

SIEMENS AG.

SIMATIC LOGO! Series

Ethernet Driver

Supported version

TOP Design Studio

V1.0 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** [Page 2](#)

Describes the devices required for connection, the setting of each device, cables, and configurable systems.
- 2. External device selection** [Page 3](#)

Select a TOP model and an external device.
- 3. TOP communication setting** [Page 4](#)

Describes how to set the TOP communication.
- 4. External device setting** [Page 9](#)

Describes how to set up communication for external devices.
- 5. Supported addresses** [Page 14](#)

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

1. System configuration

The system configuration of TOP and "SIEMENS AG. – LOGO! Series Ethernet" is as follows:

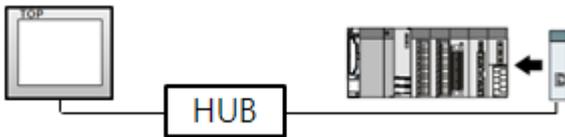
Series	Module	Link I/F	Communication method	System setting	Cable
SIMATIC LOGO!	LOGO! 8 (0BA8) Series	PROFINET Interface on Base Module	Ethernet TCP	3.1 Settings example 1 (Page 4)	Twisted pair cable* Note 1)

***Note 1)** Twisted pair cable

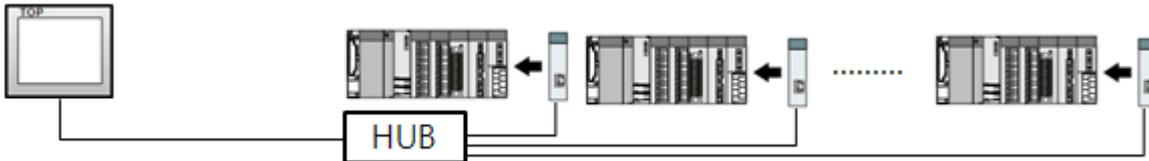
- Refer to STP (Shielded Twisted Pair Cable) or UTP (Unshielded Twisted Pair Cable) Category 3, 4, 5.
- Depending on the network configuration, you can connect to components such as the hub and transceiver, and in this case, use a direct cable.

■ Connectable configuration

- 1:1 connection (one TOP and one external device) connection

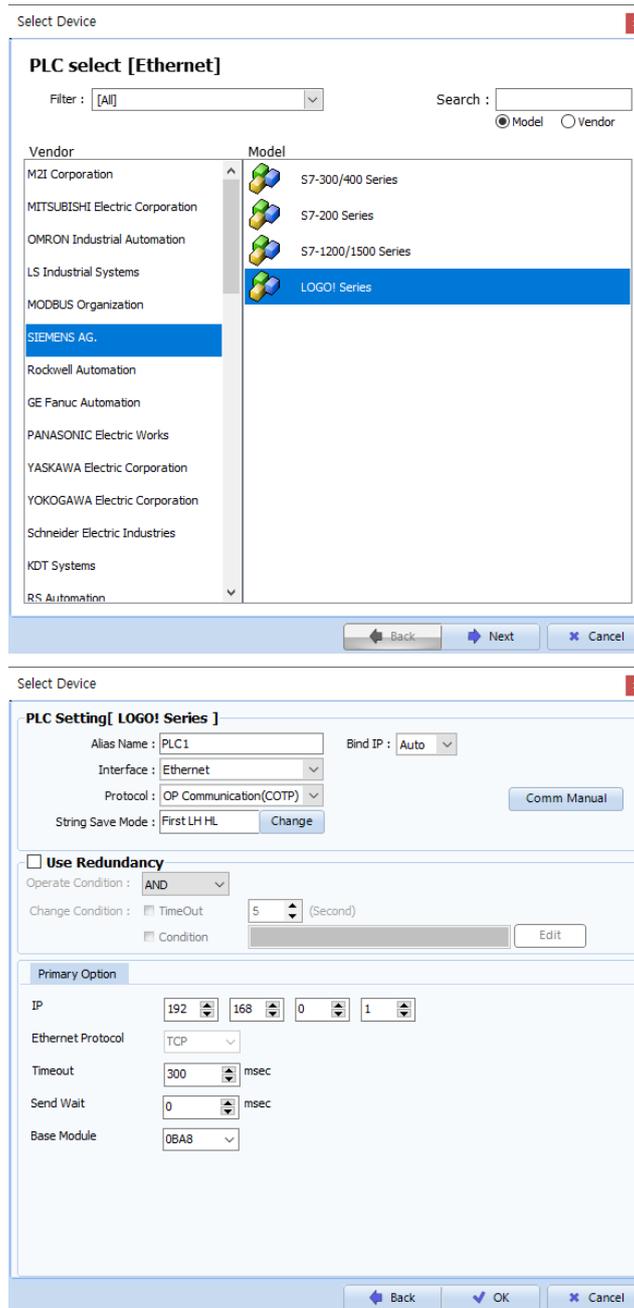


- 1:N connection (one TOP and multiple external devices) connection



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. Select "SIEMENS AG."					
	PLC	Select the external device to be connected to the TOP. <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>Model</th> <th>Interface</th> <th>Protocol</th> </tr> </thead> <tbody> <tr> <td>LOGO! Series</td> <td>Ethernet</td> <td>OP Communication(COTP)</td> </tr> </tbody> </table> <p>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.</p>	Model	Interface	Protocol	LOGO! Series	Ethernet
Model	Interface	Protocol					
LOGO! Series	Ethernet	OP Communication(COTP)					

