Memory Uplink
Master Driver

Supported version   TOP Design Studio   V1.4.6 or higher

CONTENTS

We would like to thank our customers for using M2I's "Touch Operation Panel (M2I TOP) Series". Read this manual and familiarize yourself with the connection method and procedures of the "TOP and external device".

1. System configuration

The system configuration of TOP and "Memory Uplink Master driver" is as follows:

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Series Module	Link I/F	Communication method	System setting	Cable
Memory Uplink Master	Ethernet port on CPU module	Ethernet (TCP)(UDP)	3.1 Settings example 1	Twisted pair cable*Note 1)

*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 (one TOP and one external device) connection

・N:1 connection (multiple TOPs and one external device) connection
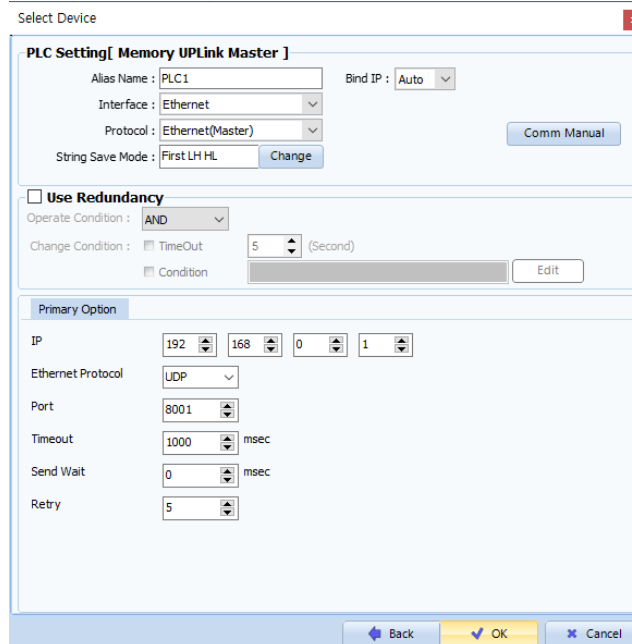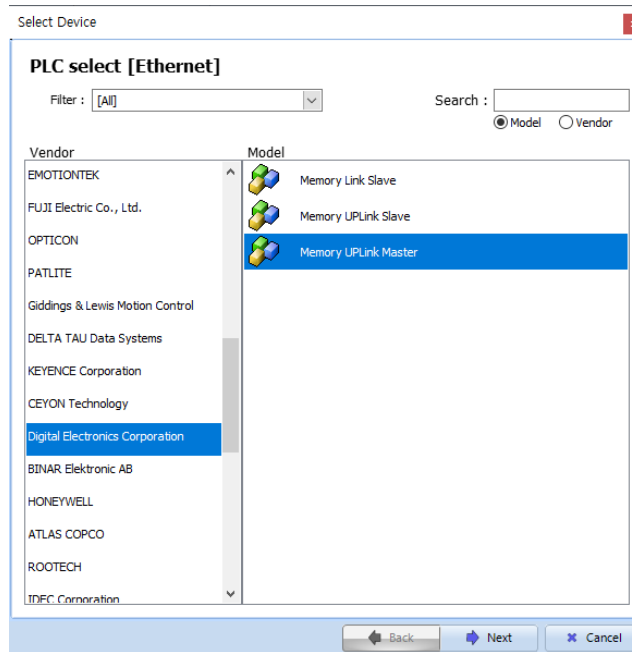
・1:N connection (one TOP and multiple external devices) connection

