MITSUBISHI Electric Corporation MELSEC Q Series

Ethernet Driver

Supported version TOP Design Studio V1.0 or higher



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We want to thank our customers who use the Touch Operation Panel.

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Describes how to set up communication for external devices.

5. Supported addresses

Refer to this section to check the data addresses which can communicate with an external device.

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1. System configuration

The system configuration of TOP and "MITSUBISHI Electric Corporation - MELSEC Q Ethernet" is as follows.

Series	CPU	Link I/F	Communication method	Communication setting	Cable	
MELSEC-Q	Q00CPU Q00JCPU Q01CPU Q02CPU Q02HCPU Q02HCPU Q06HCPU Q12HCPU Q03UDECPU Q03UDECPU Q04UDEHCPU Q13UDEHCPU Q26UDEHCPU Q03UDCPU Q04UDHCPU Q04UDHCPU Q13UDHCPU Q13UDHCPU Q26UDHCPU	QJ71E71				
		Q02CPU Q02HCPU Q06HCPU Q12HCPU	QJ71E71-B2			
		QJ71E71-B5	Ethernet (TCP/UDP)	<u>3. TOP</u> <u>communication</u> <u>setting</u> <u>4. External device</u> <u>setting</u>	Twisted pair cable*Note 1)	
		QJ71E71-100				
		QJ71E71-B2				
		QJ71E71-B5				
		QJ71E71-100				

*Note 1) Twisted pair cable

- Refer to STP (Shielded Twisted Pair Cable) or UTP (Unshielded Twisted Pair Cable) Category 3, 4, 5.

- Depending on the network configuration, you can connect to components such as the hub and transceiver, and in this case, use a direct cable.

■ Connectable configuration

• 1:1 connection







2. External device selection

■ Select a TOP model and a port, and then select an external device.

Select Device				x
PLC select [E	thernet]			
Filter : [All]		~	Search :	
0.0			Mode	el 🔿 Vendor
Vendor	М	lodel		
M2I Corporation		MELSEC Q Series		
MITSUBISHI Electric Co	rporation	MELSEC FX Series		
OMRON Industrial Auto	mation	MELSEC AnN/AnS Ser	ries	
LS Industrial Systems				
MODBUS Organization		MELSEC ANA/ANU Ser	ries	
SIEMENS AG.	4	MELSEC iQ-R Series		
Rockwell Automation	4	MELSEC iQ-F Series		
GE Fanuc Automation				
PANASONIC Electric W	orks			
YASKAWA Electric Corp	oration			
YOKOGAWA Electric Co	rporation			
Schneider Electric Indu	stries			
KDT Systems				
RS Automation	~			
		Back	Next	X Cancel
Select Device				x
PLC Setting[MEL	SEC Q Series]			
Alias Name	: PLC1	Bind IP : Au	uto ~	
Interface : Ethernet				
Protocol : MC Protocol 3E (Binary)		(hange	C	omm Manual
Suing save more , mattime Change				
- Use Redundan	cy			
Change Condition :	TimeOut	(Second)		
energe contractifier e	Condition	(occorro)		Edit
Primary Ontion				
Primary Option			1	
ч	192 🚔 168			
Ethernet Protocol	UDP 🗸			
Port	6000 🚔			
Timeout	1000 🚔 ms	ec		
Send Wait	0 🌒 ms	ec		
Retry	• 📼			
Retry HMI Port	5 💌 1024 💽			
Retry HMI Port	1024			
Retry HMI Port	5 💌			

Settings			Contents	
ТОР	Model	Check the display and process of TOP to select the touch model.		
	Vendor	Select the vendor of the external device to be connected to TOP. Please select "MITSUBISHI Electric Corporation".		
	PLC	Select the external device to be connected to the TOP.		
		Model	Interface	Protocol
		MELSEC Q Series	Ethernet	Set Users
External device		Supported Protocol		
		MC Protocol 3E (Binary)	MC Protocol 3E (ASCII)	MELSOFT Connection
		Please check the system config connect is a model whose syste	juration in Chapter 1 to see if t m can be configured.	the external device you want to



3. TOP communication setting

The communication can be set in TOP Design Studio or TOP main menu. The communication should be set in the same way as that of the external device.

3.1 Communication setting in TOP Design Studio

(1) Communication interface setting

 $\blacksquare [Project] \rightarrow [Property] \rightarrow [TOP Setting] \rightarrow [HMI Setup] \rightarrow [Use HMI Setup Check] \rightarrow [Edit] \rightarrow [Ethernet]$

- Set the TOP communication interface in TOP Design Studio.



Items	ТОР	External device	Remarks
IP Address	192.168.0.100	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

* The above settings are examples recommended by the company.

Items	Description
IP Address	Set the IP address of the TOP.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.



(2) Communication option setting

The "Ethernet" interface of the MELSEC Q Series communication driver supports 3 protocols. Refer to the following to proceed with the settings for the protocol to be used.

① MC Protocol 3E Binary

- [Project] → [Project properties] → [PLC settings > Ethernet > PLC1 : MELSEC Q Series]
- Set the options for MC Protocol 3E Binary in TOP Design Studio.