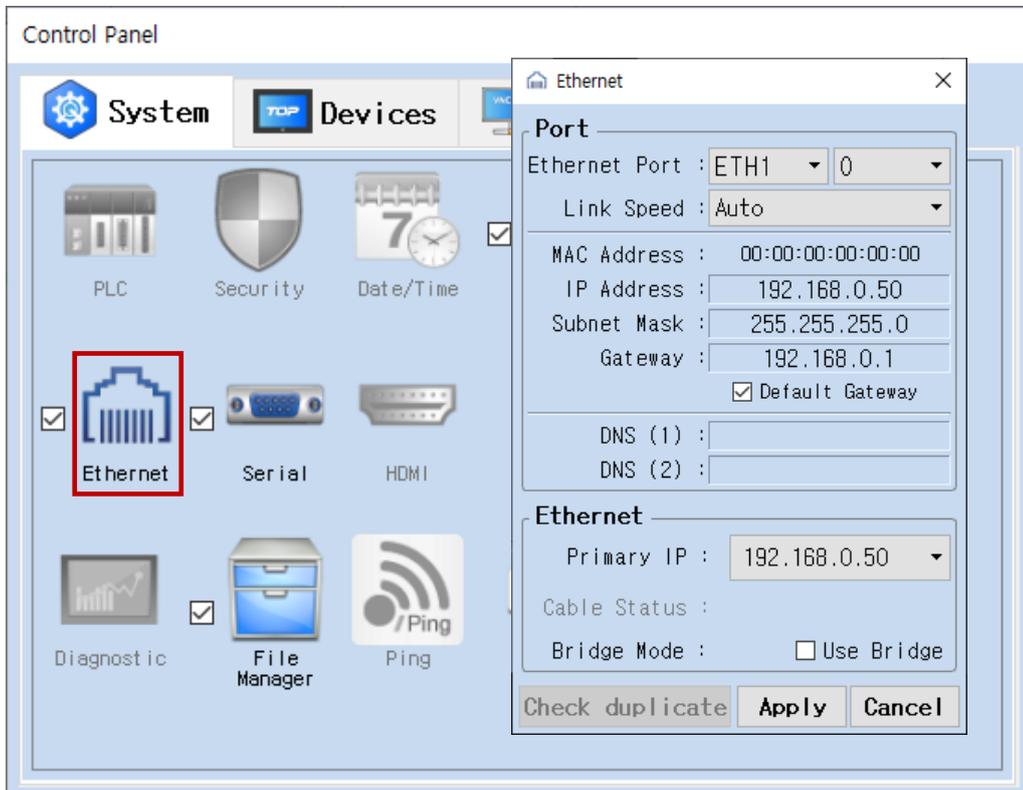
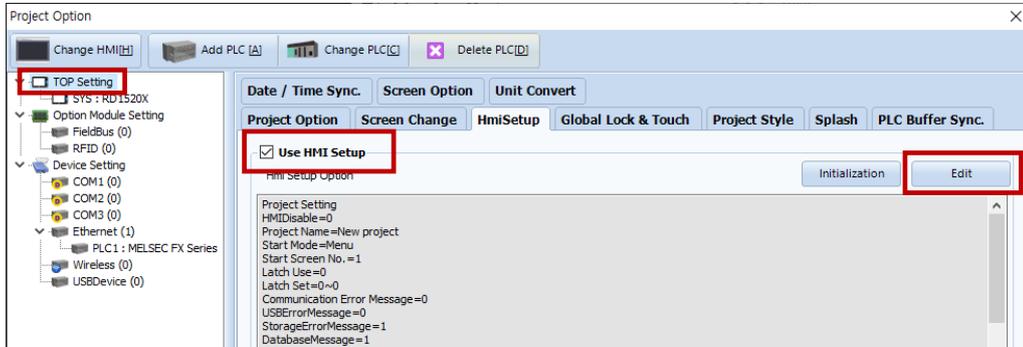
3. TOP communication setting

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 Settings] → [Project Options > "HMI Settings Use" Check > Edit > Ethernet]
- Set the TOP communication interface in TOP Design Studio.



Items	TOP	External device	Remarks
IP Address* Note 1) Note 2)	192.168.0.50	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

*[Note 1](#)) The network addresses of the TOP and the external device (the first three digits of the IP, 192 . 168 . 0 . 0) should match.

*[Note 2](#)) Do not use duplicate IP addresses over the same network.

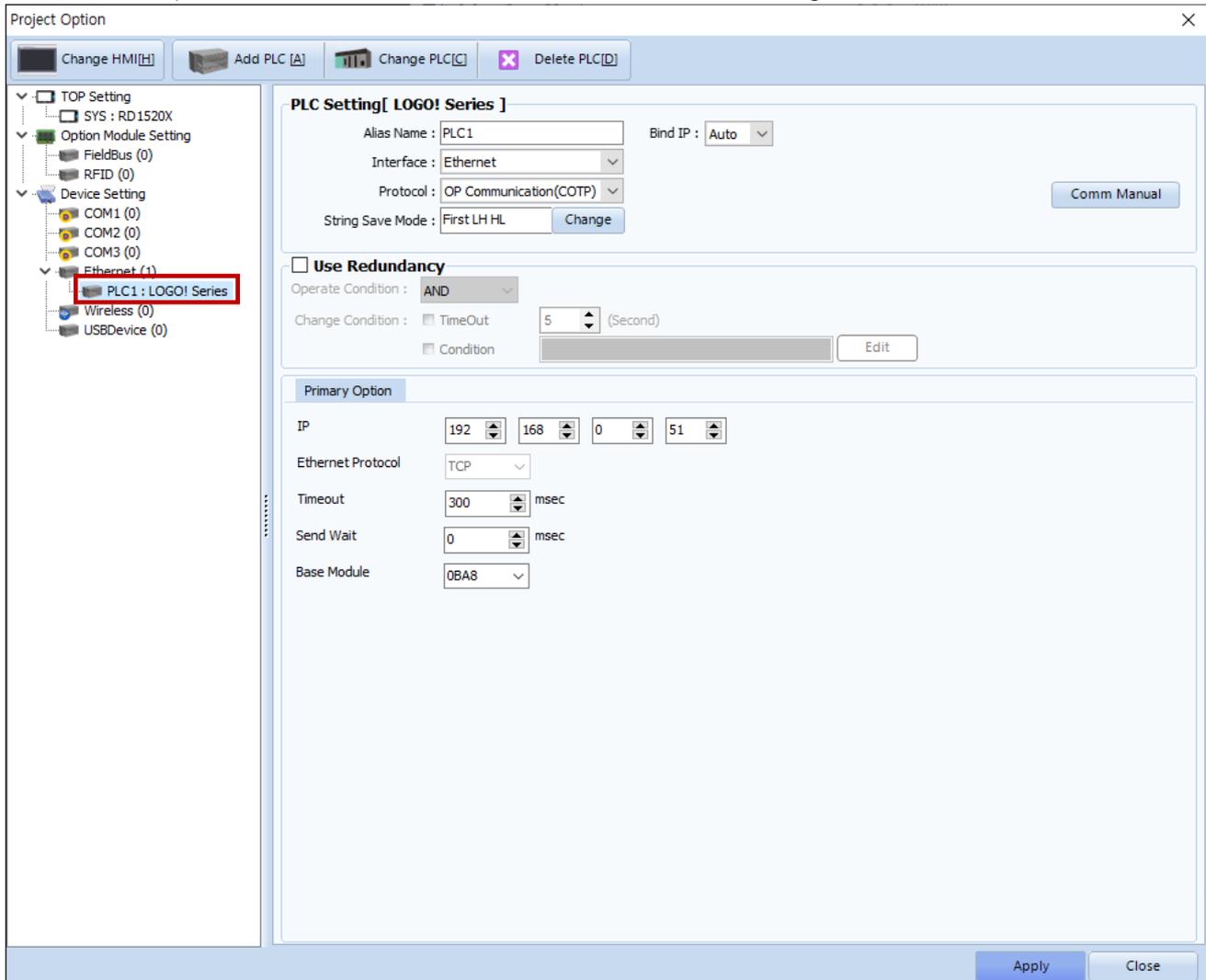
* The above settings are examples recommended by the company.

