS changed. • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • Q26DHCCPU-LS is supported. • Access to an LCPU or a QCPU via an RCPU by the Ethernet connection, direct CPU connection, CC-Link IE Controller Network connection, or CC-Link IE Field Network connection is supported.
May, 2016	SH(NA)-081201ENG-N	Compatible with GT SoftGOT2000 Version1.155M • SAFETY PRECAUTIONS changed. • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • R16NCCPU-S1 is supported. • The SLMP connection is supported. • GT SoftGOT2000 is compatible with Windows 10.

Revision date	* Manual Number	Revision
Aug., 2016	SH(NA)-081201ENG-O	Compatible with GT SoftGOT2000 Version1.160S • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • RJ72GF15-T2 is supported. • MELSERVO-J4 series is supported. • MELSERVO-JE series is supported. • The redundant system (RCPU) is supported. • The SoftGOT-GOT link function supports the monitoring of a controller through a GOT by Ethernet. • The Ethernet connection supports the TCP/IP protocol.
Oct., 2016	SH(NA)-081201ENG-P	Compatible with GT SoftGOT2000 Version1.165X • SAFETY PRECAUTIONS changed. • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • Access to the MELSEC iQ-F on the CC-Link IE Field Network through a MELSEC iQ-R or MELSEC iQ-F is supported. • [Servo axis switching device first No.] has been added to the communication setup (for RCPU and MELSEC iQ-F). • [Delay time] has been added to the mail setup.
Jan., 2017	SH(NA)-081201ENG-Q	Compatible with GT SoftGOT2000 Version1.170C • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • The MODBUS/TCP connection is renamed to the MODBUS/TCP master connection. • The MODBUS/TCP slave connection is supported. • RD77GF32 is supported. • FX5-80SSC-S is supported. • Retaining print settings is supported.
Apr., 2017	SH(NA)-081201ENG-R	Compatible with GT SoftGOT2000 Version1.175H • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • The setting to unmute GT SoftGOT2000 at its startup has been added to the environment setup. • The SoftGOT-GOT link function supports the PDF file synchronization. • The SoftGOT-GOT link function supports the Ethernet communication unit to connect the personal computer and GOT.
Jun., 2017	SH(NA)-081201ENG-S	Compatible with GT SoftGOT2000 Version1.180N • The description of Abbreviations, Generic Terms, the meaning of the icon has been changed. • R800-R (R16RTCPU) and CR800-D are supported. • The internal device interface functions are available on Visual Studio 2012, Visual Studio 2013, and Visual Studio 2015. • Accessing a different network via the GOT and a QCPU or LCPU by using the SoftGOT-GOT link function and the Ethernet connection is supported.
Oct., 2017	SH(NA)-081201ENG-T	Compatible with GT SoftGOT2000 Version1.185T • The abbreviations, generic terms, and icon indications have been changed. • The time setting function and the time notification function are supported.
Dec., 2017	SH(NA)-081201ENG-U	Compatible with GT SoftGOT2000 Version1.190Y • R00CPU, R01CPU, and R02CPU are supported. • Global labels are supported when GX Simulator3 is connected.
Apr., 2018	SH(NA)-081201ENG-V	Compatible with GT SoftGOT2000 Version1.195D • Windows Server 2016, Windows Server 2012 R2, and Windows Server 2008 R2 are supported. • MELIPC is supported. • The Edgecross interaction function is supported. • The troubleshooting descriptions have been modified.
Jul., 2018	SH(NA)-081201ENG-W	Compatible with GT SoftGOT2000 Version1.200J • R08PSFCPU, R16PSFCPU, R32PSFCPU, and R120PSFCPU are supported. • The MODBUS/TCP master connection between GT SoftGOT2000 and controllers with unit ID 255 is supported.
Oct., 2018	SH(NA)-081201ENG-X	Compatible with GT SoftGOT2000 Version1.205P • The abbreviations, generic terms, and icon indications have been changed. • Help (e-Manual) is supported. • CR800-Q (Q172DSRCPU) is supported. • TOSHIBA PLC (Unified Controller nv) type1 light is supported. • The virtual drive N is supported. • The following internal device interface functions are usable for SGB and SGD devices. GDev_Read function GDev_Write function • The following internal device interface functions are supported. sgt_GDevOpenMapping function sgt_GDevCloseUnMapping function sgt_ReadDeviceRandom function sgt_WriteDeviceRandom function sgt_ReadDeviceBlock function sgt_WriteDeviceBlock function • Sample programs for Microsoft Excel 2013 have been added.

