

TECHNICAL BULLETIN
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[Issue No.] FA-A-0213

[Title] Production discontinuation of MELSEC-Q series ATA card, Q2MEM-16MBA

[Date of Issue] July 2016

[Relevant Models] Q2MEM-16MBA

Thank you for your continued support of Mitsubishi programmable controllers, MELSEC-Q series. Production of the MELSEC-Q series ATA card, Q2MEM-16MBA, will be discontinued.

The following lists the CPU modules used in this technical bulletin.

CPU module	Model
High Performance model QCPU	Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU
Process CPU	Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU
Redundant CPU	Q12PRHCPU, Q25PRHCPU
Universal model QCPU	Q02UCPU, Q03UDCPU, Q03UDECPU, Q04UDHCPU, Q04UDEHCPU, Q06UDHCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q13UDHCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q26UDHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU
High-speed Universal model QCPU	Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU

1. Model to be discontinued

Product	Model	Remarks
ATA card	Q2MEM-16MBA	Capacity: 16M bytes

2. Schedule

Transition to made-to-order: April 28, 2017

Order acceptance: Through June 30, 2017

Production discontinuation: July 31, 2017

3. Reason for discontinuation

Some parts of the memory card are now obsolete, and we will have difficulty to maintain our production system.

4. Repair support

Repair support period: Until July 31, 2024 (for seven years after the discontinuation of production)

5. Alternative models

It is difficult to develop interchangeable products for the above ATA card because some parts of the card are obsolete and the needs of the card in the market are now declining. Please use an SRAM card (Q2MEM-1MBS, Q2MEM-2MBS, Q3MEM-4MBS, or Q3MEM-8MBS) or the built-in memory of a CPU module (program memory, standard RAM, or standard ROM) as an alternative memory device (refer to Chapter 7).

6. Recommendable proposals

We recommend the following solutions for the production discontinuation of the Q2MEM-16MBA.

- (1) Purchase another or more Q2MEM-16MBA as a spare before the order acceptance date described in Chapter 2.**
- (2) Consider replacing a memory device from the Q2MEM-16MBA to an SRAM card or the built-in memory of a CPU module.**
- (3) If purchasing a new CPU module, purchase a High-speed Universal model QCPU.**
- (4) If the CPU module currently-used accesses the PLC user data file (***.CSV/BIN) stored in the Q2MEM-16MBA by using the SP.FREAD and SP.FWRITE instructions, take the following measures depending on the CPU module used.**

CPU module used	Description
• High Performance model QCPU • Process CPU • Universal model QCPU	Replace the CPU module used with a High-speed Universal model QCPU and store the PLC user data file in an SD memory card.
Redundant CPU	Purchase another or more Q2MEM-16MBA as a spare since the Redundant CPU cannot be replaced with a High-speed Universal model QCPU.

7. Alternative products

7.1 Alternative products for each CPU module type

(1) When a High Performance model QCPU, Process CPU, or Redundant CPU^{*3} is used

The following memory devices are available as alternatives.

Alternative product		Capacity	Battery backup
Q2MEM-16MBA		16M bytes	Not required
Built-in memory of a CPU module	Program memory	112K to 1008K bytes ^{*1}	Required
	Standard RAM	64K to 256K bytes ^{*1}	Required
	Standard ROM	112K to 1008K bytes ^{*1}	Not required
SRAM card	Q2MEM-1MBS	1M bytes	Required
	Q2MEM-2MBS	2M bytes	Required
	Q3MEM-4MBS ^{*2}	4M bytes	Required

*1 Capacity differs depending on the CPU module used.

*2 This card will be used with a CPU module with a serial number (first five digits) of "16021" or later, which was shipped in February 2014 or later. The serial number can be checked on the rating plate located on the side of the module.

*3 In a redundant CPU system, an error occurs if different memory devices are used in a control system and a standby system. Please use the same alternative memory device when performing the replacement.

(2) When a Universal model QCPU is used

The following memory devices are available as alternatives.

Alternative product		Capacity	Battery backup
Q2MEM-16MBA		16M bytes	Not required
Built-in memory of a CPU module	Program memory	80K to 4000K bytes ^{*1}	Not required
	Standard RAM	128K to 1792K bytes ^{*1}	Required
	Standard ROM	512K to 16384K bytes ^{*1}	Not required
SRAM card	Q2MEM-1MBS	1M bytes	Required
	Q2MEM-2MBS	2M bytes	Required
	Q3MEM-4MBS	4M bytes	Required
	Q3MEM-8MBS	8M bytes	Required

*1 Capacity differs depending on the CPU module used.

(3) When a High-speed Universal model QCPU is used

If the CPU module currently-used is replaced with a High-speed Universal model QCPU, the following memory devices will be available as alternatives.