Project Option		×
Change HMI[H]	Add PLC [A] TI Change PLC[C] 🔀 Delete PLC[D]	
 TOP Setting SYS: TOPRX1000V Option Module Setting FieldBus (0) RFID (0) COM1 (0) COM2 (0) COM3 (0) Ethernet (1) FIC1: MELSECC USBDevice (0) 	PLC Setting[MELSEC Q Series] Alas Name : PlC1 Protocol : MC Protocol 3E (Binary) String Save Mode : First LH HL Change Operate Condition : ImeOut Change Condition : TimeOut Condition : TimeOut Primary Option IP 19 192 168 0 5 Series Name: Refry 5 8 HMI Port 1024	Comm Manual
		Apply Close
Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External

Interface	Select "Ethernet".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Select the Ethernet protocol between the TOP and an external device.	
Port	Enter the Ethernet communication port number of the external device.	
Timeout	Set the time for the TOP to wait for a response from an external device.	
Send Wait	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	
HMI Port	Enter the Ethernet communication port number of the TOP.	
Open System	Select Open System when using TCP.	



② MC Protocol 3E ASCII

- $\blacksquare [Project] \rightarrow [Project \text{ properties}] \rightarrow [PLC \text{ settings > Ethernet > PLC1 : MELSEC Q Series}]$
 - Set the options for MC Protocol 3E ASCII in TOP Design Studio.

Project Option		~
Change HMI[H]	Add PLC (A) TI Change PLC[C] X Delete PLC[D]	
	PLC Setting[MELSEC Q Series] Alias Name : PLC1 Interface : Ethernet Protocol : MC Protocol 3E (ASCII) String Save Mode : First LH HL Change Operate Condition : AND Change Condition : TimeOut 5 \$ (Second) Edit	Comm Manual
	Image: Primary Option IP 192 IP 192 Ethernet Protocol UDP ~ Port 6000 Timeout 1000 Send Wait 0 Retry 5 HMI Port 1024	
		Apply Close
Items	Settings	Кррту Стозе
Interface		Remarks
	Select "Ethernet".	Remarks Refer to "2. External
Protocol	Select "Ethernet". Select the communication protocol between the TOP and an external device.	Remarks Refer to "2. External device selection".
Protocol IP	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device.	Remarks Refer to "2. External device selection".
Protocol IP Ethernet Protocol	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device. Select the Ethernet protocol between the TOP and an external device.	Remarks Refer to "2. External device selection".
Protocol IP Ethernet Protocol Port	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device. Select the Ethernet protocol between the TOP and an external device. Enter the Ethernet protocol between the TOP and an external device. Enter the Ethernet communication port number of the external device.	Remarks Refer to "2. External device selection".
Protocol IP Ethernet Protocol Port Timeout	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device. Select the Ethernet protocol between the TOP and an external device. Enter the Ethernet protocol between the TOP and an external device. Enter the Ethernet communication port number of the external device. Set the time for the TOP to wait for a response from an external device.	Remarks Refer to "2. External device selection".
Protocol IP Ethernet Protocol Port Timeout Send Wait	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device. Select the Ethernet protocol between the TOP and an external device. Enter the Ethernet protocol between the TOP and an external device. Enter the Ethernet communication port number of the external device. Set the time for the TOP to wait for a response from an external device. Set the waiting time between TOP's receiving a response from an external device and	Remarks Refer to "2. External device selection".
Protocol IP Ethernet Protocol Port Timeout Send Wait	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device. Select the Ethernet protocol between the TOP and an external device. Enter the Ethernet protocol between the TOP and an external device. Enter the Ethernet communication port number of the external device. Set the time for the TOP to wait for a response from an external device. Set the waiting time between TOP's receiving a response from an external device and sending the next command request.	Remarks Refer to "2. External device selection".
Protocol IP Ethernet Protocol Port Timeout Send Wait HMI Port	Select "Ethernet". Select the communication protocol between the TOP and an external device. Enter the IP address of the external device. Select the Ethernet protocol between the TOP and an external device. Enter the Ethernet communication port number of the external device. Set the time for the TOP to wait for a response from an external device. Set the waiting time between TOP's receiving a response from an external device and sending the next command request. Enter the Ethernet communication port number of the TOP.	Remarks Refer to "2. External device selection".



③ MELSOFT Connection

- [Project] → [Project properties] → [PLC settings > Ethernet > PLC1 : MELSEC Q Series]
 - Set the options for MELSOFT Connection in TOP Design Studio.

Project Option		×	
Change HMI[H]	Add PLC [A] Thange PLC[C] X Delete PLC[D]		
TOP Setting TOP Setting SYS : TOPR/1000 Fieldbus (0) Fieldbus (0) Fieldbus (0) COM1 (0) COM2 (0) COM3 (0) Ethermet (1) USBDevice (0)	PLC Setting[MELSEC Q Series] Alias Name: ELC1 Interface: Ethernet Protocol: MELSOFT Connection String Save Mode: First LIHL Change Operate Condition: TimeOut Condition: TimeOut Condition: TimeOut Condition: TimeOut Port Sool © Timeout Dot Station No Src Station No Condition: TimeOut Src Station No Condition: Condition: Condition Det Station No Condition: Condition: Condition Det Station No Condition: Condition: Condition Det Station No Condition: Condition: Condition Det Station No Condition: Condition: Condition: Condition Condition: Condition: Condition Condition: Condition: Condition Condition: Condition: Condition: Condition Condition: Condition: Cond	Comm Manual	
ltome	Cattings	Domorka	
Interface	Select "Ethernet"	Pofor to "2 Extornal	
Protocol	Select the communication protocol between the TOP and an external device device set		
IP	Enter the IP address of the external device.		
Ethernet Protocol	Enter the P address of the external device.		
	Select the Ethernet protocol between the TOP and an external device. Enter the Ethernet communication port number of an external device.		
Fort	Enter the Ethernet communication port number of an external device. *Note 1)		
	Set the time for the TOP to wait for a response from an external device.		
Send Wait	Set the waiting time between TOP's receiving a response from an external device and		
	sending the next command request.		
Dst Network No	Enter the PLC network number.		
Dst Station No	Enter the prefix of PLC.		
Src Network No	Set the TOP network number.		
Src Station No	Set the prefix of TOP.		

