

Chapter 14 MITSUBISHI: MELSEC-Q PLC

14.1 PLC List

InfoUis able to connect to MELSEC-Q PLC.

PLC	CPU Module	Connection method	Comm. method	Connection Module	Remarks
MELSEC-Q	Q00J, Q00, Q01, Q02, Q02H, Q06H, Q12H, Q25H, Q12PH, 25PH	Link	RS-232C	QJ71C24N QJ71C24N-R2	Cnet
		Link	RS-422/485	QJ71C24N QJ71C24N-R4	Cnet
		Link	Ethernet	QJ71E71-100	FEnet
	Q03UDE, Q04UDEH, Q06QDEH, Q10UDEH, Q13UDEH, Q20UDEH, Q26UDEH	CPU Ethernet	Ethernet	Built in Ethernet	-

Notice

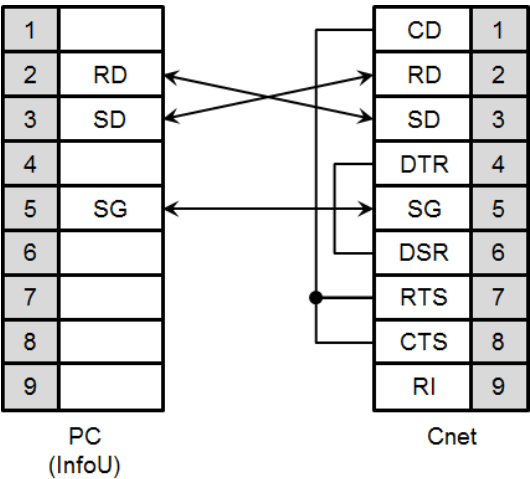
Terminology

- ☞ Link: executing serial communication with the communication module of the PLC.
- ☞ Built in Ethernet: PLC CPU에 탑재된 RJ45 포트를 통한 Ethernet 통신입니다.

14.2 Wiring Diagram

14.2.1 Link method: Cnet

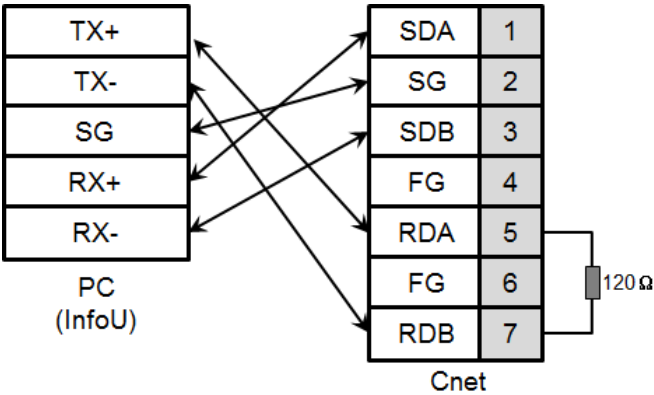
Cnet is specified into RS-232C and RS-422/485 type. Below is the wiring of RS-232C.



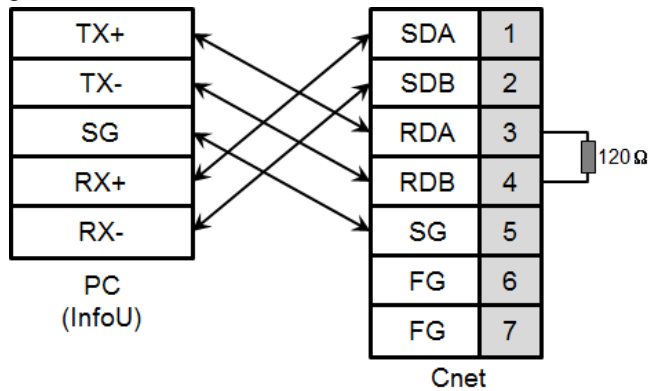
Notice

MELSEC-Q Cnet (RS-232C) uses flow control, so it communicates only with the wiring as above.

QJ71C24N (RS-422) wiring is as below.



QJ71C24N-4R(RS-422) wiring is as below.



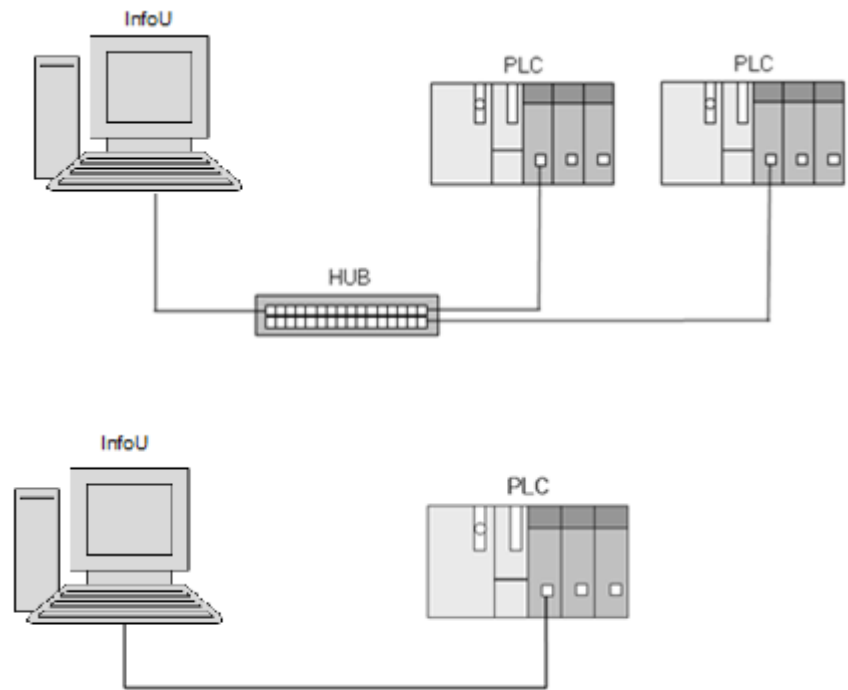
Notice

- ☞ RS-422/485 port of the PLC does not need an extra connector since it's consisted as a terminal block.
- ☞ For safe communication, shielded wiring is recommended.

14.2.2 Link method: FEnet

(1) Ethernet specification

Ethernet can be connected in 2 ways as below figure.



Notice

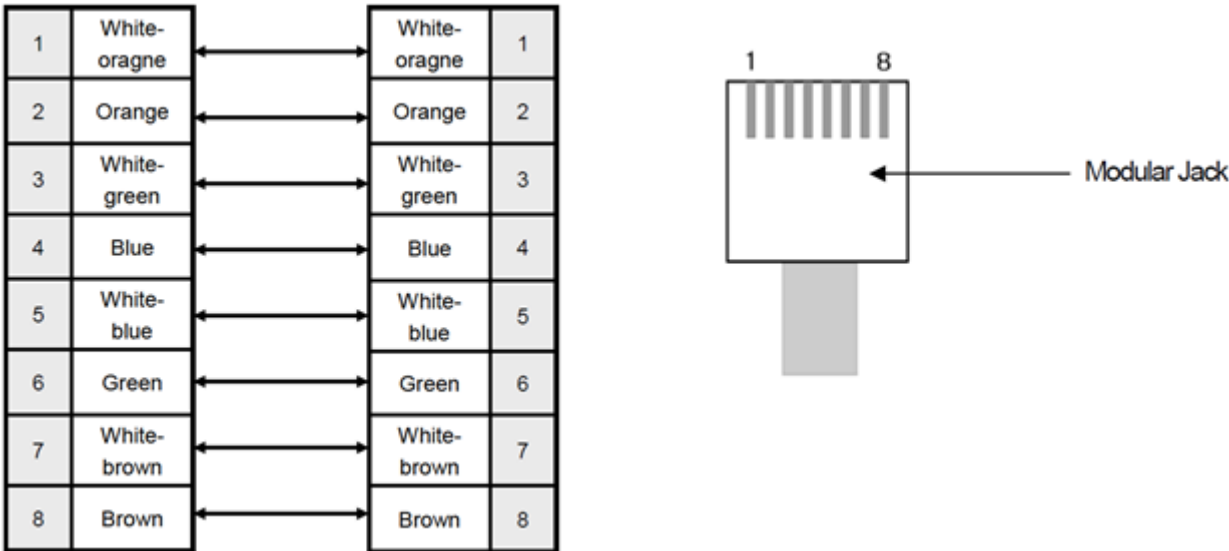
- ☞ When connecting hub-node, direct cable has to be used and cross cable has to be used when connecting 1:1.

