MITSUBISHI ELECTRIC

Changes for the Better

for a greener tomorrow eco Changes

Mitsubishi Programmable Controllers MELSEC-A/QnA Series Transition Guide

From MELSEC-A/QnA Series to

MELSEC-Q Series

A-Q

Comprehensive, risk-free upgrade solutions

Feb. 2015 Edition

From MELSEC-A/QnA Series

➡ MELSEC-Q Series

Supporting A/QnA Series Upgrades

Mitsubishi Electric offers a carefully engineered combination of hardware, software, and support designed to allow you to upgrade legacy MELSEC-AnS/QnAS Series controller systems to the current MELSEC-L/Q Series with minimum disruption to your plant operations.

Upgrade Option

This catalog uses the following terms unless otherwise noted.
- A/QnA Series: Abbreviation for large types of MELSEC-A Series and MELSEC-QnA Series programmable controllers
- Q Series: Abbreviation for MELSEC-Q Series Programmable controller
- AnS/QnAS Series: Abbreviation for small types of MELSEC-A Series and MELSEC-QnA Series programmable controllers

At-a-glance technical overview

Technical Bulletin

		〈Date of discontinuation〉	〈Technical bulletin No.〉
Large type A/QnA Series			
A/QnA (large type)	●CPU module	End of Sep. 2006	T99-0050
	●I/O module	End of Sep. 2006	T99-0050
	●Special function module	End of Sep. 2006	T99-0050
	●Data link module (MELSECNET(II), MELSECNET/B module, etc.)	End of Sep. 2006	T99-0050
	●MELSEC-I/OLINK master module	End of Sep. 2006	T99-0050
	●MELSECNET/MINI-S3 master module	End of Sep. 2008	T99-0050
	●Network module (MELSECNET/10)	End of Sep. 2014	FA-A-0141
A2C Series			
A2C	●CPU module	End of Sep. 2006	T99-0050
	●A2C I/O module	End of Sep. 2008	T99-0070
	●Special function module etc.	End of Sep. 2008	T99-0070
Network interface board			
MELSECNET(II), MELSECNET/B	●MELSECNET(II), MELSECNET/B interface board	End of Sep. 2008	T99-0049
A0J2(H) Series			
A0J2(H)	●CPU module	End of Sep. 2008	T99-0069
	●Power supply module	End of Sep. 2008	T99-0069
	●I/O module	End of Sep. 2008	T99-0069
	●Special function module etc.	End of Sep. 2008	T99-0069
Remote I/O module			
Remote I/O module	●MELSECNET/MINI-S3 I/O module	End of Sep. 2008	T99-0070
	●MELSEC-I/OLINK I/O module	End of Sep. 2014	FA-A-0142

Please refer to the Technical Bulletin "Repair acceptance of discontinued models (FA-A-0049)" for the repair acceptance period of the above discontinued products.

In-depth technical documentation resource

Transition Handbook

Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook

- Fundamentals L(NA)08043ENG
- Intelligent Function Modules L(NA)08046ENG

Transition from MELSEC-A/QnA (Large Type) Series, AnS/QnAS (Small Type) Series to Q Series Handbook

- Network Modules L(NA)08048ENG
- Communication Modules L(NA)08050ENG

Transition from MELSEC-A0J2H Series to Q Series Handbook

L(NA)08060ENG

Transition from MELSECNET/MINI-S3, A2C (I/O) to CC-Link Handbook

L(NA)08061ENG

Transition from MELSEC-I/OLINK to AnyWire DB A20 Handbook

L(NA)08263ENG

Transition from MELSEC-I/OLINK to CC-Link/LT Handbook

L(NA)08062ENG

Transition of CPUs in MELSEC Redundant System Handbook (Transition from Q4ARCPU to QnPRHCPU)

L(NA)08117ENG

MELSEC-A/QnA (Large), AnS/QnAS (Small)Transition Examples

L(NA)08121ENG

- For the products shown in handbooks for transition, catalogs, and transition examples, refer to the manuals for the relevant products and check the detailed specifications, precautions for use, and restrictions before replacement.
  For the products manufactured by Mitsubishi Electric Engineering Co., Ltd., Mitsubishi Electric System & Service Co., Ltd., and other companies, refer to the catalog for each product and check the detailed specifications, precautions for use, and restrictions before use.
  The manuals and catalogs for our products, products manufactured by Mitsubishi Electric Engineering Co., Ltd., and Mitsubishi Electric System & Service Co., Ltd., are shown in Appendix of each handbook for transition.
- Products shown in this handbook are subject to change without notice.

A/QnA -> Q Conversion Support Tool*1

Minimize program conversion efforts by A/QnA -> Q Conversion Support Tool

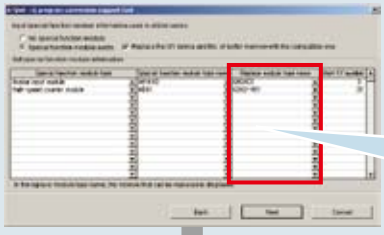
A/QnA -> Q Conversion Support Tool

■Complete conversion from A/QnA program to Q program is supported by this tool.
It easily helps to find and correct non-completed conversion parts.

Convert A/QnA programs to Q programs
with the GX Developer's PLC Type Change function.

A/QnA program (Original project) → PLC Type Change **GX Developer***2 → Q program (Converted project)

Enter the configuration information on the existing A/QnA special function modules.



Point 1

●By specifying module names, the X/Y devices and buffer memory addresses are converted (when the programs are compatible)

A/QnA -> Q Conversion Support Tool

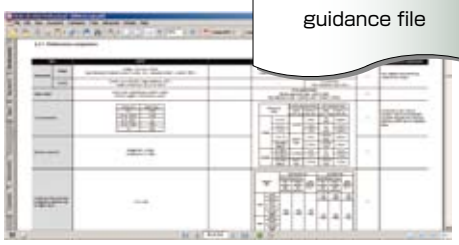
Output

Differences between the two programs and guidance on how to complete the conversion are displayed.

Differences between two programs

<See 1 on p. 8.>

HTML conversion guidance file



<See 2 on p. 9-10.>

Point 2

●No need to manually compare the existing program with the converted program!

Point 3

●A list of unconverted instructions and devices is displayed.
●Information on recommended products for unconvertible special function modules is displayed.

*1: This support tool applies to ladder programs only.
Conversion from AnS/Q2AS(H) programs to Q programs is also supported.
To perform PLC Type Change to an Universal model QCPU module, the version 1.06 or later is required.

*2: GX Developer does not support the PLC type change to High-speed Universal model QCPU.
Please change the PLC type by the following application and method.
①GX Developer: Convert PLC type to Universal model QCPU then save the project data.
②A/QnA -> Q Conversion Support Tool: Output "Differences between two programs" and "HTML conversion guidance file".
③GX Developer: Correct "Differences between two programs" referring to "HTML conversion guidance file".
④GX Works2: Open "Differences between two programs"(Project - Open Other data - Open Other project) and change the PLC type to High-speed Universal model QCPU.

Note: For the acquisition of A/QnA -> Q Conversion Support Tool, please contact your local Mitsubishi Electric sales office or sales representative.

A0J2 Conversion Support Function

■ACPU ladder programs, which are not supported by GX Developer, are converted into the GPPA format.

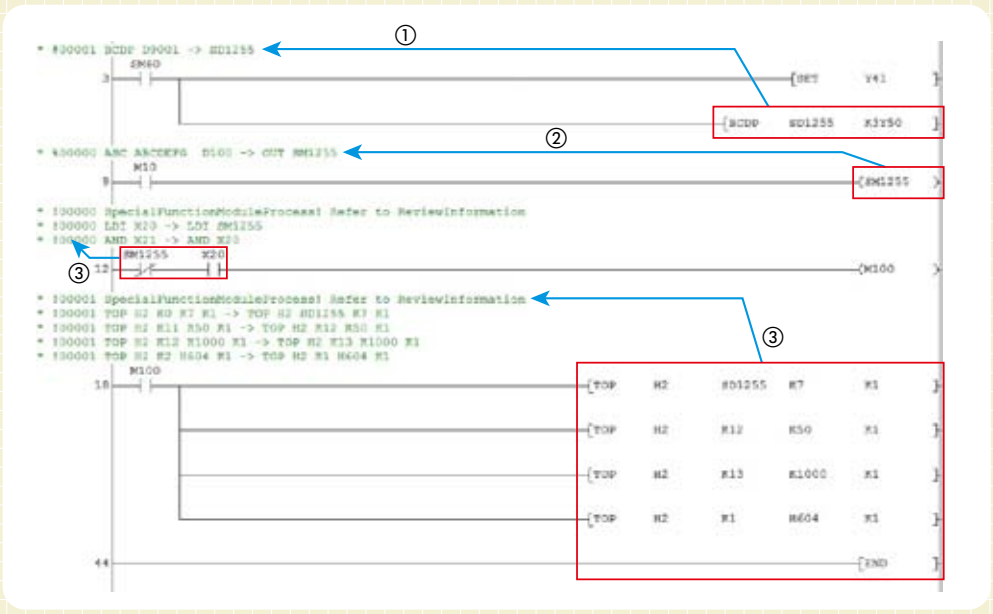
The ACPU ladder programs, which are not supported by GX Developer, are read and converted into the GPPA format, which are supported by GX Developer.

Convert the ACPU ladder programs, which are not supported by GX Developer, into the GPPA format and save.

*1: A0J2CPU, A1CPU, A2CPU, A52GCPU, A3CPU, A3VCPU, A73CPU, A3HCPU, A3MCPU

1 Q programs with differences highlighted

■The differences between two programs can be modified directly.
This prevents mistakes and improves the conversion efficiency.



<Differences highlighted>

①Statement for unconverted devices—#

The original device and a default device are displayed as shown below. Each ladder containing an uncovered device is displayed.

[Example] #00001 BCDP D9001 → SD1255 (#00001 is a search keyword from the guidance file.)

②Statement for unconverted instructions—%

The original instruction and a default instruction are displayed as shown below. Each ladder containing an uncovered instruction is displayed.

[Example] %00000 ASC ABCDEFG D100 → OUT SM1255 (%00000 is a search keyword from the guidance file.)

③Statement of special function module processes—!

For the special function module instructions (FROM, DFRO, TO, DTO and instructions using X/Y devices), a message requesting review is displayed. For the X/Y devices and buffer memory addresses, their original and modified statuses are displayed.

[Example] !00001 SpecialFunctionModuleProcess! Refer to ReviewInformation
(!00001 is a search keyword from the guidance file.)

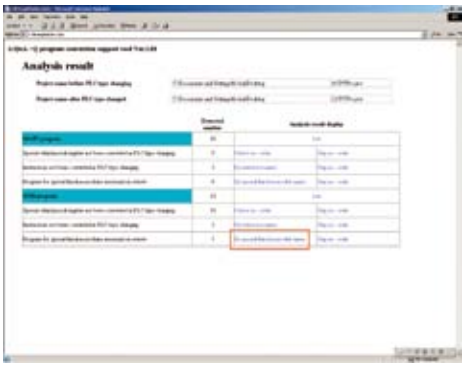
A/QnA -> Q Conversion Support Tool

2 HTML conversion guidance file

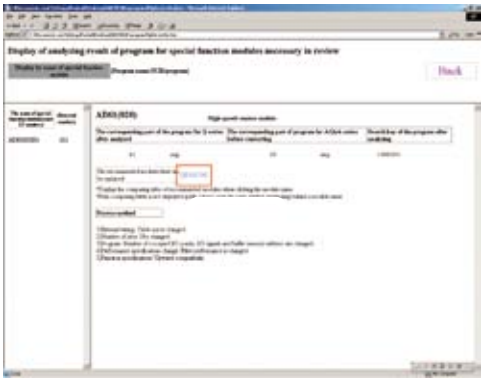
■Easy comparison of performance specifications before and after a replacement.

Detailed information is displayed hierarchically in your Internet Explorer. Information on the differences between the two programs and the conversion guidance file can be linked together.

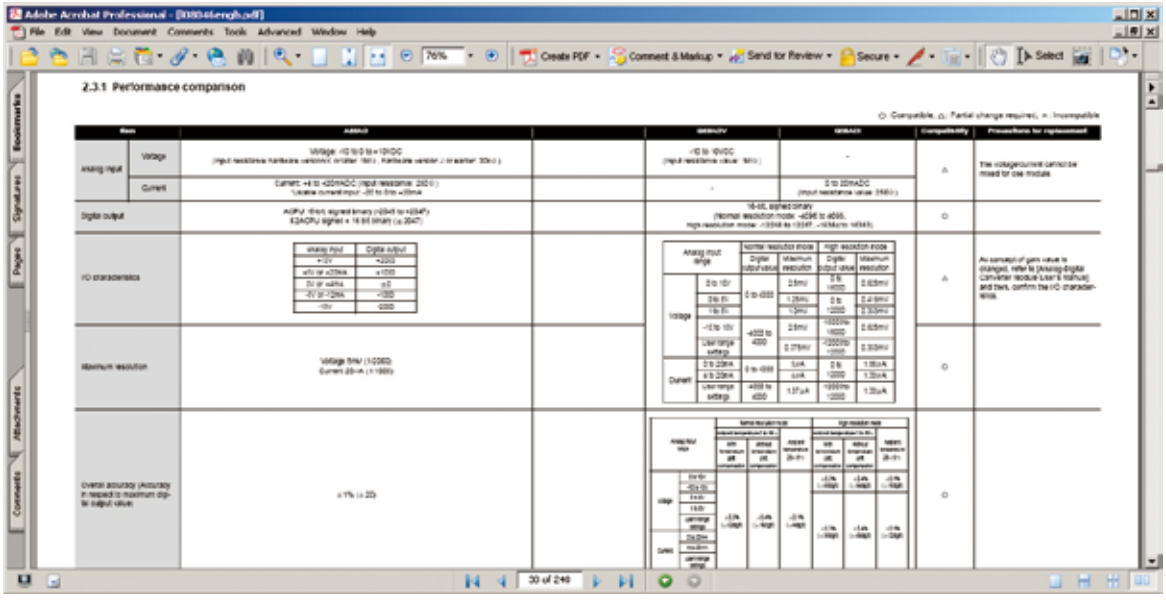
[Example] Special function module processes which need to be reviewed



Click "By special function module name" in the "Programs for special function modules necessary in review" row.