Items	Description
IP Address	Set an IP address to be used by the TOP to use over the network.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.

(2) Communication option setting

■ [Project > Project Property > PLC Settings > ETHERNET(1) > "PLC1 : LOGO! Series"]

– Set the options of the LOGO! Series Ethernet communication driver in TOP Design Studio.



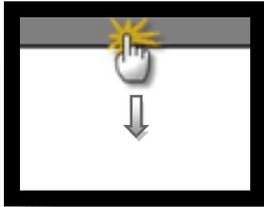
* The above settings are examples recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External device selection" .
Protocol	Select the communication protocol between the TOP and an external device.	
IP	Enter the IP address of the external device.	
Ethernet Protocol	Selects an Ethernet protocol TCP between the TOP and an external device.	Fixed
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external device and sending the next command request.	
Base Module	Select the series of the external device.	

3.2. Communication setting in TOP

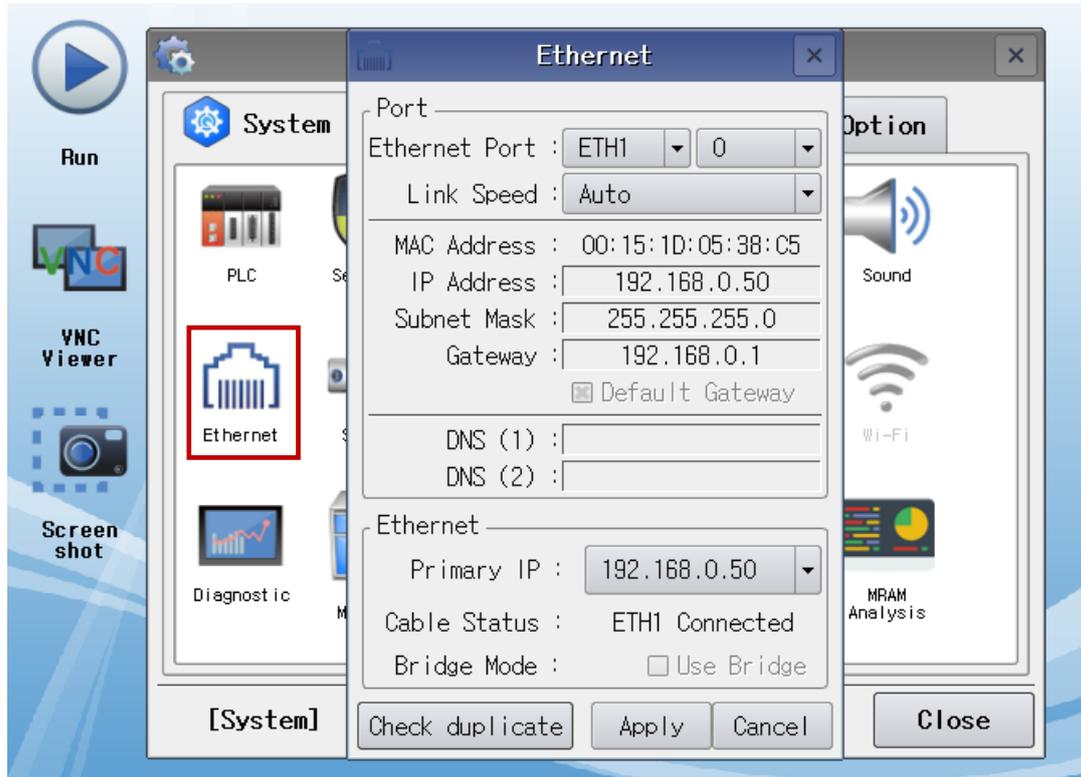
* This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.

- 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

- [Main screen > Control Panel > Ethernet]



Items	TOP	External device	Remarks
IP Address*Note 1) Note 2)	192.168.0.50	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

*Note 1) The network addresses of the TOP and the external device (the first three digits of the IP, 192 . 168 . 0 . 0) should match.

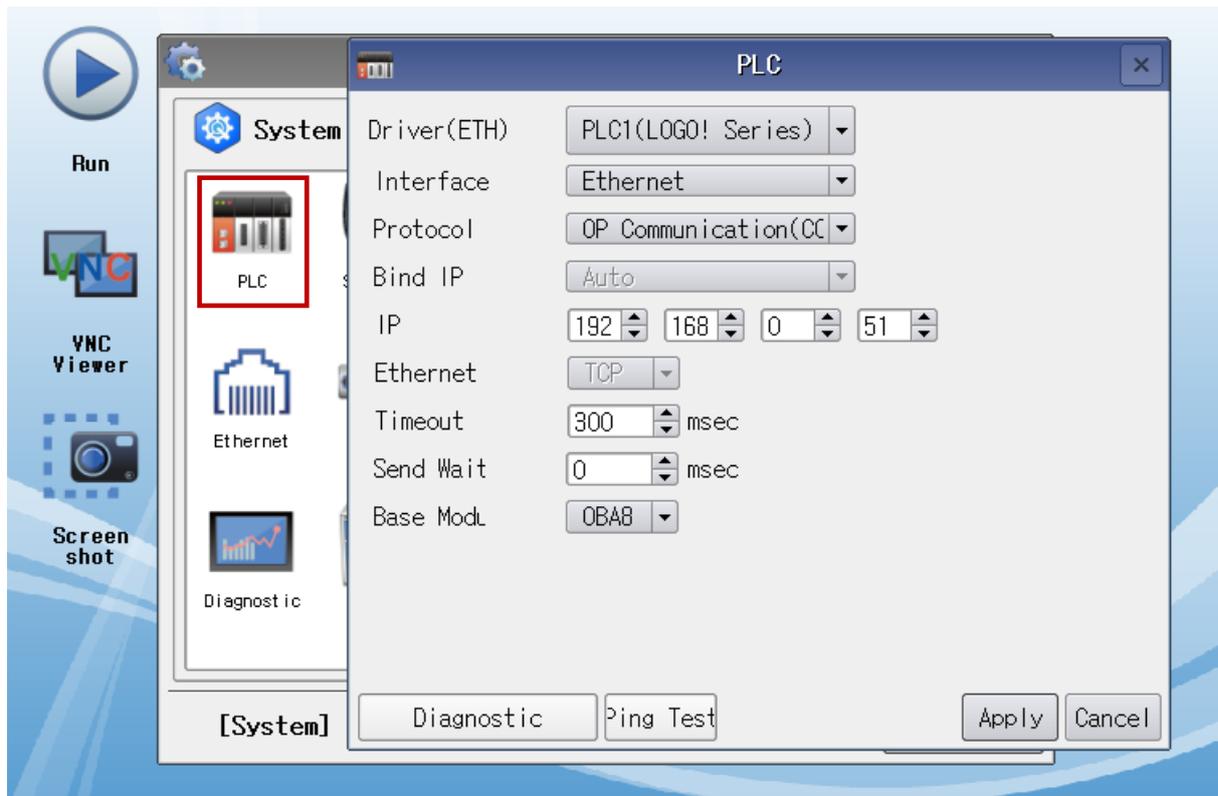
*Note 2) Do not use duplicate IP addresses over the same network.