(2) Ethernet cable

Ethernet cable gets specified into 2 cables according to its type.

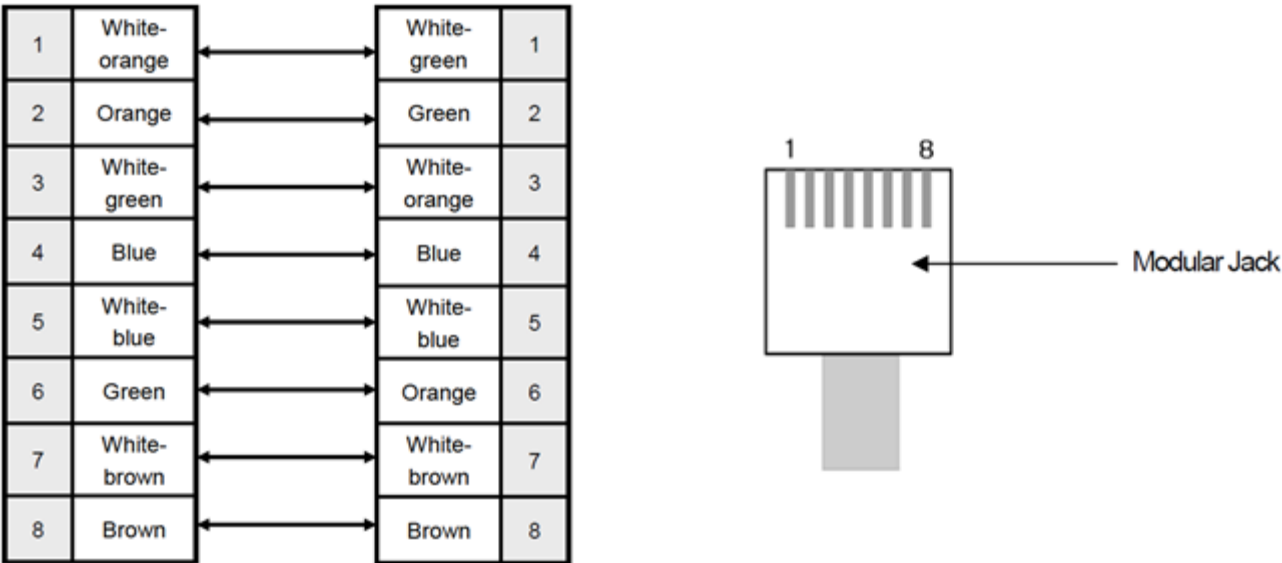
When communicating through LAN, connected to network equipment like a hub, direct cable is used. (In case of hub-node connection) Direct connection is available among equipments and in this case, cross cable is used.

Method for wiring a direct cable is as follows.



'White-yellow', 'White-green', 'White-blue', 'White-brown' from above figure is indicated on the coating of the cable. For example, 'white-blue' has blue stripes on white coating.

Method for wiring of cross cable is as follows.



Notice

- ☞ Use according to the connection method.
- ☞ Wire the cable by using a modular tool. Bad connection may occur.
- ☞ If the lock part of the modular jack gets damaged, it may not get fixed to the RJ45 connector (Ethernet connector) and bad connection may occur.
- ☞ The UTP cable is made out of solid wire material. Therefore, it may break when heavily bent or shaken.
- ☞ It is advisory to use a plug cover when wiring cables.

14.3 I/O Driver Setting

14.3.1 Link method: Cnet

(1) PLC Setting

Cnet communication parameter of PLC can be specified at GX Developer. For more detail, refer to MITSUBISHI user manual.

- Select 'Parameter → PLC parameter → I/O allocation' at the GX Developer.
- Setting screen appears. And then allocate I/O.

Item	Setting
Type	Select 'Intelligent'
Name	Select module name currently being installed For example, if currently installed module is QJ71C24N, select 'QJ71C24N'
Point	Select 32-point.
Head XY	Specify the head I/O address of module.

* Intelligent: name of Q series PLC modules operating by command of PLC CPU.

- Specify the switch by selecting the switch setting button.

Switch No.	Contents
SW1	Communication setting of CH1
SW2	Protocol setting of CH1
SW3	Communication setting of CH2
SW4	Protocol setting of CH2
SW5	Station number setting

<Configuration of SW1, 3>

B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0
<div>Comm. speed</div>								<div>Comm. parameter</div>							
Baud rate (bps)		Upper byte (B15 ~ B8)													
9,600		05H													
19,200		07H													
38,400		09H													
57,600		0AH													
115,200		0BH													
Bit	Contents		0	1	Reference										
B7	Modifying settings		Disable	Enable	Set as Enable(1)										
B6	Online editing		Disable	Enable	Set as Enable(1)										
B5	SUM check code		None	Presence	Set as Presence(1)										
B4	Stop bit		1	2	-										
B3	Parity type		Odd	Even	-										
B2	Parity		None	Presence	-										
B1	Data bit		7	8	-										
B0	Writing setting		Individual	Interlock	In case of using only one communication channel, set as Individual										

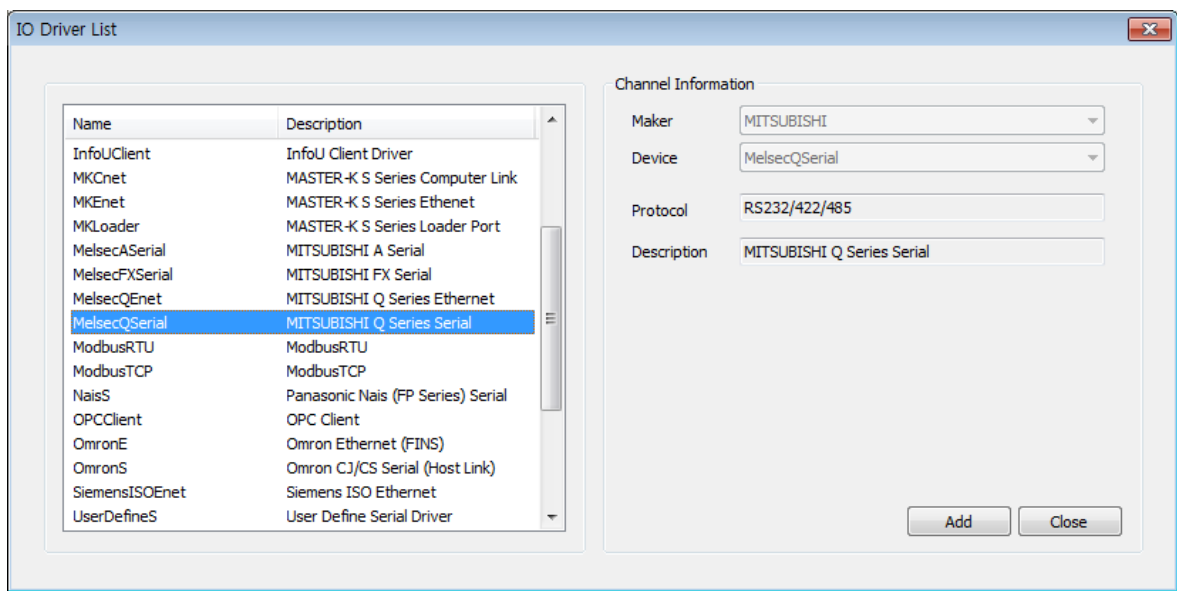
<Configuration of SW2, SW4>

- SW2 and SW4 are items to set a communication protocol. Set as Mode 1

Notice

- 1. Communication state check
 - There are RX, TX LEDs on the Cnet module. These LEDs are blink rapidly when communicating normally.
- 2. Cautions when setting PLC
 - Refer to operating manual of MITSUBISHI when setting up a PLC.

- (2) InfoU Setting: MelsecQ Serial
 - 1) Add Channel



Select “MelsecQSerial” from the I/O driver list and press “Add”.

