TECHNICAL BULLETIN

[Issue No.] FA-A-0075 **[Page]** 1/14
[Title] Production discontinuation of the AnS and QnAS series Ethernet interface modules
[Date of Issue] May 2010
[Relevant Models] A1SJ71E71N-B2, A1SJ71E71N-B5, A1SJ71QE71N-B2, and A1SJ71QE71N-B5

Thank you for your continued support of Mitsubishi programmable controllers, MELSEC-AnS and -QnAS series.

Production of the following MELSEC-AnS and -QnAS series models will be discontinued.

1. Models to be discontinued

Product name	Series	Model	Interface
Ethernet interface module	AnS	A1SJ71E71N-B2	10BASE2
		A1SJ71E71N-B5	10BASE5
	QnAS	A1SJ71QE71N-B2	10BASE2
		A1SJ71QE71N-B5	10BASE5

2. Schedule

- Transition to "made-to-order": March 31, 2010
- Order acceptance : Through December 24, 2010
- Production discontinuation : January 31, 2011

3. Reasons for discontinuing production

Some parts of the above products are now obsolete. Therefore, we will have difficulty to maintain the production system.

4. Repair acceptance

- Repair acceptance: Through January 31, 2018 (For 7 years after production discontinuation)

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

5. Alternative models

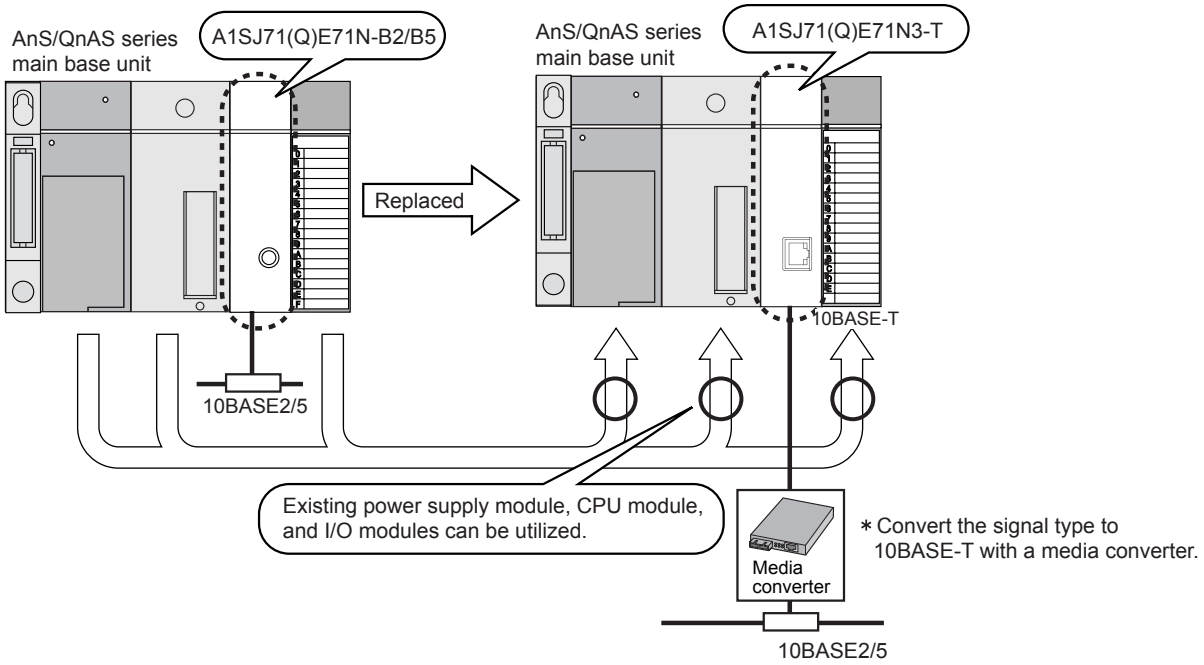
(1) Replacement with the same series models

(a) Alternative models

Discontinued model		Alternative model
Series	**Model**	**Model**
AnS	A1SJ71E71N-B2	A1SJ71E71N3-T *1
	A1SJ71E71N-B5	
QnAS	A1SJ71QE71N-B2	A1SJ71QE71N3-T *1
	A1SJ71QE71N-B5	

*1 The signal type must be converted from 10BASE2/5 to 10BASE-T. Using a commercially available media converter that is compliant with IEEE802.3 standards, convert the signal type of the existing cable to 10BASE-T.