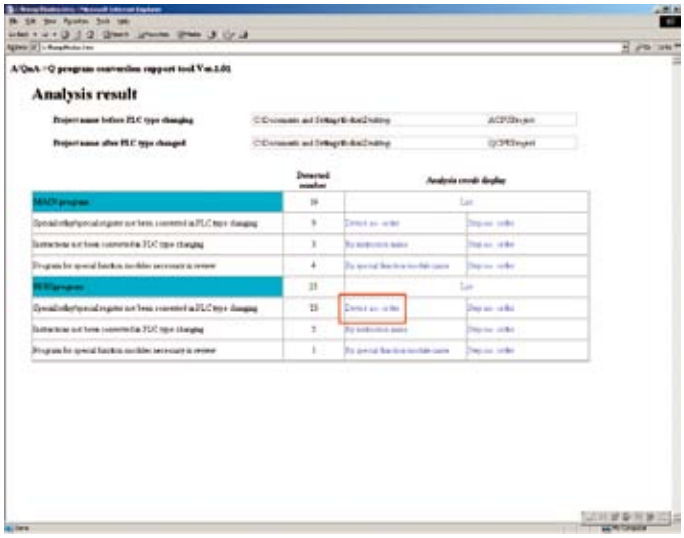
Click the recommended module name next to "The recommended modules that can be replaced."



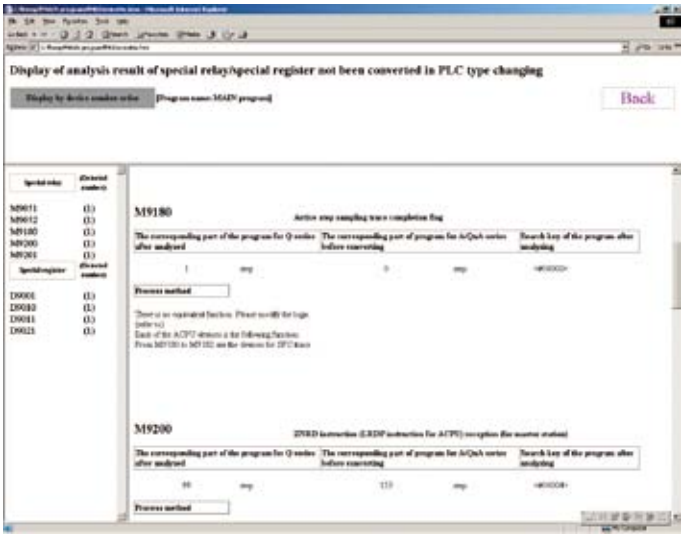
The module performance comparison can be confirmed.

■Details of unconverted special relays and registers can be displayed, improving conversion efficiency.

[Example] Special relays and registers which are not converted in the Q program



Click "Device no. order" in the "Special relay/special register not been converted in PLC type changing" row.



The modified contents can be confirmed.

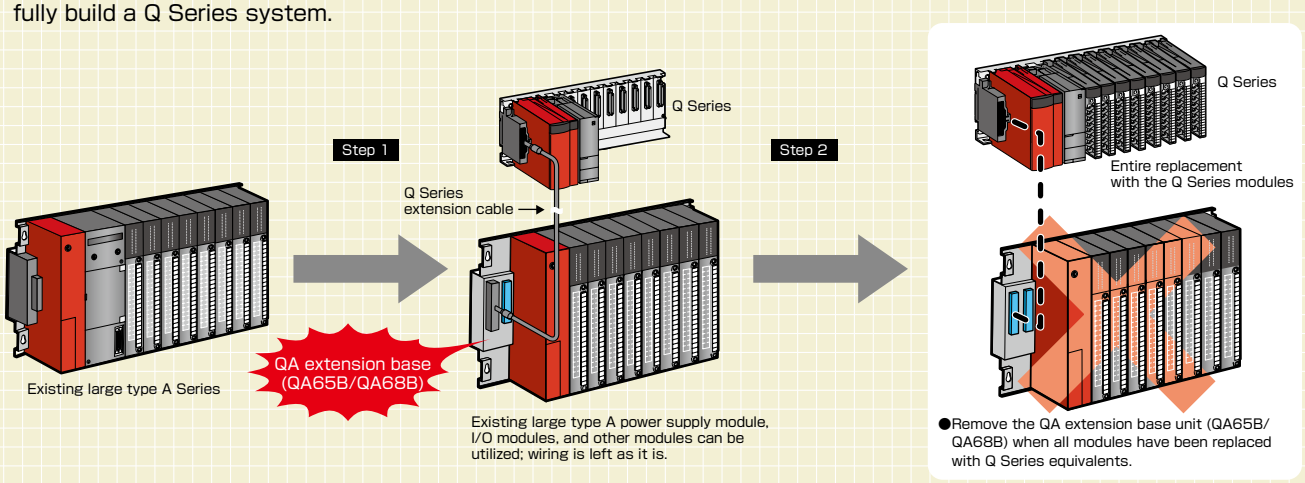
For Large Type A/QnA Series

QA Extension Base Unit (QA65B / QA68B)

Replace A/QnA Series CPU with Q Series CPU while keeping existing A/QnA Series modules

■Gradual transition from A/QnA Series to Q Series (Q mode).

●Construct a new system that is controlled by the Q Series CPU (Q mode) while keeping the existing large type A Series modules installed to a QA6□B extension base unit. The A/QnA Series modules can gradually be replaced to fully build a Q Series system.



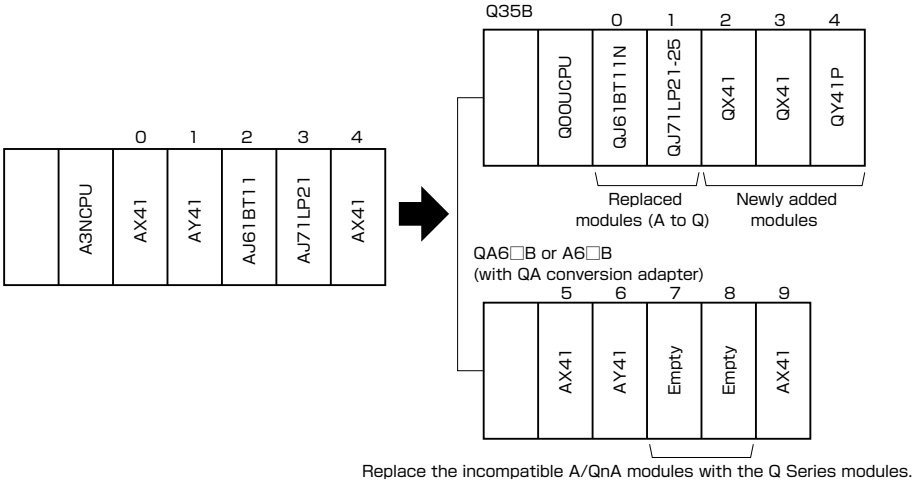
●The QA6□B extension base units are compatible with the High Performance model QCPUs, and Universal model QCPUs*1 (including High-speed Universal model QCPUs). Basic model QCPUs, process CPUs, redundant CPUs or remote I/O stations are not compatible.

●Please refer to the "QA65B/QA68B Extension Base Unit User's Manual (IB(NA)-0800158)" for details of modules that can be installed onto on the QA6□B extension base units.

*1: Universal model QCPU, whose first 5-digit serial number is 13102 or later, is compatible with the base unit.

■Reduce conversion effort by using the same I/O addresses

When reusing existing modules with a Q Series CPU, it is not required to change the I/O number of the existing modules. For new module(s) on the main base unit, assign a subsequent number that comes after the existing module numbers in the I/O assignment settings. This can greatly reduce the program modification time.

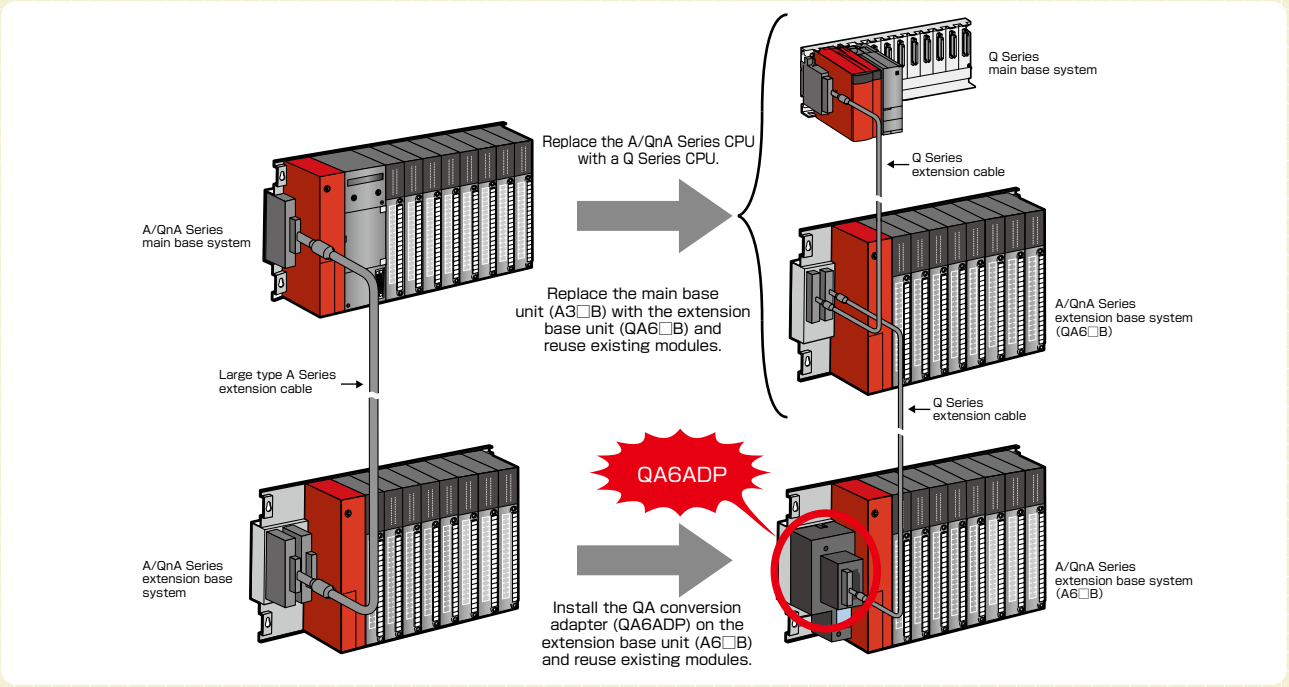


Replace the incompatible A/QnA modules with the Q Series modules.

QA Conversion Adapter (QA6ADP)

Replace the main base unit with the Q Series while keeping the existing A/QnA extension base unit

■Install a QA conversion adapter to use the existing A/QnA Series extension base units with a Q Series CPU.



Notes

- The QA6ADP adapter cannot be connected to a QA1S extension base unit, which is being used to hold small type AnS/Q2AS Series modules.
- The QA6ADP adapter is compatible with High Performance model QCPUs only. Basic model QCPUs, process CPUs, redundant CPUs, safety CPUs, Universal model QCPUs*1 (including High-speed Universal model QCPUs), and remote I/O stations are not compatible.
- Modules which can be installed to the extension base unit (A6□B) are the same as when QA6□B is used.
- An adapter module mounting bracket is required to install the QA6ADP adapter. Follow the instructions in the user's manual for the installation procedure.
- When an AC input module is installed on the "A5□B" extension base unit (without power supply) using the QA6ADP, either the "A6□B with QA6ADP" or "QA6□B" extension base unit (with power supply) is required in the system.

*1: Universal model QCPU, whose first 5-digit serial number is 13102 or later, is compatible with Adapter.

Note: Assign the I/O numbers in the following order: Q Series to A Series or A Series to Q Series.
When the order is mixed (i.e., Q Series → A Series → Q Series), an error will occur in the CPU.

■Example of I/O assignment

		Model	Type	Point	Address
Main base unit	0	QJ61BT11N	Intelli.	32 points	100
	1	QJ71LP21-25	Intelli.	32 points	120
	2	QX41	Input	32 points	140
	3	QX41	Input	32 points	160
	4	QY41P	Output	32 points	180

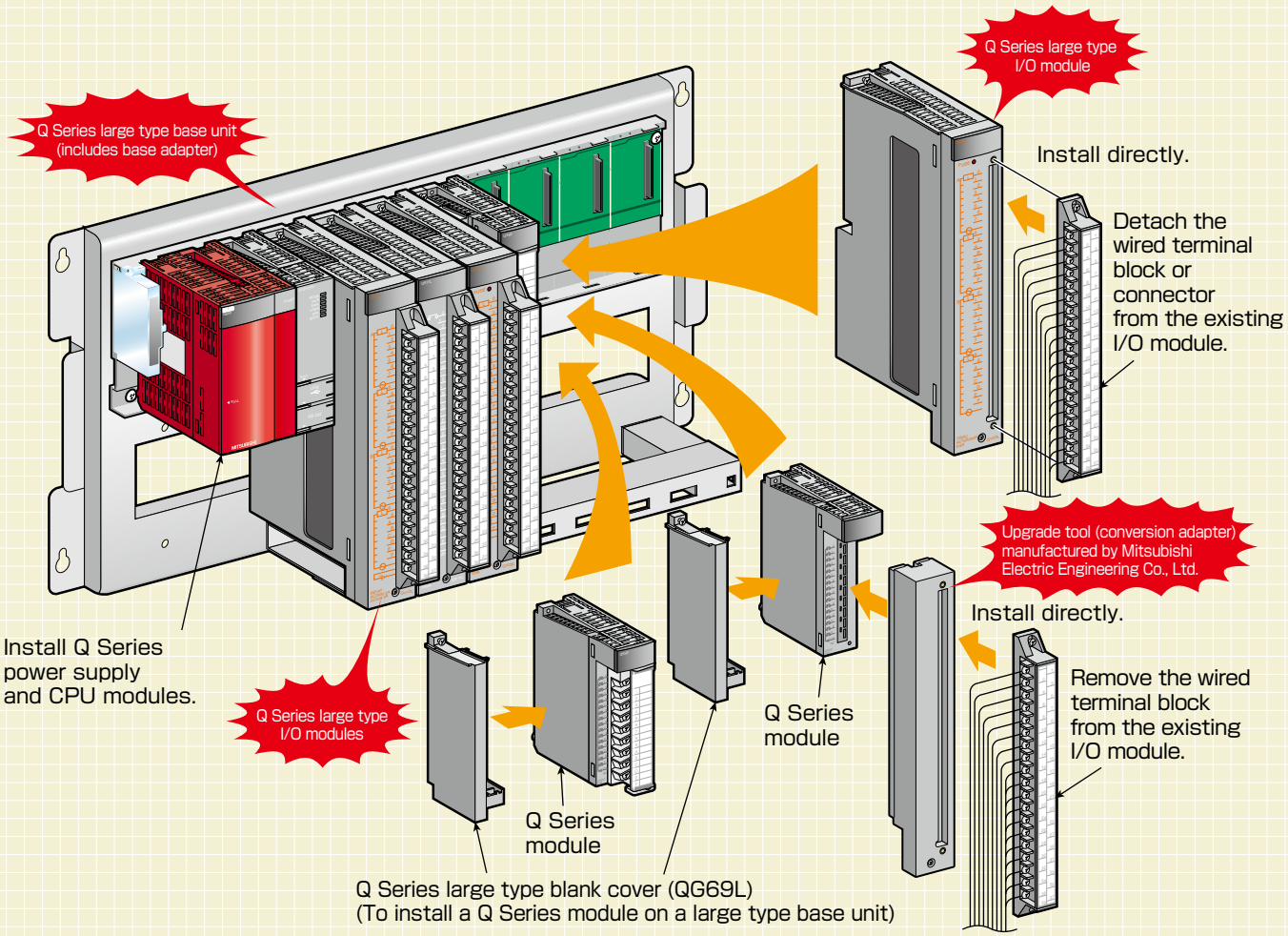
		Model	Type	Point	Address
Extension base unit	5	AX41	Input	32 points	00
	6	AY41	Output	32 points	20
	7	——	Empty	32 points	40
	8	——	Empty	32 points	60
	9	AX41	Input	32 points	80

Q Series Large Type Base Unit, I/O Module (Q38BL · Q35BL · Q68BL · Q65BL · Q55BL · QX11L · QX21L · QY11AL · QY13L · QY23L · QY51PL · QG69L)

Upgrade to Q Series with the existing 32-point I/O wiring

■Minimize wiring modifications by reusing the existing A Series 32-point I/O wiring.