*Note 1) UDP : 5001, TCP : 5002



3.2. Communication setting in TOP

****** This is the setting method when "Use HMI settings" in "3.1 Communication setting in TOP Design Studio" is not checked.

■ Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.



(1) Communication interface setting

■ [Control Panel] → [Ethernet]

	ō	Ethernet ×
Run	🔯 System	Port Ethernet Port : ETH1 • 0 • Detion
	PLC Se	Link Speed : Auto MAC Address : 00:15:1D:05:38:C5 IP Address : 192.168.0.100 Sound
YNC Yiewer	<u>ا</u>	Subnet Mask : 255.255.0 Gateway : 192.168.0.1
	Ethernet	DNS (1) :
Screen shot	Diagnostic	Primary IP : 192.168.0.100 Cable Status : ETH1 Connected
		Bridge Mode : Use Bridge
	[System]	Check duplicate Apply Cancel Close

Items	ТОР	External device	Remarks
IP Address	192.168.0.100	192.168.0.50	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

* The above settings are examples recommended by the company.

Items	Description
IP Address	Set the IP address of the TOP.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.



(2) Communication option setting

The "Ethernet" interface of the MELSEC Q Series communication driver supports 3 protocols. Refer to the following to proceed with the settings for the protocol to be used.

① MC Protocol 3E Binary

■ [Control panel] \rightarrow [PLC]

	õ	1001	PLC			
Bun	🔯 Syster	Driver(ETH)	PLC1(MELSEC Q Series) 💌			
nuli		Interface	Ethernet 💌			
		Protocol	MC Protocol 3E (Bir 🕶			
WNC	PLC	Bind IP	Auto			
VNC		IP	192 168 0 51 0			
Viewer		Ethernet	UDP -			
	Ethernet	Port	6000 🜩			
<u></u>		Timeout	1000 🜩 msec			
Screen	. mit	Send Wait	0 🔷 msec			
shot	mil	Retry	5			
	Diagnostic	HMI Port	1024 🜩			
	[System]	Diagnostic	Ping Test	Apply	ancel	

 \ast The above settings are $\underline{examples}$ recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Select the Ethernet protocol between the TOP and an external device.	
Port	Enter the Ethernet communication port number of the external device.	
Timeout	Set the time for the TOP to wait for a response from an external device.	
Send Wait	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	
HMI Port	Enter the Ethernet communication port number of the TOP.	
Open System	Select Open System when using TCP.	



② MC Protocol 3E ASCII

■ [Control panel] \rightarrow [PLC]

	Ö	1001	PLC	×	
	🔯 Syster	Driver(ETH)	PLC1(MELSEC Q Series) -		
Run		Interface	Ethernet 🔹		
		Protocol	MC Protocol 3E (ASC -		
WNC	PLC	Bind IP	Auto		
YNC		IP	192 - 168 - 0 - 51 -		
Viewer	l Gail	Ethernet	UDP 💌		
	Ethernet	Port	6000 ≑		
.		Timeout	1000 🖨 msec		
Screen	word	Send Wait	0 🖨 msec		
shot		Retry	5		
	Dragnostic	HMI Port	1024 🜩		
	[System]	Diagnostic	Ping Test	Apply Cancel	

 * The above settings are $\underline{\text{examples}}$ recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Select the Ethernet protocol between the TOP and an external device.	
Port	Enter the Ethernet communication port number of the external device.	
Timeout	Set the time for the TOP to wait for a response from an external device.	
Send Wait	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	
HMI Port	Enter the Ethernet communication port number of the TOP.	
Open System	Select Open System when using TCP.	



③ MELSOFT Connection

■ [Control panel] \rightarrow [PLC]

¢	1001	PLC	×	
🔯 System	Driver(ETH)	PLC1(MELSEC Q Series) 🔻		
	Interface	Ethernet 🔹	_	
	Protocol	MELSOFT Connection 💌		
PLC	Bind IP	Auto		
	IP	192 • 168 • 0 • 51 •		
	Ethernet	UDP -		
Ethernet	Port	5001 🜩		
	Timeout	1000 🖨 msec		
and	Send Wait	0 🖨 msec		
hill *	Retry	5		
Diagnostic	Dst Netwc	1		
	Dst Stati	1	-	
[System]	Diagnostic	Ping Test	Apply Cancel	
	System PLC Ethernet Diagnostic [System]	SystemDriver(ETH)InterfaceProtocolPLCBind IPIPEthernetEthernetPortImeoutSend WaitDiagnosticDst NetwcIsystemDiagnostic	Image: System Driver(ETH) PLC1(MELSEC Q Series) Interface Ethernet PLC Interface Bind IP Auto IP 192 ÷ 168 ÷ 0 ÷ 51 ÷ Ethernet UDP • Port 5001 ÷ Timeout 1000 ÷ msec Send Wait 0 ÷ st Dst Netwc 1 ÷ Diagnostic Diagnostic Piagnostic Diagnostic Piagnostic Diagnostic	System Driver(ETH) PLC1(MELSEC Q Series) Interface Ethernet Protocol MELSOFT Connection Bind IP Auto IP 192 168 0 0 51 Ethernet IDP Port 5001 Timeout 1000 msec Send Wait 0 Dst Netwc 1 Diagnostic Dist Stati Diagnostic Ping Test

