Human Machine Interface (HMI) GOT

GOT2000 Basics (Connection Introduction)

This training course is intended for those who operate the GOT2000 Series HMI for the first time.

L(NA)00243ENG

Introduction

Purpose of the Course

In this course, we will learn the outline of Human Machine Interface (HMI) GOT connection, such as devices connectable to the human machine interface GOT and connection types.

As prerequisites for this course, you should have already completed the following courses or possess the equivalent knowledge in:

- FA Equipment for Beginners (HMIs)
- FA Equipment for Beginners (Industrial Network)

Introduction Course Structure

The contents of this course are as follows.
We recommend that you start from Chapter 1.

Chapter 1 GOT Connection

We will learn devices connectable to the Human Machine Interface (HMI) GOT and the types of connection to PLCs.

Final Test

Passing grade: 60% or higher.

Introduction

How to Use This e-Learning Tool

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Back to the previous page	<	Back to the previous page.
Move to the desired page	TOC	"Table of Contents" will be displayed, enabling you to navigate to the desired page.
Exit the learning	X	Exit the learning.

Cautions for Use

Safety precautions

When you learn based on using actual products, please carefully read the safety precautions in the corresponding manuals.

Chapter 1 GOT Connection

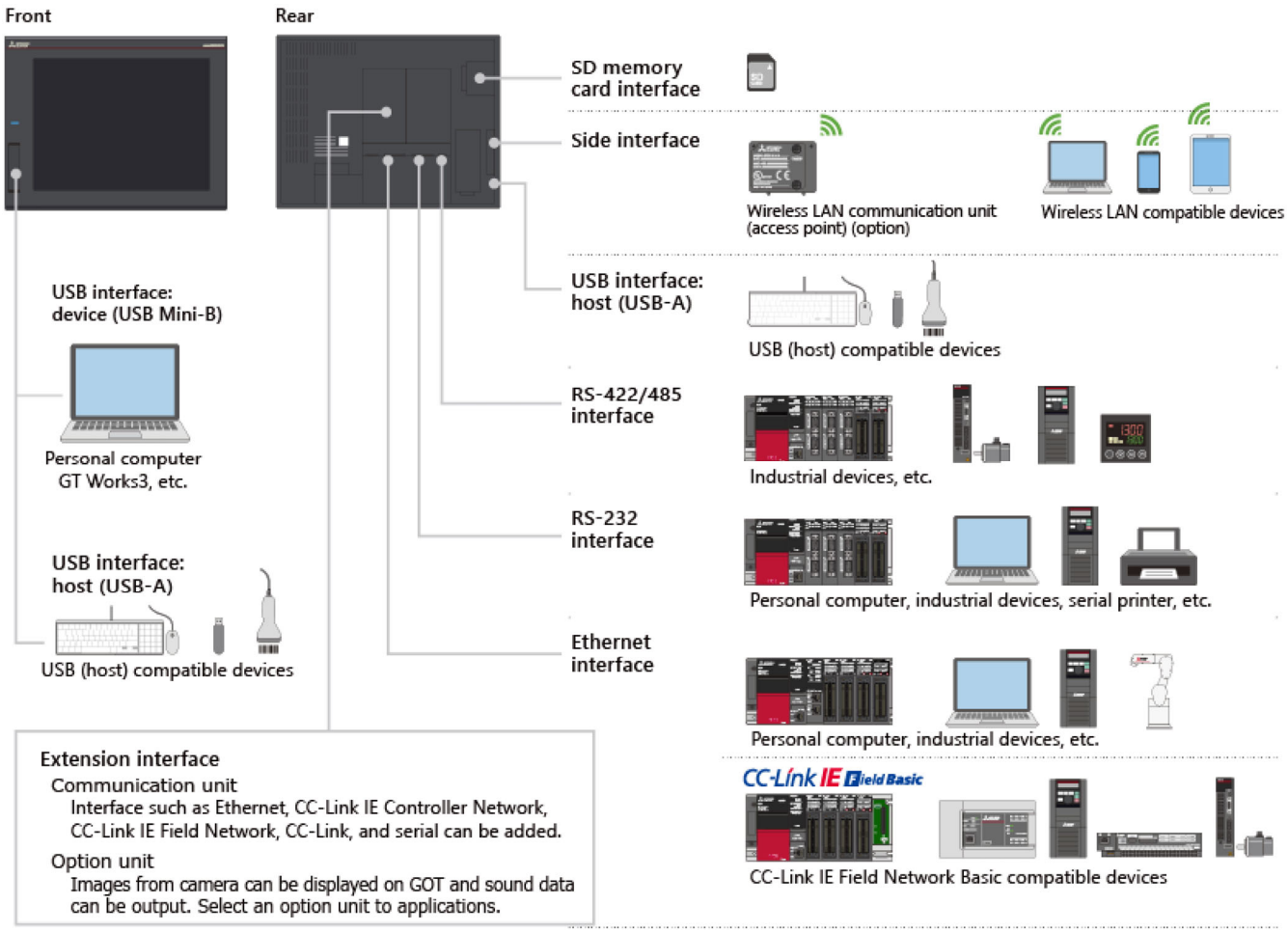
In this chapter, we will learn devices connectable to the Human Machine Interface (HMI) GOT and the types of connection to PLCs.