InfoU Use Exclusive communication Mode 1

- Channel Name: Input a channel name.
- Description: Input some information on the channel.
- Baud Rate: Select a communication speed.
- Parity Bit: Select a parity bit.
- Data Bit: Select a data bit.
- Stop Bit: Select a stop bit.
- Time Out : It refers to a certain time period during which any response to the request for data is not made and after passing such a time period, the system will declare timeout to move on to the next process. The time period to be set will be a base to judge communication errors.
- Retry: Set up the number of times to retry when communication fails.
- Use RTS: Check ☒ in the box only when using Channel 485 and 422.
- Delay Time (Before): Information used only in Channel 485 and 422.The delay time right before requesting Data to PLC.
- Delay Time (After): Information used only in Channel 485 and 422.The delay time right after requesting Data to PLC.
- Save: If 'Save' button is pressed, Channel information will be saved and the saved information will add to the left "Configuration Information" tree.

MelsecQ Serial Configuration Information

Configuration Information

MelsecQ Serial Driver Configuration Information

- [New Channel]
- MelsecQSerial
- [New Station]

Channel Information

Channel Name MelsecQSerial

Description

☐ Line Redundancy ☐ Device Redundancy

COM Port#1 COM1

COM Port#2

COM Port#3

COM Port#4

Baud Rate 38400

Parity Bit No Parity

Data Bit 8

Stop Bit 1

Timeout 2000 msec [1000 ~ 3000]

Retry 3 [1 ~ 5]

☐ Use RTS

Delay Time (Before) 0 msec

Delay Time (After) 15 msec

Save

Close

2) Add Station

MelsecQ Serial Configuration Information

Configuration Information

MelsecQ Serial Driver Configuration Information

- [New Channel]
- MelsecQSerial
- [New Station]

Station Information

Station Name

Description

PLC CPU Type Q_Q00J

Station Number 0 (0 ~ 255)