■No need to make new installation holes. The hole size and pitch of the Q Series large type base units are the same as those of A/QnA Series.



·Q Series power supply and CPU modules can be used without any modification (Q Series large type blank cover is not necessary).

·Q Series large type I/O modules can be used with Q Series modules. (Some modules, such as the ones that occupy two slots, cannot be installed. For details, please refer to Q Series Large Type Base Unit User's Manual (IB-0800408).)

Notes

●Through the use of Upgrade Tool (manufactured by Mitsubishi Electric Engineering Co., Ltd., refer to page 15), terminal block modules that are not compatible with the Q Series large type I/O modules can be installed without rewiring.

●For compatibility of Q Series large type base unit and upgrade tool, refer to page 16.

■Q Series large type base units

Type	Model	Outline
Main base unit	Q38BL	8 slots, 1 power supply module required, Q Series large type I/O module supported
	Q35BL	5 slots, 1 power supply module required, Q Series large type I/O module supported
Extension base unit	Q68BL	8 slots, 1 power supply module required, Q Series large type I/O module supported
	Q65BL	5 slots, 1 power supply module required, Q Series large type I/O module supported
	Q55BL	5 slots, power supply module not required, Q Series large type I/O module supported

■Q Series large type I/O modules

Type	Model		Outline
	Existing A Series module	Q Series large type module	
Input module	AX11	QX11L	32 points; 100 to 120 V AC; rated input current: 10 mA (100 V AC, 60 Hz); response time: 15 ms or less (OFF to ON), 25 ms or less (ON to OFF); 32 points/common; 38-point terminal block
	AX21	QX21L	32 points; 200 to 240 V AC input; rated input current: 10 mA (220 V AC, 60 Hz); response time: 15 ms or less (OFF to ON), 25 ms or less (ON to OFF); 32 points/common; 38-point terminal block
Output module	AY10A AY11A	QY11AL	16-point contact output, 24 V DC/240 V AC, 2 A/point, 16 A/all points, all points independent, 38-point terminal block, surge suppressor (varistor 387 to 473 V)
	AY13	QY13L	32-point contact output, 24 V DC/240 V AC, 2 A/point, 5 A/common, 8 points/common, 38-point terminal block
	AY23	QY23L	32-point triac output, 100 to 240 V AC, 0.6 A/point, 2.4 A/common, 8 points/common, 38-point terminal block
	AY51 AY51-S1	QY51PL	32-point transistor output (Sink), 12/24 V DC, 0.5 A/point, 4 A/common, 16 points/common, 38-point terminal block
Q Series large type blank cover	—	QG69L	Blank cover for installing the existing Q Series module on the Q Series large type base unit

Note

●The Q Series large type base units and I/O modules are compatible with High Performance model QCPUs, Universal model QCPUs*1 (including High-speed Universal model QCPUs), and MELSECNET/H remote I/O stations.
The following CPUs and system are not compatible:
・Basic model QCPUs, process CPUs, redundant CPUs, and safety CPUs
・Q00UJCPU

*1: Universal model QCPU, whose first 5-digit serial number is 13102 or later, is compatible

A/Q Upgrade Tool/FA Goods
(manufactured by Mitsubishi Electric Engineering Co., Ltd.)

Replace A/QnA Series system with Q Series system without extensive I/O rewiring

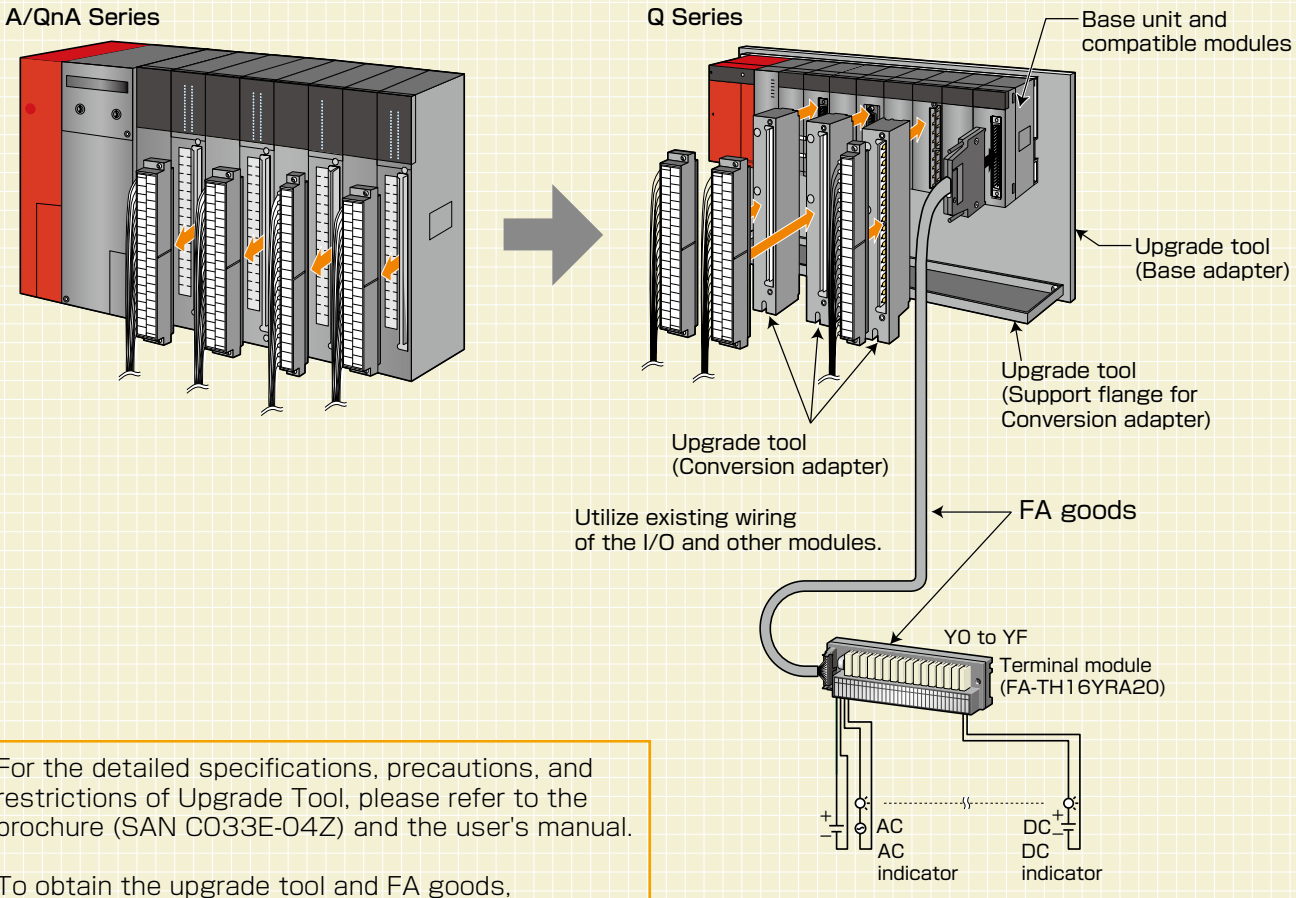
■Upgrade tool

The upgrade tool consists of three components: a conversion adapter, which modifies the existing wiring of the A/QnA Series input/output/analog/high-speed counter modules to correspond to the Q Series modules; a conversion adapter support flange, which supports the conversion adapters from the bottom, and a base adapter, which allows the Q Series base unit to be installed using the installation holes of the A/QnA Series base unit. (The upgrade tool does not include the Q Series base unit. Please prepare it separately.)

- Remove the large type A/QnA Series programmable controllers along with the base unit, install the base adapter in the same position, and install Q Series modules. (New installation holes are unnecessary when installing the base adapter)
- Attach the conversion adapters to the Q Series modules.
- Remove the terminal blocks from the existing large type A/QnA Series modules and attach them to the conversion adapters. (The existing wiring can be used without modification.)
- FA goods may be used for an I/O module that is not available in the Q Series.

■FA goods

FA goods are useful for system configuration with the Q Series modules. These goods consist of connector/terminal conversion module, terminal module, and positioning module cable, etc. FA goods can be used when a module replacement is not available because of the module's specification, etc.



When replacing the A/QnA Series I/O module with the Q Series I/O module, the FA goods connector/terminal conversion module and terminal module can also be used.

For the detailed specifications, precautions, and restrictions of Upgrade Tool, please refer to the brochure (SAN C033E-04Z) and the user's manual.

To obtain the upgrade tool and FA goods, please contact your local Mitsubishi Electric sales office or representative.

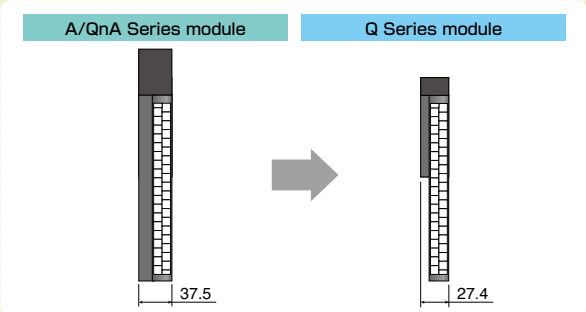
Compatibility of Q Series large type base unit and Upgrade Tool

■Compatibility of Q Series large base unit and Base Adapter/Conversion Adapter

Item			Q Series large type base unit*1	Base adapter/conversion adapter*2
Slot width of base unit*3			Same width as the large type A Series base unit (37.5 mm)	Same width as Q Series base unit (27.4 mm)
Installable module	Power supply module	Q Series power supply module	○	○
	CPU module	Basic model QCPU	×	○
		High Performance model QCPU	○	○
		Process CPU	×	○
		Universal model QCPU	○*4	○
	・I/O module ・Intelligent function module	Q Series large type I/O modules*5	○	×
		Q Series module (occupies 1 slot)	○*7	○
		Q Series module (occupies 2 slots)	×	○
Conversion adapter *6	For terminal block type 16-point I/O module (occupies 1 slot)		○*7	○
	For terminal block type 32-point I/O module (occupies 1 slot)		○*7	△*9
	For terminal block type 32-point I/O module (occupies 2 slots)		×	△*10
	For high-speed counter module		○*7	△*9
	For analog module (occupies 1 slot)		○*7	△*9
	For analog module (occupies 2 slots)		×	△*10
Connection of Q/QA/QA1S extension base unit*8			○	○

○: Applicable (installable)　△: Applicable with restrictions (installable)　×: Not Applicable (Not installable)

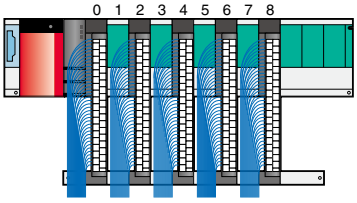
*1: Q Series large type base units can be used with Q Series base units.
*2: The base adapter manufactured by Mitsubishi Electric Engineering Co., Ltd. is to be installed to the Q Series base unit.
*3: Check the installation conditions before using the upgrade tool, because wiring space is reduced due to a decrease in the module's width.



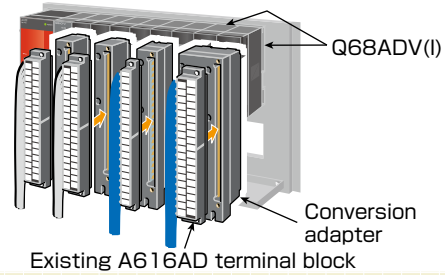
*4: Q00UJCPU is not compatible.
*5: The common terminal arrangement and electrical specifications are same as that of large type A Series I/O module.
*6: Since the conversion adapters are to be installed onto the Q Series modules, the specifications and functions are same as that of the Q Series modules. (Please check the transition handbook, since the specifications and functions are different from that of large type A Series module)
*7: Q Series large type blank cover (QG69L) is required. Some modules are not compatible. (Some exceeds 98 mm height.) For details, please refer to the Q Series Large Type Blank Cover User's Manual (IB-0800408).

Note: Universal model QCPU, whose first 5-digit serial number is 13102 or later, is compatible with the base units.

*8: High Performance model QCPUs and Universal model QCPUs[Note] (include High-speed Universal model QCPUs) can be connected to the QA/QA1S extension base unit.
*9: If the size of cable connected to the terminal block is larger than 1.25 mm², ERNT-AQTX41, AQTY41, AQTX81, AQTY81, AQT68AD, AQT68ADN, AQT68DA, and AQTD61 modules may have a difficulty in installation. In this case, secure wiring space by leaving empty slots in between modules. For example, install modules on slot No. 0, 2, 4, 6, 8, and leave slot No. 1, 3, 5, 7 empty. If the number of slots is insufficient, consider using the Q Series large type base unit.



*10: When using two Q Series modules with the existing wiring terminals using conversion adapters.
For example, when replacing an A616AD module with two Q68ADV(I) modules.



Module for Easy Replacement

A wide range of Q Series modules facilitate the replacement

■DC input module compatible with 6 mA rated input current

DC input modules compatible with 6 mA rated input current are available.
When replacing large type A Series modules and utilizing the external devices as they are, the existing Q Series modules may not receive signals sent from external devices, such as proximity sensors, due to incompatibility with low-rated input current, and thus, external resistors need to be installed.
With the QX41-S2 and QX81-S2 modules, which are compatible with 6 mA rated input current, external resistors are no longer required. (The existing external devices can be utilized after replacing modules.)