* The above settings are examples recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Select the Ethernet protocol between the TOP and an external device.	
Port	Enter the Ethernet communication port number of an external device.	*Note 1)
Timeout	Set the time for the TOP to wait for a response from an external device.	
Send Wait	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	
Dst Network No	Enter the PLC network number.	
Dst Station No	Enter the prefix of PLC.	
Src Network No	Set the TOP network number.	
Src Station No	Set the prefix of TOP.	

*Note 1) UDP : 5001, TCP : 5002



3.3 Communication diagnostics

■ Check the interface setting status between the TOP and an external device.

- Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.
- Check that the settings of the connected ports in [Control Panel] \rightarrow [Ethernet] are the same as the settings of the external device.

Diagnosis of whether the port communication is normal or not

- Touch "Communication diagnostics" in [Control Panel] \rightarrow [PLC].

- Check whether communication is connected or not.

Communication	Communication setting normal
diagnostics succeeded	
Error message	Communication setting abnormal
	- Check the cable, TOP, and external device settings. (Refer to Communication diagnostics sheet.)

Communication diagnostics sheet

- If there is a problem with the communication connection with an external device, please check the settings in the sheet below.

Items	Conte	ents	Ch	eck	Remarks
System	How to connect the sy	stem	OK	NG	1 System configuration
configuration	Connection cable name	5	OK	NG	T. System comgutation
ТОР	Version information		OK	NG	
	Port in use		OK	NG	
	Driver name		OK	NG	
	Other detailed settings		OK	NG	
	Relative prefix	Project setting	ОК	NG	2. External device selection
		Communication diagnostics	ОК	NG	3. TOP communication setting
	Ethernet port setting	IP Address	OK	NG	
		Subnet Mask	OK	NG	
		Gateway	OK	NG	
External device	CPU name		OK	NG	
	Communication port n	OK	NG		
	Protocol (mode)		OK	NG	
	Setup Prefix		ОК	NG	4 Eutomal device setting
	Other detailed settings		ОК	NG	4. External device setting
	Ethernet port setting	IP Address	OK	NG	
		Subnet Mask	OK	NG	
		Gateway	OK	NG	
	Check address range		ОК	NG	5. Supported addresses



Use MELSOFT Engineering Software to set as follows.

This example is a setting method using GX Works2. For more details, refer to the manufacturer's user manual.

% Set it to the same protocol as TOP.

4.1 MC Protocol 3E Binary

Step1. Register the Ethernet communication module in the [Parameter] \rightarrow [I/O Assignment] window.

							_			
MELSOFT Series GX Work	s2 (Untitled Project) - [[PRG]Write MAIN 1	Step]						- 0	×
<u>Project</u> <u>E</u> dit <u>F</u> ind/Repla	ce <u>C</u> ompile <u>V</u> iew	<u>O</u> nline De <u>b</u> ug	Diagnostics Tool <u>V</u>	<u>/</u> indow <u>H</u> elp						_ 8 ×
i 🗅 📂 💾 🎒 🥥 👘	Q Parameter Setting							×]	
🔁 🗉 🗖 🞇 🖼 📽	PLC Name PLC System	PLC File PLC RAS	Boot File Program SF	C Device I/O Assi	gnment Multiple (CPU Setting S	Serial Communication	m		
Navigation	I/O Assignment(*1)									↓ ▷ -
Project	No. Slot	Туре		Model Name	Po	oints	Start XY 🔺	Switch Setting		^
👎 📭 🙉 🗣 🖻 👫 -	0 PLC 1 0(*-0)	Intelligent	* *		32Points		0000	Detailed Setting	END	3
Parameter	2 1(*-1)		-			-		Salact DLC tune		
PLC Parameter	3 2(*-2) 4 3(*-3)		• •			•		Select FEC type		
Network Paramete	5 4(*-4)		•			•		New Module		
CC-Link	6 5(*-5)	-	•			-				
Remote Password	7 0(~0)		•			•	•			
- 🚳 Intelligent Function M	Assigning the I/O ad	dress is not necessary	as the CPU does it autom	atically.						
Global Device Comme	Leaving this setting b	olank will not cause an	error to occur.							
Plogram Second	Base Setting(*1)							-Base Mode		
Program		Base Model Name	Power	Model Name	Extensio	n Cable	Slots	Auto		
MAIN	Main Ext.Base 1							C Detail		
Local Device Com	Ext.Base2						-			
Device Initial Value	Ext.Base3							8 Slot Default		
	Ext.Base5							12 Slot Default		
	Ext.Base6						-	Select		
	Ext.Base7						•	module name		
				Export to CSV Eik	Tmport M	ultiple CPU Para	motor De	ad RLC Data		
	(*1)Cotting she	uld be get as game wh	on using multiple CDU	Export to C3V File		utuple CFO Fait				
	(*1)Setung sho	uiu be set as same wit	en using multiple CPO.							
In Project										
User Library										
Connection Destinatio	Print Window F	rint Window Preview	Acknow	vledge XY Assignment	Default	Check	End	Cancel		
		»							1	
		Korean	Unlabeled			0	06UDH	Host	0/	1Step NI
		Rorcan	onlabelea			4			0/	totop 190



Step2. Set the Ethernet network in the [Network Parameter] \rightarrow [Ethernet / CC IE / MELSECNET] window.

