



Mitsubishi PLC

2001 No.159E

NEW PRODUCT RELEASE

Ethernet Interface module

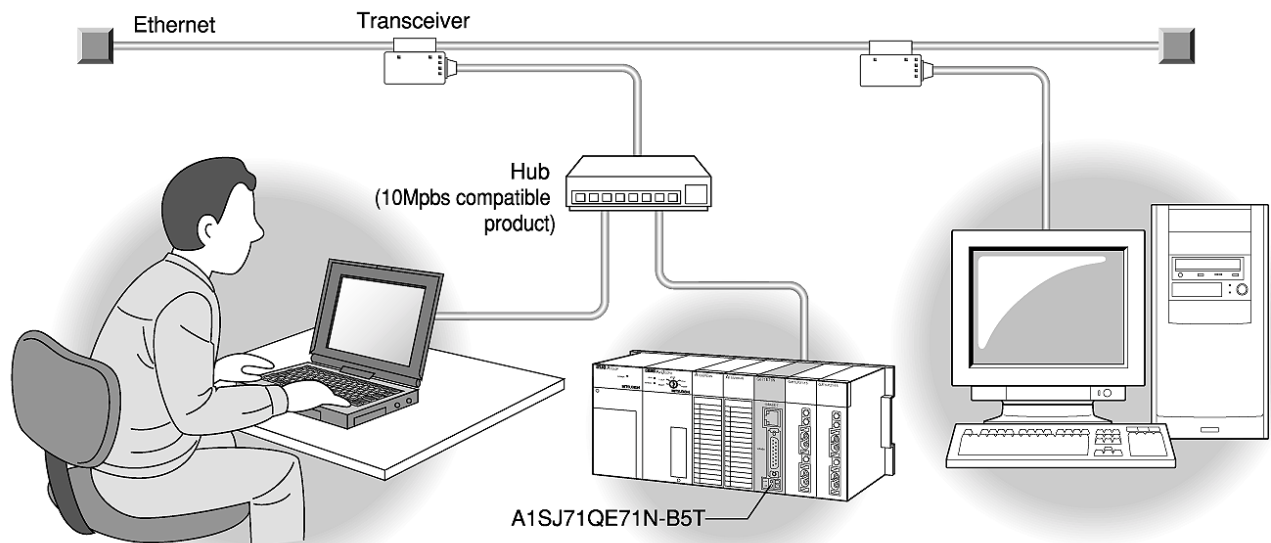
QnA Series : AJ71QE71N-B5T,AJ71QE71N-B2,A1SJ71QE71N-B5T,A1SJ71QE71N-B2

A Series : AJ71E71N-B5T,AJ71E71N-B2,A1SJ71E71N-B5T,A1SJ71E71N-B2

Available soon!

10BASE-T type Ethernet interface modules are now available in the QnA/A Series!

Personal computers can now be easily connected to the PLC by using a hub.



The new module includes the same functions as the old module (*1).

With added features:

- The 10BASE-T connection module has been added.
QnA series :AJ71QE71N-B5T,A1SJ71QE71N-B5T
A series :AJ71E71N-B5T,A1SJ71E71N-B5T
- Includes high-speed internal processing, which gives 'about 2-3 times faster' communication processing speed compared to the old module.

* Refer to [New Features] (1), for the target products of old modules.

[New Features]

(1) Increased range of connections to match the system configuration.

With the introduction of the 10BASE-T connection Ethernet interface module (hereinafter, Ethernet module), the PLC and personal computer can now be connected with 10BASE5, 10BASE2, or 10BASE-T.

	New product				Old product			
	Type	Interface (*1)			Type	Interface (*1)		
		10BASE2	10BASE5	10BASE-T		10BASE2	10BASE5	10BASE-T
QnA Series	AJ71QE71N-B2	○	N/A	N/A	AJ71QE71	○	○	N/A
	AJ71QE71N-B5T	N/A	○	○	AJ71QE71-B5	N/A	○	N/A
	A1SJ71QE71N-B2	○	N/A	N/A	A1SJ71QE71-B2	○	N/A	N/A
	A1SJ71QE71N-B5T	N/A	○	○	A1SJ71QE71-B5	N/A	○	N/A
A Series	AJ71E71N-B2	○	N/A	N/A	AJ71E71-S3	○	○	N/A
	AJ71E71N-B5T	N/A	○	○				
	A1SJ71E71N-B2	○	N/A	N/A	A1SJ71E71-B2-S3	○	N/A	N/A
	A1SJ71E71N-B5T	N/A	○	○	A1SJ71E71-B5-S3	N/A	○	N/A

*1. Indicates the communication interface for the corresponding unit. (○: Available)

(2) High-speed internal processing

With the Ethernet module's faster internal processing, the PLC responds much faster when exchanging data with an external device.