Comparison of QX41-S2/QX81-S2 with large type A/QnA Series modules

Item		Specification			
		A/QnA Series model		Q Series replacement model	
Model	Positive common type	AX41	AX42	QX41-S2*1	QX41
	Negative common type	AX81	AX82	QX81-S2*1	QX81
Number of input points		32	64	32	32
Rated input current	24 V DC	Approx. 10 mA	Approx. 7 mA	Approx. 6 mA	Approx. 4 mA
	12 V DC	Approx. 4 mA	Approx. 3 mA	(N/A)	(N/A)

*1 The pin arrangement is same as that of the existing A/Q Series connector type module.
Use Conversion Adapter manufactured by Mitsubishi Electric Engineering Co., Ltd. when replacing a large type A Series 32-point terminal block module.

■I/O combined module * A module with sequential I/O numbers

QX41Y41P's I/O assignment is the same as that of large type A Series I/O combined module, AH42. This module can be used as the I/O module on the programmable controller side when using A0J2 Upgrade Tool (manufactured by Mitsubishi Electric System & Service Co., Ltd., refer to page 23) to replace the A0J2(H)CPU.
It is not necessary to change the programs when replacing AH42 or A0J2(H)CPU. (Minimize the need to modify programs)

(QH42P)

	Input(X)	Output(Y)	
00 1F	X00 to X1F	Y00 to Y1F	32 points

Same I/O numbers are used for input and output

(AH42, QX41Y41P)

	Input(X)	Output(Y)	
00 1F	X00 to X1F	Blank	32 points
20 3F	Blank	Y20 to Y3F	32 points

Sequential I/O numbers are used for input and output

■High-speed counter module

These high-speed counter modules are used to replace the large type A Series high-speed counter modules (AD61 and AD61-S1) and have the same input filtering system and counting speed.
Modules can be replaced without being restrained by the specifications of existing pulse generators (e.g. an encoder).

Counting speed switch setting	A/QnA Series model	Q Series replacement model
50K PPS	AD61	QD62-H01
10K PPS	AD61-S1	QD62-H02

■Analog output positioning module

The positioning module realizes servo motor control with a high-resolution encoder, and is compatible with a 1 Mpps maximum input pulse (x10 compared to the conventional module).
Replace the positioning module while keeping the existing external devices such as servo amplifiers.

Positioning mode	A/QnA Series model	Q Series replacement model
Position control mode	AD70	QD73A1
Speed/position control switchover mode		

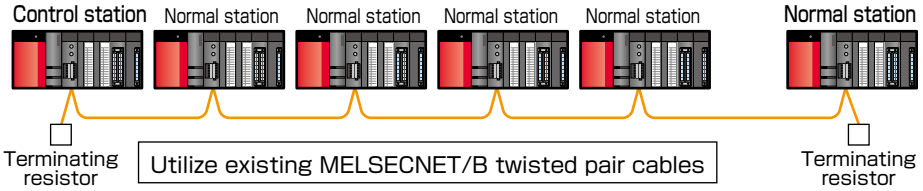
Note: The number of occupied points may differ between the existing and newly replacing modules.
If the number of occupied points differs, set the start I/O number of the replacing module same with the start I/O number of the existing module to reuse the existing programs.

MELSECNET/H Network Module

Reuse existing network cables to build the MELSECNET/H network system

■MELSECNET/H Network module (twisted bus type)

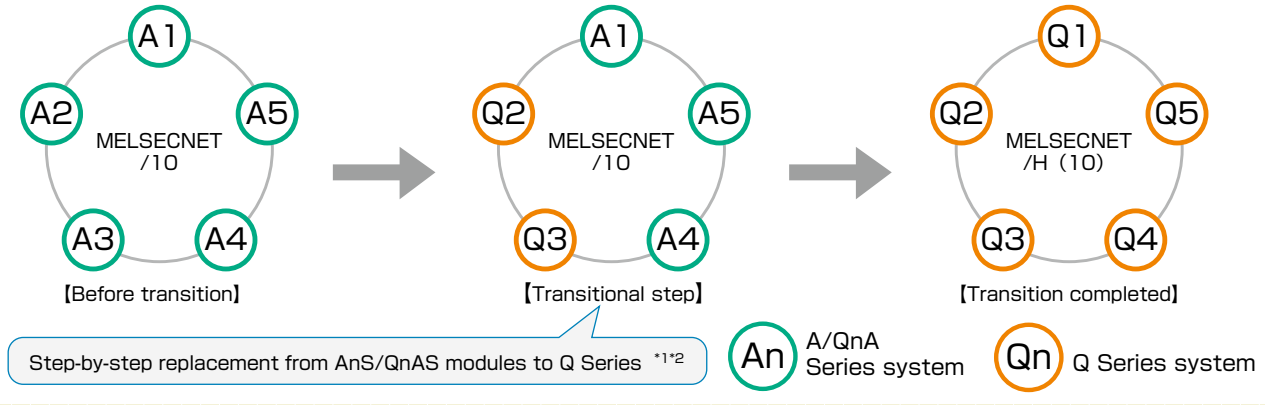
The existing twisted pair cables of MELSECNET/B data link system can be used to build the MELSECNET/H network system when replacing A/QnA Series modules with Q Series modules. Modules are replaced without modifying the previously laid network cables. Network system with an even higher speed can also be configured by replacing the twisted pair cables with CC-Link cables.



Model	Outline
QJ71NT11B	MELSECNET/H network module (twist bus type)

■MELSECNET/H Network module (optical loop type, coaxial bus type)

Gradual transition from the existing A/QnA modules in MELSECNET/10 network system to Q Series with MELSECNET/H(10) network system is possible.*1
For both the PLC-to-PLC network and the remote I/O network, the transition can be completed by the step-by-step replacement from A/QnA Series modules to Q Series modules.*1



●PLC to PLC network, remote I/O network

A/QnA Series model	Q Series transition model
AJ71LP21 AJ71QLP21	QJ71LP21-25 *2
AJ71LP21G AJ71QLP21G	QJ71LP21G *2
AJ71QLP21S	QJ71LP21S-25 *2
AJ71BR11 AJ71QBR11 AJ71LR21 *1 AJ71QLR21 *1	QJ71BR11 *2

●Remote I/O network

A/QnA Series model	Q Series transition model
AJ72LP25 AJ72QLP25	QJ72LP25-25 *3
AJ72LP25G AJ72QLP25G	QJ72LP25G *3
AJ72BR15 AJ72QBR15 AJ72LR25 *1 AJ72QLR25 *1	QJ72BR15 *3

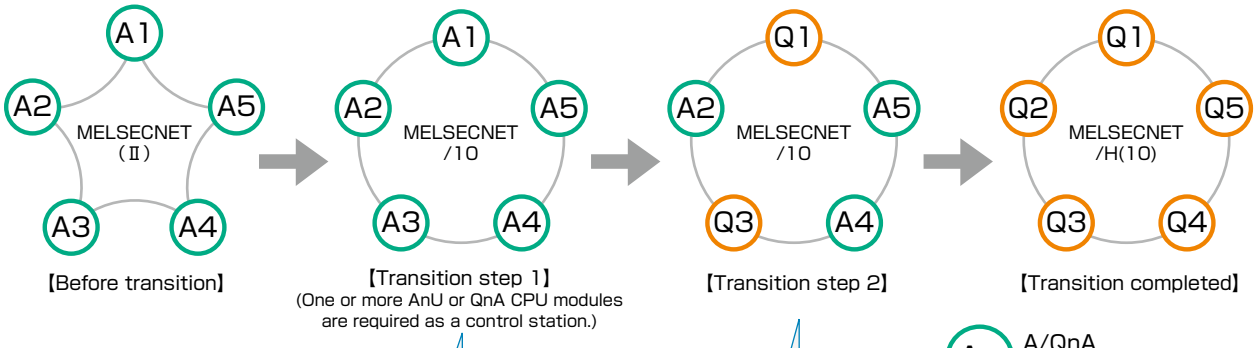
*1 : The Q Series modules do not support the MELSECNET/10 coaxial loop system; therefore, step-by-step replacement is not possible. The coaxial loop system should be replaced with the coaxial bus system, optical loop system or twisted bus system at once.
*2 : The Q Series remote master station is not compatible with the A/QnA Series remote I/O stations, and therefore the master station should be replaced with Q Series remote master station after replacing the entire A/QnA Series remote I/O stations with the Q Series stations.
*3 : When mixing the A/QnA Series and Q Series modules on the same network, please use this product whose first 5-digit serial number is 15012 or later.

MELSECNET/10 Network Module
(Discontinued in Sep. 2014 *1)

Replace MELSECNET(Ⅱ) system with Q Series MELSECNET/H(10) system using existing wiring

■Step-by-step transition from the A/QnA Series and Q Series combined system to the Q Series system.

MELSECNET(Ⅱ) system can be replaced with the MELSECNET/10 system while reusing the existing cable installations. Following the network replacement, A/QnA Series systems are replaced with Q Series stations as needed in a step-by-step manner.
Note that in the MELSECNET/H system, the PLC-to-PLC network stations and the remote I/O network stations cannot be mixed. For the transition, use the normal stations (local stations) only instead of remote I/O stations. Furthermore, the step-by-step transition is not possible if the network includes a combination of A/QnA Series and Q Series stations, because A/QnA Series system does not support MELSECNET/H twisted bus network system.



Replace MELSECNET(Ⅱ) data link modules at all stations with MELSECNET/10 network modules, and then switch the network system over to MELSECNET/10.

- Change the MELSECNET(Ⅱ) master station to the MELSECNET/10 control station.
  Note: For CPU modules (AnN CPU and AnA CPU) that cannot be set as the MELSECNET/10 control stations, please consider changing to the Q Series CPU module.
- Set the MELSECNET(Ⅱ) local stations to the MELSECNET/10 normal stations.
- The transition step 1 may be skipped depending on the replacement procedure.

For stations that are to be changed from the A/QnA Series system to the Q Series system, replace the programmable controllers to Q Series, and set them as MELSECNET/10 normal stations. By gradually replacing the A/QnA Series system with the Q Series system, the transition to the Q Series system will be completed.

Type	Model	
	Control/normal station	Remote I/O station
Large type A/QnA Series MELSECNET/10 network module	AJ71BR11 AJ71LP21 AJ71LP21G AJ71LR21 AJ71QBR11 AJ71QLP21 AJ71QLP21G AJ71QLP21S AJ71QLR21	AJ72BR15 AJ72LP25 AJ72LP25G AJ72LR25 AJ72QBR15 AJ72QLP25 AJ72QLP25G AJ72QLR25

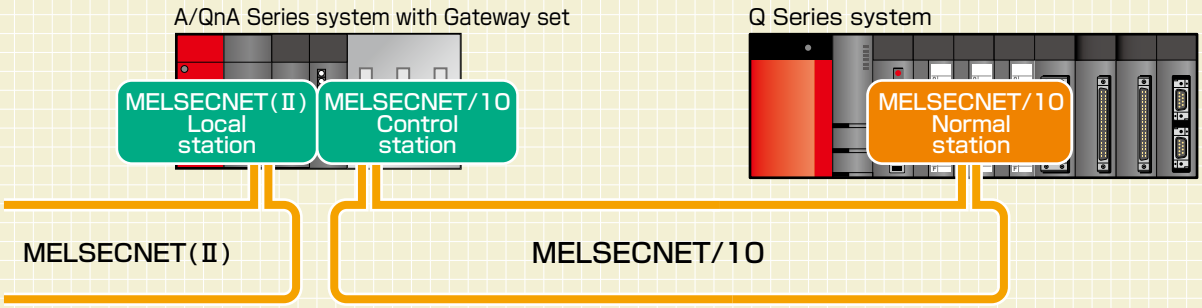
*1: The production was discontinued in September 2014. For the details, please refer to Technical Bulletin No.FA-A-0141.

MELSECNET(Ⅱ)-MELSECNET/10 Gateway Set (Q6KT-NETGW-□□)

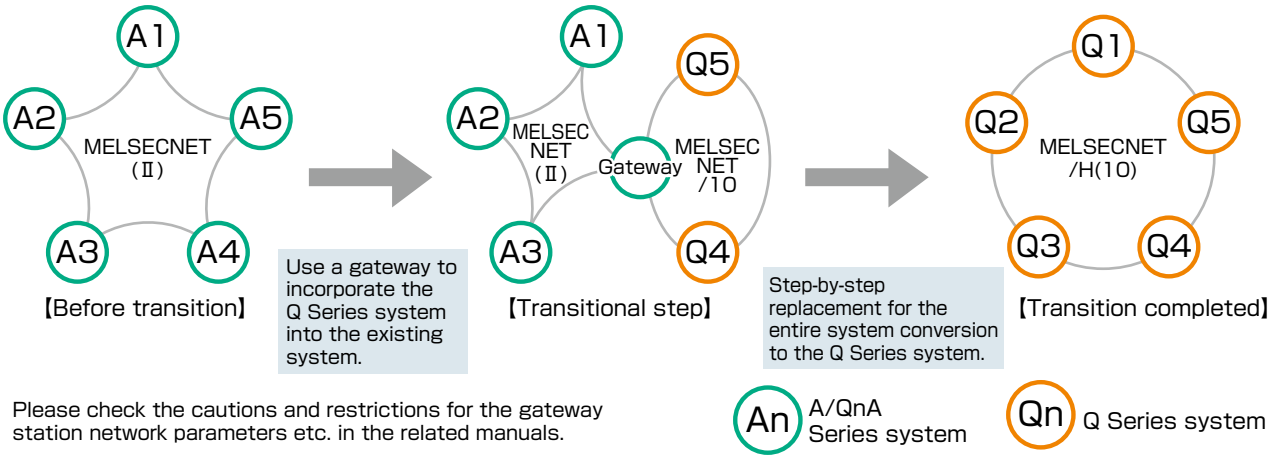
Step-by-step module replacement from the MELSECNET(Ⅱ)/B network system to MELSECNET/H(10)

■Partial replacement of the MELSECNET(Ⅱ) network with the MELSECNET/10 and use of a gateway set enable data communication with the MELSECNET/10 normal station

[Example] Using the Q Series in the MELSECNET(Ⅱ) that used to have the AnS/QnA Series only.



[Example] Step-by-step system replacement to have a system entirely made up with the Q Series



Please check the cautions and restrictions for the gateway station network parameters etc. in the related manuals.

An A/QnA Series system

Qn Q Series system

Gateway set model name	Main part			MELSECNET(Ⅱ)/B part	MELSECNET/10 part
Q6KT-NETGW-SS	A1S35B	A1S61PN	Q2ASCPU	A1SJ71AP21	A1SJ71QLP21
Q6KT-NETGW-RS				A1SJ71AR21	A1SJ71QLP21
Q6KT-NETGW-RB					A1SJ71QBR11
Q6KT-NETGW-TS				A1SJ71AT21B	A1SJ71QLP21
Q6KT-NETGW-TB					A1SJ71QBR11

*Production and sale of these gateway sets will continue after September 2014, although the individual AnS Series products may be discontinued.

