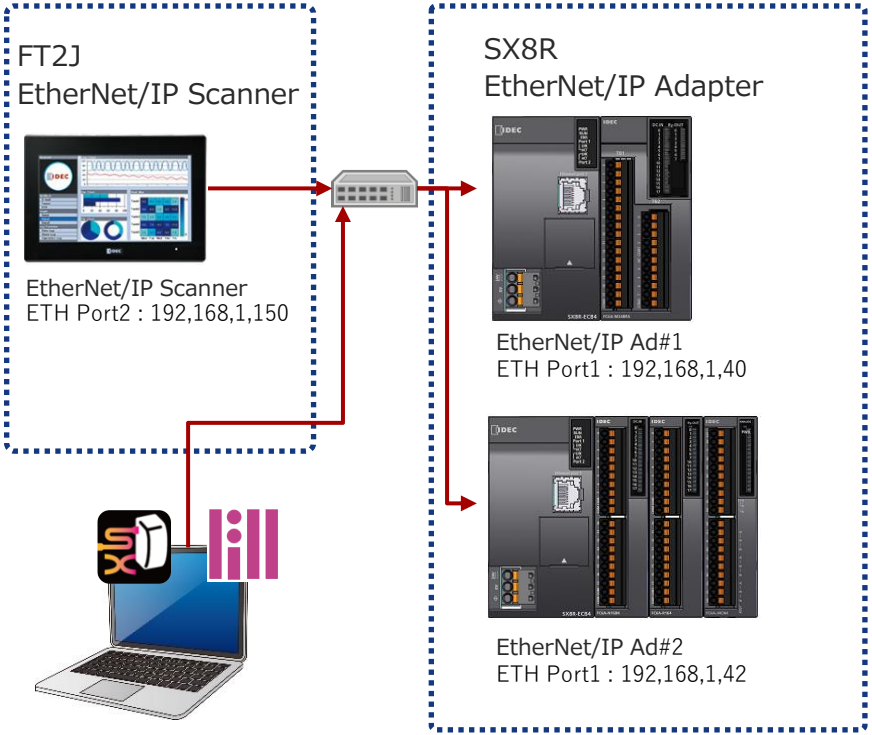
FT2J and SX8R: EtherNet/IP protocol

FT2J and SX8R: EtherNet/IP protocol

Step1: Define shared memory allocation between scanner and adapter according to remote IO system configuration

System Configuration



Shared memory setting

EtherNET/IP Scanner FT2J	
D0	⇦
D1	⇦
D2	⇨
D3	⇨
D100	⇦
D101	⇦
D102	
D103	
D104	
D105	
D106	
D107	
D108	
D109	
D110	⇨
D111	⇨

EtherNET/IP Ad#1			
Status	2 byte	SX8R-ECB4	
INPUT	2 byte	FC6A-M24BR1	Slot #1
Control	2 byte	SX8R-ECB4	
OUTPUT	2 byte (1byte Reserved)	FC6A-M24BR1	Slot #1

EtherNET/IP Ad#2				
Status		2 byte	SX8R-ECB4	
INPUT		2 byte	FC6A-N16B4	Slot #1
AD Ch.0	DATA	2 byte	FC6A-J4CN4	Slot #3
	Status	2 byte		
AD Ch.1	DATA	2 byte		
	Status	2 byte		
AD Ch.2	DATA	2 byte		
	Status	2 byte		
AD Ch.3	DATA	2 byte		
	Status	2 byte		
Control		2 byte	SX8R-ECB4	
OUTPUT		2 byte	FC6A-R164	Slot #2