1.1 Connectable devices

With various types of built-in interface, GOTs are connectable to various factory automation (FA) products and other industrial devices.

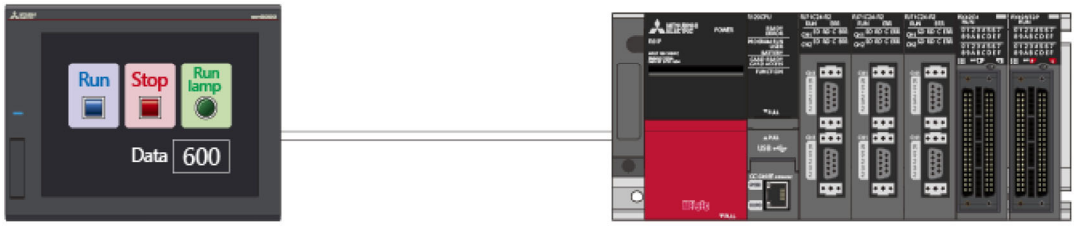
System configuration example*1

＊1 In this course, GT2712-STB□ is used. For details on devices and options connectable to other models, refer to the GOT2000 Series Connection Manuals.



1.2 Connection to PLC

The GOT can be connected to the PLC using various types of connection to monitor the PLC.
Connection types are selectable according to the system configuration and application.

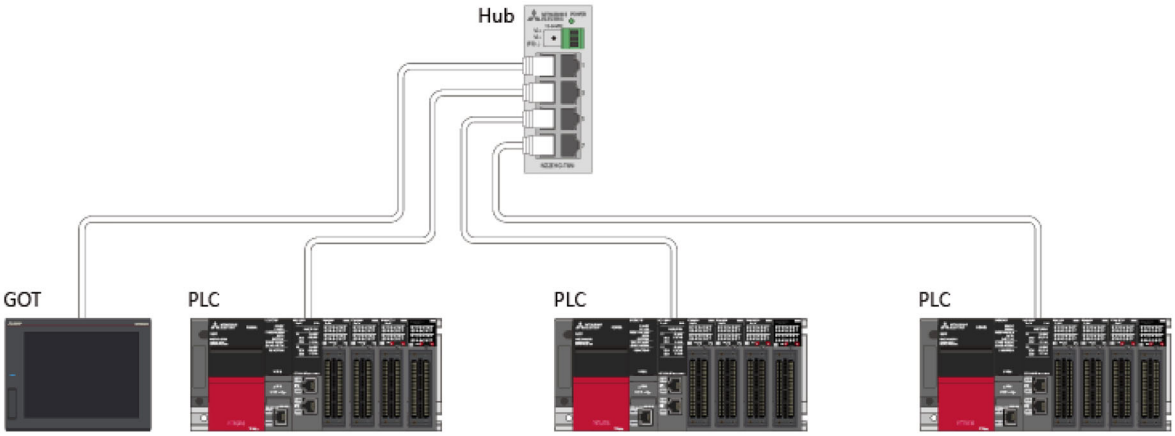


GOT PLC

Chapter	Connection type
1.2.1	Ethernet connection
1.2.2	Direct CPU connection
1.2.3	Serial communication connection
1.2.4	CC-Link IE TSN connection
1.2.5	CC-Link IE Controller Network connection
1.2.6	CC-Link IE Field Network connection
1.2.7	CC-Link IE Field Network Basic connection
1.2.8	CC-Link connection
1.2.9	Bus connection
1.2.10	MELSECNET/H or MELSECNET/10 connection
1.2.11	Connection to non-Mitsubishi Electric PLCs