(b) Replacement example



(2) Replacement with the Q series models

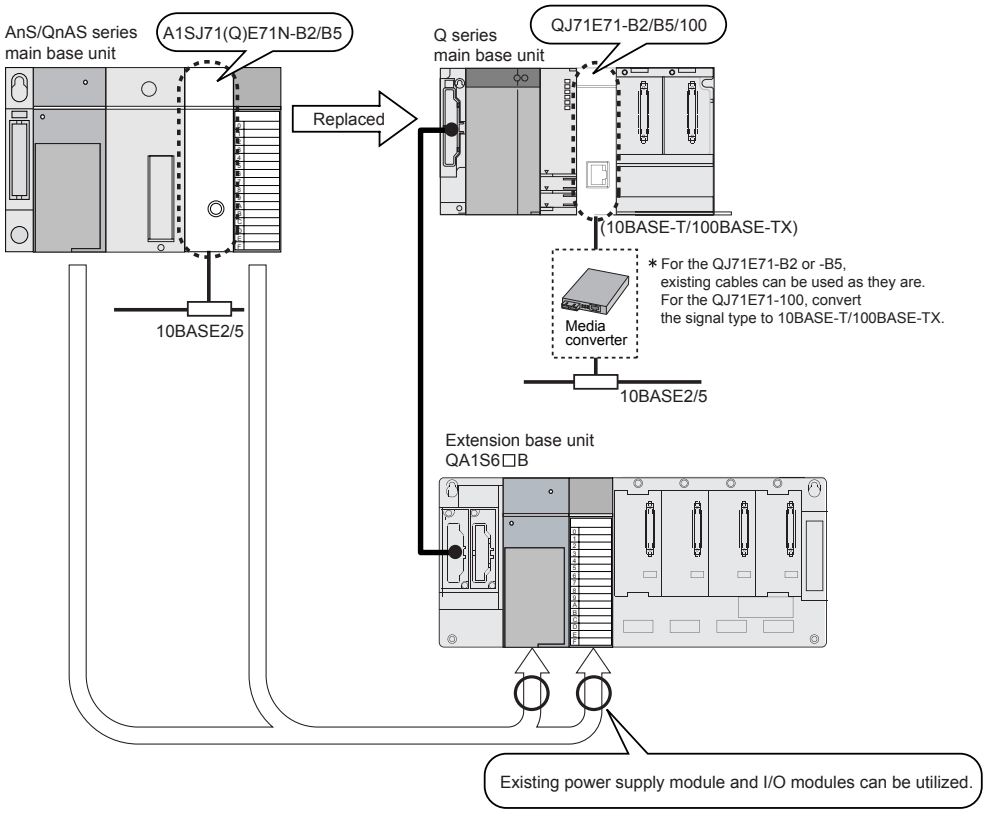
(a) Alternative models

Discontinued model		Alternative model		
Series	**Model**	**Series**	**Model**	
AnS	A1SJ71E71N-B2	Q	QJ71E71-B2	Or, QJ71E71-100 *1
	A1SJ71E71N-B5		QJ71E71-B5	
QnAS	A1SJ71QE71N-B2		QJ71E71-B2	
	A1SJ71QE71N-B5		QJ71E71-B5	

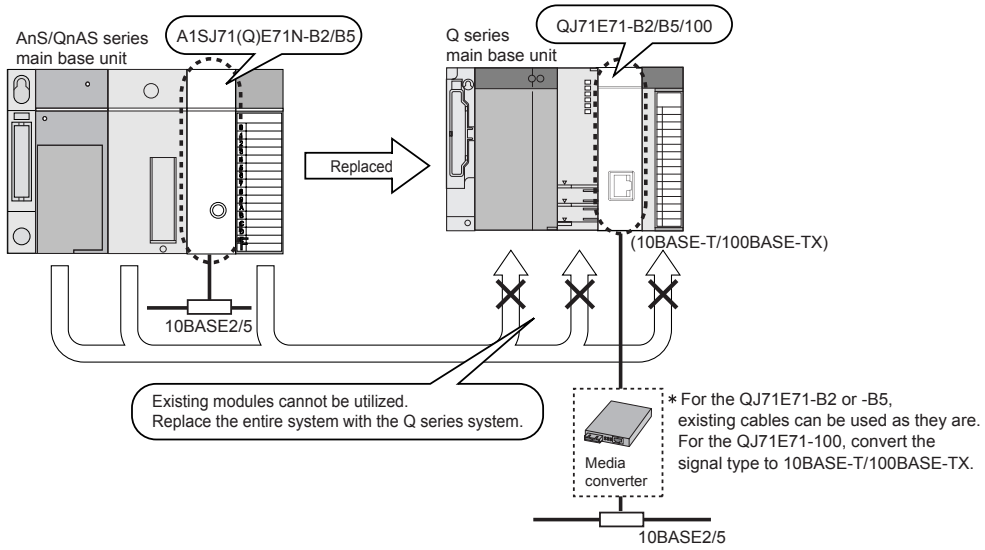
To replace a discontinued model with the QJ71E71-B2, -B5, or -100, the entire system must be changed to the Q series system. (Refer to (c) in this section.)
Note that, by using an extension base unit, QA1S6□B, the existing I/O modules can be used. (Refer to (b) in this section.)
For use of the QA1S6□B, there are restrictions on the CPU and other module models.
For details, refer to the QCPU User's Manual (Hardware Design, Maintenance and Inspection).
For utilization of AnS or QnAS series programs for the Q series system, refer to (2) (b) and (c) in "8. Precautions for replacement."