* The above settings are examples recommended by the company.

Items	Description
IP Address	Set an IP address to be used by the TOP to use over the network.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.

(2) Communication option setting

■ [Main screen > Control Panel > PLC]



* The above settings are examples recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External device selection".
Protocol	Select the communication protocol between the TOP and an external device.	
IP	Enter the IP address of the external device.	
Ethernet Protocol	Selects an Ethernet protocol TCP between the TOP and an external device.	Fixed
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external device and sending the next command request.	
Base Module	Select the series of the external device.	

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 if the port (ETH1/ETH2) 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. External device setting

Set as below using "LOGO Soft Comfort V8.0".

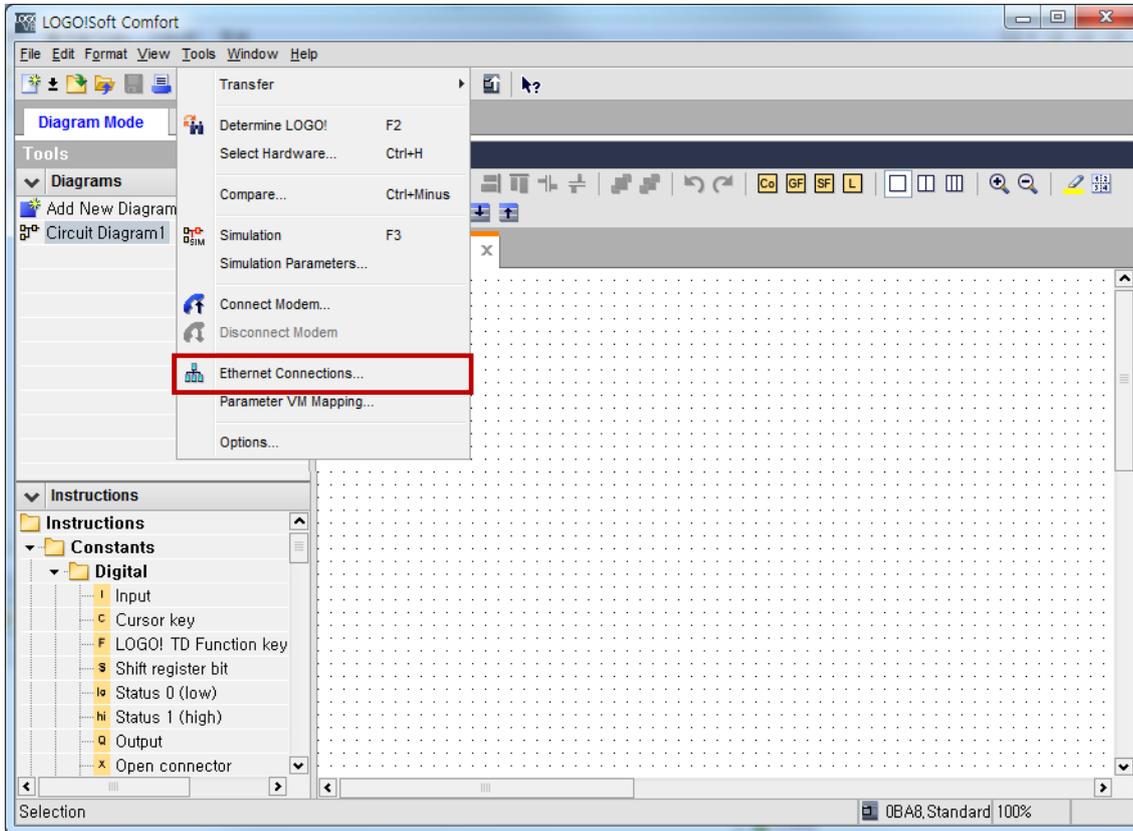
For more detailed setting method than that described in this example, refer to the PLC user manual.



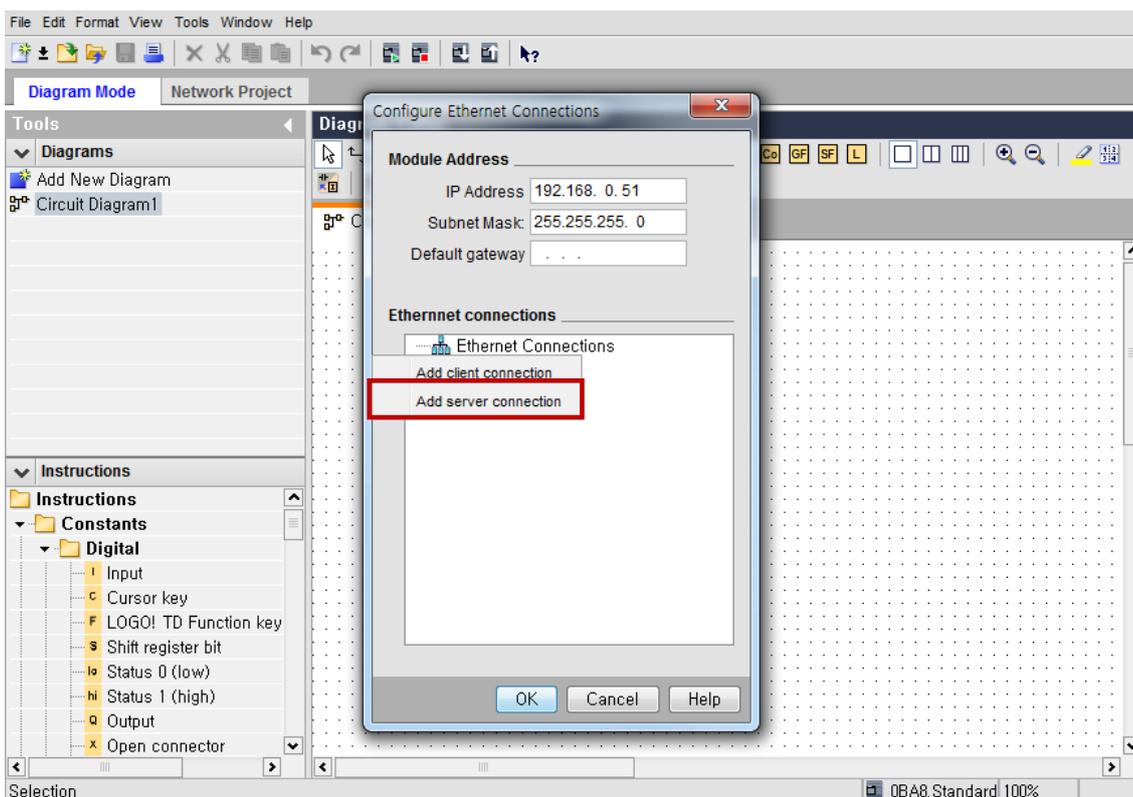
Do not use duplicate IP addresses over the same network.