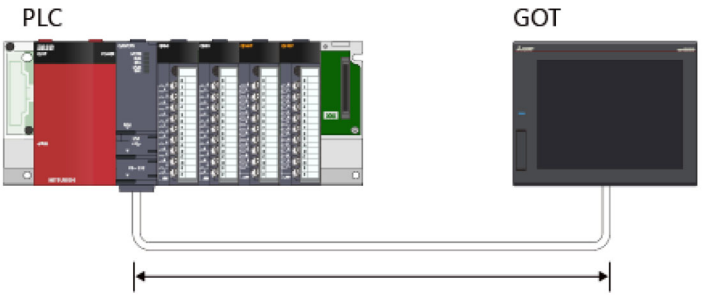
1.2.1 Ethernet connection

PLC devices are monitored on the GOT via Ethernet.
The network can be configured with commercially available products such as hubs and cables.



1.2.2 Direct CPU connection

PLC CPU devices are monitored by connecting the GOT to the built-in RS-232 or RS-422 interface of the PLC CPU.*1

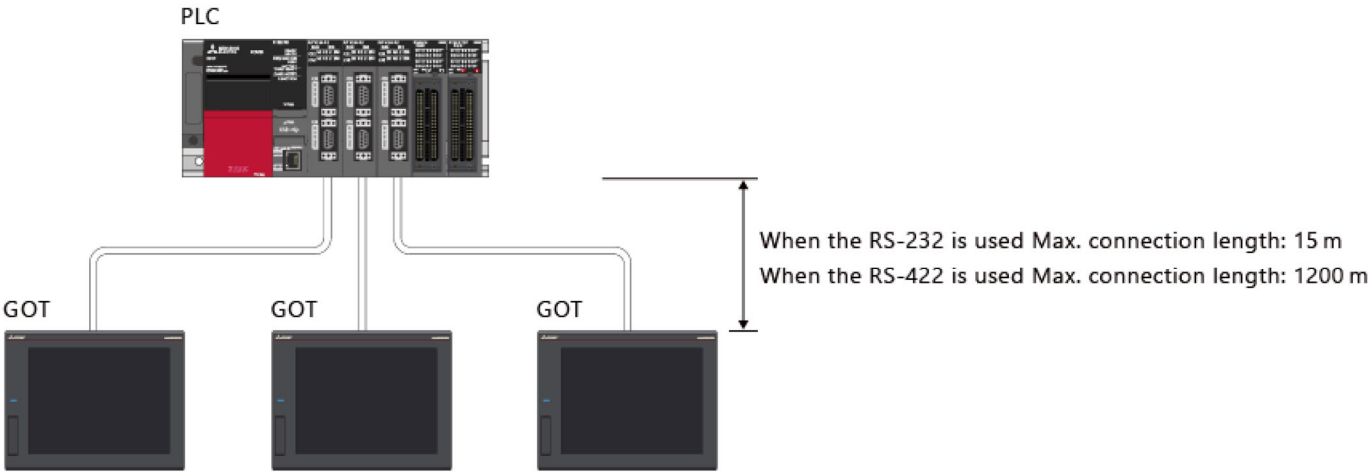


When the RS-232 is used Max. connection length: 3 m
When the RS-422 is used Max. connection length: 30.5 m *2

*1 : The built-in interface depends on the PLC CPU model.
*2 : Combination of an RS-422 conversion cable and RS-422 cable.