*1 The signal type must be converted from 10BASE2/5 to 10BASE-T/100BASE-TX. Using a commercially available media converter that is compliant with IEEE802.3 standards, convert the signal type of the existing cable to 10BASE-T/100BASE-TX.

(b) An example of using existing modules except a discontinued model and a CPU module



(c) An example of replacing all modules with Q series modules



6. Performance specifications comparison between the discontinued and alternative models

The performance specifications of the discontinued and alternative models are shown below.

(1) When replacing the A1SJ71E71N-B2

Item		Specification				
		A1SJ71E71N-B2	**A1SJ71E71N3-T**	**QJ71E71-B2**	**QJ71E71-100**	
Transmission specifications	Interface	10BASE2	10BASE-T	10BASE2	10BASE-T	100BASE-TX
	Data transmission speed	10Mbps				100Mbps
	Communication mode	Half-duplex				Full- or half-duplex
	Transmission method	Base band				
	Maximum node-to-node distance	925m		925m		
	Maximum segment length	185m	100m (between hub and node)	185m	100m (between hub and node)	
	Maximum number of nodes/connection	30/segment	Cascade connection Up to 4 bases	30/segment	Cascade connection Up to 4 bases	Cascade connection Up to 2 bases
	Minimum node-to-node distance	0.5m		0.5m		
Communication data storage memory	Number of simultaneously open connections allowed	8 connections (Can be used in sequence programs.)		16 connections (Can be used in sequence programs.)		
	Fixed buffer	1k word×8		1k word×16		
	Random access buffer	3k words×2		6k words×1		
Number of writes to EEPROM						
Number of occupied I/O points		32 points/slot (I/O assignment: special 32 points)		32 points/slot (I/O assignment: intelligent 32 points)		
Internal current consumption (5VDC)		0.66A	0.69A	0.60A	0.50A	
Connector		BNC connector	Modular jack (RJ45)	BNC connector	Modular jack (RJ45)	
Connection cable		Coaxial cable (RG58A/U or RG58C/U)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	Coaxial cable (RG58A/U or RG58C/U)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	Shielded twisted pair cable (STP), Category 5 or higher
External power supply (12VDC) (for transceiver)						
External dimensions		130 (H)×34.5 (W)×94 (D) [mm]		98 (H)×27.4 (W)×90 (D) [mm]		
Weight		0.21kg	0.17kg	0.13kg	0.11kg	