The following table shows the minimum transmission delay time (reference value) on the PLC side when using each communication function.

(This is based on the PLC CPU scan time of 10ms.)

Communication function	Outline of communication process	QnA Series		A Series	
		New product	Old product	New product	Old product
Using read/write data in the PLC CPU	UDP/IP communication Communication with binary code data Reading of D0 to D99	27	43	40	56
Using fixed buffers	TCP/IP communication Communication with binary code data Communication of 1017 words of data	65	118	65	118
Using random access buffers	UDP/IP communication Communication with ASCII code data Reading of 508 words of data	10	42	10	42

(Unit: ms)

[Function]

(1) Data communication function (TCP/IP Communication and UDP/IP Communication)

Communication Function		Description	QnA series	A series
Using read/write data in the PLC CPU		Reads/writes PLC CPU data from/to an external device.	○	○
Using fixed buffers	Procedure exist	Reads/writes any data between PLC CPU and an external device using fixed buffer of the Ethernet modules.	○	○
	No Procedure			
Using random access buffers		Exchanges data with multiple external devices, using the Ethernet random access buffers. (no need to specify external device)	○	○
Using data link instructions		Reads/writes PLC CPU data of other stations via the Ethernet using data link instructions.	○	N/A
File transfer (FTP Server Function)		Reads/writes files in the local station using the FTP server function, from an external device.	○	N/A

(2) Other functions

Function	Description	QnA series	A series
MELSECNET/10 relay communication	Data communication is enabled over a network system where Ethernet and MELSECNET/10 or multiple Ethernet networks are present.	○	N/A
Router relay communication (Router relay function)	Communicates data via routers and gateways. (Ethernet module does not function as a router.)	○	○
External device existence confirmation	Checks whether or not the external device operates normally after communication has been established (open processing).	○	○
Pairing open communication	Receiving connection and transmitting connection are opened as a single pair. (For fixed buffer communication.)	○	○
Communication using automatic open UDP port	Communication is enabled automatically after initial processing is completed of local station Ethernet module. (Opening and closing by a sequence program is unnecessary.)	○	N/A
Simultaneous broadcast	Data is broadcasted simultaneously to all stations on the same Ethernet network where the Ethernet module is located. (Using UDP/IP)	○	○
Access PLC CPU from GX Developer using Ethernet connection.		○	○

Please refer to the new module's User's Manual for the function versions and serial numbers of the products (CPU module and GX Developer) related to the above functions.

○: Applicable

[Performance Specifications]