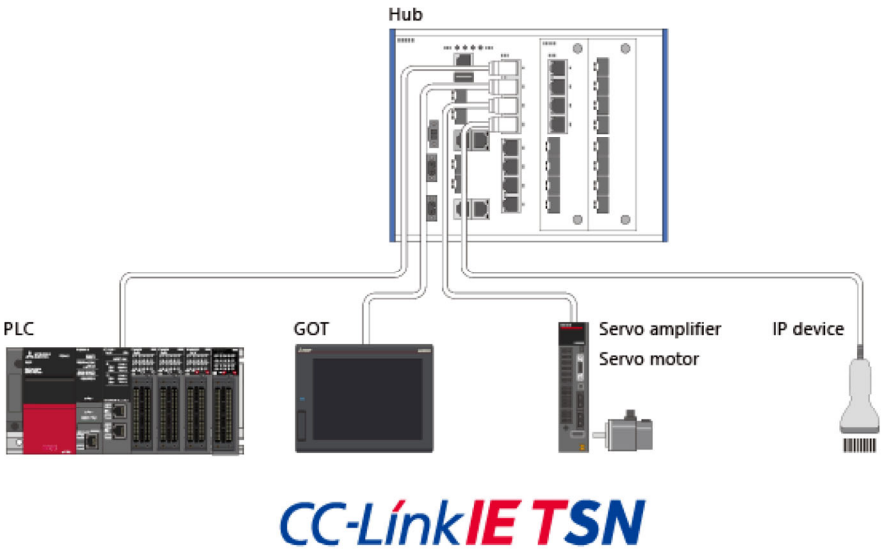
1.2.3 Serial communication connection

PLC devices are monitored by connecting the GOT to the serial communication module or computer link module mounted with the PLC.
Multiple GOTs can be connected depending on the type of the serial communication module or computer link module mounted with the PLC.



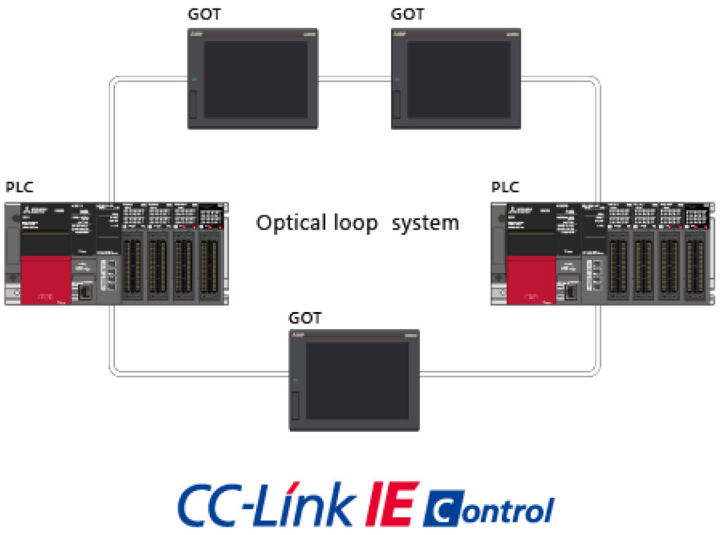
1.2.4 CC-Link IE TSN connection

The GOT is connected to the CC-Link IE TSN as a local station.
The GOT can monitor the cyclic data and devices of the master and local stations (except the GOT) on the CC-Link IE TSN.
A dedicated communication unit needs to be mounted on the GOT for the CC-Link IE TSN connection.



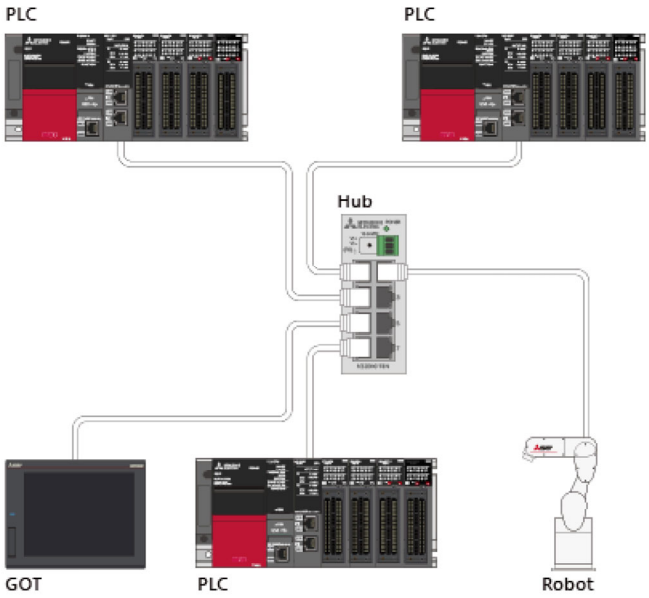
1.2.5 CC-Link IE Controller Network connection

The GOT is connected to the CC-Link IE Controller Network as a normal station.
The GOT can monitor the cyclic data and devices of master and local stations (except the GOT) on the CC-Link IE Controller Network.
A dedicated communication unit needs to be mounted on the GOT for the CC-Link IE Controller Network connection.