Revision date	* Manual Number	Revision
Jan., 2019	SH(NA)-081201ENG-Y	Compatible with GT SoftGOT2000 Version1.210U • The description for using an MI3000 has been added. • The description for starting multiple modules has been modified.
Apr., 2019	SH(NA)-081201ENG-Z	Compatible with GT SoftGOT2000 Version1.215Z • The multi-channel function is supported. • The OPC UA client connection is supported. • A press-and-hold operation on a touchscreen is supported. • Retaining GOT internal device data at intervals is supported. • Specifying CPU numbers and module numbers with devices is supported. • A description of OpenSSL toolkit has been added.
Jul., 2019	SH(NA)-081201ENG-AA	Compatible with GT SoftGOT2000 Version1.220E • The microcomputer connection (serial) is supported. • Some items selectable for [Connection] have been renamed. ([RS232], [USB]) • The connection with the CC-Link IE TSN master/local module (RJ71GN11-T2) via Ethernet is supported.
Oct., 2019	SH(NA)-081201ENG-AB	Compatible with GT SoftGOT2000 Version1.225K • GT SoftGOT2000 (Multiple channels) supports the inverter connection. • The connection to FX5UJ is supported. • Specifying the window startup display position is supported. • When multiple displays are used, moving a window to other display from the menu options is supported. • The SoftGOT-GOT link function supports the connection with the GOT that uses the base screen size expansion.
Jan., 2020	SH(NA)-081201ENG-AC	Compatible with GT SoftGOT2000 Version1.230Q • The connection to the MELSEC iQ-L series is supported. • The connection to the FR-A800 series (FR-A8□0-GN, FR-A8□2-GN) is supported. • The connection to the FR-E800 series is supported. • GT SoftGOT2000 (Multiple channels) supports the SoftGOT-GOT link function. • The built-in memory (SRAM) of the GOT has been added to the types of resource data to be synchronized. • Selecting the timing to synchronize the resource data is supported.
Apr., 2020	SH(NA)-081201ENG-AD	Compatible with GT SoftGOT2000 Version1.235V • GT SoftGOT2000 (Multiple channels) supports the direct inverter connection by Ethernet. • GT SoftGOT2000 (Multiple channels) supports the connection with the Motion module (RD78G□) by Ethernet.
Jun., 2020	SH(NA)-081201ENG-AE	Compatible with GT SoftGOT2000 Version1.240A • GT SoftGOT2000 (Multiple channels) supports the connection with the Motion module (RD78GHV, RD78GHW) by Ethernet. • GT SoftGOT2000 (Multiple channels) supports the FR-A800 Plus series (FR-A8□0-E-AWH, FR-A8□0-LC, FR-A8□0-E-LC). • GT SoftGOT2000 (Multiple channels) supports MR-J5 (MR-J5-G(-RJ), MR-J5W2-G, MR-J5W3-G). • OMRON PLC (CP2E) is supported. • KEYENCE PLC (KV-8000 series) is supported. • The SoftGOT-GOT link function supports selecting the timing to synchronize the project data. • The company name of TOSHIBA MACHINE CO., LTD. has been changed to SHIBAURA MACHINE CO., LTD.
Oct., 2020	SH(NA)-081201ENG-AF	Compatible with GT SoftGOT2000 Version1.245F • SAFETY PRECAUTIONS changed. • The virtual drive V is supported. • CPU assignment when starting multiple modules is supported. • GT SoftGOT2000 (Multiple channels) supports the connection with the CC-Link IE TSN master/local module (FX5-CCLGN-MS) by Ethernet. • The connection to MR-JET-□G is supported.
Jan., 2021	SH(NA)-081201ENG-AG	Compatible with GT SoftGOT2000 Version1.250L • The abbreviations, generic terms, and model icon indications have been changed. • The SoftGOT-GOT link function is supported by GT2512-WX.
Apr., 2021	SH(NA)-081201ENG-AH	Compatible with GT SoftGOT2000 Version1.255R • The abbreviations, generic terms, and model icon indications have been changed. • Windows Server 2012 and Windows Server 2019 are supported. • Importing and exporting of setting files are supported. • The gateway server function is supported. • Monitoring an RCPU redundant system through a module on the redundant extension base unit is supported. • FX5-ENET and FX5-ENET/IP are supported. • HITACHI IES PLCs are supported. • SIEMENS PLCs (SIMATIC S7-200 SMART and SIMATIC S7-1500) are supported. • Specifying application startup option settings with devices is supported.