(2) When replacing the A1SJ71E71N-B5

Item		Specification				
		A1SJ71E71N-B5	**A1SJ71E71N3-T**	**QJ71E71-B5**	**QJ71E71-100**	
Transmission specifications	Interface	10BASE5	10BASE-T	10BASE5	10BASE-T	100BASE-TX
	Data transmission speed	10Mbps				100Mbps
	Communication mode	Half-duplex				Full- or half-duplex
	Transmission method	Base band				
	Maximum node-to-node distance	2500m		2500m		
	Maximum segment length	500m	100m (between hub and node)	500m	100m (between hub and node)	
	Maximum number of nodes/connection	100/segment	Cascade connection Up to 4 bases	100/segment	Cascade connection Up to 4 bases	Cascade connection Up to 2 bases
	Minimum node-to-node distance	2.5m		2.5m		
Communication data storage memory	Number of simultaneously open connections allowed	8 connections (Can be used in sequence programs.)		16 connections (Can be used in sequence programs.)		
	Fixed buffer	1k word×8		1k word×16		
	Random access buffer	3k words×2		6k words×1		
Number of writes to EEPROM						
Number of occupied I/O points		32 points/slot (I/O assignment: special 32 points)		32 points/slot (I/O assignment: intelligent 32 points)		
Internal current consumption (5VDC)		0.57A	0.69A	0.50A		
Connector		D-sub connector (male, 15-pin)	Modular jack (RJ45)	D-sub connector (male, 15-pin)	Modular jack (RJ45)	
Connection cable		AUI cable (twisted pair cable)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	AUI cable (twisted pair cable)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	Shielded twisted pair cable (STP), Category 5 or higher
External power supply (12VDC) (for transceiver)		Required		Required		
External dimensions		130 (H)×34.5 (W)×94 (D) [mm]		98 (H)×27.4 (W)×90 (D) [mm]		
Weight		0.20kg	0.17kg	0.12kg	0.11kg	

(3) When replacing the A1SJ71QE71N-B2

Item		Specification				
		A1SJ71QE71N-B2	A1SJ71QE71N3-T	QJ71E71-B2	QJ71E71-100	
Transmission specifications	Interface	10BASE2	10BASE-T	10BASE2	10BASE-T	100BASE-TX
	Data transmission speed	10Mbps				100Mbps
	Communication mode	Half-duplex				Full- or half-duplex
	Transmission method	Base band				
	Maximum node-to-node distance	925m		925m		
	Maximum segment length	185m	100m (between hub and node)	185m	100m (between hub and node)	
	Maximum number of nodes/connection	30/segment	Cascade connection Up to 4 bases	30/segment	Cascade connection Up to 4 bases	Cascade connection Up to 2 bases
	Minimum node-to-node distance	0.5m		0.5m		
Communication data storage memory	Number of simultaneously open connections allowed	8 connections (Can be used in sequence programs.)		16 connections (Can be used in sequence programs.)		
	Fixed buffer	1k word×8		1k word×16		
	Random access buffer	6k words×1				
Number of writes to EEPROM		Up to 10,000 times in the same area				
Number of occupied I/O points		32 points/slot (I/O assignment: special 32 points)		32 points/slot (I/O assignment: intelligent 32 points)		
Internal current consumption (5VDC)		0.53A		0.60A	0.50A	
Connector		BNC connector	Modular jack (RJ45)	BNC connector	Modular jack (RJ45)	
Connection cable		Coaxial cable (RG58A/U or RG58C/U)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	Coaxial cable (RG58A/U or RG58C/U)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	Shielded twisted pair cable (STP), Category 5 or higher
External power supply (12VDC) (for transceiver)						
External dimensions		130 (H)×34.5 (W)×94 (D) [mm]		98 (H)×27.4 (W)×90 (D) [mm]		
Weight		0.20kg	0.18kg	0.13kg	0.11kg	

(4) When replacing the A1SJ71QE71N-B5

Item		Specification				
		A1SJ71QE71N-B5	A1SJ71QE71N3-T	QJ71E71-B5	QJ71E71-100	
Transmission specifications	Interface	10BASE5	10BASE-T	10BASE5	10BASE-T	100BASE-TX
	Data transmission speed	10Mbps				100Mbps
	Communication mode	Half-duplex				Full- or half-duplex
	Transmission method	Base band				
	Maximum node-to-node distance	2500m		2500m		
	Maximum segment length	500m	100m (between hub and node)	500m	100m (between hub and node)	
	Maximum number of nodes/connection	100/segment	Cascade connection Up to 4 bases	100/segment	Cascade connection Up to 4 bases	Cascade connection Up to 2 bases
	Minimum node-to-node distance	2.5m		2.5m		
Communication data storage memory	Number of simultaneously open connections allowed	8 connections (Can be used in sequence programs.)		16 connections (Can be used in sequence programs.)		
	Fixed buffer	1k word×8		1k word×16		
	Random access buffer	6k words×1				
Number of writes to EEPROM		Up to 10,000 times in the same area				
Number of occupied I/O points		32 points/slot (I/O assignment: special 32 points)		32 points/slot (I/O assignment: intelligent 32 points)		
Internal current consumption (5VDC)		0.40A	0.53A	0.50A		
Connector		D-sub connector (male, 15-pin)	Modular jack (RJ45)	D-sub connector (male, 15-pin)	Modular jack (RJ45)	
Connection cable		AUI cable (twisted pair cable)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	AUI cable (twisted pair cable)	Unshielded twisted pair cable (UTP) or shielded twisted pair cable (STP), Category 3, 4, or 5	Shielded twisted pair cable (STP), Category 5 or higher
External power supply (12VDC) (for transceiver)		Required		Required		
External dimensions		130 (H)×34.5 (W)×94 (D) [mm]		98 (H)×27.4 (W)×90 (D) [mm]		
Weight		0.19kg	0.18kg	0.12kg	0.11kg	