Reading the model name

Q6KT-NETGW-□□
Gateway set
① ②

①Network type: MELSECNET(Ⅱ)
S: SI optical fiber cable (double loop)
R: Coaxial cable (double loop)
T: Twisted pair cable (bus)

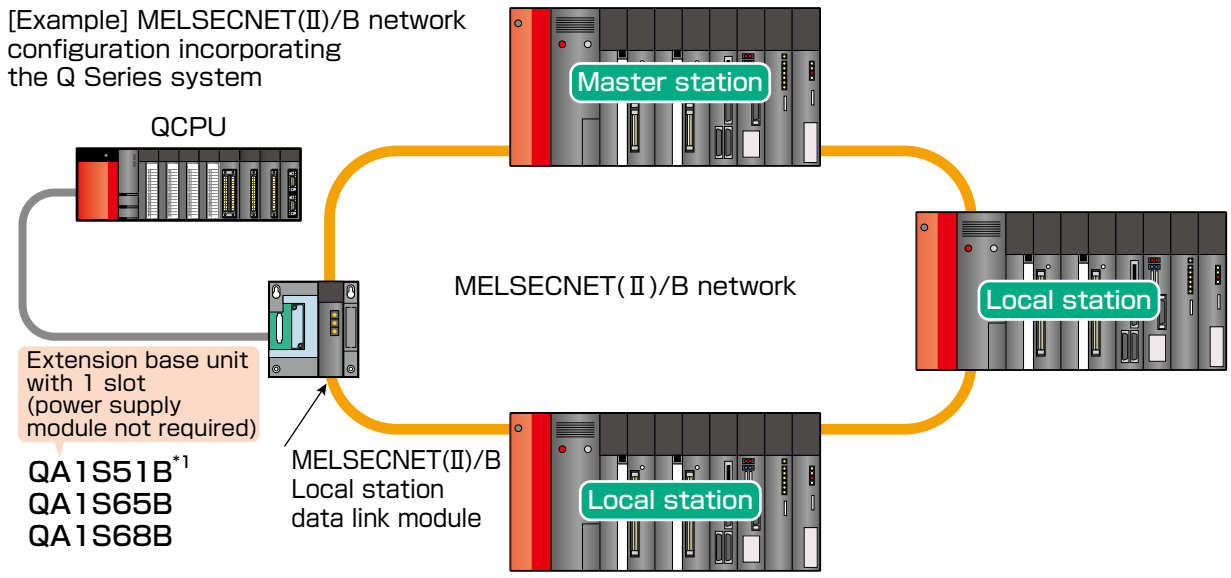
②Network type: MELSECNET/10
S: SI optical fiber cable (double loop)
B: Coaxial cable (bus)

MELSECNET(Ⅱ), MELSECNET/B Local Station Data Link Module (A1SJ71AP23Q, A1SJ71AR23Q, A1SJ71AT23BQ)

Add the Q Series system to the MELSECNET(Ⅱ) or MELSECNET/B network to share data

■Add Q Series system as a local station into MELSECNET(Ⅱ), MELSECNET/B network.

The MELSECNET(Ⅱ)/B local station data link modules allow a Q Series system to directly connect to existing NET(Ⅱ)/NET/B data link system via a QA1S6□B extension base unit.



*1: QA1S51B, which does not have an extension cable connector(OUT), cannot be connected with any other extension unit. QA6□B, or QA6ADP with A5□B/A6□B cannot be used in combination.

Model	Outline
A1SJ71AP23Q	MELSECNET(Ⅱ) local station data link module for SI optical fiber cable
A1SJ71AR23Q	MELSECNET(Ⅱ) local station data link module for coaxial cable
A1SJ71AT23BQ	MELSECNET/B local station data link module for shielded twisted pair cable

●Specifications

①Supported CPUs
High Performance model QCPUs [Q02(H), Q06H, Q12H, and Q25HCPU] and Universal model QCPUs*1 (include High-speed Universal Model QCPUs)

②Compatible extension base units
QA1S6□B or QA6□B with A-A1S module conversion adapter (A1ADP)

③Number of modules per CPU
Send range can be further increased by installing up to 6 modules per CPU.

④Network parameters
No setup is required, as network parameters settings are automatically detected by the module.

⑤Link refresh setting
Link refresh setting is not automatically detected. Hence, FROM/TO instructions within sequence program to enable send/receive cyclic data are required.

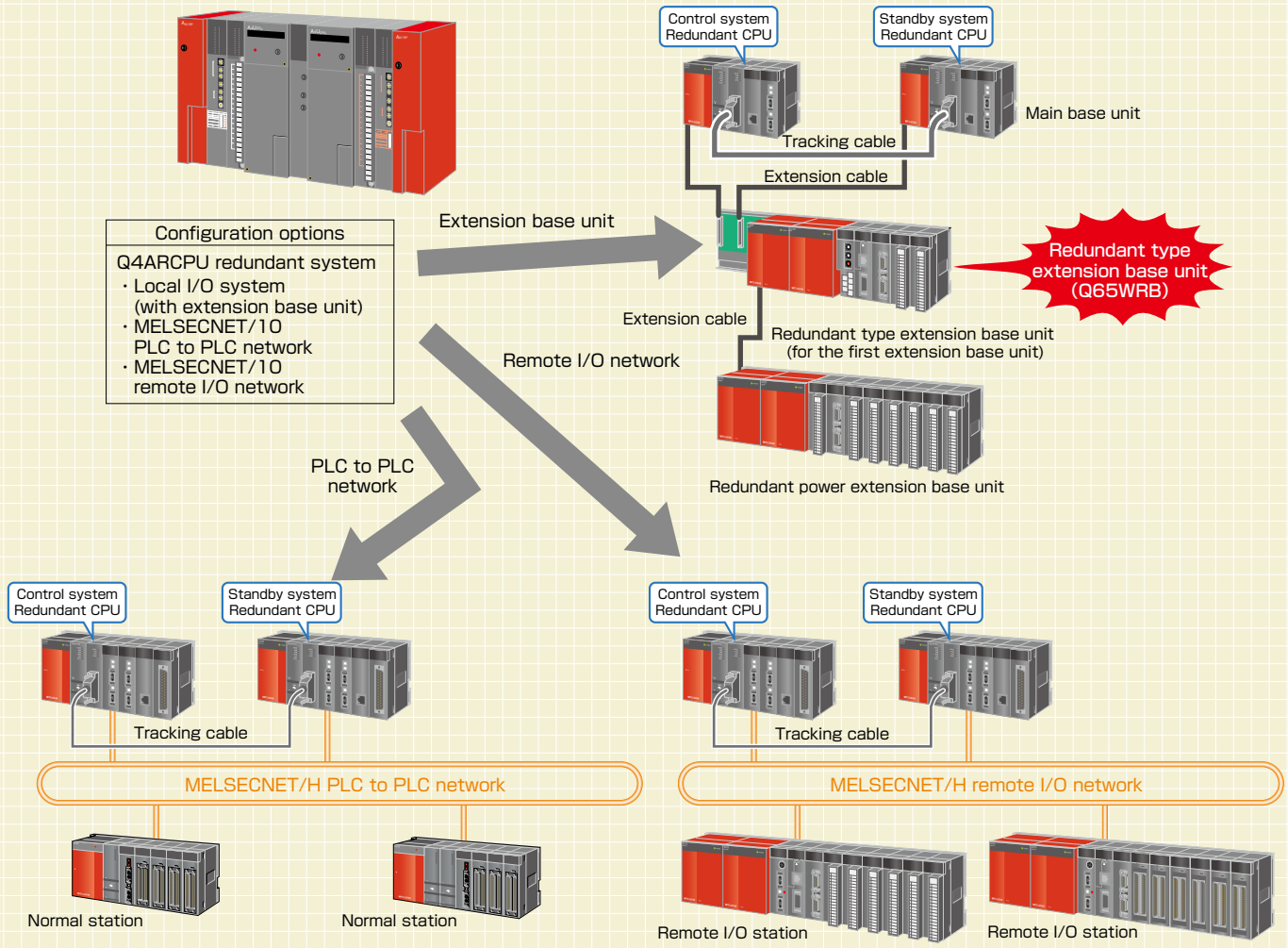
Sample programs for link refresh are provided in the "A/QnA -> Q Conversion Support Tool." The sample program can be used to create a QCPU program which may reduce development time.
For details, please contact your local Mitsubishi sales office or representative.

*1: Universal model QCPU, whose first 5-digit serial number is 13102 or later, is compatible with the data link modules.

Q Series Redundant System

Select the best Q Series redundant system configuration for the application

■Easily replace the existing Q4ARCPU redundant system to the QCPU redundant system.



■Network modules of MELSECNET/H PLC to PLC network and remote I/O network can be installed to the Q Series redundant CPU main base. (They can be used together.)
A wide variety of system is constructed to suit the needs of the control target.

■Realizes local I/O system equivalent to Q4ARCPU using the redundant type extension base unit.

■Up to 63 modules can be installed using the redundant type extension base unit.

■Fast system switching time at approx. 50 ms in the redundant local I/O system, remarkable improvement compared to the Q4ARCPU redundant system (300 ms + 1 scan time).

A0J2 Renewal Tool
(manufactured by Mitsubishi Electric System & Service Co., Ltd.)

Replace A0J2(H) system with Q Series system using the existing wiring

■A0J2 renewal tool features

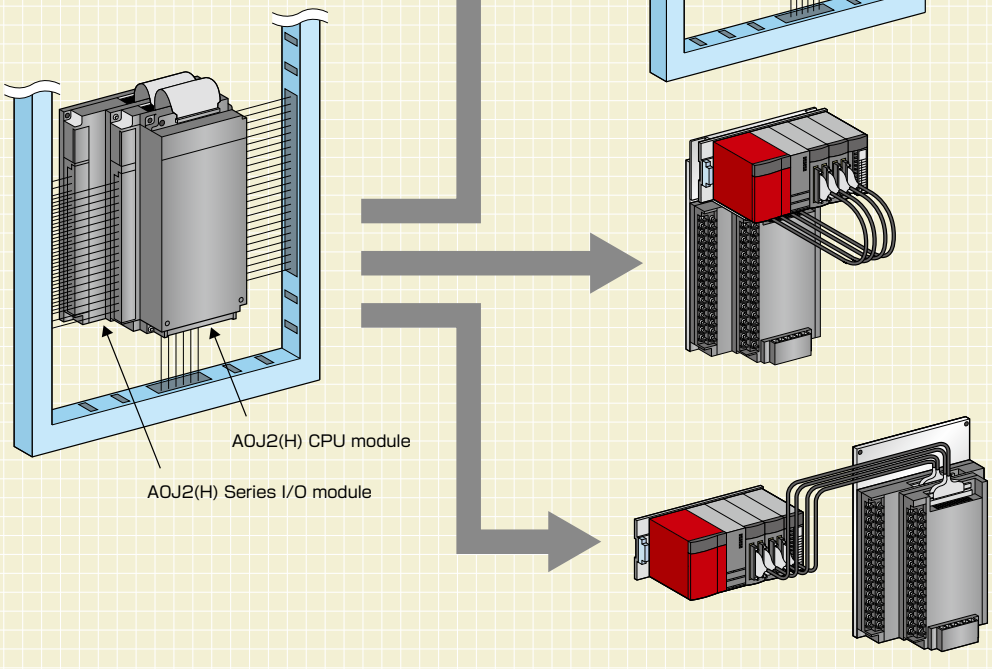
The A0J2 renewal tool is used to replace the A0J2(H) system with Q Series system. It consists of an interface module to which the existing wiring terminal block can be installed, and a base adapter that can be installed using the existing installation holes.
A variety of installation methods is available to fit the installation space.

■Interface module features

The interface module has DC to relay output conversion and AC to DC input conversion functions. Hence, replacement is possible together with Q Series connector type DC I/O modules.
Dedicated cables are used to connect the interface module to Q Series I/O modules.

【After upgrade】

【Before upgrade】



On-board installation
Suitable when there is enough depth. Stack the programmable controller on the existing panel face.

Note: Depth of 236 mm or more is required (when two interface modules are stacked).

Adjacent installation
Suitable when there is enough space above existing modules. Install the programmable controller above the interface module(s).

Note: Space of 92 mm or more from the top of the existing modules is required.

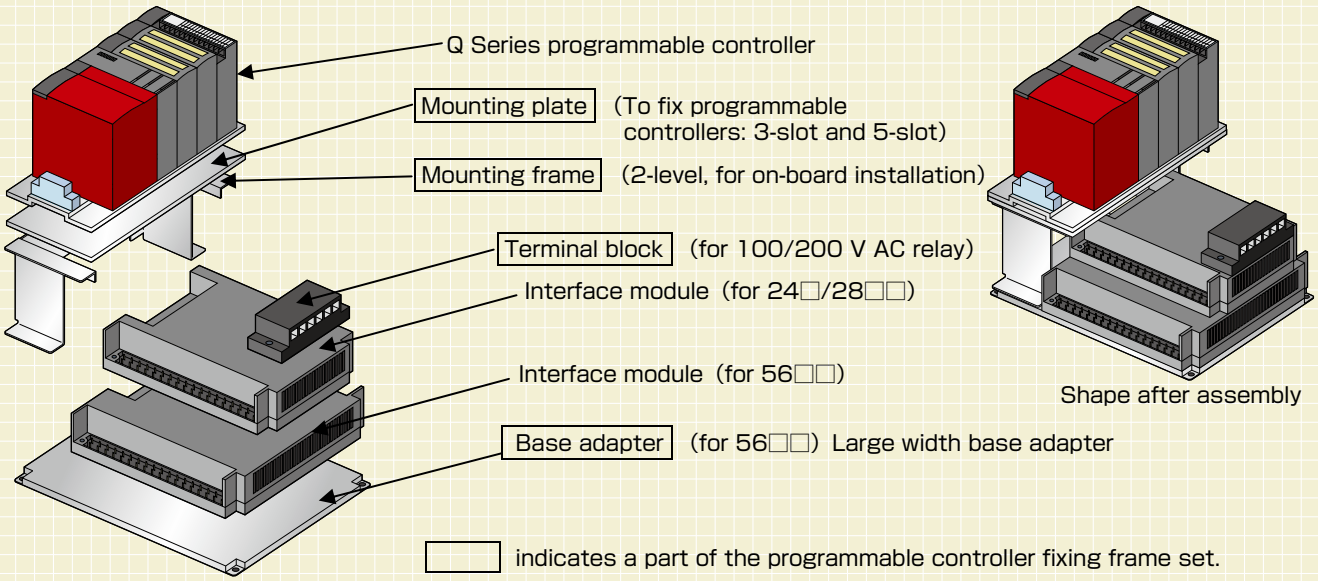
Standalone installation
Install the programmable controller separately.