2. External device selection

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

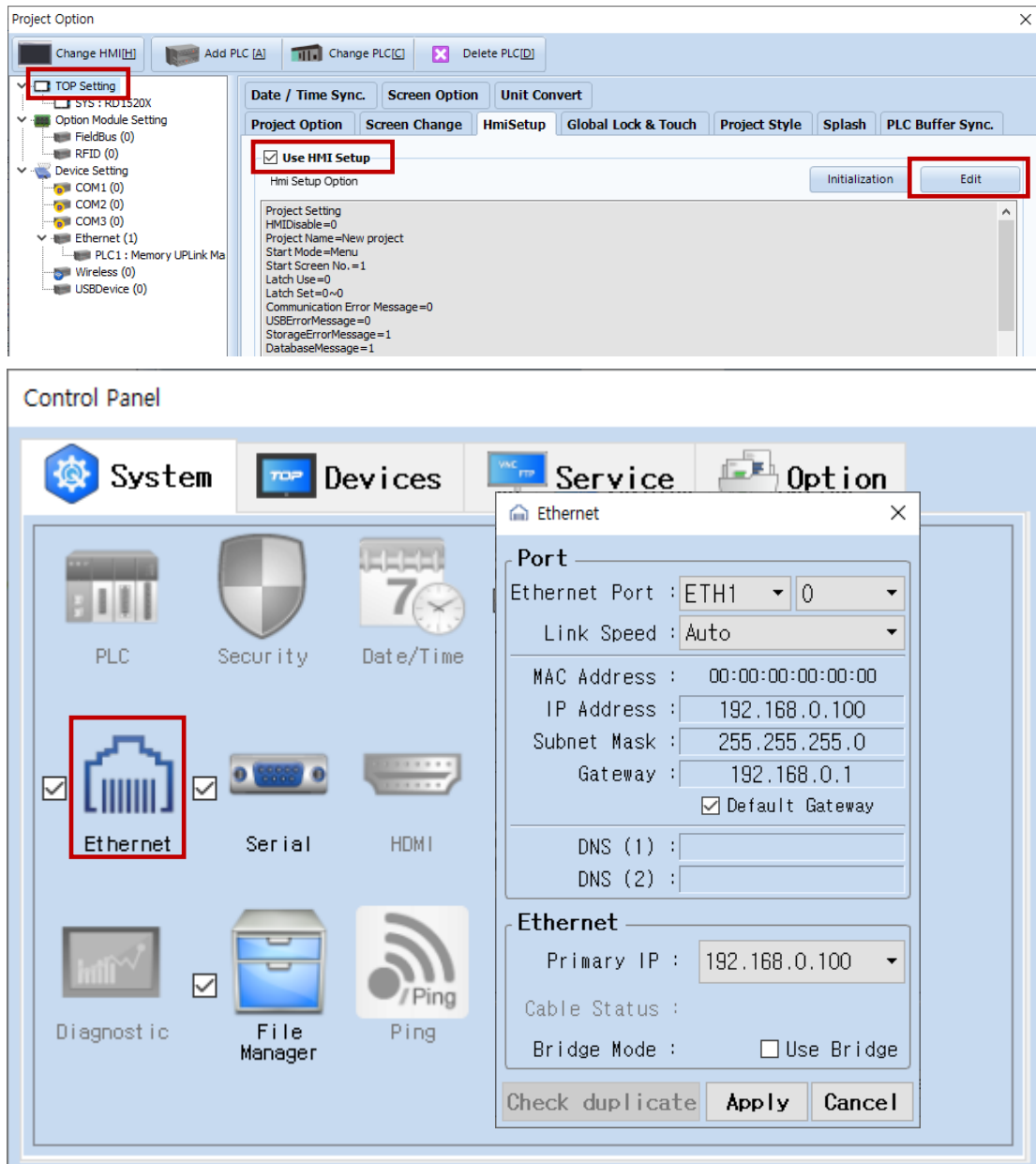| Settings		Contents
TOP	Model	Check the TOP display and process to select the touch model.
External device	Vendor	Select the vendor of the external device to be connected to TOP. Please select "Digital Electronics Corporation".
	PLC	Select an external device to connect to TOP. | Model	Interface	Protocol | |---|---|---| | Memory Uplink Master | Ethernet | Ethernet(Master) | Please check the system configuration in Chapter 1 to see if the external device you want to connect is a model whose system can be configured.

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

■ [Project > Project Property > TOP Setting] → [Project Option > "Use HMI Setup" Check > Edit > Ethernet]

– Set the TOP communication interface in TOP Design Studio.

* The above settings are examples recommended by the company.

Items	TOP	"Memory Uplink Client"	Remarks
IP Address*Note 1) Note 2)	192.168.0.100	192.168.0.1	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	
Port	Don`t Care	**8001 (fixed)**	
Protocol	TCP,UDP		

(2) Communication option setting

■ Communication interface setting

Items	Contents
IP Address	Configure the IP Address assigned to the TOP via network.
Subnet mask	Enter network subnet mask.
Gateway	Enter network subnet mask.
PLC IP address	Enter the assigned IP number for the external device.
Read/Write port	Select the port number to use for Ethernet communication of the external device.
TOP port	Port number is automatically configured when communicating with "Memory Uplink Server" through Ethernet.
Ethernet timeout	Configures response waiting time of TOP from external device to [0–99] x 100 mSec.
Delay time prior to transmission [x1 mSec]	Configures response waiting time in between reception and the next command request transmission of TOP from external device to [0–5000] x 1 mSec.
Protocol	Selects the permitted protocol depending on the "Memory Uplink Slave" and configured port number.

3.2 Communication diagnostics

■ Check the interface setting status between the TOP and 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 if the ETH port settings you want to use in [Control Panel > Ethernet] are the same as those of the external device.

■ Diagnosis of whether the port communication is normal or not

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

- The Diagnostics dialog box pops up on the screen and determines the diagnostic status.

OK	Communication setting normal
Time Out Error	Communication setting abnormal - Check the cable, TOP, and external device setting status. **(Reference: Communication diagnostics sheet)**

■ Communication diagnostics sheet

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

Items	Contents		Check		Remarks
System configuration	How to connect the system		OK	NG	1. System configuration
	Connection cable name		OK	NG	
TOP	Version information		OK	NG	2. External device selection 3. Communication setting
	Port in use		OK	NG	
	Driver name		OK	NG	
	Other detailed settings		OK	NG	
	Relative prefix	Project setting	OK	NG	
		Communication diagnostics	OK	NG	
	Ethernet port setting	IP Address	OK	NG	
		Subnet Mask	OK	NG	
		Gateway	OK	NG	
External device	CPU name		OK	NG	4. External device setting
	Communication port name (module name)		OK	NG	
	Protocol (mode)		OK	NG	
	Setup Prefix		OK	NG	
	Other detailed settings		OK	NG	
	Ethernet port setting	IP Address	OK	NG	
		Subnet Mask	OK	NG	
		Gateway	OK	NG	
	Check address range		OK	NG	5. Supported addresses (For details, please refer to the PLC vendor's manual.)

4. 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.

Device	Bit Address	Word Address	Remarks
D	00000.00–65535.15	00000–65535	