7. Functional comparison between the discontinued and alternative models

The following table shows functional comparison between the discontinued and alternative models.

	Function		AnS series		QnAS series		Q series	Remarks
			A1SJ71E71N-B2, A1SJ71E71N-B5	A1SJ71E71N3-T	A1SJ71QE71N-B2, A1SJ71QE71N-B5	A1SJ71QE71N3-T	QJ71E71-B2, QJ71E71-B5, QJ71E71-100	
1	Initial processing	Sequence program	○		○		○*2	(*7)
		GX Developer parameter setting	×		○		○*2	
2	Open processing	Sequence program	○		○		○*2	(*8)
		GX Developer parameter setting	×		×		○*2	
3	Communication using the fixed buffer	With procedure	○		○		○*3	-
		No procedure	○		○		○*3	-
4	Communication using the random access buffer		○		○		○*4	-
5	Reading/writing data in the programmable controller CPU (communication using MC protocol)		○		○		○	(*9)
6	Communication using data link instructions		×		○*1		○	For communication among programmable controller CPUs
7	Interrupt processing (during data reception)	Fixed buffer communication	×		×		○	BUFRCVS instruction
		Data link instruction	×		×		○	RECVS instruction
8	Sending/receiving e-mail	Sending/receiving by sequence program	×		×		○	(*10)
		Transmission by the auto-notification function	×		×		○	-
9	File transfer		×		○		○	FTP server function
10	Transmission by the Web function		×		×		○	-
11	Simultaneous broadcast		○		○		○	Simultaneous broadcast function
12	Communication while the programmable controller CPU is in STOP status		○		○		○*5	-
13	Selection of communication data code (ASCII/binary)		○		○		○	-
14	Communication through CC-Link IE controller network, MELSECNET/H, and MELSECNET/10		×		○*1		○	-
15	Router relay function		○		○		○	Router relay function
16	Existence check of the connected device	Ping	○		○		○	-
		KeepAlive	×		×		○	-
17	Communication by pairing open		○		○		○	Communication using the fixed buffer
18	Unit of each timer setting value for data communication	500ms	○		○ (Fixed)		○ (Fixed)	-
		2s	○		×		×	-
19	Communication with GX Developer	TCP/IP	×		×		○	For 1:1 communication
		UDP/IP	○		○		○	Depends on the GX Developer
20	EEPROM		×		○		×*6	Communication parameter registration
21	TCP Maximum Segment Size Option transmission		○		○		○	-

○: Available ×: N/A

*1 The availability of the function depends on the date of manufacture and software version of the programmable controller CPU and the SWnIVD/NX-GPPQ GPP function software package.

*2 A sequence program using input/output signals cannot be used together with the parameter setting in GX Developer.

*3 The input/output signals and the buffer memory of the QnAS series are compatible.

*4 Although the function is compatible, it cannot be used together with the e-mail sending/receiving function activated by the sequence program.

*5 Setting "Always wait for OPEN" in the Network parameter setting of GX Developer eliminates the need for the sequence program.
If this is used in an existing sequence program, the following conditions are not applicable. (It will not correctly function because the same area is used)
- "Always wait for OPEN" is selected in the dialog box opened from "Operational settings" in the Network parameter setting.
- "MELSOFT connection" is set in the Network parameter open setting window.
- Re-initial processing (using the UINI instruction or buffer memory) is used in the sequence program

*6 There is no EEPROM. The data items stored in the EEPROM of the QnAS series model are set by parameters from GX Developer.

*7 Based on the parameter setting in GX Developer, the Q series model performs initial processing at startup. An existing sequence program is not required.

*8 The number of connections that can be opened from the programmable controller CPU has been increased to 16 for the Q series models.
Also, by setting "Always wait for OPEN" in the parameter setting of GX Developer, only the Passive open processing for TCP/IP communication or the open processing for UDP/IP communication can be performed at startup of the Q series model. An existing sequence program is not required.