1.2.6 CC-Link IE Field Network connection

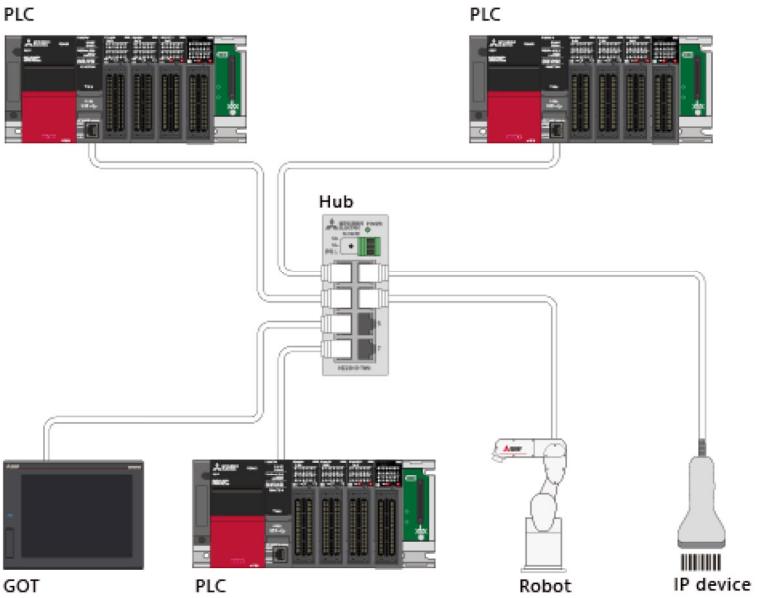
The GOT is connected to the CC-Link IE Field Network as an intelligent device station.
The GOT can monitor the cyclic data and devices of the master, local, and intelligent device stations on the CC-Link IE Field Network.
A dedicated communication unit needs to be mounted on the GOT for the CC-Link IE Field Network connection.



CC-Link IE Field

1.2.7 CC-Link IE Field Network Basic connection

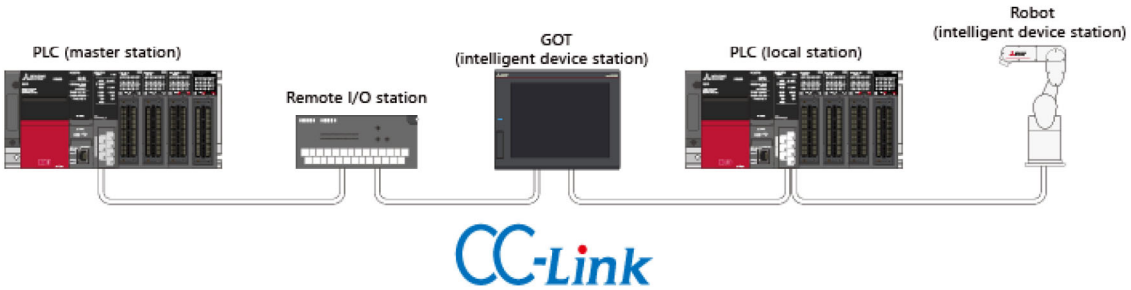
The GOT is connected to the CC-Link IE Field Network Basic as a slave station.
The GOT can perform cyclic communications with the controllers operating as the master stations on the CC-Link IE Field Network Basic.
Connect the GOT to the CC-Link IE Field Network Basic via the Ethernet interface built in the GOT.



CC-Link IE Field Basic

1.2.8 CC-Link connection

The GOT is connected to a network as an intelligent device station of the CC-Link system.
The GOT can monitor the cyclic data and devices of the master and local stations on the CC-Link network.
A dedicated communication unit needs to be mounted on the GOT for the CC-Link connection.