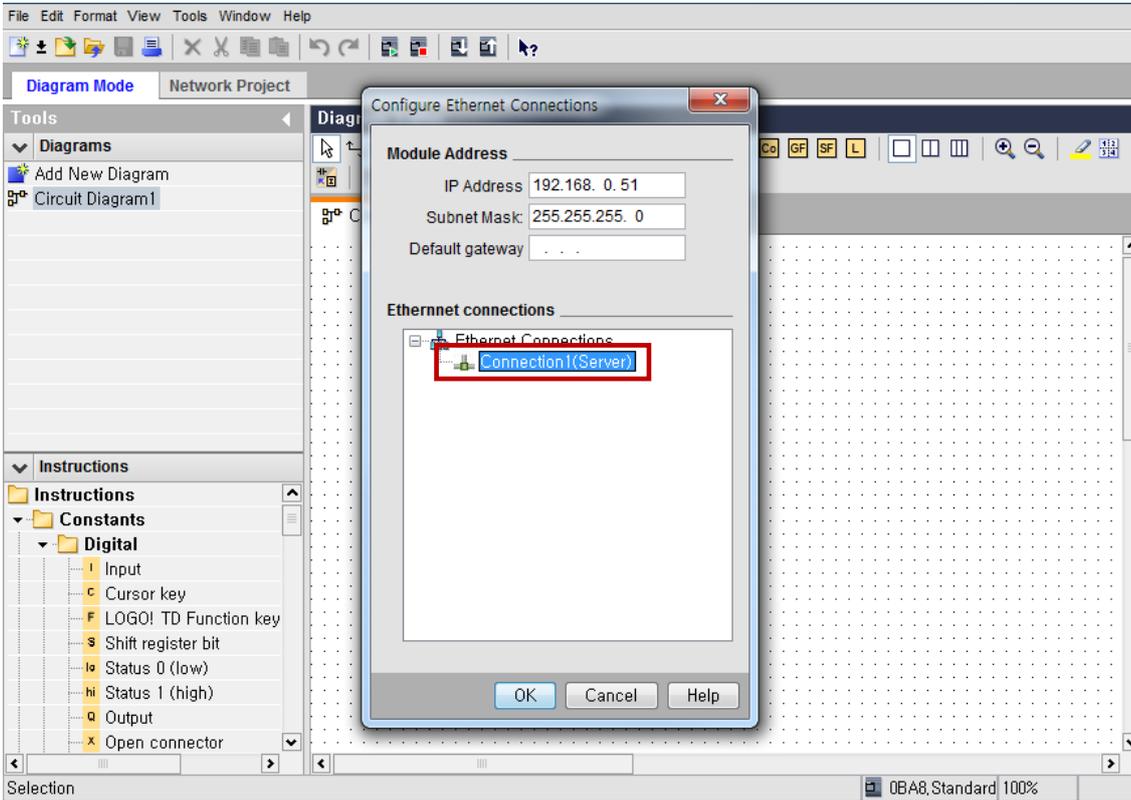
■ Connection Settings (Set in Diagram Mode)

Step 1. Tools > Click Ethernet Connections and run "Configure Ethernet Connections".



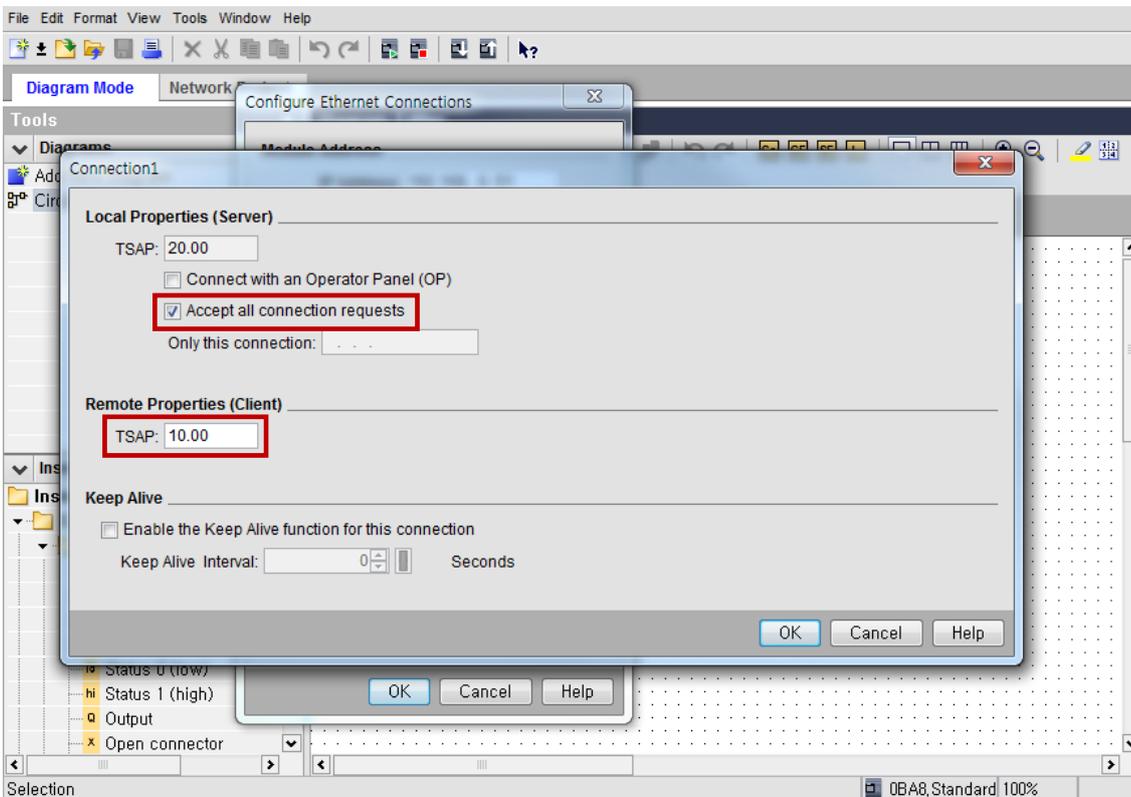
Step 2. Right click "Ethernet Connections" → Click "Add server connection" to add server connection setting.