*9 For the Q series, up to 960-word data can be read or written. (Up to 480-word data for the QnAS series)

*10 This cannot be used together with the communication function using the random access buffer.

8. Precautions for replacement

(1) Replacement with the same series models

(a) Internal current consumption

Since the internal current consumption (5VDC) differs between the discontinued and alternative models, calculate it again. For the internal current consumption (5VDC), refer to "6. Performance specifications comparison between the discontinued and alternative models".

(b) Cable wiring

The signal type must be converted from 10BASE2/5 to 10BASE-T.
Using a commercially available media converter that is compliant with IEEE802.3 standards, convert the signal type of the existing cable to 10BASE-T.

(c) Utilization of programs

1) Utilizing the programs on the connected device side
Existing programs can be used without modification.
2) Utilizing the programs on the AnS or QnAS series host station
Existing programs can be used without modification.

(2) Replacement with the Q series models

(a) Cable wiring

For replacement with the QJ71E71-B2 or -B5, existing cables can be used as they are.
For replacement with the QJ71E71-100, the signal type must be converted from 10BASE2/5 to 10BASE-T/100BASE-TX.
Using a commercially available media converter that is compliant with IEEE802.3 standards, convert the signal type of the existing cable to 10BASE-T/100BASE-TX.

(b) Utilizing AnS series programs for the Q series

1) Utilizing the programs on the connected device side
The existing programs for the AnS series on the connected device side can be used for communication with the Q series system without modification.
Note that some programs cannot be utilized because the response speed differs between the AnS and Q series. Test the operation in advance when utilizing the programs.

2) Utilizing the programs on the AnS series host station
Because the buffer memory assignment differs between the AnS and Q series, AnS series sequence programs cannot be utilized for the Q series system. Create a new program.

(c) Utilizing QnAS series programs for the Q series

1) Utilizing the programs on the connected device side
The existing programs for the QnAS series on the connected device side can be used for communication with the Q series system without modification, except the following programs.

Item	Description
Program related to file operation	The commands related to file operation differ between the QnAS and Q series. Refer to the Q Corresponding MELSEC Communication Protocol Reference Manual, and modify the program.
Program for access to MELSECNET(II) or MELSECNET/B	The QCPU (Q mode) cannot access the MELSECNET(II) and MELSECNET/B.

Note that some programs cannot be utilized because the response speed differs between the QnAS and Q series. Test the operation in advance when utilizing the programs.

2) Utilizing the programs on the QnAS series host station

Do not use the sequence program together with the parameter setting in GX Developer for initial processing.
For parameter setting and communication with a QCPU, always use GX Developer.
The existing sequence program for the QnAS series host station can be used for communication with the Q series system, except the following programs.

Item	Description
Program for access to MELSECNET(II) or MELSECNET/B	The QCPU (Q mode) cannot access the MELSECNET(II) and MELSECNET/B.
Sequence program related to EEPROM	The Q series model does not have an EEPROM. If there is a program for accessing the EEPROM, modify the sequence program
Pairing open setting for connection No.8	For the Q series, the pairing open setting for connection No.8 is not available. (Connections No.8 and No.1 are pairing settings for reception and transmission, accordingly.) If the pairing open setting for connection No.8 has been set, modify the sequence program.
Parameter setting program by the EPRSET instruction	For the Q series, the Ethernet parameter setting is not available by using the EPRSET instruction. If the EPRSET instruction is used, delete the relevant part of the sequence program, and set parameters for the Ethernet module in the Network parameter setting of GX Developer.

Note that some programs cannot be utilized because the response speed differs between the QnAS and Q series.
Always test the operation in advance when utilizing the programs.

9. Related manuals

For replacement, refer to the following manuals.

(1) Replacement with the same series models

Manual name	Manual number (code)
For A Ethernet Interface Module User's Manual	SH-080192 (13JT71)
For QnA Ethernet Interface Module User's Manual	SH-080146 (13JR33)

(2) Replacement with the Q series models

Manual name	Manual number (code)
Q Corresponding Ethernet Interface Module User's Manual (Basic)	SH-080009 (13JL88)
QCPU User's Manual (Hardware Design, Maintenance and Inspection)	SH-080483ENG (13JR73)
Q Corresponding MELSEC Communication Protocol Reference Manual	SH-080008 (13JF89)