Revision date	* Manual Number	Revision
Jul., 2021	SH(NA)-081201ENG-AI	Compatible with GT SoftGOT2000 Version1.260W • The connection to MR-J4 (MR-J4-GF(-RJ)) through a Simple Motion module or CC-Link IE Field Network master/local module is supported. • The connection to MR-J5 and MR-JET (MR-J5-□G(-RJ), MR-J5W-□G, and MR-JET-□G) by Ethernet is supported. • Direct CPU connection has been renamed to the direct CPU connection (RS-232) or direct CPU connection (USB).
Oct., 2021	SH(NA)-081201ENG-AJ	Compatible with GT SoftGOT2000 Version1.265B • SAFETY PRECAUTIONS changed. • GT SoftGOT2000 (Multiple channels) supports the GOT Mobile function. • The connection to microcomputers (Ethernet) is supported. • GT SoftGOT2000 (Multiple channels) supports the connection with the Motion module (FX5-40SSC-G, FX5-80SSC-G) by Ethernet. • The connection to the OMRON PLCs (CJ2H(-EIP)) by using the communication unit CJ1W-EIP21 is supported. • The connection to the LS IS PLCs is supported. • The connection to the YASKAWA robot controllers is supported. • Specification of the master GOT for the network interaction function is supported. • The internal device interface functions are available on Microsoft Visual C++ 2017, Microsoft Visual C++ 2019, Microsoft Visual C# 2017, Microsoft Visual C# 2019, and Microsoft Excel 2019. • GT SoftGOT2000 (Multiple channels) supports the system launcher. • GT SoftGOT2000 (Multiple channels) supports the system launcher (servo network). • GT SoftGOT2000 (Multiple channels) supports the drive recorder. • GT SoftGOT2000 (Multiple channels) supports the servo amplifier graph. • The mobile screen display is supported. • The hyperlink is supported. • The ANDON connection is supported. • The GOT Mobile information is supported. • CC-Link IE Field Network diagnostics supports CC-Link IE TSN. • Support for GT SoftGOT2000 running on Windows XP/Vista has ended.
Jan., 2022	SH(NA)-081201ENG-AK	Compatible with GT SoftGOT2000 Version1.270G • Compatible with FX3U-ENET and FX Configurator-EN. • GT SoftGOT2000 (Multiple channels) supports the connection to MELSECWinCPU (MELSEC iQ-R series). • The following functions are usable for Microsoft Visual C++ 2017, Microsoft Visual C++ 2019, Microsoft Visual C# 2017, and Microsoft Visual C# 2019. long sgt_GDevOpenMapping() void sgt_GDevCloseUnMapping() long sgt_ReadDeviceRandom() long sgt_WriteDeviceRandom() • GT SoftGOT2000 (Multiple channels) supports the connection to MR-J5D-□G4 through a Motion module. • GT SoftGOT2000 (Multiple channels) supports the connection to MR-J5-B(MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) through a Motion controller or Simple Motion module. • GT SoftGOT2000 (Multiple channels) supports the connection to MR-J5D-□G4 via Ethernet. • RD78G□ supports Simple Motion mode. • OMRON PLCs support the communication unit CJ1W-EIP21. • GT SoftGOT2000 (Single channel) supports the GOT Mobile function.
Apr., 2022	SH(NA)-081201ENG-AL	Compatible with GT SoftGOT2000 Version1.275M • The connection to the MELSEC iQ-F series (FX5S) is supported. • Windows 11 is supported. • GT SoftGOT2000 (Multiple channels) supports the connection to OMRON PLC (NJ and NX series). • GT SoftGOT2000 (Multiple channels) supports the connection to ALLEN-BRADLEY PLC. • The connection to a PLC or MELIPC through a servo amplifier using Ethernet connection is supported.
Jul., 2022	SH(NA)-081201ENG-AM	Compatible with GT SoftGOT2000 Version1.280S • GT SoftGOT2000 (Multiple channels) supports the connection to the RnCPU or RnENCPU through the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) by Ethernet. • The connection to YASKAWA robot controller YRC1000micro is supported.
Oct., 2022	SH(NA)-081201ENG-AN	Compatible with GT SoftGOT2000 Version1.285X • GT SoftGOT2000 (Multiple channels) supports the connection to a servo amplifier (MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) through a Motion controller (R16MTCPU, R32MTCPU, or R64MTCPU) or Simple Motion module (RD77MS4, RD77MS8, or RD77MS16). • The connection to a servo amplifier (MR-J5-□G(-RJ), MR-J5W2-□G, MR-J5W3-□G, or MR-JET-□G) through the CC-Link IE TSN master/local module (RJ71GN11-T2) is supported.

Revision date	* Manual Number	Revision
Apr., 2023	SH(NA)-081201ENG-AP	Compatible with GT SoftGOT2000 Version1.295H • The connection to the MELSEC iQ-L series (L32HCPU) is supported. • Support for GT SoftGOT2000 running on Windows Server 2012, Windows Server 2008, Windows 8.1, Windows 8, and Windows 7 has ended. • The connection to a servo amplifier (MR-J5-□G(-RJ), MR-J5W2-□G, MR-J5W3-□G, or MR-JET-□G) through the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported. • GS2512-WXTBD is supported.
Jul., 2023	SH(NA)-081201ENG-AQ	Compatible with GT SoftGOT2000 Version1.300N • GT SoftGOT2000 (Multiple channels) supports the Ethernet connection to FX5UJ through the CC-Link IE TSN master/local module (FX5-CCLGN-MS).
Oct., 2023	SH(NA)-081201ENG-AR	Partial corrections
Jan., 2024	SH(NA)-081201ENG-AS	Compatible with GT SoftGOT2000 Version 1.310Y • The connection to a servo amplifier (MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) via a Motion controller (Q170MSCPU) is supported. • Descriptions of PDFium, Perl-Compatible Regular Expressions, OpenJPEG, Little cms color engine, FreeTypeProject, JQuery, JQuery Marquee, JQuery UI, CreateJS, Web Font Loader, jsSHA, and libexpat have been added.

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SH(NA)-081201ENG-AS(2401)MEE
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