Step 3. Double click "Connection1" then set in pop-up window as shown below.

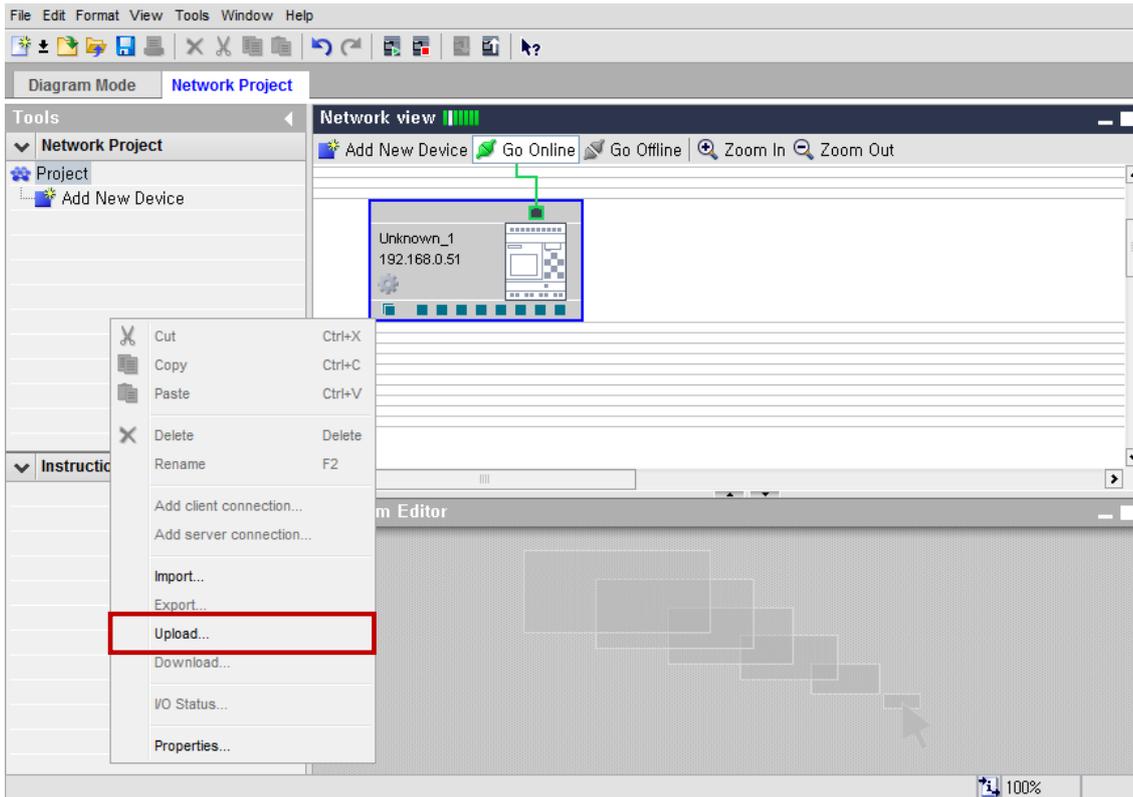
- ① Check accept all connection requests
- ② TSAP : 10.00



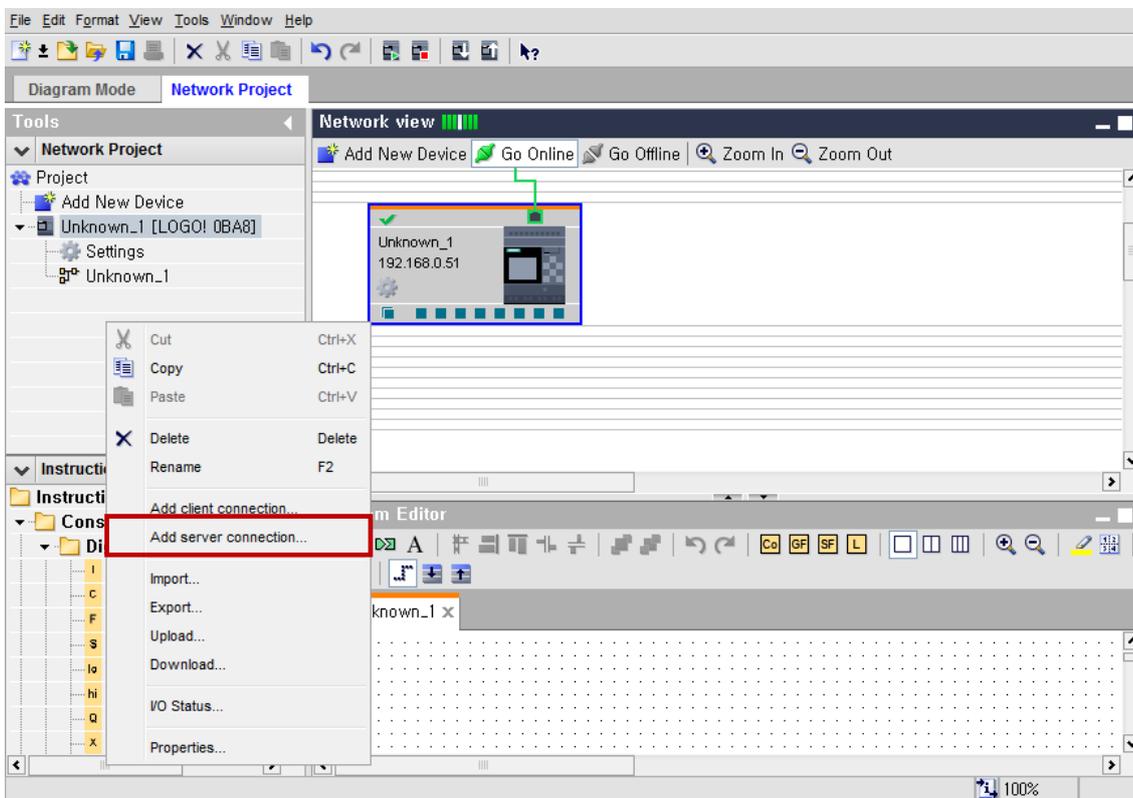
Step 4. Run Tool > Transfer > PC → LOGO! then after downloading setting information, RUN.