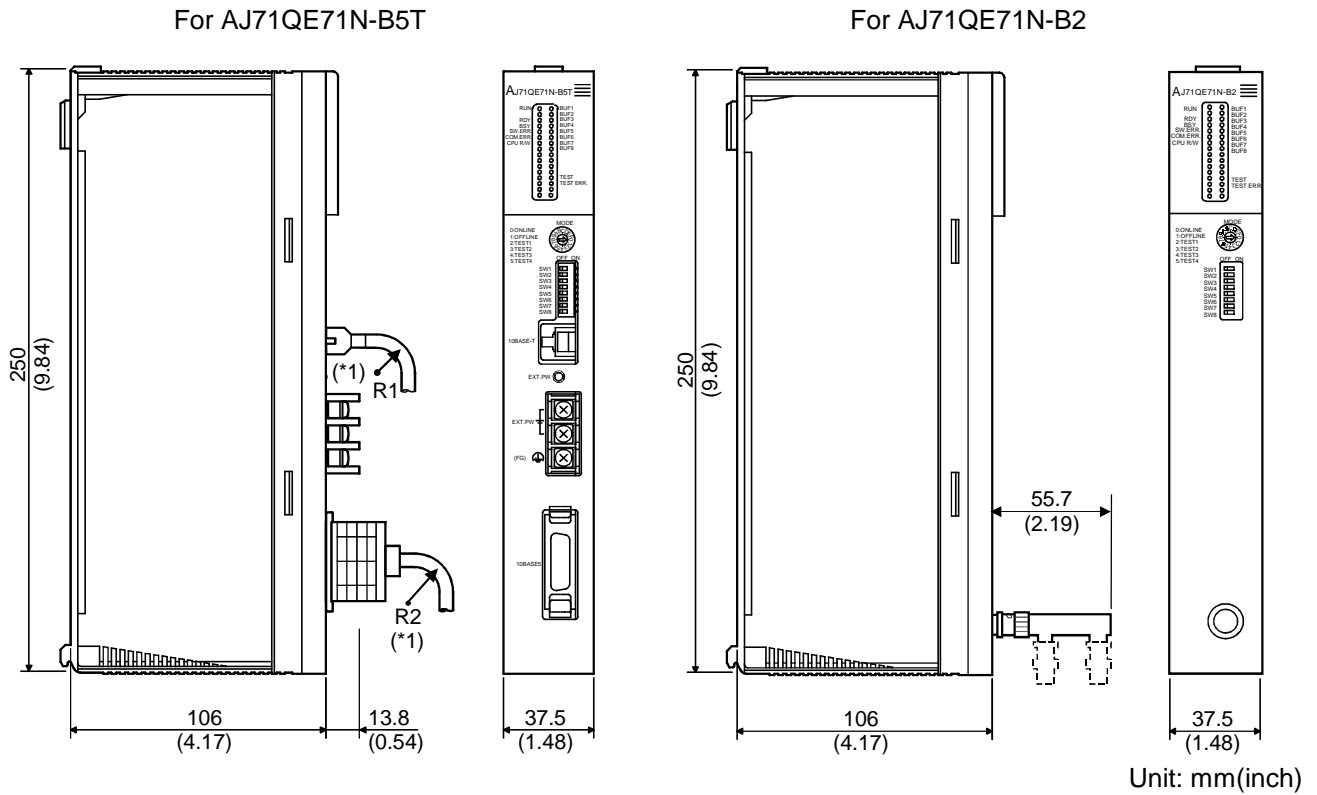
Item		Specification							
		AJ71QE71N-B5T A1SJ71QE71N-B5T		AJ71QE71N-B2 A1SJ71QE71N-B2		AJ71E71N-B5T A1SJ71E71N-B5T		AJ71E71N-B2 A1SJ71E71N-B2	
		10BASE5	10BASE-T	10BASE2		10BASE5	10BASE-T	10BASE2	
Transmission Specifications	Transmission speed	10Mbps							
	Transmission method	Base band							
	Maximum node-to-node distance	2500m (8203ft.)	-	925m (3035ft.)	2500m (8203ft.)	-	925m (3035ft.)		
	Maximum segment length	500m (1641ft.)	100m (323ft.) (*1)	185m (607ft.)	500m (1641ft.)	100m (323ft.) (*1)	185m (607ft.)		
	Maximum number of nodes per connection	100 units/segment	Cascade connection, maximum 4	30 units/segment	100 units/segment	Cascade connection, maximum 4	30 units/segment		
	Minimum node interval	2.5m (8.2ft.)	-	0.5m (1.6ft.)	2.5m (8.2ft.)	-	0.5m (1.6ft.)		
Send/receive data storage memory	Number of simultaneously open connections allowed	8 connections (Connections usable by the sequence program)							
	Fixed buffer	1k words × 8			1k words × 8				
	Random access buffer	6k words × 1			3k words × 2				
Number of occupied I/O points		32 points							
5VDC current consumption		AJ71QE71N-B5T :0.48A AJ71QE71N-B2 :0.56A A1SJ71QE71N-B5T:0.42A A1SJ71QE71N-B2 :0.64A			AJ71E71N-B5T :0.48A AJ71E71N-B2 :0.56A A1SJ71E71N-B5T:0.42A A1SJ71E71N-B2 :0.64A				
12VDC external supply power capacity (for transceiver)		(*2)				(*2)			

*1 Between hub and node.

