# TECHNICAL BULLETIN


**[Title]** Production discontinuation of the MELSEC-Q series Flash card, Q2MEM-2MBF
**[Date of Issue]** December 2013
**[Relevant Models]** Q2MEM-2MBF

Thank you for your continued support of Mitsubishi programmable controllers, MELSEC-Q series.
Production of the MELSEC-Q series Flash card, Q2MEM-2MBF, will be discontinued.
As we have already informed in the technical bulletin, FA-A-0154, production of the Q2MEM-4MBF will also be discontinued on March 15, 2014.

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, Q03UDVCPU, Q03UDECPU, Q04UDHCPU, Q04UDVCPU, Q04UDEHCPU, Q06UDHCPU, Q06UDVCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q13UDHCPU, Q13UDVCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q26UDHCPU, Q26UDVCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU |
| High-speed Universal model QCPU | Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU |

**1. Model to be discontinued**

| Product | Model | Remarks |
|---|---|---|
| Flash card | Q2MEM-2MBF | Capacity: 2M bytes |

**2. Schedule**

Transition to made-to-order: September 15, 2014
Order acceptance: Through November 15, 2014
Production discontinuation:December 15, 2014

**3. Reasons for discontinuing production**

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

**4. Repair acceptance**

Repair acceptance: Through December 15, 2021 (for 7 years after production discontinuation)

**5. Alternative models**

It is difficult to develop interchangeable products for the above Flash 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).

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**6. Recommendable proposals**

We recommend the following solutions for the production discontinuation of the Q2MEM-2MBF.

(1) Purchase another or more Q2MEM-2MBF as a spare before the order acceptance date described in Chapter 2.

(2) Consider replacing a memory device from the Q2MEM-2MBF 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.

**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.

| Item | | | Capacity | Battery backup |
|---|---|---|---|---|
| Product | Q2MEM-2MBF | | 2M bytes | Not required |
| Alternative product | 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: The currently available CPU modules do not support this card. It will be used with CPU modules with a serial number (first five digits) of "16021" or later, which will be available in the market after February 2014. Please consider replacing your CPU module. 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 (except a High-speed Universal model QCPU) is used
The following memory devices are available as alternatives.

| Item | | | Capacity | Battery backup |
|---|---|---|---|---|
| Product | Q2MEM-2MBF | | 2M bytes | Not required |
| Alternative product | 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.

| Item | | | Capacity | Battery backup |
|---|---|---|---|---|
| Alternative product | 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 | L1MEM-2GBSD | 2G bytes | Not required |
| | | L1MEM-4GBSD | 4G 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-2MBF can be stored in the following alternative memory devices.

○: Storable, ×: Not storable, △: Storable (only 1 file)

| 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 | ○ | × | ○ | ○ |
| File register | ***.QDR | × | △ | × | ○ |
| Boot setting file | AUTOEXEC.QBT | ○ | × | ○ | ○ |
| Remote password | 00000000.QTM | ○ | × | ○ | ○ |

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

Files in the Q2MEM-2MBF can be stored in the following alternative memory devices.

○: Storable, ×: Not storable, △: Storable (only 1 file)

| 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 | ○ | × | ○ | ○ |
| File register | ***.QDR | × | △ | × | ○ |
| Boot setting file | AUTOEXEC.QBT | ○ | × | ○ | ○ |
| Remote password | 00000000.QTM | ○ | × | ○ | ○ |
| Backup data | MEMBKUP0.QBP | × | × | × | ○ |
| Drive heading | QN.DAT | ○ | △ | ○ | ○ |

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

Files in the Q2MEM-2MBF can be stored in the following alternative memory devices.

○: Storable, ×: Not storable

| File | File name and extension | Program memory | Standard RAM | Standard ROM | SD memory card |
|---|---|---|---|---|---|
| Parameter | PARAM.QPA | ○ | ○ | ○ | ○ |
| Intelligent function module parameter | IPARAM.QPA | ○ | ○ | ○ | ○ |
| Program | ***.QPG | ○ | ○ | ○ | ○ |
| Device comment | ***.QCD | ○ | ○ | ○ | ○ |
| Initial device value | ***.QDI | ○ | ○ | ○ | ○ |
| File register | ***.QDR | × | ○ | × | × |
| Boot setting file | AUTOEXEC.QBT | ○ | ○ | ○ | × |
| Remote password | 00000000.QTM | ○ | ○ | ○ | ○ |
| Backup data file | MEMBKUP0.QBP | × | × | × | ○ |
| Drive heading | QN.DAT | ○ | ○ | ○ | ○ |

**8. Alternative methods**

**8.1 To use the memory device for boot operation**

Please consider either of the following alternative methods.

- Replace the Q2MEM-2MBF 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 of the CPU module.

**8.2 To store a file register file**

Create a file register file in an SRAM card or the standard RAM. (With a Universal model QCPU or a High-speed Universal model QCPU, a file register file can be created only in the standard RAM.) To hold data in the SRAM card or the standard RAM when power is turned off, perform battery backup. If not performed, initialize the file register file with initial device values.

**8.3 To use the CPU module change function with memory card**

When a Universal model QCPU (except a High-speed Universal model QCPU) is used, replace the Q2MEM-2MBF 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, copy and store the files in a personal computer so that the data will not be erased due to running out of battery.

When a High-speed Universal model QCPU is used, replace the Q2MEM-2MBF 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 (except a High-speed Universal model QCPU) is used

Please consider either of the following alternative methods.

- Replace the Q2MEM-2MBF with an SRAM card.
  To hold the data in files, perform battery backup of the SRAM card.
- Read files from the source CPU module to the personal computer using a 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 a programming tool.

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

Replace the Q2MEM-2MBF with an SD memory card.

**9. Precautions**

To store and use the files in the Q2MEM-2MBF 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 file register file is changed**

Check the "File Register" 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 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.

**9.3 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.

**9.4 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.

**9.5 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 |
| On | Off | SRAM card |
| Off | On | Flash card/ATA card |
| On | On | Standard ROM |

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

**9.6 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, 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.

- QDRSET, QDRSETP: Setting file register file
- QCDSET, QCDSETP: Setting comment file
- PLOADP: Loading program from memory card
- PSWAPP: Loading and unloading

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

**9.7 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 standard RAM 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).