Network NO 0

PLC NO 255

Module IO NO 1023

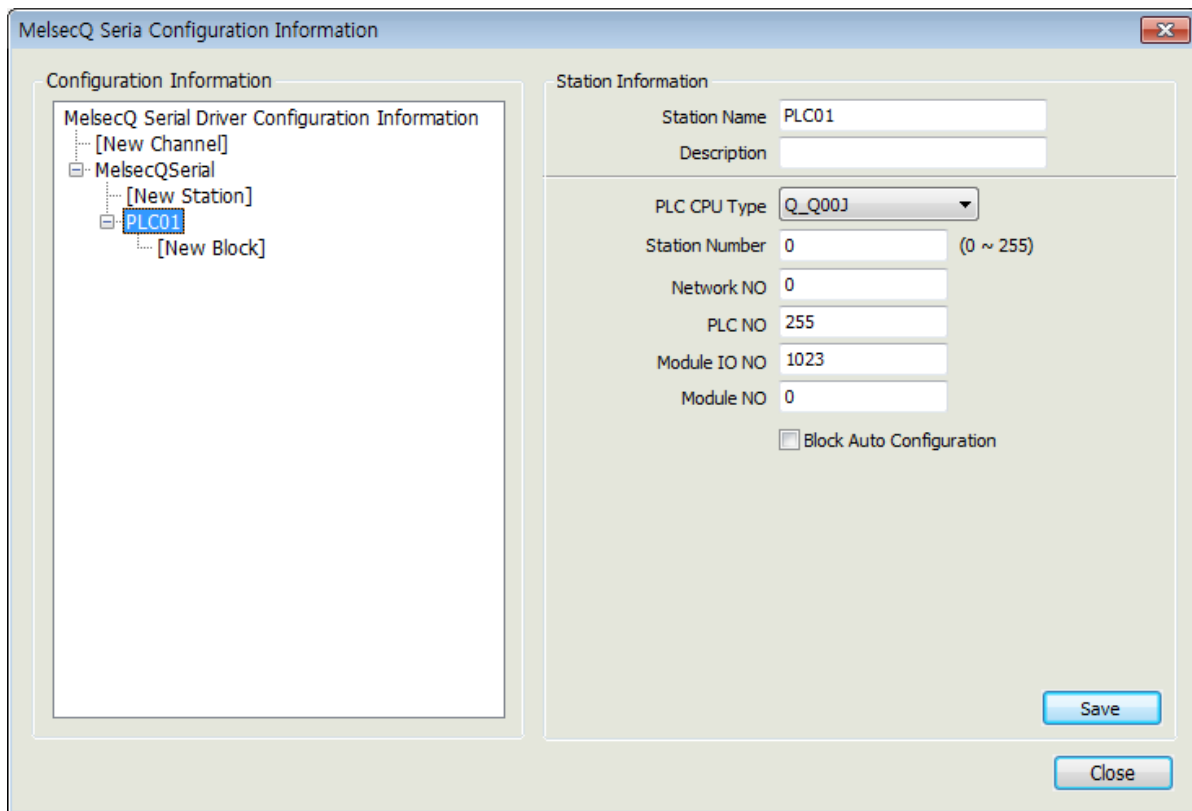
Module NO 0

☐ Block Auto Configuration

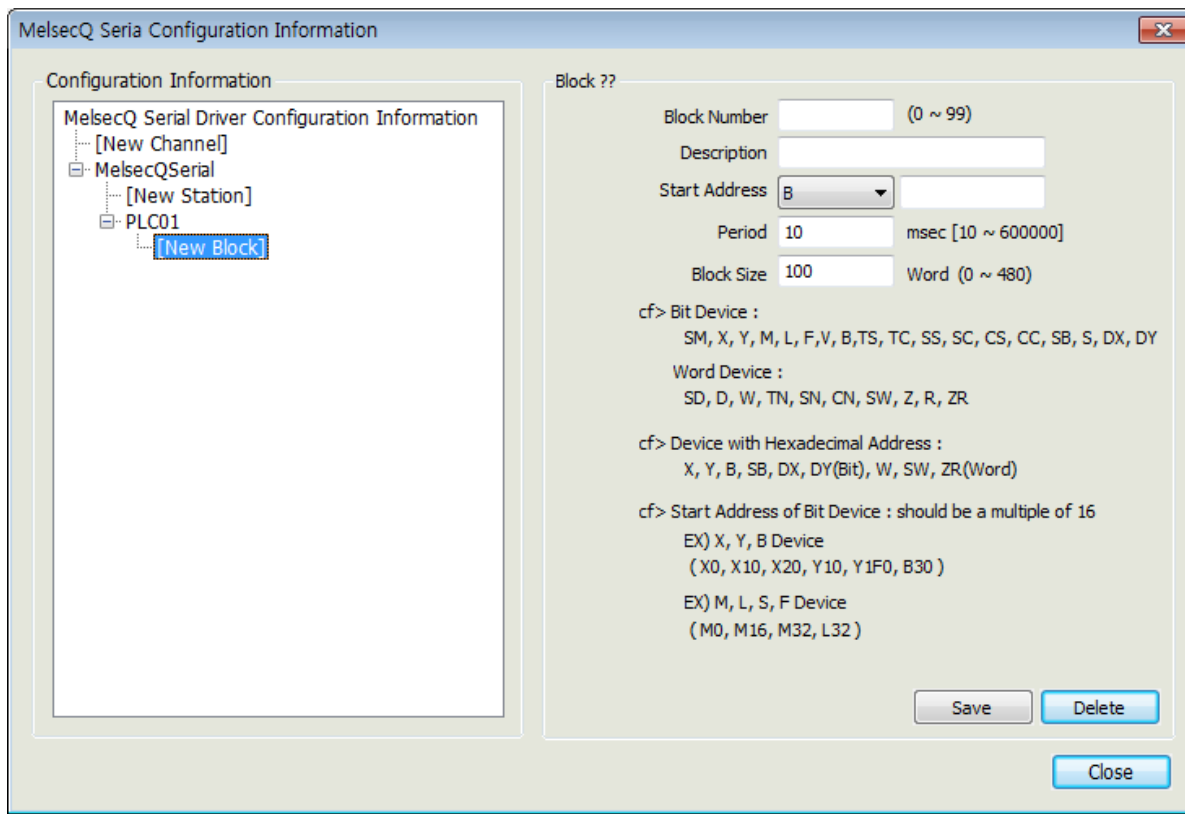
Save

Close

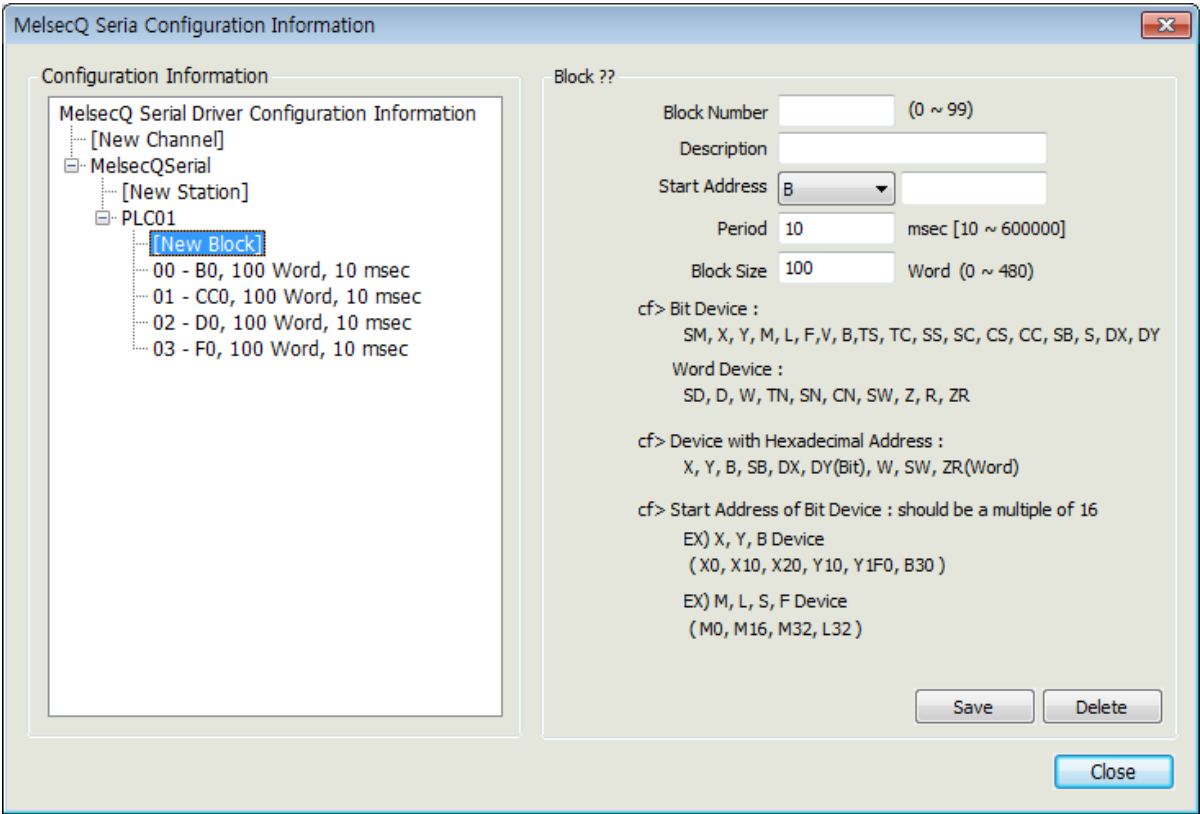
- Select [New Station] from “Configuration Information” tree.
- Station Name: Input a station name.
- Description: Input some information on the station.
- PLC CPU Type: Select a PLC CPU type.
- Station Number: Input the number of PLC Cnet Module.
- Save: If ‘Save’ button is pressed, Station information will be saved and the saved information will add to the left “Configuration Information” tree.



3) Add Block



- Select [New Block] from "Configuration Information" tree.
- Block Number: This number is a unique code of the block. The user needs to designate a different code to each block.
- Description: Input some information on the block.
- Start Address: Input the Block's Start Address.
- Period: Input an interval to collect data of the relevant block (unit: msec).
- Save: If 'Save' button is pressed, Block information will be saved and the saved information will add to the left "Configuration Information" tree.
- Delete: If "Delete" button is pressed, the currently selected Block will be deleted.



4) I/O Address

• I/O Address Map

Device Type	Bit	Word	Address Range				Example(InfoU Address)
			Q02(H), Q06H, Q12H, Q25H, Q12PH, Q25PH, Q2A, Q2A-S1, Q2AS, Q2AS-S1, Q2ASH, Q2ASH-1, Q3A, Q4A, Q4AR	Q00J, Q00, Q01	Decimal	Hexadecimal	
SM	●		000000~002047	000000~001023	●		SM0 , SM10, SM197
SD		●	000000~002047	000000~001023	●		SD1, SD2047
X	●		000000~001FFF	000000~0007FF		●	X0~XF, X10~X1F, X1FFF
Y	●		000000~001FFF	000000~0007FF		●	Y0~YF, Y10~Y1F, YFFF
M	●		000000~008191	000000~008191	●		M0, M1F
L	●		000000~008191	000000~002047	●		L0~L11, L15, L100
F	●		000000~002047	000000~001023	●		F0~F17, F9, F2000
V	●		000000~002047	000000~001023	●		V1000, V2047
B	●		000000~001FFF	000000~0007FF		●	B1F, B1000, B1FFF
D		●	000000~012287	000000~011135	●		D0, D1000, D10000, D12287
W		●	000000~001FFF	000000~0007FF		●	W0, WF, W1F, W1FFF
TS	●		000000~002047	000000~000511	●		TS0, TS12, TS1000, TS2000
TC	●				●		TC1, TC17, TC200, TC2047
TN		●			●		TN0, TN2047
SS	●				●		SS0, SS2047
SC	●				●		SC0~SS2047
SN		●	000000~001023	000000~000511	●		SN0~SN2047
CS	●				●		CS0~CS1023
CC	●				●		CC0~CC1023
CN		●			●		CN0~CC1023
SB	●		000000~0007FF	000000~0003FF		●	SB0~SB7FF
SW		●	000000~0007FF	000000~0003FF		●	SW0~SW7FF
S	●		000000~008191	000000~002047	●		S0~S8191 (Q00J,Q00,Q01 액세스불가)
DX	●		000000~001FFF	000000~0007FF		●	DX0~DX1FFF
DY	●		000000~001FFF	000000~0007FF		●	DY0~DY1FFF
Z		●	000000~000015	000000~000009	●		Z0~Z15
R		●	000000~032767	000000~032767	●		R0~R32767
ZR		●	000000~0FE7FF	000000~00FFFF		●	ZR0~ZRFE7FF

14.3.2 Link method: FEnet

(1) PLC Setting

Set up FEnet communication parameters of PLC on the GX Developer. Please refer to operating manual of MITSUBISHI, for more detail

- Select 'Parameter → PLC parameter → I/O allocation' at the GX Developer.
- Setting screen appears as above, then allocates I/O.

Item	Setting
Type	Select 'Intelligent'
Name	Select module name currently being installed For example, if currently installed module is QJ71E71, select 'QJ71E71'
Point	Select 32-point.
Head XY	Specify the head I/O address of module.

* Intelligent: name of Q series PLC modules operating by command of PLC CPU.

- Select 'Parameter → Network parameter → MELSECNET/Ethernet' at the GX Developer.
- Ethernet network parameter appears. Set the parameter

Item	Setting
Network type	Set as Ethernet.
Head I/O No.	Set head I/O address of module
Network No.	Doesn't affect the communication. Any value is ok.
Total No. of station	Doesn't affect the communication. Any value is ok
Group No.	Doesn't affect the communication. Any value is ok
Station No.	Doesn't affect the communication. Any value is ok
Mode	Set as online.

- Select the operating settings and set IP address, then set other items.
- Select the Open settings and set.

<In case of UDP/IP>

Item	Settings
Protocol	Set as 'UDP'
Fixed buffer	Set as 'Transmission'
Fixed buffer communication procedure	Set as 'Presence of procedure'
Pairing open	Set as 'doesn't pair'
Check survival	Set as 'doesn't check'
Self station port number	Set the port number with hexadecimal in hexadecimal
Target IP address	Input the IP address of PC(InfoU)
Target station port number	Set the port number of PC(InfoU) in hexadecimal.

<In case of TCP/IP>

Item	Settings
Protocol	Set as 'TCP'
Open method	Set as 'Full passive'
Fixed buffer	Set as 'reception'
Fixed buffer communication procedure	Set as 'Presence of procedure'
Pairing open	Set as 'Pair'. Transmission protocol is generated automatically.
Check survival	'Set as 'doesn't check'
Self station port number	Set the port number with hexadecimal in hexadecimal
Target IP address	Input the IP address of PC(InfoU)
Target station port number	Set the port number of PC(InfoU) in hexadecimal.