Alternative product		Capacity	Battery backup
Q2MEM-16MBA		16M bytes	Not required
Built-in memory of a CPU module	Program memory	120K to 1040K bytes ^{*1}	Not required
	Standard RAM	192K to 1280K bytes ^{*1*2}	Required
	Standard ROM	1025.5K to 4102K bytes ^{*1}	Not required
SD memory card	NZ1MEM-2GBSD	2G bytes	Not required
	NZ1MEM-4GBSD	4G bytes	Not required
	NZ1MEM-8GBSD	8G bytes	Not required
	NZ1MEM-16GBSD	16G bytes	Not required

*1 Capacity differs depending on the CPU module used.

*2 The use of an extended SRAM cassette increases the standard RAM capacity (up to 8M bytes).

7.2 Files that can be stored in alternative memory devices

(1) When a High Performance model QCPU, Process CPU, or Redundant CPU is used

Files in the Q2MEM-16MBA can be stored in the following alternative memory devices.

O: Storable, x: Not storable

File	File name and extension	Program memory	Standard RAM	Standard ROM	SRAM card
Parameter	PARAM.QPA	O	x	O	O
Intelligent function module parameter	IPARAM.QPA	O	x	O	O
Program	***.QPG	O	x	O	O
Device comment	***.QCD	O	x	O	O
Initial device value	***.QDI	O	x	O	O
Boot setting file	AUTOEXEC.QBT	O	x	O	O
Remote password	00000000.QTM	O	x	O	O
PLC user data ^{*1}	***.CSV/BIN	x	x	x	x
Label program	PROJINFO.CAB	O	x	O	x

*1 If the CPU module currently-used stores the PLC user data file (***.CSV/BIN) in the Q2MEM-16MBA, take the following measures depending on the CPU module used.

CPU module used	Description
<ul style="list-style-type: none"> High Performance model QCPU Process CPU 	Replace the CPU module used with a High-speed Universal model QCPU and store the PLC user data file in an SD memory card.
Redundant CPU	Purchase another or more Q2MEM-16MBA as a spare since the Redundant CPU cannot be replaced with a High-speed Universal model QCPU.

(2) When a Universal model QCPU is used

Files in the Q2MEM-16MBA can be stored in the following alternative memory devices.

○: Storable, ×: Not storable

File	File name and extension	Program memory	Standard RAM	Standard ROM	SRAM card
Parameter	PARAM.QPA	○	×	○	○
Intelligent function module parameter	IPARAM.QPA	○	×	○	○
Program	***.QPG	○	×	○	○
Device comment	***.QCD	○	×	○	○
Initial device value	***.QDI	○	×	○	○
Boot setting file	AUTOEXEC.QBT	○	×	○	○
Remote password	00000000.QTM	○	×	○	○
Backup data file	MEMBKUP0.QBP	×	×	×	○
PLC user data	***.CSV/BIN	×	×	○ ^{*1}	×
Symbolic information	SRCINF**.CAB	○	×	○	○
Drive heading	QN.DAT	○	×	○	○

*1 The file can no longer be accessed by using the SP.FREAD and SP.FWRITE instructions. If the CPU module accesses the file stored in the Q2MEM-16MBA by using these instructions, replace the CPU module with a High-speed Universal model QCPU, and store the file in an SD memory card.

(3) When a High-speed Universal model QCPU is used

Files in the Q2MEM-16MBA can be stored in the following alternative memory devices.

○: Storable, ×: Not storable

File	File name and extension	Program memory	Standard RAM	Standard ROM	SRAM card
Parameter	PARAM.QPA	○	○	○	○
Intelligent function module parameter	IPARAM.QPA	○	○	○	○
Program	***.QPG	○	○	○	○
Device comment	***.QCD	○	○	○	○
Initial device value	***.QDI	○	○	○	○
Boot setting file	AUTOEXEC.QBT	○	○	○	○
Remote password	00000000.QTM	○	○	○	○
Backup data file	MEMBKUP0.QBP	×	×	×	○
PLC user data	***.CSV/BIN	×	×	○ ^{*1}	○
Symbolic information	SRCINF**.C32	○	○	○	○
Drive heading	QN.DAT	○	○	○	○

*1 The file can no longer be accessed by using the SP.FREAD and SP.FWRITE instructions. If the CPU module accesses the file stored in the Q2MEM-16MBA by using these instructions, store the file in an SD memory card.

8. Alternative methods**8.1 To use the memory device for boot operation**

Please consider either of the following alternative methods.

- Replace the Q2MEM-16MBA with an SRAM card (or an SD memory card when a High-speed Universal model QCPU is used).
- Move the file used for boot operation to the program memory or standard ROM in the CPU module.

8.2 To use the memory device for storing the PLC user data file (*.CSV/BIN) and access the file by using the SP.FREAD and SP.FWRITE instructions****(1) When a High Performance model QCPU, Process CPU, Redundant CPU, or Universal model QCPU is used**

Replace the CPU module (High Performance model QCPU, Process CPU, or Universal model QCPU) with a High-speed Universal model QCPU and store the PLC user data file in an SD memory card. Since the Redundant CPU cannot be replaced with a High-speed Universal model QCPU, purchase another or more Q2MEM-16MBA as a spare.