■ Connection Settings (Set in Network Project)

Step 1. Run "Go Online" to locate the module connected to the network, and then "Upload".

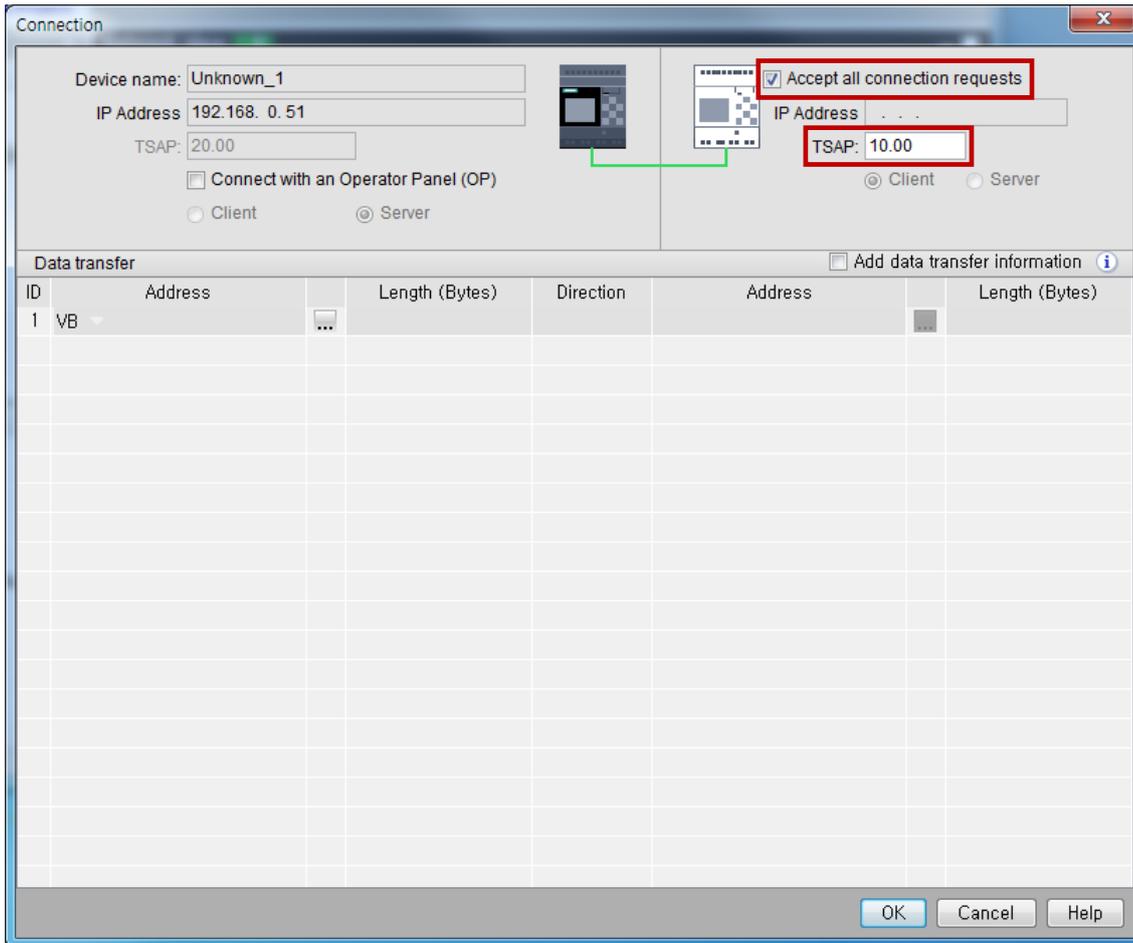


Step 2. Right click module → click "Add server connection" to add server connection setting.



Step 3. Set in pop-up window as shown below.

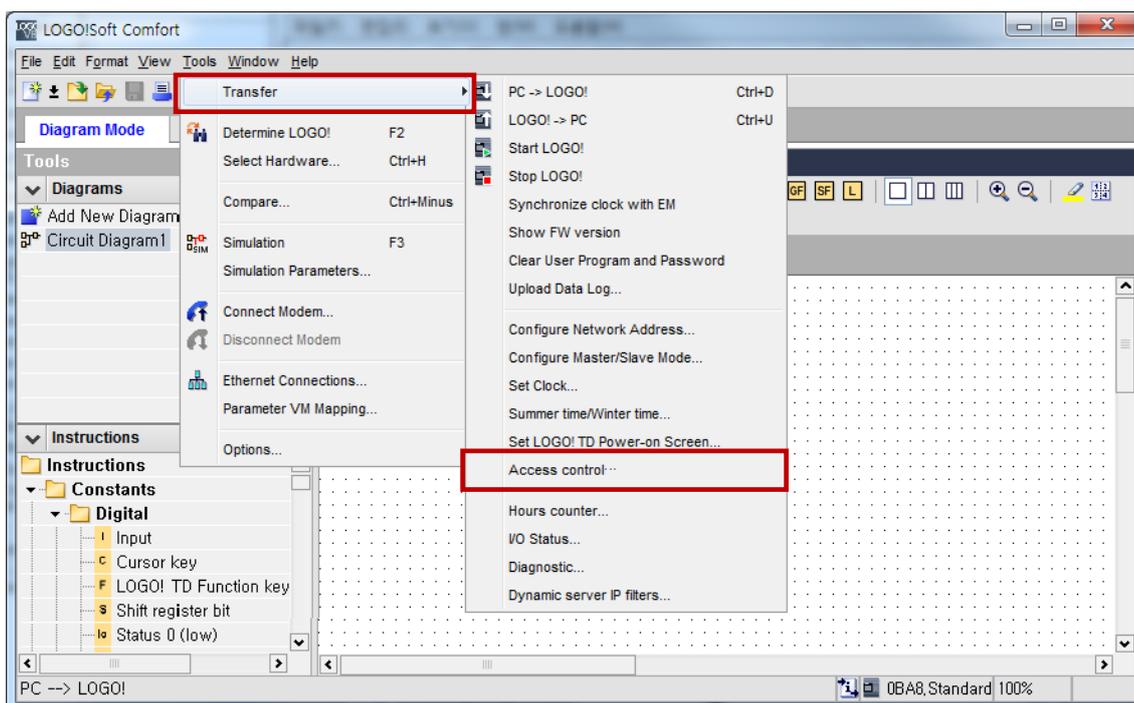
- ① Check accept all connection requests
- ② TSAP : 10.00