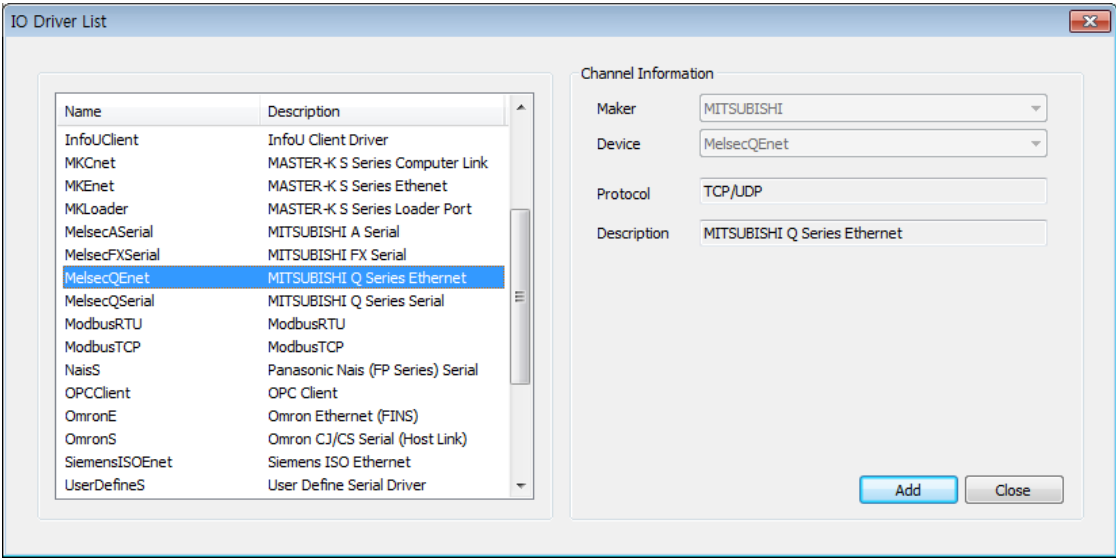
Notice

Communication state check

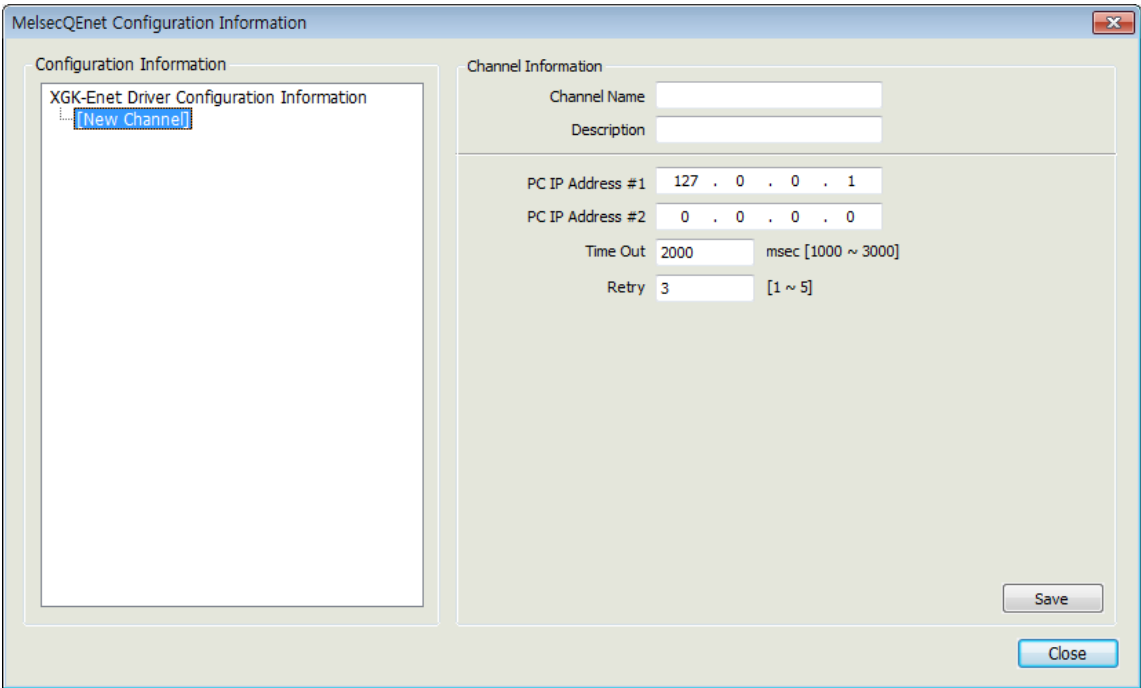
There are RX, TX LEDs on the FEnet module. These LEDs are blink rapidly when communicating normally.

(2) InfoU Setting: MelsecQ Enet

1) Add Channel



Select “MelsecQEnet”from the I/O Driver list and press “Add”.



- Channel Name: Input a channel name.
- Description: Input some information on the channel.

- Serve IP Address #1: Input PC's IP Address.
- Server IP Address #2: If Line Redundancy will be used, input the second IP Address to be used.
- Time Out : It refers to a certain time period during which any response to the request for data is not made and after passing such a time period, the system will declare timeout to move on to the next process. The time period to be set will be a base to judge communication errors.
- Retry: Set up the number of times to retry when communication fails.
- Save: If 'Save' button is pressed, Block information will be saved and the saved information will add to the left "Configuration Information" tree.

The screenshot shows the 'MelsecQEnet Configuration Information' dialog box. It is divided into two main sections: 'Configuration Information' on the left and 'Channel Information' on the right. The 'Configuration Information' section contains a tree view with 'XGK-Enet Driver Configuration Information' as the root. Under it, there is a '[New Channel]' button and a 'MelsecQEnet' entry, which is currently selected. Below 'MelsecQEnet' is a '[New Station]' button. The 'Channel Information' section contains several input fields: 'Channel Name' (set to 'MelsecQEnet'), 'Description' (empty), 'PC IP Address #1' (set to '127 . 0 . 0 . 1'), 'PC IP Address #2' (set to '0 . 0 . 0 . 0'), 'Time Out' (set to '2000' with a unit of 'msec [1000 ~ 3000]'), and 'Retry' (set to '3' with a range of '[1 ~ 5]'). At the bottom right of the dialog are 'Save' and 'Close' buttons.

Field	Value
Channel Name	MelsecQEnet
Description	
PC IP Address #1	127 . 0 . 0 . 1
PC IP Address #2	0 . 0 . 0 . 0
Time Out	2000 msec [1000 ~ 3000]
Retry	3 [1 ~ 5]

2) Add Station

MelsecQEnet Configuration Information

Configuration Information

- XGK-Enet Driver Configuration Information
 - [New Channel]
 - MelsecQEnet
 - New Station

Station Information

Station Name:

Description:

PLC CPU Type:

☐ Use Floating IP

☐ Line Redundancy ☐ Device Redundancy

PLC IP Address #1-1	0 . 0 . 0 . 0	Port Num #1-1	1280
PLC IP Address #1-2	0 . 0 . 0 . 0	Port Num #1-2	1280
PLC IP Address #2-1	0 . 0 . 0 . 0	Port Num #2-1	1280
PLC IP Address #2-2	0 . 0 . 0 . 0	Port Num #2-2	1280

Communication Type:

Code Type:

Network NO:

PLC NO:

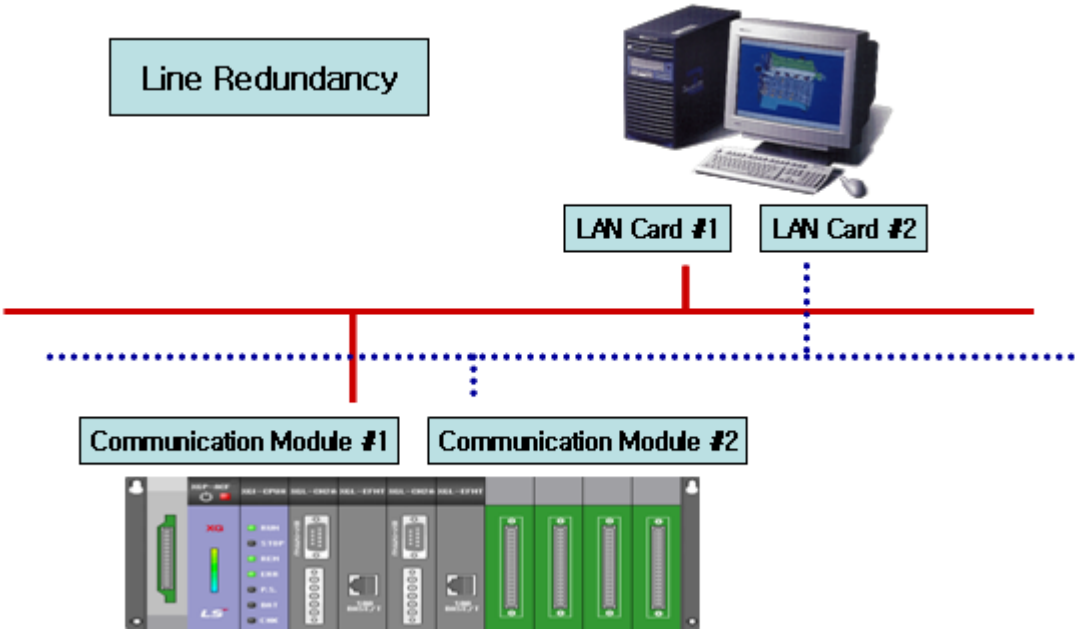
Module IO NO:

Module NO:

☐ Block Auto Configuration

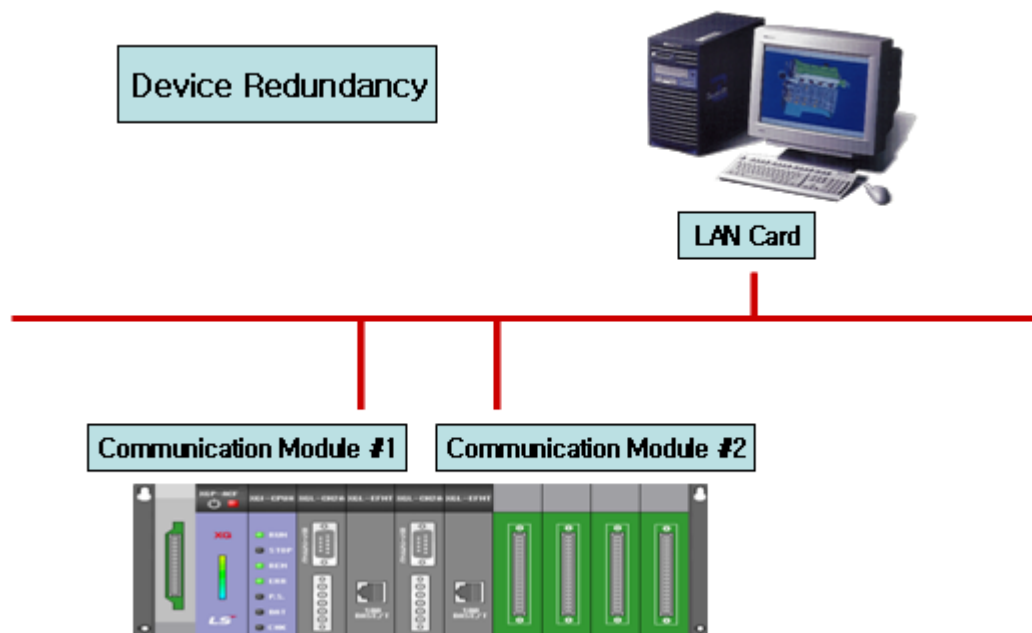
Save Close

- Select [New Station] from “Configuration Information” tree.
- Station Name: Input a station name.
- Description: Input some information on the station.
- PLC CPU Type: Select a PLC CPU type.
- Line Redundancy: Check ☒ in the box to use Line Redundancy. It is used when the network is intended to be separated and communicated as seen in the figure below by installing two LAN cards on the computer and two Enet communication modules on PLC. It is a redundancy option for any failure in the network line.

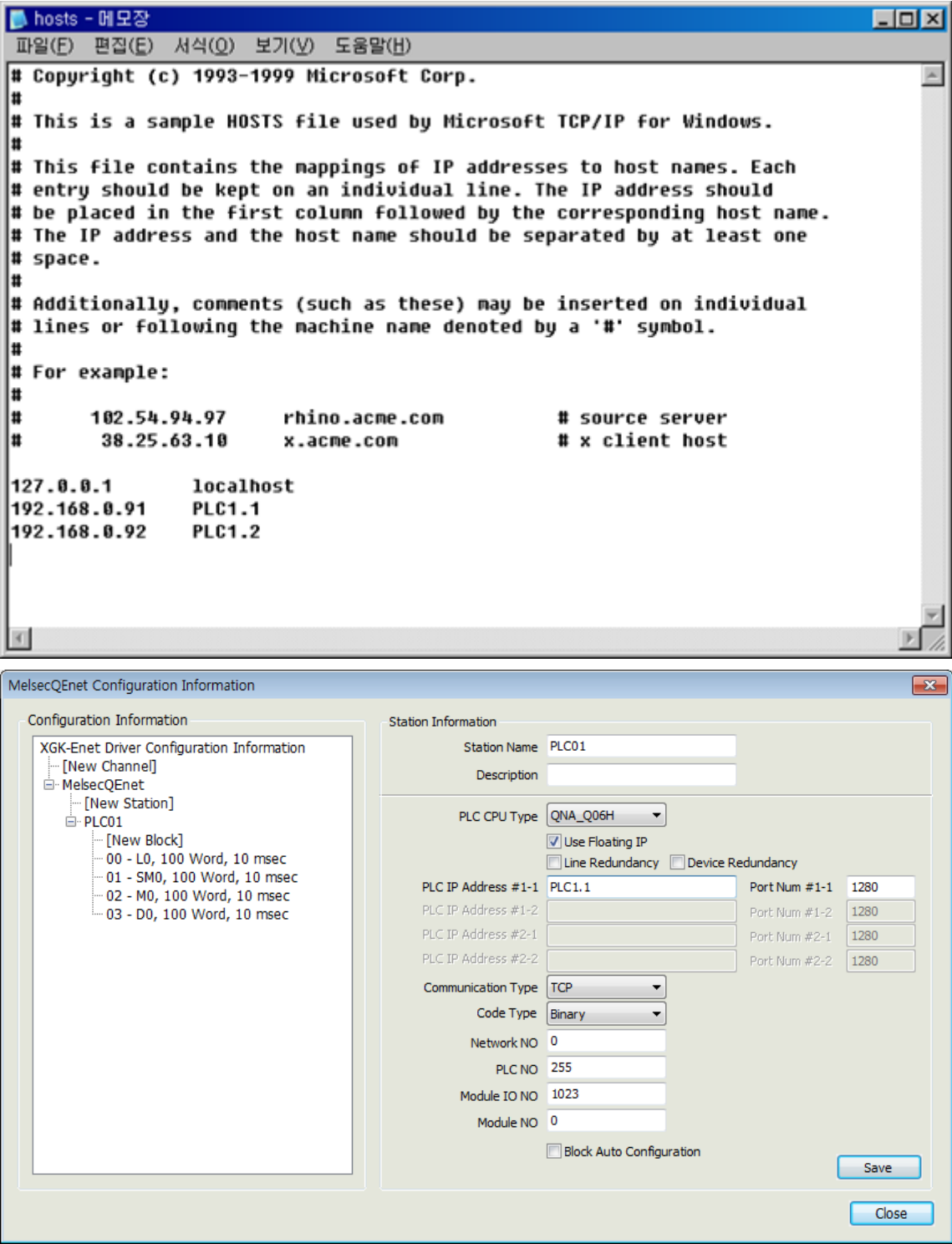


- Device Redundancy: Check ☒ in the box to use Device Redundancy. It is used when the

communication module is separated as seen in the figure below by installing one LAN card on the computer and two Enet communication modules on PLC. It is a redundancy option for any failure in the PLC communication module.



- PLC IP Address #1-1: Input PLC's IP Address.
- PLC IP Address #1-2: Input PLC's IP Address. Input the address when using Device Redundancy.
- PLC IP Address #2-1: Input PLC's IP Address. Input the address when using Device Redundancy.
- PLC IP Address #2-2: Input PLC's IP Address. Input the address when using Line Redundancy along with Device Redundancy.
- Communication Type: Select either TCP or UDP.
- Port: The port number is automatically inputted according to the selected communication type.
- Flexible IP Support: Check the following if the user wants to use a flexible IP. A flexible IP uses hosts files to communicate and they are located in C:\WINDOWS\system32\drivers\etc. Once they are saved as follow, set up a flexible IP according to the inst



- Save: If 'Save' button is pressed, Station information will be saved and the saved information will add to the left "Configuration Information" tree.