Note: For the AnS Series, the standalone installation only.

For detailed specifications, precautions, and restrictions of the A0J2 renewal tool, please refer to the brochure (X900904-165) and user's manual. For further information, please contact your local Mitsubishi Electric sales office or sales representative.

■Structure

[Example] 2-level on-board installation



■Basic configuration

【Before upgrade】

A0J2(H) Series programmable controller
・CPU module ・I/O module

【After upgrade】

Q Series programmable controller	+	A0J2 renewal tool*2
・Main base unit(Q33B) ・Power supply module(Q62P)*1 ・CPU module ・I/O module		・Interface module ・Programmable controller fixing frame set*3 ・Programmable controller connection cable

*1: The interface modules except for some models require 24 V DC power supply. If the Q62P is not used, provide a separate external power supply.
*2: See the following list for the applicable interface module.
*3: Includes a base adapter, mounting plate, mounting frame, terminal block, and power supply cable.

Discontinued model		Replacement interface module
Input module	A0J2-E32A	SC-A0JQIF-32A
	A0J2-E32D	SC-A0JQIF-32D
Output module	A0J2-E24R	SC-A0JQIF-24R
	A0J2-E24S	SC-A0JQIF-24S
	A0J2-E24T	SC-A0JQIF-24T
I/O module	A0J2-E28AR	SC-A0JQIF-28AR
	A0J2-E28AS	SC-A0JQIF-28AS
	A0J2-E28DR	SC-A0JQIF-28DR

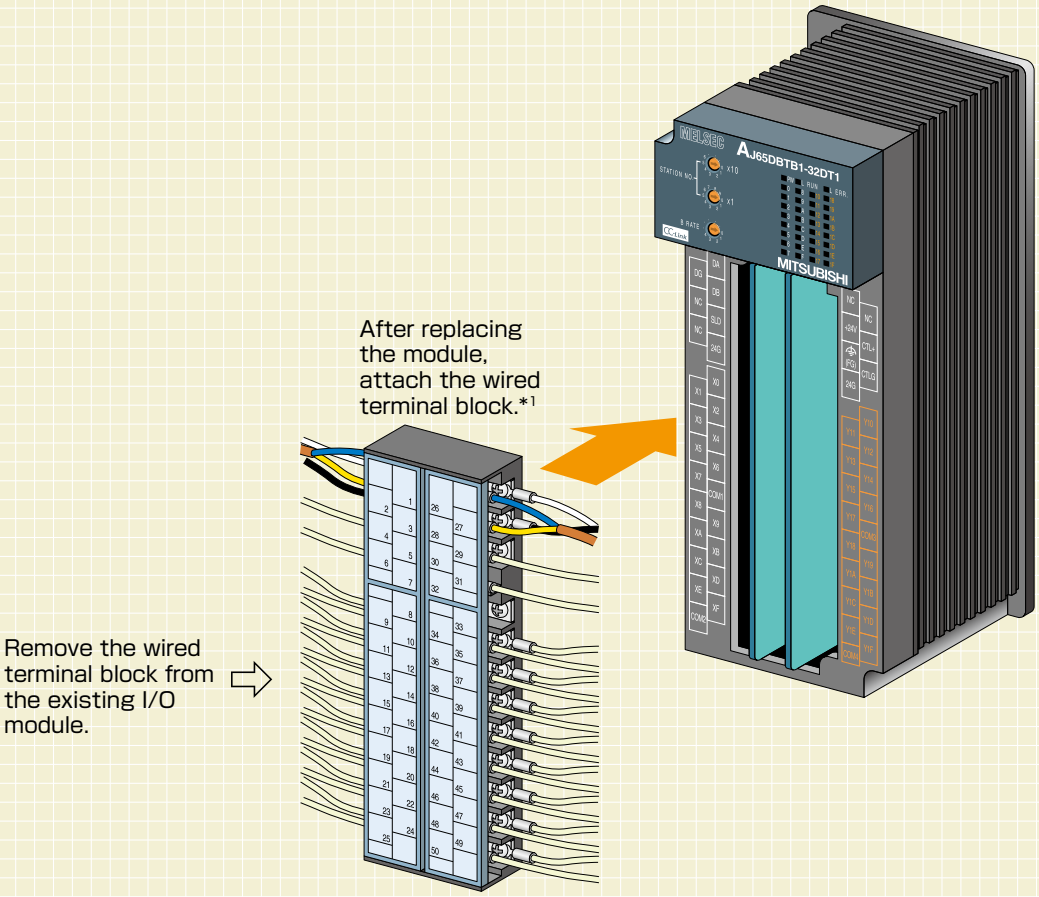
Discontinued model		Replacement interface module
I/O module	A0J2-E28DS	SC-A0JQIF-28DS
	A0J2-E28DT	SC-A0JQIF-28DT
	A0J2-E56AR	SC-A0JQIF-56AR
	A0J2-E56AS	SC-A0JQIF-56AS
	A0J2-E56DR	SC-A0JQIF-56DR
	A0J2-E56DS	SC-A0JQIF-56DS
	A0J2-E56DT	SC-A0JQIF-56DT

1. When upgrading to the Q Series module, programs do not need to be modified if the I/O combined module "QX41Y41P (32-point input for the first half and 32-point output for the second half)" is used. (Refer to page 17)
2. The A0J2 renewal tool can be used to replace MELSECNET/MINI compact type I/O modules (AJ35PTF-□ (such as 28AR and 56DR)) with CC-Link modules.
3. For products that are not described (such as connection cables for programmable controller), please contact your local Mitsubishi sales office or representative

A2C Shape CC-Link Remote I/O Module

Replace A2CCPU and NET/MINI-S3 I/O modules with CC-Link modules using the existing NET/MINI-S3 wiring

■The simple replacement process helps minimize the upgrade time.
The installation size is the same as that of A2C I/O modules; existing terminal block can be installed directly.



*1: The communication cables and power cables need to be rewired.

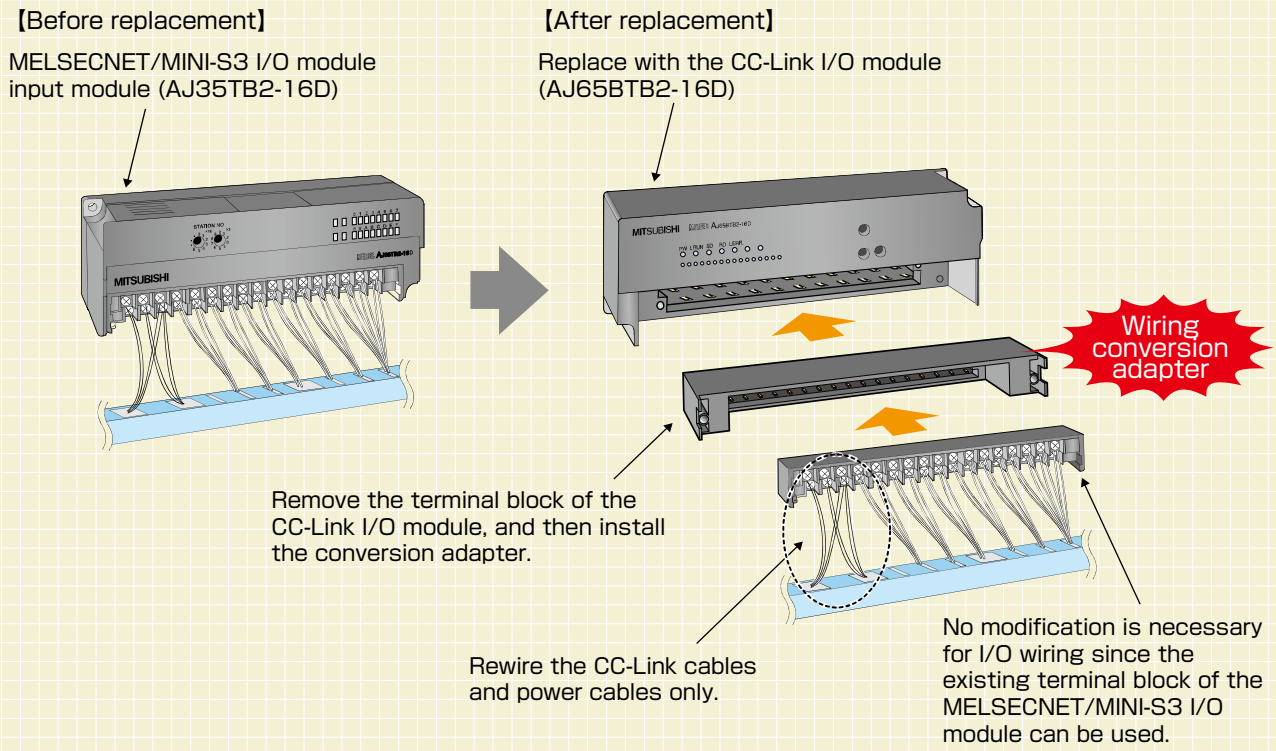
Discontinued model	Alternative model	
	Model	Outline
AX41C AX81C	AJ65DBTB1-32D	Terminal block type, 24 V DC input, 32 points, positive/negative common shared
AY51C	AJ65DBTB1-32T1	Terminal block type, 0.5 A transistor output, 32 points, sink
AX40Y50C	AJ65DBTB1-32DT1	Terminal block type, 24 V DC input, 16 points, positive common 0.5 A transistor output, 16 points, sink
AY13C	AJ65DBTB1-32R	Terminal block type, relay output, 32 points
AX40Y10C AX80Y10C	AJ65DBTB1-32DR	Terminal block type, 24 V DC input, 16 points; relay output, 16 points

MELSECNET/MINI-S3 I/O Module Wiring Conversion Adapter

Replace NET/MINI-S3 system with CC-Link network system while reusing the existing NET/MINI-S3 wiring

■Wiring adapter terminal blocks eliminate the need to rewire.

[Example] Replacing AJ35TB2-16D with AJ65BTB2-16D using a 34-pin conversion adapter



Discontinued model		Alternative model		
Type	Model	Model		Remarks (restrictions)
		Alternative module	Conversion adapter	
Input module	AJ35TB1-16D	AJ65BTB1-16D	Wiring conversion adapter for 26-point terminal block*1 A6ADP-1MC16D	*1: The overall size is increased due to addition of the adapter to the alternative module. *2: Additional wiring to CTL+ (External power supply for output) is required.
	AJ35TB2-16D	AJ65BTB2-16D	Wiring conversion adapter for 34-point terminal block*1 A6ADP-2MC16D	
Output module	AJ35TB1-16T	AJ65BTB1-16T	Wiring conversion adapter for 26-point terminal block*1, *2 A6ADP-1MC16T	

For Large Type A/QnA Series

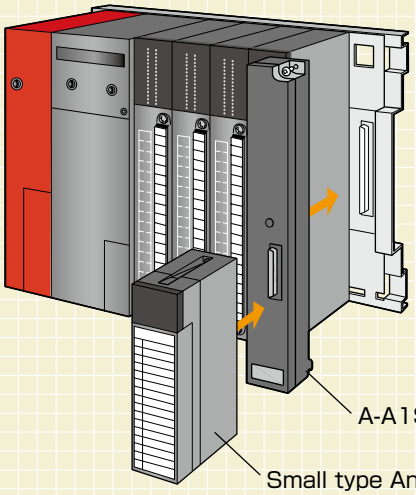
A-A1S Module Conversion Adapter

(A1ADP-XY: For I/O module
A1ADP-SP: For special function module)

Use small type AnS/QnAS Series modules when additional modules are required for the A/QnA system

■For a system with free I/O points and slots

Large type A Series base unit



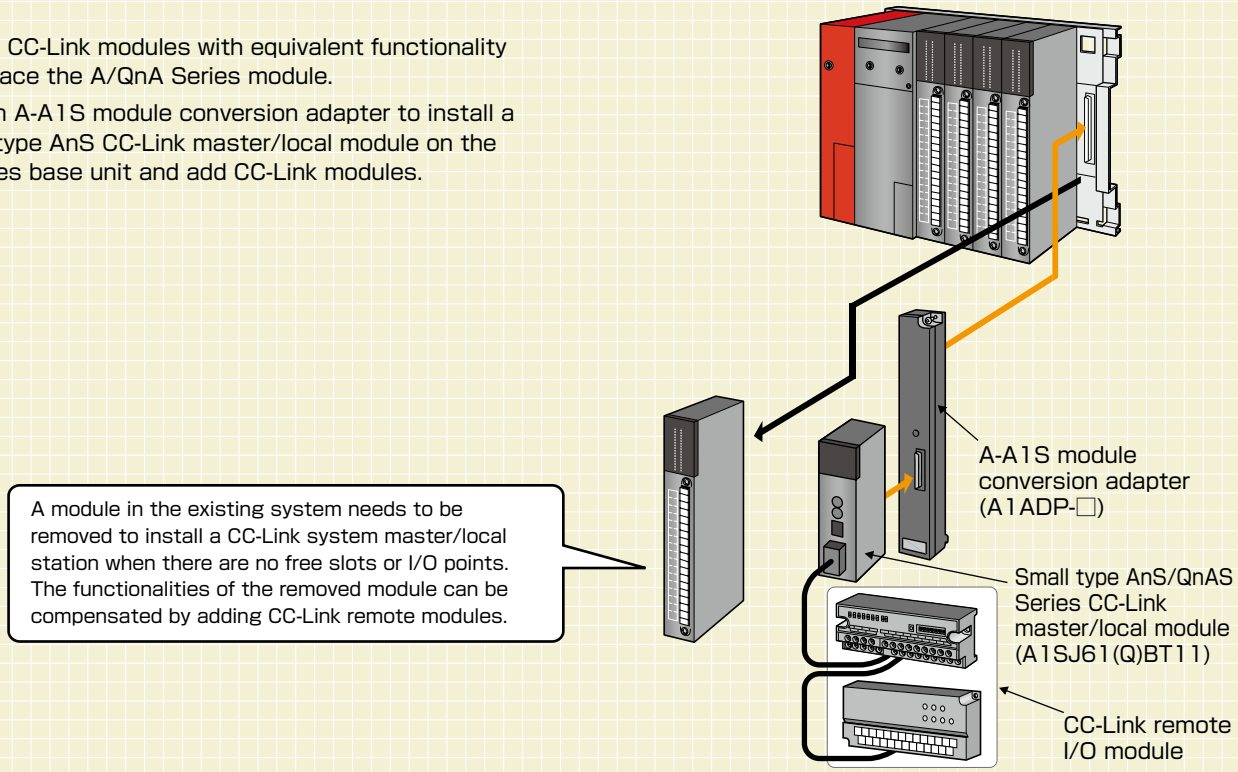
- Select a small type AnS/QnAS module having the required functions.
- Use the A-A1S module conversion adapter to install the small type AnS/QnAS module on the large type A/QnA Series base unit.