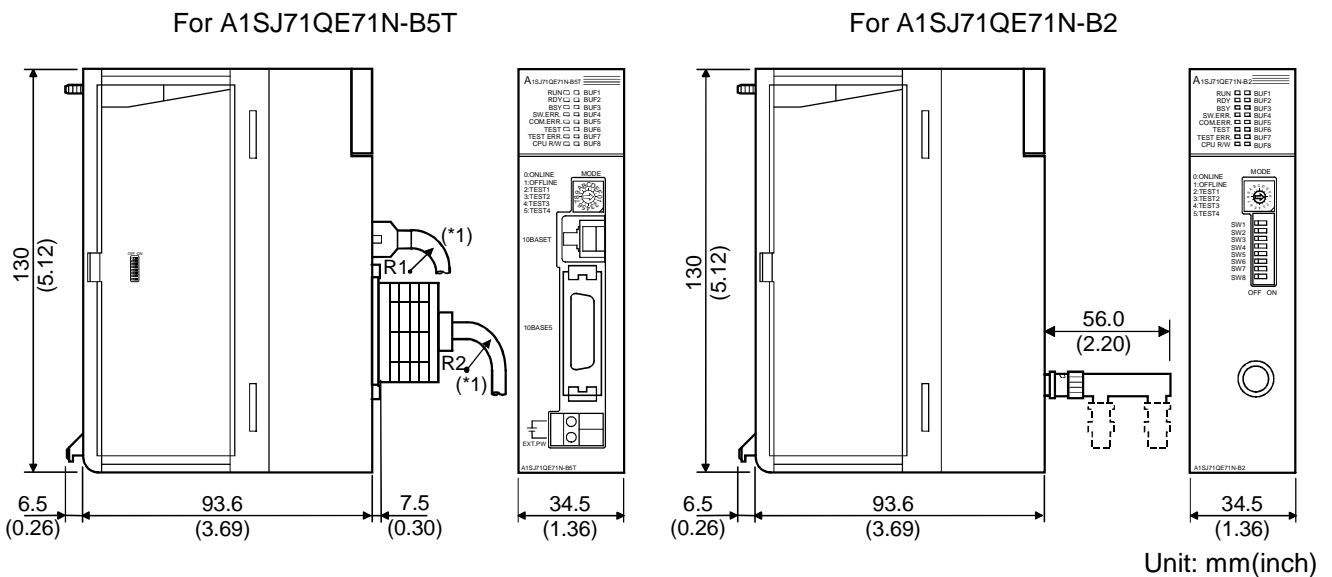
*2 It is necessary to use a power supply that meets the specifications of the transceiver and AUI cable, considering the voltage drop (maximum 0.80V) in the module.

[External Dimensions]

The following diagram shows the AJ71QE71N-B5T and AJ71QE71N-B2. The dimensions of the AJ71QE71N-B5T are the same as AJ71E71N-B5T. Also, the AJ71QE71N-B2 is the same as AJ71E71N-B2.



The following diagram shows the A1SJ71QE71N-B5T and A1SJ71QE71N-B2. The dimensions of the A1SJ71QE71N-B5T are the same as A1SJ71E71N-B5T. Also, the A1SJ71QE71N-B2 is the same as A1SJ71E71N-B2.



*1. The bending radius near the connector (reference value: R1, R2) should be four times larger or more than the cable's external diameter when connecting the communication cable.

[Manual]

(1) For QnA Series Ethernet module (AJ71QE71N-B5T, AJ71QE71N-B2, A1SJ71QE71N-B5T, A1SJ71QE71N-B2)

Manual name	Manual supply status	IB/SH number	Model code
For QnA Ethernet Interface module User's Manual(Hardware)	Included with the product	IB-0800182	13JT54
For QnA Ethernet Interface module User's Manual	Sold separately	SH-080146	13JR33

(2) For A Series Ethernet module (AJ71E71N-B5T, AJ71E71N-B2, A1SJ71E71N-B5T, A1SJ71E71N-B2)

Manual name	Manual supply status	IB/SH number	Model code
For A Ethernet Interface module User's Manual(Hardware)	Included with the product	IB-0800203	13JT70
For A Ethernet Interface module User's Manual	Sold separately	SH-080192	13JR45

[Production discontinuation of old products]

The following old Ethernet modules will be discontinued as follows.

Product	Period
QnA Series : AJ71QE71,AJ71QE71-B5,A1SJ71QE71-B2,A1SJ71QE71-B5	Through February, 2002
A Series : AJ71E71-S3,A1SJ71E71-B2-S3,A1SJ71E71-B5-S3	Through December, 2001

Notes

Ethernet is a registered trademark of Xerox, Co. Ltd. of USA.

Other company names and products mentioned in this new-product release are the trademarks or registered trademarks of their respective owners.

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