MelsecQEnet Configuration Information

Configuration Information

- XGK-Enet Driver Configuration Information
 - [New Channel]
 - MelsecQEnet
 - [New Station]
 - PLC01**
 - [New Block]

Station Information

Station Name: PLC01
Description:

PLC CPU Type: QNA_Q06H

☐ Use Floating IP
☐ Line Redundancy ☐ Device Redundancy

PLC IP Address #1-1	192 . 168 . 0 . 11	Port Num #1-1	1280
PLC IP Address #1-2	0 . 0 . 0 . 0	Port Num #1-2	1280
PLC IP Address #2-1	0 . 0 . 0 . 0	Port Num #2-1	1280
PLC IP Address #2-2	0 . 0 . 0 . 0	Port Num #2-2	1280

Communication Type: TCP
Code Type: Binary

Network NO: 0
PLC NO: 255
Module IO NO: 1023
Module NO: 0

☐ Block Auto Configuration

Save **Close**

3) Add Block

MelsecQEnet Configuration Information

Configuration Information

- XGK-Enet Driver Configuration Information
 - [New Channel]
 - MelsecQEnet
 - [New Station]
 - PLC01
 - New Block**

Block Information

Block Number: (0 ~ 99)
Description:
Start Address: SM
Period: 10 msec [10 ~ 600000]
Block Size: 100 Word (1 ~ 700)

remark> Bit Device :
SM, X, Y, M, L, F, V, B, TS, TC, SS, SC, CS, CC, SB, S, DX, DY

Word Device :
SD, D, W, TN, SN, CN, SW, Z, R, ZR

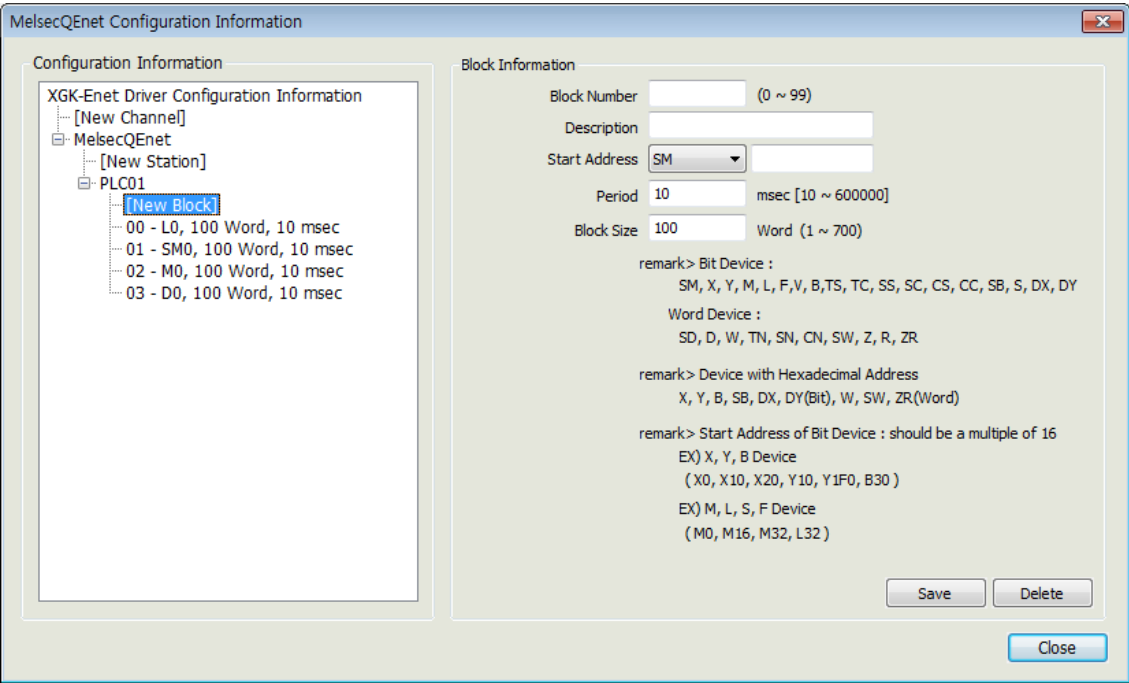
remark> Device with Hexadecimal Address
X, Y, B, SB, DX, DY(Bit), W, SW, ZR(Word)

remark> Start Address of Bit Device : should be a multiple of 16
EX) X, Y, B Device
(X0, X10, X20, Y10, Y1F0, B30)
EX) M, L, S, F Device
(M0, M16, M32, L32)

Save **Delete** **Close**

- Select [New Block] from "Configuration Information" tree.
- Block Number: This number is a unique code of the block. The user needs to designate a different code to each block.
- Description: Input some information on the block.
- Start Address: Input the Block's Start Address.
- Period: Input an interval to collect data of the relevant block (unit: msec).
- Block Size: Input a block size of the relevant block (unit: Word (2 byte)).

- Save: If 'Save' button is pressed, Block information will be saved and the saved information will add to the left "Configuration Information" tree.
- Delete: If "Delete" button is pressed, the currently selected Block will be deleted.



4) I/O Address

- I/O Address Map

Device Type	Bit	Word	Address Range		Decimal	Hex decimal	Example(InfoU Address)
			Q02(H), Q06H, Q12H, Q25H, Q12PH, Q25PH, Q2A, Q2A-S1, Q2AS, Q2AS-S1, Q2ASH, Q2ASH-1, Q3A, Q4A, Q4AR	Q00J, Q00, Q01			
SM	●	-	000000~002047	000000~001023	●	-	SM0 , SM10, SM197
SD	-	●	000000~002047	000000~001023	●	-	SD1, SD2047
X	●	-	000000~001FFF	000000~0007FF	-	●	X0~XF, X10~X1F, X1FFF
Y	●	-	000000~001FFF	000000~0007FF	-	●	Y0~YF, Y10~Y1F, YFFF
M	●	-	000000~008191	000000~008191	●	-	M0, M1F
L	●	-	000000~008191	000000~002047	●	-	L0~L11, L15, L100
F	●	-	000000~002047	000000~001023	●	-	F0~F17, F9, F2000
V	●	-	000000~002047	000000~001023	●	-	V1000, V2047
B	●	-	000000~001FFF	000000~0007FF	-	●	B1F, B1000, B1FFF