  * Select a small type AnS/QnAS module having the required functions.

■For a system with free I/O points and slots

- Select CC-Link modules with equivalent functionality to replace the A/QnA Series module.
- Use an A-A1S module conversion adapter to install a small type AnS CC-Link master/local module on the A Series base unit and add CC-Link modules.

Large type A/QnA Series base unit



- Up to three A-A1S module conversion adapters can be used per base unit.
- A-A1S module conversion adapters are compatible with the QA extension base unit and the large type A Series extension base unit (when QA conversion adapter (QA6ADP) is install).
- For details of applicable CPU modules, installable modules, and supported adapters for each module, refer to the following manual.
  - Product manual: A-A1S Module Conversion Adapter User's Manual (IB-0800352-E or later version)
- The production of the AnS/QnAS (small type) Series was discontinued at the end of September 2014 (except few models including the AnS/QnAS Series CC-Link master/local module).

Product List

List of products used for upgrade

Extension base unit

Type	Model	Outline
QA(1S) extension base unit	QA1S51B	1 slot, for AnS Series modules (power supply module not required)
	QA1S65B	5 slots, for AnS Series modules
	QA1S68B	8 slots, for AnS Series modules
	QA65B	5 slots, for A Series modules
	QA68B	8 slots, for A Series modules

QA conversion adapter

Type	Model	Outline
QA conversion adapter	QA6ADP	Adapter for connecting large type A/QnA extension base unit as QCPU extension base unit

Q Series large type base unit

Type	Model	Outline
Main base unit	Q38BL	8 slots, 1 power supply module required, for the Q Series large type I/O modules
	Q35BL	5 slots, 1 power supply module required, for the Q Series large type I/O modules
Extension base unit	Q68BL	8 slots, 1 power supply module required, for the Q Series large type I/O modules
	Q65BL	5 slots, 1 power supply module required, for the Q Series large type I/O modules
	Q55BL	5 slots, power supply module not required, for the Q Series large type I/O modules

Product List

Q Series large type I/O module

Type	Model	Outline
Input module	QX11L	32 points, 100 to 120 V AC, rated input current: 10 mA (100 V AC, 60 Hz), response time: 15 ms or less (OFF to ON), 25 ms or less (ON to OFF), 32 points/common, 38-point terminal block
	QX21L	32 points, 200 to 240 V AC, rated input current: 10 mA (220 V AC, 60 Hz), response time: 15 ms or less (OFF to ON), 25 ms or less (ON to OFF), 32 points/common, 38-point terminal block
Output module	QY11AL	16-point contact output, 24 V DC/240 V AC, 2 A/point, 16 A/all points, all points independent, 38-point terminal block, surge suppressor (varistor 387 to 473 V)
	QY13L	32-point contact output, 24 V DC/240 V AC, 2 A/point, 5 A/common, 8 points/common, 38-point terminal block
	QY23L	32-point triac output, 100 to 240 V AC, 0.6 A/point, 2.4 A/common, 8 points/common, 38-point terminal block
	QY51PL	32-point transistor output (Sink), 12/24 V DC, 0.5 A/point, 4 A/common, 16 points/common, 38-point terminal block
Q Series large type blank cover	QG69L	Blank cover for installing the existing Q Series module on the Q Series large type base unit

DC input module

Type	Model	Outline
DC input module	QX41-S2	32 points, 24 V DC, rated input current: approximately 6 mA, positive common type, 32 points/common, response time: 1 ms/5 ms/10 ms/20 ms/70 ms or less (Set by the CPU parameter at the initial setting of 10 ms for both ON to OFF and OFF to ON)
	QX81-S2	32 points, 24 V DC, rated input current: approximately 6 mA, negative common type, 32 points/common, response time: 1 ms/5 ms/10 ms/20 ms/70 ms or less (Set by the CPU parameter at the initial setting of 10 ms for both ON to OFF and OFF to ON)

I/O combined module

Type	Model	Outline
I/O combined module	QX41Y41P	Input specifications (positive common type) 32 points, 24 V DC, 32 points/common, response time: 1 ms/5 ms/10 ms/20 ms/70 ms or less (Set by the CPU parameter at the initial setting of 10 ms for both ON to OFF and OFF to ON) Output specifications (sink type) 32 points, 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms or less (OFF to ON), 1ms or less (ON to OFF, rated load, resistance load) Number of occupied I/O points: 64 points (32-point input for the first half and 32-point output for the second half)

High-speed counter module

Type	Model	Outline
High-speed counter module	QD62-H01	High-speed counter module for replacing the AD61 (with the same input filtering system and counting speed)
	QD62-H02	High-speed counter module for replacing the AD61-S1 (with the same input filtering system and counting speed)

Analog output positioning module

Type	Model	Outline
Analog output positioning module	QD73A1	1-axis analog output type Position control mode (positioning control, two-phase trapezoidal positioning control) Velocity/position control switchover mode

MELSECNET/H twisted bus type network module

Type	Model	Outline
MELSECNET/H twisted bus type network module	QJ71NT11B	MELSECNET/H twisted pair cable, single bus, for control/normal station

MELSECNET(Ⅱ), MELSECNET/B local station data link module

Type	Model	Outline
MELSECNET(Ⅱ) local station data link module	A1SJ71AP23Q	MELSECNET(Ⅱ) local station data link module for SI optical fiber cable
	A1SJ71AR23Q	MELSECNET(Ⅱ) local station data link module for coaxial cable
MELSECNET/B local station data link module	A1SJ71AT23BQ	MELSECNET/B local station data link module for shielded twisted pair cable

MELSECNET(Ⅱ)-MELSECNET/10 gataway set

Type	Model	Outline
MELSECNET(Ⅱ)-MELSECNET/10 gateway set	Q6KT-NETGW-SS	A set of A1S35B, A1S61PN, Q2ASCPU, A1SJ71AP21, and A1SJ71QLP21
	Q6KT-NETGW-RS	A set of A1S35B, A1S61PN, Q2ASCPU, A1SJ71AR21, and A1SJ71QLP21
	Q6KT-NETGW-RB	A set of A1S35B, A1S61PN, Q2ASCPU, A1SJ71AR21, and A1SJ71QBR11
MELSECNET/B-MELSECNET/10 gateway set	Q6KT-NETGW-TS	A set of A1S35B, A1S61PN, Q2ASCPU, A1SJ71AT21B, and A1SJ71QLP21
	Q6KT-NETGW-TB	A set of A1S35B, A1S61PN, Q2ASCPU, A1SJ71AT21B, and A1SJ71QBR11

Note: Production and sale of these gateway sets will continue after September 2014, although the individual AnS Series products may be discontinued.

Product List

Q Series redundant system extension base unit

Type	Model	Outline
Redundant system extension base unit	Q65WRB	5 slots, for Q Series modules

A2C shape CC-Link remote I/O module

Type	Model	Outline
CC-Link remote I/O module (Screw/2-piece terminal block, dustproof type)	AJ65DBTB1-32D	Input: 32 points, 24 V DC (positive/negative common [sink/source]), terminal block 1-wire type, response time: 10 ms
	AJ65DBTB1-32T1	Output: 32 points, 12/24 V DC, 0.5 A transistor output (sink), terminal block 1-wire type (low leakage current type)
	AJ65DBTB1-32DT1	Input: 16 points, 24 V DC (positive common), 1-wire type, high-speed response, response time: 10ms Output: 16 points, 24 V DC (0.5A), transistor output (sink) terminal block 1-wire type (low leakage current type)
	AJ65DBTB1-32R	Output: 32 points, 24 C DC/240 V AC (2A) relay output, terminal block 1-wire type
	AJ65DBTB1-32DR	Input: 16 points, 24 V DC (positive/negative common [sink/source]), response time: 10 ms Output: 16 points, 24 V DC/240 V AC, 2 A relay output, terminal block 1-wire type

MELSECNET/MINI-S3-CC-Link wiring conversion adapter

Type	Model	Outline
MELSECNET/ MINI-S3-CC-Link wiring conversion adapter	A6ADP-1MC16D	26-pin conversion adapter, 1-wire type, 16-point input CC-Link module dedicated adapter
	A6ADP-2MC16D	34-pin conversion adapter, 2-wire type, 16-point input CC-Link module dedicated adapter
	A6ADP-1MC16T	26-pin conversion adapter, 1-wire type, 16-point input (with CTL + terminal)CC-Link module dedicated adapter

A-A1S module conversion adapter

Type	Model	Outline
For I/O modules	A1ADP-XY	Adapter for installing the small type AnS/QnAS Series I/O module on a large type A/QnA base unit and QA extension base unit
For special function modules	A1ADP-SP	Adapter for installing the small type AnS/QnAS Series special function module on a large type A/QnA base unit and QA extension base unit

Models in continuous production

The production of the A/QnA Series products except the following modules has been discontinued since September 2006.

Note: In accordance with the continuation of production, model names may be changed.

Power supply module

Type	Model
Large type A/QnA Series power supply module	A61PN*1
	A61RP

If using power supplies other than the above, please consider switching over to one of the above models.
*1: A61PN is a replacement of A61P/A61PEU/A61P-UL.

Battery

Type	Model
Battery	A6BAT

Only some models of the MELSEC-A/QnA (Large Type) Series are still in limited production. However, the EN61131-2:2003 certification has expired, so the CE Declaration for models still in production has been withdrawn. (Technical Bulletin No. FA-A-0071)

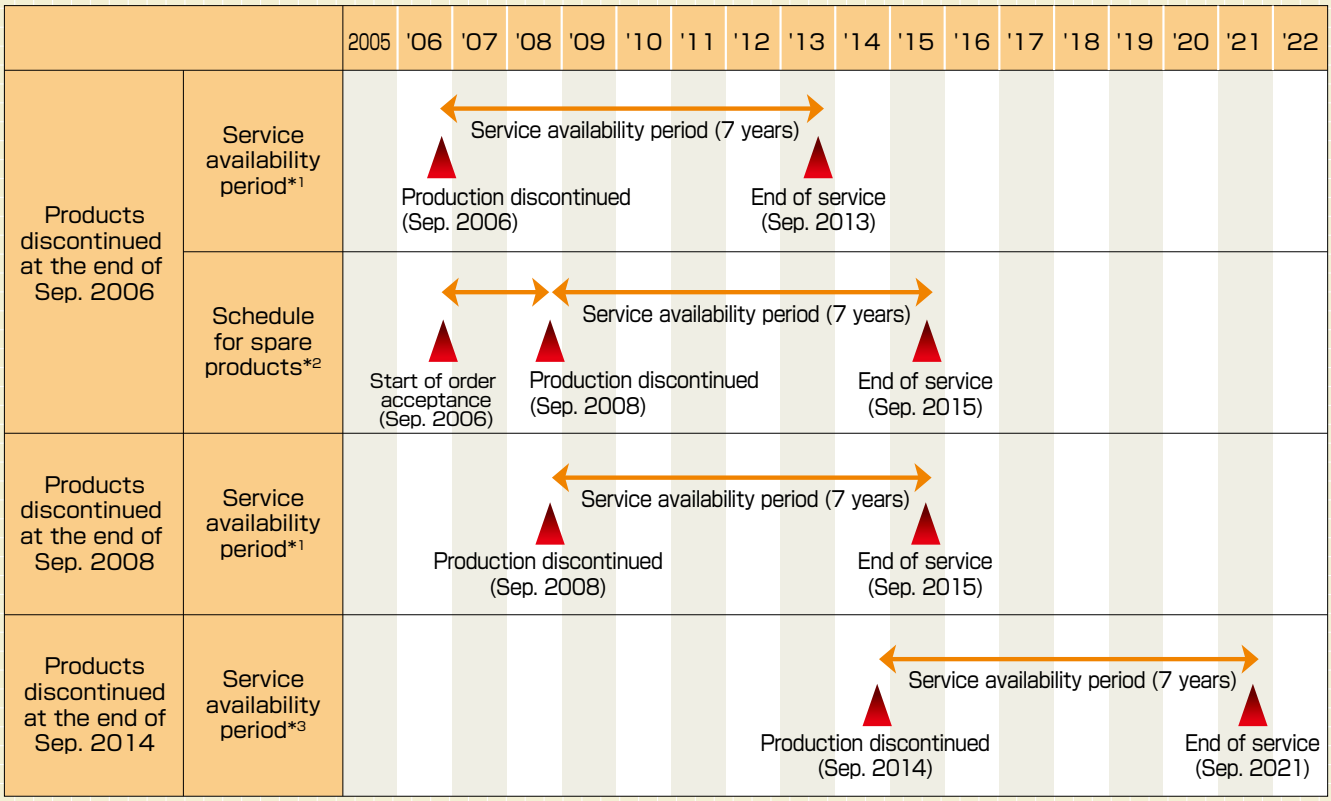
Discontinued products

Discontinued products		Date of discontinuation
Large type A Series/ Large type QnA Series	●CPU module ●I/O module ●Special function module ●Data link module (MELSECNET(Ⅱ), MELSECNET/B module, etc.) ●MELSECNET/MINI-S3 master module	End of Sep. 2006
	●MELSECNET/10 network module ●MELSEC-I/OLINK master module	End of Sep. 2014
A2C Series	●CPU module	End of Sep. 2006
	●A2C I/O module ●Special function module etc.	End of Sep. 2008
Network interface board	●MELSECNET(Ⅱ), MELSECNET/B interface board	End of Sep. 2008
A0J2(H) Series	●CPU module ●Power supply module ●I/O module ●Special function module etc.	End of Sep. 2008
Remote I/O module	●MELSECNET/MINI-S3 I/O module	End of Sep. 2008
	●MELSEC-I/OLINK I/O module	End of Sep. 2014

Note: The production of the AnS/QnAS Series was also discontinued at the end of September 2014.

Product List

Service availability period



*1: For details of the service availability period of discontinued products, refer to Technical Bulletin No.FA-A-0049.
*2: Production of selected products , which were discontinued at the end of September 2006 (Technical Bulletin No.T99-0050), were extended until end of September 2008 as spare. However, its continued production has ended as of the end of September 2008.
*3: For details of the service availability period of discontinued products, refer to Technical Bulletin No. FA-A-0141 and No. FA-A-0142.

Responding to the amenable running of FA systems through an enhanced support system

Global FA Centers

"Mitsubishi Electric Global FA centers" have been established in various countries around the world to cover the Americas, Europe, and Asia. FA centers help to ensure compliance with the certifications and regulations of different regions, initiate product development in response to local demands, and provide full-time, professional customer service.