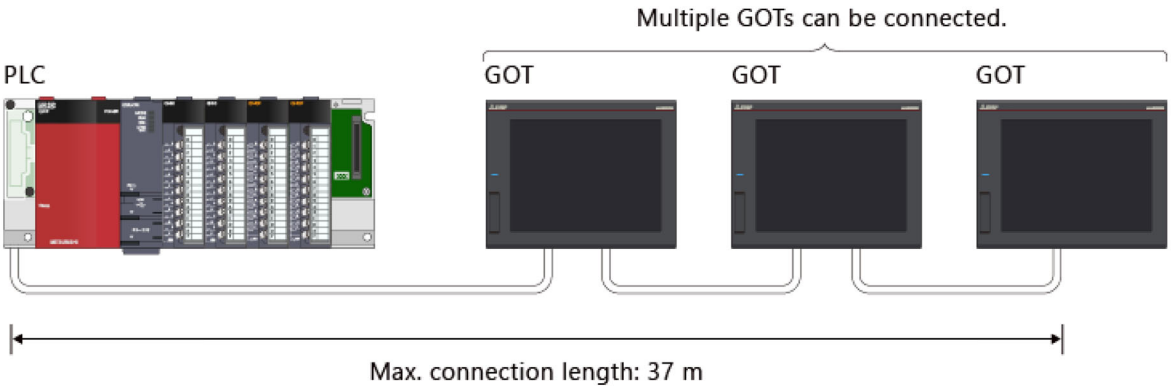


1.2.9 Bus connection

The GOT is connected using an extension connector of a base unit (connection by I/O bus).

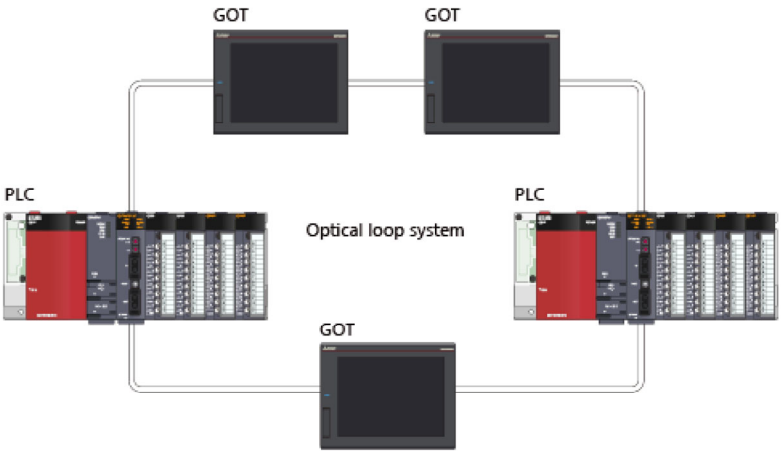
By occupying one stage of the extension base unit, up to five GOTs can be connected.[*1]

* 1: RCPU (High Performance model or models in higher class)



1.2.10 MELSECNET/H or MELSECNET/10 connection

The GOT is connected to the MELSECNET/H or MELSECNET/10 (PLC to PLC network) as a normal station.
The GOT can monitor the cyclic data and devices of normal stations (except the GOT) on the MELSECNET/H or MELSECNET/10 (PLC to PLC network).
A dedicated communication unit needs to be mounted on the GOT for the MELSECNET/H or MELSECNET/10 connection.



1.2.11 Connection to non-Mitsubishi Electric PLCs

The GOT can monitor the PLCs not manufactured by Mitsubishi Electric.
The following table lists the manufacturers of the connectable PLCs.
For details on the supported models, refer to the following.
• GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1 (SH-081198ENG)
• GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1 (SH-081199ENG)

Manufacturers of the connectable PLCs

As of September 2021
○: Connectable, ×: Not connectable

Manufacturer*1	GT27/GT25	GT21					
		GT2104-RTBD	GT2103-PMBD	GT2103-PMBDS	GT2103-PMBDS2	GT2103-PMBLS	GT2107-W
Mitsubishi Electric Corporation	○	○	○	○	○	○ MELSEC iQ-F and MELSEC-F only	○
OMRON Corporation	○	○	○	○	○	×	○
KEYENCE CORPORATION	○	○	○	○	○	×	○
KOYO ELECTRONICS INDUSTRIES CO., LTD.	○	×	×	×	×	×	×
Sharp Corporation	○	×	×	×	×	×	×
JTEKT Corporation	○	×	×	×	×	×	×
TOSHIBA CORPORATION	○	×	×	×	×	×	×
SHIBAURA MACHINE CO., LTD.	○	○	○	○	○	×	○
Hitachi Industrial Equipment Systems Co., Ltd.	○	×	×	×	×	×	×
Hitachi, Ltd.	○	×	×	×	×	×	×
FUJI ELECTRIC CO., LTD.	○	○	○	○	○	×	○
Panasonic Industrial Devices SUNX Co., Ltd.	○	○	○	○	○	×	○
YASKAWA Electric Corporation	○	○	○	○	○	×	○
Yokogawa Electric Corporation	○	×	×	×	×	×	×
Allen-Bradley (Rockwell Automation, Inc.)	○	○	○	○	○	×	○
GE Intelligent Platforms, Inc.	○	×	×	×	×	×	×
LS Industrial Systems Co., Ltd.	○	○	○	○	○	×	○
Mitsubishi Electric India Pvt. Ltd.	○	○	○	○	○	×	○
Schneider Electric SA	○	○	○	○	○	×	○
SICK AG	○	○	×	○	○	×	○
Siemens AG	○	○	○	○	○	×	○

1.3 Connection to devices other than PLCs

The GOT can be connected to devices other than PLCs.