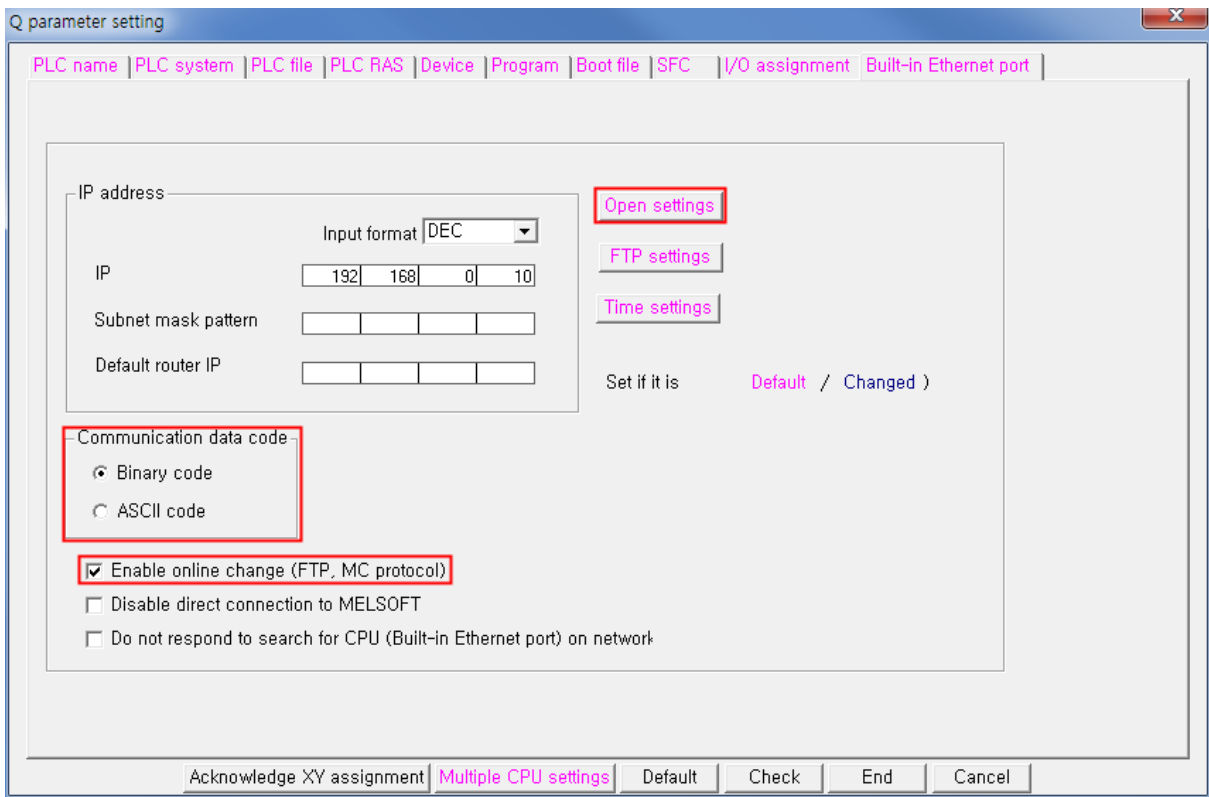
D	-	●	000000~012287	000000~011135	●	-	D0, D1000, D10000, D12287
W	-	●	000000~001FFF	000000~0007FF	-	●	W0, WF, W1F, W1FFF
TS	●	-	000000~002047	000000~000511	●	-	TS0, TS12, TS1000, TS2000
TC	●	-			●	-	TC1, TC17, TC200, TC2047
TN	-	●			●	-	TN0, TN2047
SS	●	-			●	-	SS0, SS2047
SC	●	-			●	-	SC0~SS2047
SN	-	●			●	-	SN0~SN2047
CS	●	-			●	-	CS0~CS1023
CC	●	-	000000~001023	000000~000511	●	-	CC0~CC1023
CN	-	●			●	-	CN0~CC1023
SB	●	-	000000~0007FF	000000~0003FF	-	●	SB0~SB7FF
SW	-	●	000000~0007FF	000000~0003FF	-	●	SW0~SW7FF
S	●	-	000000~008191	000000~002047	●	-	S0~S8191 (Q00J,Q00,Q01 Not accessible)
DX	●	-	000000~001FFF	000000~0007FF	-	●	DX0~DX1FFF
DY	●	-	000000~001FFF	000000~0007FF	-	●	DY0~DY1FFF
Z	-	●	000000~000015	000000~000009	●	-	Z0~Z15
R	-	●	000000~032767	000000~032767	●	-	R0~R32767
ZR	-	●	000000~0FE7FF	000000~00FFFF	-	●	ZR0~ZRFE7FF

14.3.3 Link method: QnU CPU Built in Ethernet

(1) PLC Setting

PLC의 통신 파라미터는 GX Developer에서 설정합니다. MITSUBISHI 사용설명서를 참조 바랍니다.
여기서는 기본적인 설정 방법에 대해 설명 드리겠습니다.

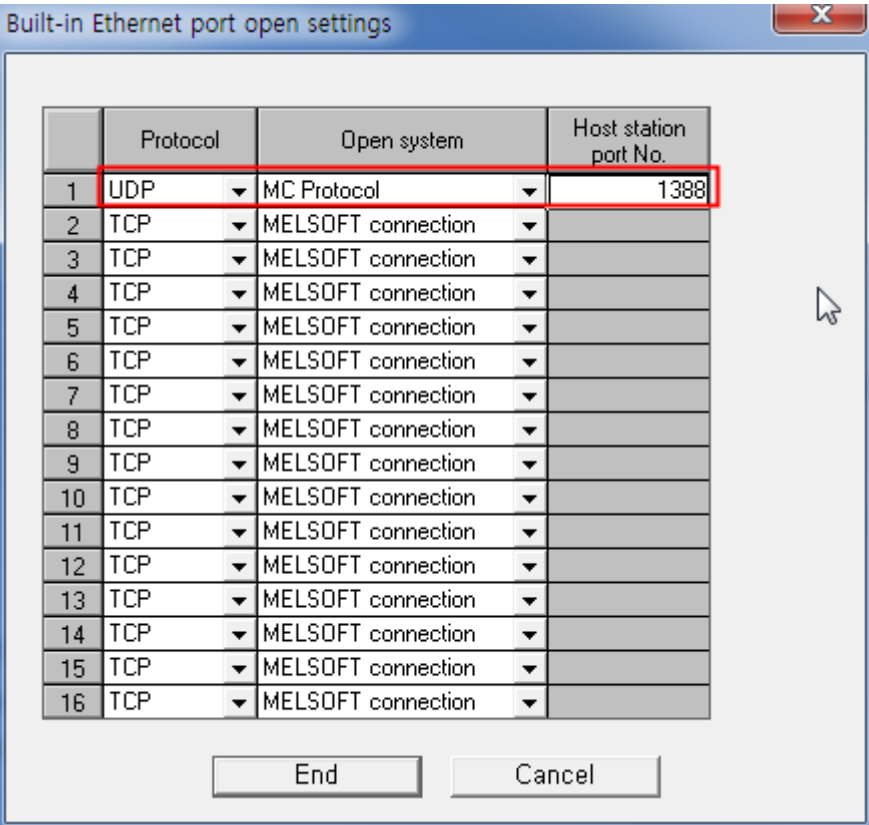
a. GX Developer에서 메뉴 항목 중 ‘파라미터 □ PLC 파라미터 □ Built-in Ethernet port’를 선택하십시오.



b. 위와 같이 설정 화면에 표시되면 파라미터를 입력합니다.

항 목	설 정
IP	Built In Ethernet 모듈의 IP 주소를 입력합니다.
Communication data code	Binary code를 선택합니다.
Enable Online Change	디바이스 쓰기를 하기 위해서 체크합니다.

c. [Open settings] 버튼을 누릅니다.



항 목	설 정
Protocol	UDP 또는 TCP를 선택합니다.
Open System	MC Protocol을 선택합니다.
Host station port No.	포트 번호를 입력합니다.

알아두기

입력 불가 포트 번호가 있습니다. 자세한 내용은 PLC 사용 설명서를 참고하세요.
포트 번호는 16진수 표기로 입력합니다.

(2) InfoU Setting

MelsecQEnet Configuration Information

Configuration Information

- XGK-Enet Driver Configuration Information
 - [New Channel]
 - MelsecQEnet
 - [New Station]
 - STA01
 - [New Block]
 - 02 - D0, 30 Word, 1000 msec

Station Information

Station Name: STA01

Description:

PLC CPU Type: Q_Q00J

☐ Use Floating IP

☐ Line Redundancy ☐ Device Redundancy

PLC IP Address #1-1: 192 . 168 . 1 . 39 Port Num #1-1: 4999

PLC IP Address #1-2: 0 . 0 . 0 . 0 Port Num #1-2: 1280

PLC IP Address #2-1: 0 . 0 . 0 . 0 Port Num #2-1: 1280

PLC IP Address #2-2: 0 . 0 . 0 . 0 Port Num #2-2: 1280

Communication Type: UDP

Code Type: Binary

Network NO: 0

PLC NO: 255

Module IO NO: 1023

Module NO: 0

☐ Block Auto Configuration

Save

Close

Station 정보 설정에서 네트워크 번호, PLC 번호, 모듈 IO 번호, 모듈 국번호를 아래와 같이 설정합니다.

항 목	설 정
네트워크 번호	0
PLC 번호	255
모듈 IO 번호	1023
모듈 국번호	0

그외 InfoU에서 설정은 [링크 방식 : FEnet]과 동일합니다.

[통신 드라이버 설정] → [링크 방식 : FEnet] 설정을 참고하시기 바랍니다.

14.4 Available Device

InfoU에서 사용 가능한 디바이스는 통신드라이버 설정의 입출력 주소를 참고하시기 바랍니다.

알아두기

- ☞ 디바이스 영역 범위를 벗어나지 않도록 사용하여 주십시오.
- ☞ CPU모듈에 따라 디바이스 범위 차이가 있을 수 있습니다. 각 CPU모듈 사용설명서를 참조 바랍니다.