MELSOFT Series GX Works2 (U	ntitled Project) - [Netw	vork Parameter - MELSECNET/CC IE/Etherr	net Module Configuration]			-	
Project Edit Eind/Replace	<u>C</u> ompile <u>V</u> iew <u>O</u> nli	ine De <u>b</u> ug <u>D</u> iagnostics <u>T</u> ool <u>W</u> inc	low <u>H</u> elp				_ 8 ×
i 🗅 🖻 💾 🎒 🙆	- 🛯 🗶 🖻 🖪	io al 📴 🖼 🖼 💵 🚝 🛃 层		. : IA: I+	- M N 🗣		
1	10- 0 H Parar	meter •	- [9]				
Navigation	4 X	IPRGIWrite MAIN 1 Step	letwork Parameter - MEL	2			4 Þ -
Project			vetwork rarameter - witten	<u> </u>			
		Set network configuration setting in Configuration	CIE Field configuration window				
			Module 1		Module 2		Module 3
Parameter		Network Type	Ethernet	✓ None		✓ None	
Network Parameter		Start I/O No.		0000			
P Ethernet / CC IF / M	LSECNET	Network No.	_	1			
CC-LINK		Total Stations					
Remote Password		Group No.	_	0			
Intelligent Function Module		Station No.	Online				
National Device Comment		Mode	Oneration Setting	•			
Setting			Uperation Secure	1			
- POU			Open Setting				
		· · · · · · · · · · · · · · · · · · ·	Router Relay Parame	eter			
Local Device Comment			Station No. <->IP Infor	mation			
Device Memory			FTP Parameters				
a Device Initial Value			E-mail Setting				
			Interrupt Settings	1			
		Necessary Setting Interlink Transmission Parameters Pleas	(No Setting / Already Set) I/O No. : e input 16-point unit(HEX) to start I/	Set if it is needed(No Valid Mo O No. in which module is	Setting / Already Set) dule During Other Station Ac mounted.	ccess 1	
		Acknowledge XY Assignment Routing Parameters	Assignment Image Group Set	ting Ched	End	Cancel	
Project		Print Window Print Window]			
💫 User Library		Preview					
Connection Destination							
	»						
		Karaan Unishalad		005110	L Llast		
		Korean Onlabeled		QUOUD	H HOSI		NU
Items	Contents	s		Settin	g value	Re	marks
Network Type	Network			Ethern	et		
Start I/O No.	I/O numl	ber of the Ethernet com	munication module	e 0000		ľ	
Network No.	PLC netw	vork number		1			



Step3. Set the Ethernet network in the [Network Parameter] \rightarrow [Ethernet / CC IE / MELSECNET] \rightarrow [Operation Setting] window.

MELSOFT Series GX Works2 (Untitled Project) - [Project Edit Eind/Replace Compile View	Network Para	meter - MELSECNET/CC IE/Ether	net Module Configuration] dow <u>H</u> elp			-	× _8×		
🗅 🖻 💾 🎒 🕘 📃 📩 🖡		R R R P P R R R		l 📮 i 🕭 🗷 🖓	i 🞝 🏴 🖾 🖉				
달 💷 📑 🗱 📽 📽 🐯 🍖 🍳 👬	Parameter	•	- 0	Ŧ					
Navigation 5	× ×	[PRG]Write MAIN 1 Step	Network Parameter - MEL	×			4 ▷ ▾		
roject 🕈 🖎 🐵 📴 🔊 L 📲 -	□ s	et network configuration setting in C	C IE Field configuration window						
🖓 Parameter			Module 1	Ner	Module 2	- None	Module 3		
PLC Parameter	Etherne	et Operation Setting			×				
Ethernet / CC IE / MELSECNET	Com	munication Data Code	Initial Timing						
CC-Link	• B	nary Code	 Do not wait for OPEN (Co impossible at STOP time) 	ommunications					
Intelligent Function Module	C A	SCII Code	 Always wait for OPEN (C possible at STOP time) 	ommunication		•			
Program Setting		ddress Setting	Send	Frame Setting -					
POU	Inpu	t Format DEC 🔻	(● Et	hernet(V2.0)					
MAIN		192 165	0 51 0						
Local Device Comment	IP AC	Jaress 192 100		EE802.3					
Device Initial Value	En:	able Online Change		nation Setting					
		able online change	C Line the Kee	nation Second					
			• Use the kee	paive					
			C Use the Ping)					
		End Cancel							
		Star	t I/O No. :	Vali	id Module During Other Station Ad	cess 1	•		
	Interlin	R Transmission Parameters Plea	se input 16-point unit(HEX) to start I	/O No. in which mod	lule is mounted.				
	Ackr	wiedge XY signment Routing Parameters	Assignment Image Group Se	tting C	Check End	Cancel			
Project	Print	Print Window			,				
🖕 User Library		Preview							
Connection Destination									
	» <						>		
	Kore	an Unlabeled		Q06	6UDH Host		NIJ		
tems		Contents			Setting value		Remarks		
Communication Data Code		Data code			Binary				
nitial Timing		Communication	module initializatio	on time	Always wait for	OPEN			
P Address Setting		IP setting			192.168.0.51				
end Frame Setting		Send frame setti	ng		Ethernet				
nable Online Change		Enable online ch	ange		Enable				
CP Existence Confirmation S	etting	TCP Existence Co	onfirmation Setting		Use the KeepA	live			



Step4. Set the Ethernet network in the [Network Parameter] → [Ethernet / CC IE / MELSECNET] → [Open Setting] window.