(2) When a High-speed Universal model QCPU is used

Replace the Q2MEM-16MBA with an SD memory card.

8.3 To use the CPU module change function with memory card**(1) When a Universal model QCPU is used**

Replace the Q2MEM-16MBA with an SRAM card. To hold data in the SRAM card when it is removed from the CPU module, perform battery backup of the card. If the battery-backed-up files are to be stored for a long time, read out the files from the SRAM card by using the programming tool and store them so that the data will not be erased due to running out of battery.

(2) When a High-speed Universal model QCPU is used

Replace the Q2MEM-16MBA with an SD memory card.

8.4 To move files, such as setting files and program files, from one CPU module to another**(1) When a High Performance model QCPU, Process CPU, Redundant CPU, or Universal model QCPU is used**

Please consider either of the following alternative methods.

- Replace the Q2MEM-16MBA with an SRAM card.
 - To hold the data in files, back up the data in the SRAM card using a battery. If the files are to be stored for a long time, read out the files from the SRAM card by using the programming tool and store them so that the data will not be erased due to running out of battery.
- Read files from the source CPU module to a personal computer using the programming tool, and store the files in a medium such as an SD memory card to move them.
 - Write the files from the personal computer to the destination CPU module using the programming tool.

(2) When a High-speed Universal model QCPU is used

Replace the Q2MEM-16MBA with an SD memory card.

9. Precautions

To store and use the files in the Q2MEM-16MBA in an alternative memory device, the following setting changes are required because the memory type (drive number) where the files are stored will change.

9.1 When the storage location of the initial device value file is changed

Check the "Device Initial Value" setting of the "PLC File" tab in PLC parameter. If the memory device in the "Corresponding Memory" field differs from the actual storage location of the file, change the setting.

9.2 When the storage location of the device comment file is changed

Check the "Comment File Used in a Command" setting of the "PLC File" tab in PLC parameter. If the memory device in the "Corresponding Memory" field differs from the actual storage location of the file, change the setting.

9.3 When the storage location of the boot setting file is changed

Check the settings of the "Boot File" tab in PLC parameter. If the memory device in the "Transfer from" field differs from the actual storage location of the file, change the setting.

9.4 When the storage location of the parameter file is changed

When a High Performance model QCPU, Process CPU, or Redundant CPU is used, the storage location (parameter-valid drive) of the parameter file is set by the DIP switches. Set the DIP switches, SW2 and SW3, to the correct storage location of the parameter file.

SW2	SW3	Parameter-valid drive
Off	Off	Program memory (Drive 0)
On	Off	SRAM card (Drive 1)
Off	On	Flash card/ATA card (Drive 2)
On	On	Standard ROM (Drive 4)

When a Universal model QCPU is used, the parameter-valid drive is automatically detected. Therefore, no switch setting change is required.

9.5 When the file storage location is specified in the instruction used in the program

If any of the following instructions is used in the program executed by the High Performance model QCPU, Process CPU, Redundant CPU, or Universal model QCPU, check if the storage location of the file specified in the instruction has not been changed. If changed, change the storage location (drive number) in the instruction as well. (Note that only the drive number "2" can be specified in the SP.FREAD and SP.FWRITE instructions.)

Instruction	Description	Remarks
QCDSET, QCDSETP	Setting comment file	-
PLOADP	Loading program from memory card	-
PSWAPP	Loading and unloading	-
SP.FREAD, SP.FWRITE	Reading/writing data from/to the PLC user data file (***.CSV/BIN)	Refer to Section 9.7.

For details, refer to the MELSEC-Q/L Programming Manual (Common Instructions).

9.6 For data backup when the power is turned off

To use the standard RAM as an alternative memory device, perform battery backup of the CPU module to hold data when the power is turned off.

Battery backup of the CPU module is also required to use the program memory as an alternative device when a High Performance model QCPU, Process CPU, or Redundant CPU is used.

To use the SRAM card as an alternative memory device, perform battery backup of the SRAM card to hold data when the power is turned off.

For details, refer to the QCPU User's Manual (Hardware Design, Maintenance and Inspection).

9.7 When the storage location of the PLC user data file (*.CSV/BIN) is changed**

If the PLC user data file (***.CSV/BIN) is stored in the standard ROM, it can no longer be accessed by using the SP.FREAD and SP.FWRITE instructions.

In the case that the CPU module currently-used accesses the PLC user data file (***.CSV/BIN) stored in the Q2MEM-16MBA by using these instructions, take the following measures depending on the CPU module used.

CPU module used	Description
<ul style="list-style-type: none">• High Performance model QCPU• Process CPU• Universal model QCPU	Replace the CPU module used with a High-speed Universal model QCPU and store the PLC user data file in an SD memory card.
Redundant CPU	Purchase another or more Q2MEM-16MBA as a spare since the Redundant CPU cannot be replaced with a High-speed Universal model QCPU.

If the CPU module cannot be replaced for any reason, purchase another or more Q2MEM-16MBA as a spare before the order acceptance date described in Chapter 2.