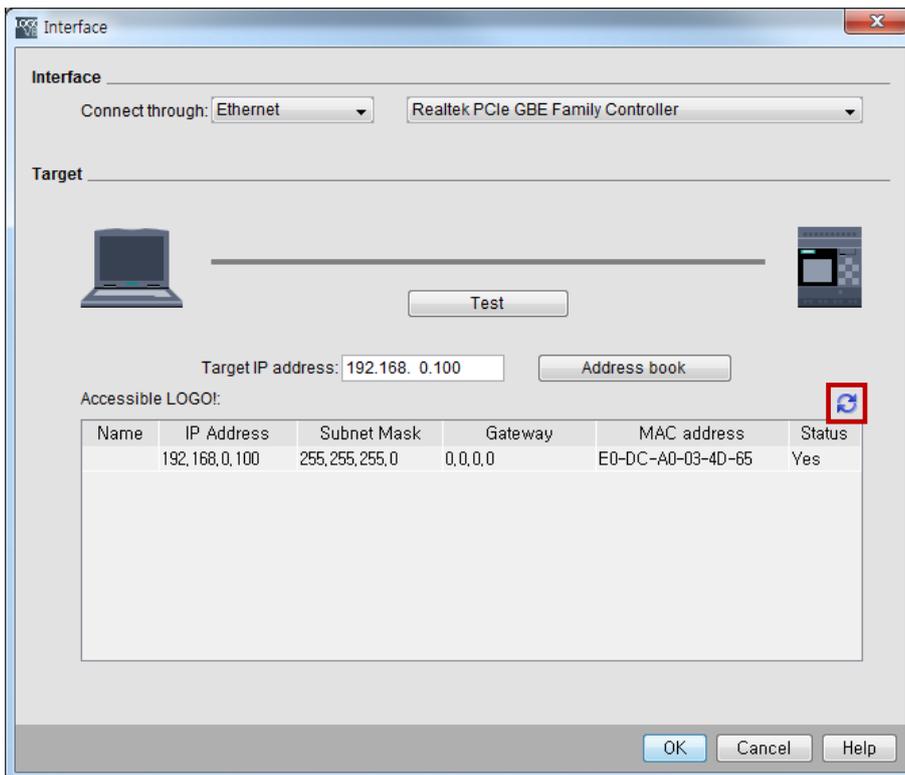
Step 4. Run Tool > Transfer > PC → LOGO! then after downloading setting information, RUN.

■ IP Settings

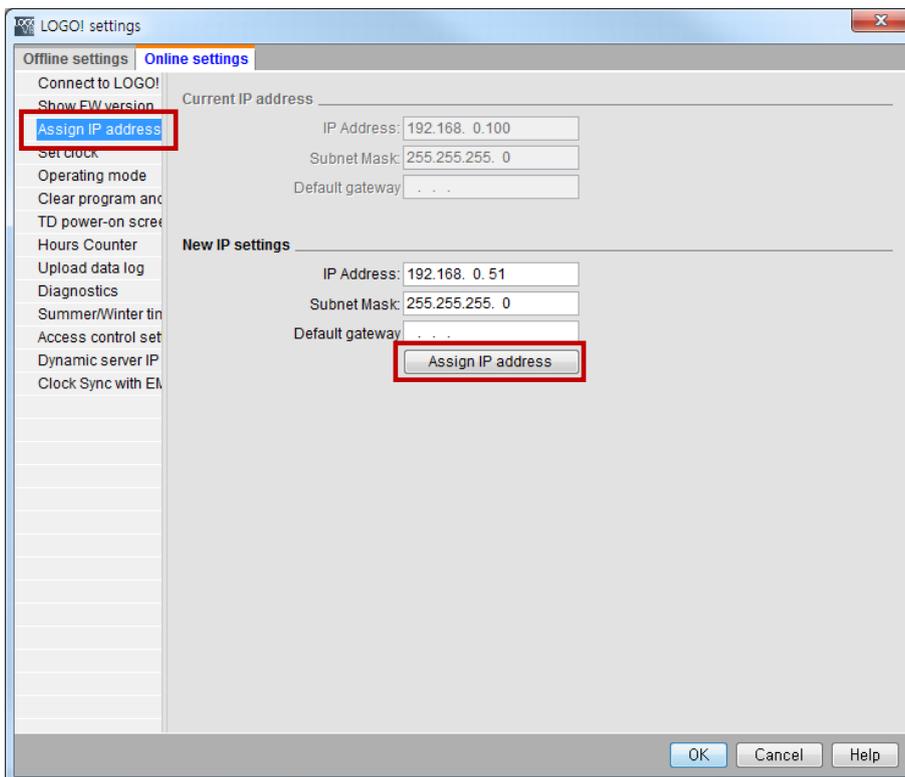
Step 1. Tools > Transfer > Click Access control.



Step 2. After updating Accessible LOGO! list, select LOGO! module to connect to.



Step 3. In Online settings > Assign IP Address > New IP settings column, enter new setting module IP address, then Click "Assign IP address".



Step 4. Reset power to the LOGO! module.

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.

■ LOGO! 8 (OBA8)

Device	Bit Address	Word Address	Remarks
Digital Input	I001 ~ I064	I001 ~ I049	
Analog Input	AI001.00 ~ AI016.15	AI001 ~ AI016	
Digital Output	Q001 ~ Q064	Q001 ~ Q064	
Analog Output	AQ001.00 ~ AQ016.15	AQ001 ~ AQ016	
Digital Flag	M001 ~ M064	M001 ~ M049	
Analog Flag	AM001.00 ~ AM064.15	AM001 ~ AM064	
Network Input	NI001 ~ NI128	NI001 ~ NI113	
Network Analog Input	NAI001.00 ~ NAI064.15	NAI001 ~ NAI064	
Network Output	NQ001 ~ NQ128	NQ001 ~ NQ113	
Network Analog Output	NAQ001.00 ~ NAQ032.15	NAQ001 ~ NAQ032	
Variable Memory	V00000.00 ~ V01023.7	VW00000 ~ VW01022	

LOGO! 8 (OBA8) VM Mapping Address

Device	VM Address	Range
Digital Input	1024 ~ 1031	8 Bytes
Analog Input	1032 ~ 1063	32 Bytes
Digital Output	1064 ~ 1071	8 Bytes
Analog Output	1072 ~ 1103	32 Bytes
Digital Flag	1104 ~ 1117	14 Bytes
Analog Flag	1118 ~ 1245	128 Bytes
Network Input	1246 ~ 1261	16 Bytes
Network Analog Input	1262 ~ 1389	128 Bytes
Network Output	1390 ~ 1405	16 Bytes
Network Analog Output	1406 ~ 1469	64 Bytes