Case1. When set to UDP (recommended)

MELSOFT Series GX Works2 (Untitled Project)	- [Network Param	eter Ethernet	Open Setting Modul	e No.: 1]					-	
<u>Project Edit Find/Replace Compile View</u>	<u>O</u> nline De <u>b</u> i	ug <u>D</u> iagnosti	cs <u>T</u> ool <u>W</u> indow	<u>H</u> elp						_ 8 ×
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🔁 🗉 🗐 🎇 📟 🎬 🐨 🏠 🖉 🛔	Parameter		•		• 🕒 🗸					
Navigation	₽ × 💽	PRG]Write MA	IN 2 Step 🛛 😭 Net	vork Parameter	- MELSECNE.	😫 Network Par	ameter Ether	×		4 ▷ ▾
Project ᢪ 🗈 📆 🗞 😰 🦺							IP Addre	ss/Port No. Inpu	ut Format	DEC 💌
- 🐼 Parameter		Protocol	Open System	Fixed Buffer	Fixed Buffer	Pairing	Existence	Host Station	Destination	Destination Port No.
PLC Parameter Network Parameter	1	UDP 👻		✓ Send ✓	Procedure Exist	✓ Disable ✓	No Confirm -	6000	192.168. 0.100	1024
Ethernet / CC IE / MELSECNET	2	· ·		• •			-			
- 🖧 CC-Link	4			• •		• •				
Intelligent Function Module	5	-		• •		• •	·			
- intelligent Function Module - I Global Device Comment	6			• • • • •			· · · ·			
- 🚰 Program Setting	8	-		• •		•	-			
Head bon	9	-		• •			-			
🖻 🍈 Program	11			• •		-	-			
Local Device Comment	12	-		• •			·			
- 🙆 Device Memory	13			• • •						
-👼 Device Initial Value	15	-		• •			-			
Project	(*)) Plea	P Address and P se enter the valu	ort No. will be displaye ue according to the sel	d by the selected	l format.		En	d	Cancel	
Connection Destination										
-e	»									
	Korea	n	Unlabeled			Q13UD	/ Ho	st		NU
Items	Conter	nts			S	etting va	lue		Re	emarks
Protocol	Etherne	et protoc	-ol		l	JDP				

Items	Contents	Setting value	Remarks
Protocol	Ethernet protocol	UDP	
Host Station Port No.	PLC Ethernet port No.	6000	
Destination IP Address	TOP Ethernet IP	192.168.0.100	
Destination Port No.	TOP Ethernet port No.	1024	

- * UDP setting is recommended for wireless TOP or in a noisy environment.
- % When connecting N TOP(s) to one PLC, set it up using the following method.

	Protocol	Open System	Fixed 8	Buffer	Fixed Buffer Communication		Pairing Open		Existence Confirmation	Host Station Port No.	Destination IP Address	Destination Port No.
1	UDP 🔹	•	 Send 	-	Procedure Exist	Ŧ	Disable	4	No Confirm 🕞	6000	192.168. 0.100	1024
2	UDP 🔹	•	 Send 	-	Procedure Exist	•	Disable	•	No Confirm 📼	6001	192.168. 0.101	1024
3	UDP 🔹	· .	 Send 	-	Procedure Exist	Ŧ	Disable	•	No Confirm 🕞	6002	192.168. 0.102	1024
4		•	-	-		•		٠	•			
5		•	-	-		•		•	-			
6		•	-	-		Ŧ		-		PLC Port	TOP IP	TOP Port
7		•	-	-		•		•	•			
8		•	-	-		•		•	-			
9		•	-	-		•		٠	•			
10		•	-	-		•		٠	•			
11		•	-	-		•		-	-			
12		•	-	-		Ŧ		•				
13		•	-	-		•		•	•			
14			-	-		Ŧ		•	•			
15			-	-		•		-	-			
16			-	-		•		-	-			