China

Shanghai FA Center
MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD.
No.1386 Hongqiao Road, Mitsubishi Electric Automation Center, Shanghai, China
Tel: +86-21-2322-3030 / Fax: +86-21-2322-3000

Beijing FA Center
MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD. Beijing Branch
Unit 901, 9F, Office Tower 1, Henderson Centre, 18 Jianguomennei Avenue, Dongcheng District, Beijing, China
Tel: +86-10-6518-8830 / Fax: +86-10-6518-2938

Tianjin FA Center
MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD. Tianjin Branch
Room 2003 City Tower, No.35, Youyi Road, Hexi District, Tianjin, China
Tel: +86-22-2813-1015 / Fax: +86-22-2813-1017

Guangzhou FA Center
MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD. Guangzhou Branch
Room 1609, North Tower, The Hub Center, No.1068, Xingang East Road, Haizhu District, Guangzhou, China
Tel: +86-20-8923-6730 / Fax: +86-20-8923-6715

Taiwan

Taichung FA Center
MITSUBISHI ELECTRIC TAIWAN CO.,LTD.
No.8-1, Industrial 16th Road, Taichung Industrial Park, Taichung City 40768, Taiwan, R.O.C.
Tel: +886-4-2359-0688 / Fax: +886-4-2359-0689

Taipei FA Center
SETSUYO ENTERPRISE CO., LTD.
3F, No.105, Wugong 3rd Road, Wugu District, New Taipei City 24889, Taiwan, R.O.C.
Tel: +886-2-2299-9917 / Fax: +886-2-2299-9963

Korea

Korea FA Center
MITSUBISHI ELECTRIC AUTOMATION KOREA CO., LTD.
7F-9F, Gangseo Hangang Xi-tower A, 401, Yangcheon-ro, Gangseo-Gu, Seoul 157-801, Korea
Tel: +82-2-3660-9605 / Fax: +82-2-3663-0475

Thailand

Thailand FA Center
MITSUBISHI ELECTRIC FACTORY AUTOMATION (THAILAND) CO., LTD.
12th Floor, SV.City Building, Office Tower 1, No. 896/19 and 20 Rama 3 Road, Kwaeng Bangpongpang, Khet Yannawa, Bangkok 10120, Thailand
Tel: +66-2682-6522 / Fax: +66-2682-6020

ASEAN

ASEAN FA Center
MITSUBISHI ELECTRIC ASIA PTE. LTD.
307, Alexandra Road, Mitsubishi Electric Building, Singapore 159943
Tel: +65-6470-2480 / Fax: +65-6476-7439

Indonesia

Indonesia FA Center
PT. MITSUBISHI ELECTRIC INDONESIA Cikarang Office
Jl. Kenari Raya Blok G2-07A Delta Silicon 5, Lippo Cikarang-Bekasi 17550, Indonesia
Tel: +62-21-2961-7797 / Fax: +62-21-2961-7794

Vietnam

Hanoi FA Center
MITSUBISHI ELECTRIC VIETNAM COMPANY LIMITED Hanoi Branch
6-Floor, Detech Tower, 8 Ton That Thuyet Street, My Dinh 2 Ward, Nam Tu Liem District, Hanoi, Vietnam
Tel: +84-4-3937-8075 / Fax: +84-4-3937-8076

Ho Chi Minh FA Center
MITSUBISHI ELECTRIC VIETNAM COMPANY LIMITED
Unit 01-04, 10th Floor, Vincom Center, 72 Le Thanh Ton Street, District 1, Ho Chi Minh City, Vietnam
Tel: +84-8-3910-5945 / Fax: +84-8-3910-5947

India

India Pune FA Center
MITSUBISHI ELECTRIC INDIA PVT. LTD. Pune Branch
Emerald House, EL-3, J Block, M.I.D.C Bhosari, Pune-411026, Maharashtra, India
Tel: +91-20-2710-2000 / Fax: +91-20-2710-2100

India Gurgaon FA Center
MITSUBISHI ELECTRIC INDIA PVT. LTD. Gurgaon Head Office
2nd Floor, Tower A & B, Cyber Greens, DLF Cyber City, DLF Phase-Ⅲ, Gurgaon-122002 Haryana, India
Tel: +91-124-463-0300 / Fax: +91-124-463-0399

India Bangalore FA Center
MITSUBISHI ELECTRIC INDIA PVT. LTD. Bangalore Branch
Prestige Emerald, 6th Floor, Municipal No. 2, Madras Bank Road (Lavelle Road), Bangalore-560001, Karnataka, India
Tel: +91-80-4020-1600 / Fax: +91-80-4020-1699

India Chennai FA Center
MITSUBISHI ELECTRIC INDIA PVT. LTD. Chennai Branch
"Citilights Corporate Centre" No.1, Vivekananda Road, Srinivasa Nagar, Chetpet, Chennai-600031, Tamil Nadu, India
Tel: +91-44-4554-8772 / Fax: +91-44-4554-8773

India Ahmedabad FA Center
MITSUBISHI ELECTRIC INDIA PVT. LTD. Ahmedabad Branch
B/4, 3rd Floor, Safal Profitaire, Corporate Road, Prahaladnagar, Satellite, Ahmedabad, Gujarat-380015, India
Tel: +91-79-6512-0063 / Fax: +91-79-6512-0063

America

North America FA Center
MITSUBISHI ELECTRIC AUTOMATION, INC.
500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A.
Tel: +1-847-478-2469 / Fax: +1-847-478-2253

Mexico

Mexico FA Center
MITSUBISHI ELECTRIC AUTOMATION, INC. Mexico Branch
Mariano Escobedo #69, Col. Zona Industrial, Tlalnepantla Edo, C.P.54030, Mexico
Tel: +52-55-3067-7511

Brazil

Brazil FA Center
MITSUBISHI ELECTRIC DO BRASIL COMÉRCIO E SERVIÇOS LTDA.
Rua Jussara, 1750-Bloco B Anexo, Jardim Santa Cecilia, CEP 06465-070, Barueri-SP, Brasil
Tel: +55-11-4689-3000 / Fax: +55-11-4689-3016

Brazil Boituva FA Center
MELCO CNC DO BRASIL COMÉRCIO E SERVIÇOS S.A.
Acesso Jose Sartorelli, KM 2.1 CEP 18550-000 Boituva-SP, Brasil
Tel: +55-15-3363-9900 / Fax: +55-15-3363-9911

Europe

Europe FA Center
MITSUBISHI ELECTRIC EUROPE B.V. Polish Branch
ul. Krakowska 50, 32-083 Balice, Poland
Tel: +48-12-630-47-00 / Fax: +48-12-630-47-01

Germany FA Center
MITSUBISHI ELECTRIC EUROPE B.V. German Branch
Gothaer Strasse 8, D-40880 Ratingen, Germany
Tel: +49-2102-486-0 / Fax: +49-2102-486-1120

UK FA Center
MITSUBISHI ELECTRIC EUROPE B.V. UK Branch
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, U.K.
Tel: +44-1707-28-8780 / Fax: +44-1707-27-8695

Czech Republic FA Center
MITSUBISHI ELECTRIC EUROPE B.V. Czech Branch
Avenir Business Park, Radlicka 751/113e, 158 00 Praha5, Czech Republic
Tel: +420-251-551-470 / Fax: +420-251-551-471

Russia FA Center
MITSUBISHI ELECTRIC EUROPE B.V. Russian Branch St. Petersburg office
Piskarevsky pr. 2, bld 2, lit "Sch", BC "Benua", office 720; 195027, St. Petersburg, Russia
Tel: +7-812-633-3497 / Fax: +7-812-633-3499

Turkey FA Center
MITSUBISHI ELECTRIC TURKEY A.Ş Ümraniye Branch
Serifali Mahallesi Nutuk Sokak No:5, TR-34775 Umraniye, Istanbul, Turkey
Tel: +90-216-526-3990 / Fax: +90-216-526-3995

Precautions before use

This publication explains the typical features and functions of the products herein and does not provide restrictions and other information related to usage and module combinations. Before using the products, always read the product user manuals. Mitsubishi Electric will not be held liable for damage caused by factors found not to be the cause of Mitsubishi Electric; opportunity loss or lost profits caused by faults in Mitsubishi Electric products; damage, secondary damage, or accident compensation, whether foreseeable or not, caused by special factors; damage to products other than Mitsubishi Electric products; and to other duties.

⚠ For safe use

- To use the products given in this publication properly, always read the relevant manuals before use.
- The products have been manufactured as general-purpose parts for general industries, and have not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the products for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- The products have been manufactured under strict quality control. However, when installing the products where major accidents or losses could occur if the products fail, install appropriate backup or fail-safe functions in the system.

Mitsubishi Programmable Controllers
MELSEC-A/QnA Series Transition Guide

Country/Region	Sales office	Tel/Fax
USA	Mitsubishi Electric Automation, Inc. 500 Corporate Woods Parkway, Vernon Hills, IL 60061, USA	Tel : +1-847-478-2100 Fax : +1-847-478-2253
Mexico	Mitsubishi Electric Automation, Inc. Mexico Branch Mariano Escobedo #69, Col. Zona Industrial, Tlalnepantla Edo, C.P.54030, Mexico	Tel : +52-55-3067-7500
Brazil	Mitsubishi Electric do Brasil Comércio e Serviços Ltda. Rua Jussara, 1750- Bloco B Anexo, Jardim Santa Cecilia, CEP 06465-070, Barueri, San Paulo, Brazil	Tel : +55-11-4689-3000 Fax : +55-11-4689-3016
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8, D-40880 Ratingen, Germany	Tel : +49-2102-486-0 Fax : +49-2102-486-1120
UK	Mitsubishi Electric Europe B.V. UK Branch Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, U.K.	Tel : +44-1707-28-8780 Fax : +44-1707-27-8695
Ireland	Mitsubishi Electric Europe B.V. Irish Branch Westgate Business Park, Ballymount, IRL-Dublin 24, Ireland	Tel : +353-1-4198800 Fax : +353-1-4198890
Italy	Mitsubishi Electric Europe B.V. Italian Branch Centro Direzionale Colleoni - Palazzo Sirio Viale Colleoni 7, 20864 Agrate Brianza(Milano) Italy	Tel : +39-039-60531 Fax : +39-039-6053-312
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Carretera de Rubí, 76-80-Apdo. 420, 08173 Sant Cugat del Vallés (Barcelona), Spain	Tel : +34-93-565-3131 Fax : +34-93-589-1579
France	Mitsubishi Electric Europe B.V. French Branch 25, Boulevard des Bouvets, F-92741 Nanterre Cedex, France	Tel : +33-1-5568-5568 Fax : +33-1-5568-5757
Czech Republic	Mitsubishi Electric Europe B.V. Czech Branch Avenir Business Park, Radlicka 751/113e, 158 00 Praha5, Czech Republic	Tel : +420-251-551-470 Fax : +420-251-551-471
Poland	Mitsubishi Electric Europe B.V. Polish Branch ul. Krakowska 50, 32-083 Balice, Poland	Tel : +48-12-630-47-00 Fax : +48-12-630-47-01
Sweden	Mitsubishi Electric Europe B.V. (Scandinavia) Fjelievägen 8, SE-22736 Lund, Sweden	Tel : +46-8-625-10-00 Fax : +46-46-39-70-18
Russia	Mitsubishi Electric Europe B.V. Russian Branch St. Petersburg Office Piskarevsky pr. 2, bld 2, lit “Sch”, BC “Benua”, office 720; 195027, St. Petersburg, Russia	Tel : +7-812-633-3497 Fax : +7-812-633-3499
Turkey	Mitsubishi Electric Turkey A.Ş Ümraniye Branch Serifali Mahallesi Nutuk Sokak No:5, TR-34775 Umraniye, Istanbul, Turkey	Tel : +90-216-526-3990 Fax : +90 -216-526-3995
Dubai	Mitsubishi Electric Europe B.V. Dubai Branch Dubai Silicon Oasis, P.O.BOX 341241, Dubai, U.A.E.	Tel : +971-4-3724716 Fax : +971-4-3724721
South Africa	Adroit Technologies 20 Waterford Office Park 189 Witkoppen Road Fourways Johannesburg South Africa	Tel : +27-11 658-8100 Fax : +27-11 658-8101
China	Mitsubishi Electric Automation (China) Ltd. No.1386 Hongqiao Road, Mitsubishi Electric Automation Center, Shanghai, China	Tel : +86-21-2322-3030 Fax : +86-21-2322-3000
Taiwan	Setsuyo Enterprise Co., Ltd. 6F., No.105, Wugong 3rd Road, Wugu District, New Taipei City 24889, Taiwan, R.O.C.	Tel : +886-2-2299-2499 Fax : +886-2-2299-2509
Korea	Mitsubishi Electric Automation Korea Co., Ltd. 1480-6, Gayang-Dong, Gangseo-Gu, Seoul, 157-200, Korea	Tel : +82-2-3660-9530 Fax : +82-2-3664-8372
Singapore	Mitsubishi Electric Asia Pte. Ltd. 307, Alexandra Road, Mitsubishi Electric Building, Singapore, 159943	Tel : +65-6470-2308 Fax : +65-6476-7439
Thailand	Mitsubishi Electric Factory Automation (Thailand) Co., Ltd. 12th Floor, SV.City Building, Office Tower 1, No. 896/19 and 20 Rama 3 Road, Kwaeng Bangpongpang, Khet Yannawa, Bangkok 10120, Thailand	Tel : +66-2682-6522 Fax : +66-2682-6020
Vietnam	Mitsubishi Electric Vietnam Company Limited Hanoi Branch Suite 9-05, 9th Floor, Hanoi Central Office Building 44B Ly Thuong Kiet District, Hanoi City, Vietnam	Tel : +84-4-3937-8075 Fax : +84-4-3937-8076
Indonesia	PT. Mitsubishi Electric Indonesia Gedung Jaya 11th Floor, JL. MH. Thamrin No.12, Jakarta Pusat 10340, Indonesia	Tel : +62-21-3192-6461 Fax : +62-21-3192-3942
India	Mitsubishi Electric India Pvt. Ltd. Emerald House, EL-3, J Block, M.I.D.C., Bhosari, Pune, 411026, Maharashtra State, India	Tel : +91-20-2710-2000 Fax : +91-20-2710-2100
Australia	Mitsubishi Electric Australia Pty. Ltd. 348 Victoria Road, P.O. Box 11, Rydalmere, N.S.W 2116, Australia	Tel : +61-2-9684-7777 Fax : +61-2-9684-7245

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YADA-MINAMI 5, HIGASHI-KU, NAGOYA, JAPAN

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001(standards for quality assurance management systems)

EC97J1113 051

ISO 9001 BUREAU VERITAS Certification 008

L(NA)08077E-K 1502〈IP〉

New publication, effective Feb. 2015.