(1) Microcomputer connection

Data in a personal computer, microcomputer board, PLC, or other devices can be written/read to/from the GOT virtual devices.

(2) Barcode reader connection

The data read with the barcode reader can be written to a PLC CPU.

(3) Temperature controller, inverter, servo amplifier, or CNC connection

Status monitoring using relevant monitor functions, parameter change, or other operations can be performed.

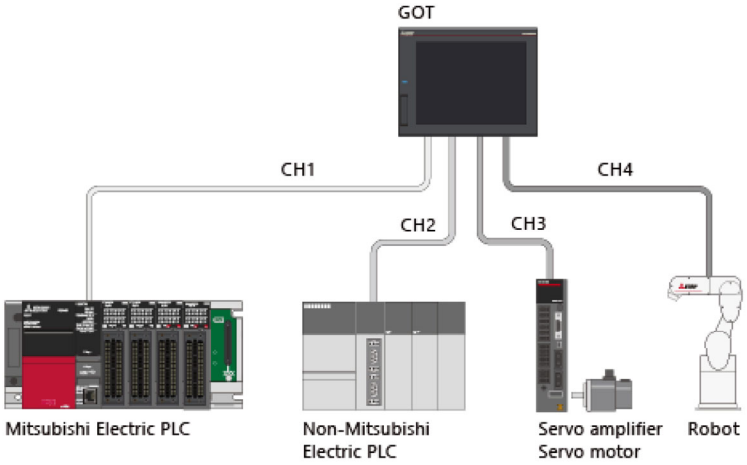
1.4 Multi-channel connection

The GOT supports various FA products and connection types. One GOT can monitor up to four channels* for FA products (PLC, servo amplifier, inverter, temperature controller, etc.).

* Up to two channels for GT21.

* GT2103-PMBLS is excluded.

To use the multi-channel connection, read the GOT2000 Series Connection Manual (Mitsubishi Electric Products), select products that comprise the system, and select the communication units to be mounted on the GOT.



1.5 Summary

In this chapter, we have learned the following lessons.

- Connectable devices
- Connection to PLC
- Connection to devices other than PLCs
- Multi-channel connection

Test Final Test

Now that you have completed all of the lessons of the **GOT2000 Basics (Connection Introduction)** course, you are ready to take the final test. If you are unclear on any of the topics covered, please take this opportunity to review those topics.

There are a total of 4 questions (5 items) in this Final Test.

You can take the final test as many times as you like.

Score results

The number of correct answers, the number of questions, the percentage of correct answers, and the pass/fail result will appear on the score page.

Test **Final Test 1**

Select the devices connectable to the GOT. Select all correct answers.

Q1

- PLC
- Inverter
- Printer
- Robot
- Barcode reader

Test **Final Test 2**

Select the GOT connection methods. Select all correct answers.

Q1

- [x] Ethernet connection
- [ ] Bluetooth connection
- [x] Direct CPU connection
- [x] CC-Link IE Field Network Basic connection

Test **Final Test 3**

Complete the following sentence that describes Ethernet connection.

A network can be configured using [Q1] such as hubs and cables.

Q1

- dedicated products
- commercially available products

Test **Final Test 4**

Complete the following sentence that describes multi-channel connection.

Multi-channel connection enables one GOT to monitor [Q1] ([Q2] for GT21) FA products.

Q1 up to four channels

Q2 up to two channels

Test **Test Score**

You have completed the Final Test. You results area as follows.
To end the Final Test, proceed to the next page

		1	2	3	4	5	6	7	8	9	10
	Final Test 1	✓									
	Final Test 2	✓									
	Final Test 3	✓									
	Final Test 4	✓	✓								

Total questions: **5**

Correct answers: **5**

Percentage: **100** %

Clear

You have completed the GOT2000 Basics (Connection Introduction) course.

Thank you for taking this course.

We hope you enjoyed the lessons and the information you acquired in this course will be useful in the future.

You can review the course as many times as you want.

Review

Close