Case2. When setting to TCP 1

I MELSOFT Series GX Works2 (Untitled Project) -	Network Parar	neter Etherne	et Open Setting Mod	lule	No.: 1]						-	
<u>Project</u> Edit <u>F</u> ind/Replace <u>C</u> ompile <u>V</u> iew	Online Deb	ug <u>D</u> iagno	stics <u>T</u> ool <u>W</u> indo	w	<u>H</u> elp							_ 8 ×
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🔁 🗈 🗖 🖼 🖼 🚟 🚟 🖏 🔹 🖓 🔥	Parameter		-			- B -				-		
Navigation	• × 🕢 🙀	[PRG]Write N	IAIN 2 Step 🛛 📳 N	etwo	ork Paramete	r - MELSECNE.	n I	etwork Para	meter Ether	×		4 ▷ -
Project												
📑 🗈 🗞 🗿 🖉 👫									IP Addres	s/Port No. Input Format	DEC	•
🖻 🚯 Parameter		Protocol	Open System		Fixed Buffer	Fixed Buffer		Pairing	Existence	Host Station Destin	ation	Destination
PLC Parameter	1	TCP 👻	Unpassive	•	Send 🔻	Procedure Exist	v [Disable 🔻	No Confirm v	6000	ress	Port No.
Network Parameter	2	-		Ŧ	-		-	•	-			
PL CC-Link	3	-		Ŧ	-	·	•	•	•			
Remote Password	4			•	•	·	•	•	•			
Intelligent Function Module	5			Ť	-		Ť	•	•			
Global Device Comment		· ·		+			Ŧ	•				
🛱 Setting	8	-		•			-	•	-			
E POU	9	-		Ŧ	-	•	•	•	•			
🖕 🛅 Program	10	-		•		·	-	•	•			
MAIN	11	-		-	-		-	• •	-			
Local Device Comment	12			Ŧ			Ŧ	• •	• •			
E-🙆 Device Memory	14			•			-	•	-			
	15	-		Ŧ	-		-	•	-			
	16	•		•	-	•	•	-	-			
	(*) Plea	IP Address and ise enter the v	i Port No. will be displa alue according to the s	yed t elect	by the selecte ted number.	d format.			En	Cancel		
roject												
🛶 User Library												
Connection Destination												
	»											
	Kore	an	Unlabeled					Q13UDV	Но	st		NU
Items	Conte	nts				S	ett	ting val	ue		Rem	arks
	E-1					Ŧ	- C D				1	

Items	Contents	Setting value	Remarks
Protocol	Ethernet protocol	ТСР	
Host Station Port No.	PLC Ethernet port No.	6000	



Case3. When setting to TCP 2

MELSOFT Series GX Works2 (Untitled Project)) - [Network Para	imeter Etherne	et Open Setting Module	No.: 1]					-	
<u>Project Edit Find/Replace Compile Vie</u>	w <u>O</u> nline De	bug <u>D</u> iagnos	stics <u>T</u> ool <u>W</u> indow	<u>H</u> elp						_ 8 ×
i 🗅 🔁 🖪 🎒 🥥 🔹 🖡 👬		📴 🔄 🗠		🌇 🐘 🖉	i 🐝 🖓 🖳 📜 i 🛵	۵. ۱۳ 🛃	🏴 🖾 🕼	÷		
🔁 🗉 🗖 🚟 🖼 🚟 🖏 🏠 🖓	Parameter		•		• 💁 -					
Navigation	9 × 🙀) [PRG]Write N	IAIN 2 Step 🛛 📳 Netwo	ork Parameter	- MELSECNE.	Network Para	ameter Ether.	×		< ▷ -
Project										
📑 🗈 🗞 🕲 🖉 👫							IP Addres	s/Port No. Inp	out Format DI	EC 💌
Parameter		Protocol	Open System	Fixed Buffer	Fixed Buffer	Pairing	Existence	Host Station	Destination	Destination
- PLC Parameter		TCP	Eulpassive 💌	Send 💌	Communication Procedure Exist	Open Disable 💌	Confirmation	Port No. 6000	IP Address 192 168 0 100	Port No. 1024
E 🚯 Network Parameter	2		• • • • •	Jend •	▼ Vicedure Exist	▼ UISCIDIC	• Commin •	0000	192.108. 0.100	1024
Collink	3	•		•	-	-	-			
Remote Password	4	· ·	-	· ·	-	· ·	• -			
Intelligent Function Module	6		+	•						
- Global Device Comment	7	•	-	-	-	-	-			
🗄 🔚 Program Setting	8	•		•	-	-	-			
E-69 POU	9	· · ·		-	-					
🖻 😬 Program	1	1 -								
MAIN	1	2 🔻	-	•	-	-	-			
	13	3 💌	-	-	-	-	-			
Device Initial Value	1	4 -	÷		• •	• •	• •			
	1/	5 -	-	· · ·	-	•				
Troject	Pi) IP Address and ease enter the v	I Port No. will be displayed alue according to the selec	by the selected ted number.	format.		Enc	1	Cancel	
	»									
	Kor	ean	Unlabeled			Q13UDV	Ho	st		NIJ
Items	Conte	ents			Set	ting val	ue		Re	marks
Protocol	Etherr	net proto	ocol		TCF)				
Host Station Port No.	PLC Et	thernet p	oort No.		600	6000				
Destination IP Address	TOP Ethernet IP					192.168.0.100				

4.2 MC Protocol 3E ASCII

Destination Port No.

Set the Communication Data Code in the [Network Parameter] \rightarrow [Ethernet / CC IE / MELSECNET] \rightarrow [Operation Setting] window to ASCII. The rest of the setting method is the same as MC Protocol 3E Binary.

1024

TOP Ethernet port No.



4.3 MELSOFT Connection

Refer to MC Protocol 3E Binary setting method to proceed Step 1~3, and then set as follows in the [Network Parameter] \rightarrow [Ethernet / CC IE / MELSECNET] \rightarrow [Open Setting] window.

MELSOFT Series GX Works2 (Untitled Project) - [N	etwork Parameter E	thernet Open Sett	ing Module	No.: 1]					-		
<u>Project Edit Find/Replace Compile View</u>	online De <u>b</u> ug <u>D</u>	iagnostics <u>T</u> ool	Window	<u>H</u> elp						- 8	×
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🔚 🎟 📰 🚟 🎬 🐨 😰 🗥 F	rameter	•			- 🕒 -						
Navigation 7	× 🕢 [PRG]W	rite MAIN 2 Step	📳 Netwo	ork Parameter -	MELSECNE.	letwork Para	ameter Ether	×		4 Þ	•
Project											
📑 🗈 🕲 🔊 👫							IP Addre	ss/Port No. Inpu	ut Format D	EC 🔽	
E- 🚱 Parameter	Pro	tocol Open !	System	Fixed Buffer	Fixed Buffer	Pairing	Existence	Host Station	Destination	Destination	
PLC Parameter	1 TCP	✓ MELSOFT Co	nnection 👻	-	Communication	Open -		Port No.	IP Address	Port No.	
Ethernet / CC IE / MELSECNET	2	•	•	-	•	•	-				
CC-Link	4		• •		• •	• •					
Remote Password	5	-	-	•	•	-	-				
Global Device Comment	6	• •		•							- 1
E Gobal Device Comment	8	-	-	-	•	-					
POU	9	-	-	-	-	-	-				41
📋 🕒 Program	10	•	•	•	•	•					
MAIN Jocal Device Comment	12	•	•	•	*	•	-				
Ovice Memory	13		•		*	• •					
Device Initial Value	15	-	•	-	-	-	-			_	
	16	•	•	•	•	•					1
Project	(*) IP Addr Please ente	ess and Port No. will r the value according	be displayed	by the selected t	format.		En	d	Cancel		
	»										
	Korean	Unlabeled				Q13UDV	Ho	st			NU
Items	Contents				Set	ting val	ue		Re	marks	

Items	Contents	Setting value	Remarks
Protocol	Ethernet protocol	TCP	
Open System	Open way	MELSOFT Connection	



5. Supported addresses

The devices available in TOP are as follows:

The device range (address) may differ depending on the CPU module series/type. The TOP series supports the maximum address range used by the external device series. Please refer to each CPU module user manual and be take caution to not deviate from the address range supported by the device you want to use.

Address	Bit	Word	Remarks	32 BIT
Input Relay	X0000 ~ X1FFF (HEX)	X0000 ~ X1FF0 (HEX)	X***0 *Note 1)	
Output Relay	Y0000 ~ Y1FFF (HEX)	Y0000 ~ Y1FF0 (HEX)	Y***0 *Note 1)	
Internal Relay	M0000 ~ M61439	M0000 ~ M61424	M0000 + 16*n *Note 2)	
Special Relay	SM0000 ~ SM2047	SM0000 ~ SM2032	SM0000 + 16*n *Note 2)	
Latch Relay	L0000 ~ L32767	L0000 ~ L32752	L0000 + 16*n *Note 2)	
Annunciator	F0000 ~ F32767	F0000 ~ F32752	F0000 + 16*n * ^{Note 2)}	
Edge Relay	V0000 ~ V32767	V0000 ~ V32752	V0000 + 16*n *Note 2)	
Step Relay	S0000 ~ S8191	S0000 ~ S8176	S0000 + 16*n *Note 2)	
Link Relay	B0000 ~ BEFFF (HEX)	B0000 ~ BEFF0 (HEX)	B***0 *Note 1)	
Special Link Relay	SB0000 ~ SB7FF0 (HEX)	SB0000 ~ SB7FF0 (HEX)	SB***0 *Note 1)	
Timer (contact)	TS00000 ~ TS25471	TS00000 ~ TS25456		
Timer (coil)	TC00000 ~ TC25471	TC00000 ~ TC25456		
Aggregate Timer (contact)	SS00000 ~ SS25471	SS00000 ~ SS25456		
Aggregate Timer (coil)	SC00000 ~ SC25471	SC00000 ~ SC25456		L/H *Note 3)
Counter (contact)	CS00000 ~ CS25471	CS00000 ~ CS25456		
Counter (coil)	CC00000 ~ CC25471	CC00000 ~ CC25456		
Timer (current value)	TN00000.0 ~ TN25471.15	TN00000 ~ TN25471		
Aggregate Timer (current value)	SN00000.0 ~ SN25471.15	SN00000 ~ SN25471		
Counter (current value)	CN00000.0 ~CN25471.15	CN00000 ~ CN25471		
Data Dagistar	D0000000.0 ~ D4212223.15	D0000000 ~ D4212223	Binary Protocol	
	D000000.0 ~ D999999.15	D000000 ~ D999999	ASCII Protocol	
Special Data Register	SD0000.0 ~ SD2255.15	SD0000 ~ SD2255		
Link Register	W000000.0 ~ W4045FF.F	W000000 ~ W4045FF		
Link Special	SW0000.0 ~ SW7FFF.F	SW0000 ~ SW7FFF		
Index	Z00.0 ~ Z19.15	Z00 ~ Z19		
File Register		Custom range		

*Note 1) For bit addresses with hexadecimal "0~F" notations, use the initial 0 bit as the word address

*Note 2) When using a bit address that uses decimals, use a word address in units of "16"

*Note 3) The lower 16 BIT data of 32 BIT data is saved in the address whose screen has been registered, and the upper 16 BIT data is saved in the address next to the address whose screen has been registered.

Ex. When saving 32BIT data hexadecimal data 12345678 in address D00100, it is saved to 16BIT device address as follows:

Items	32BIT	16BIT		
Address	D00100	D00100	D00101	
Input data (hexadecimal)	12345678	5678	1234	