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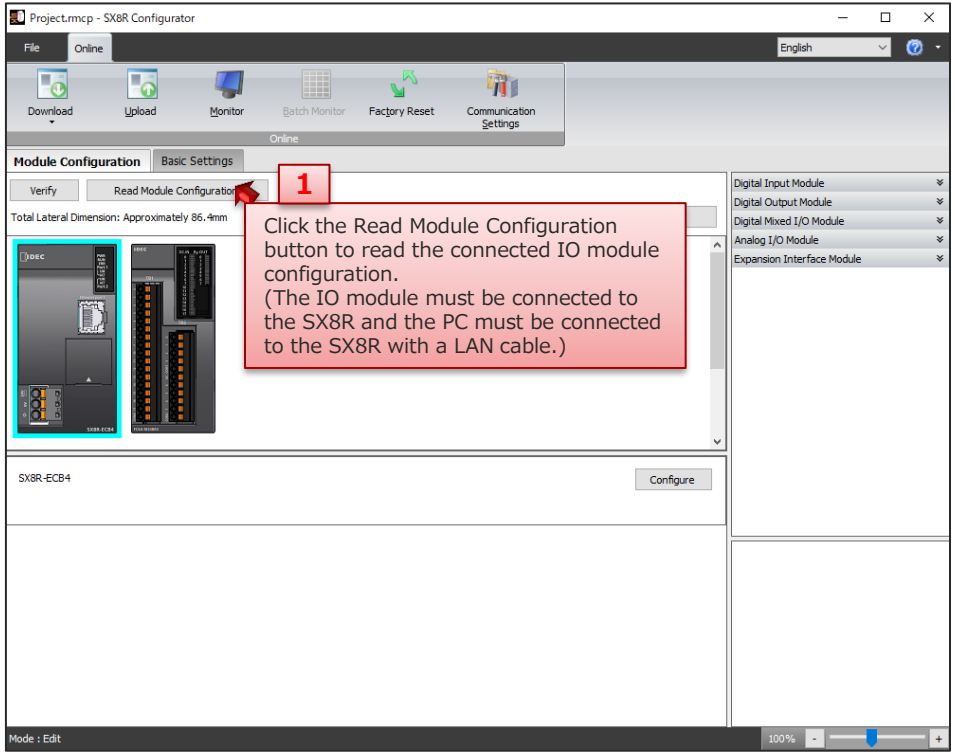
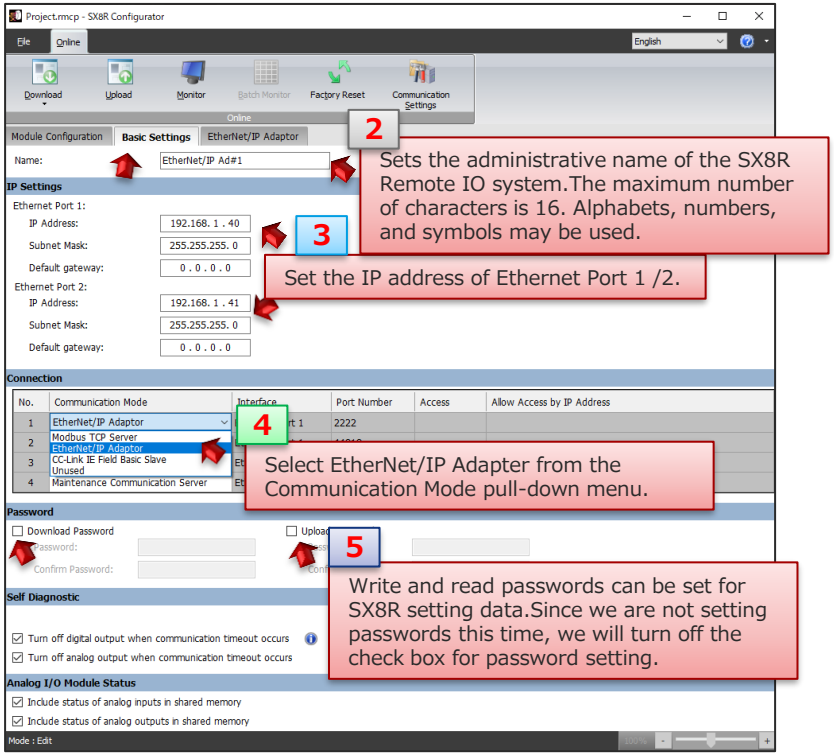
FT2J and SX8R: EtherNet/IP protocol

Step2: Configure communication settings for SX8R (EtherNet/IP Adpter#1) using SX8R Configurator





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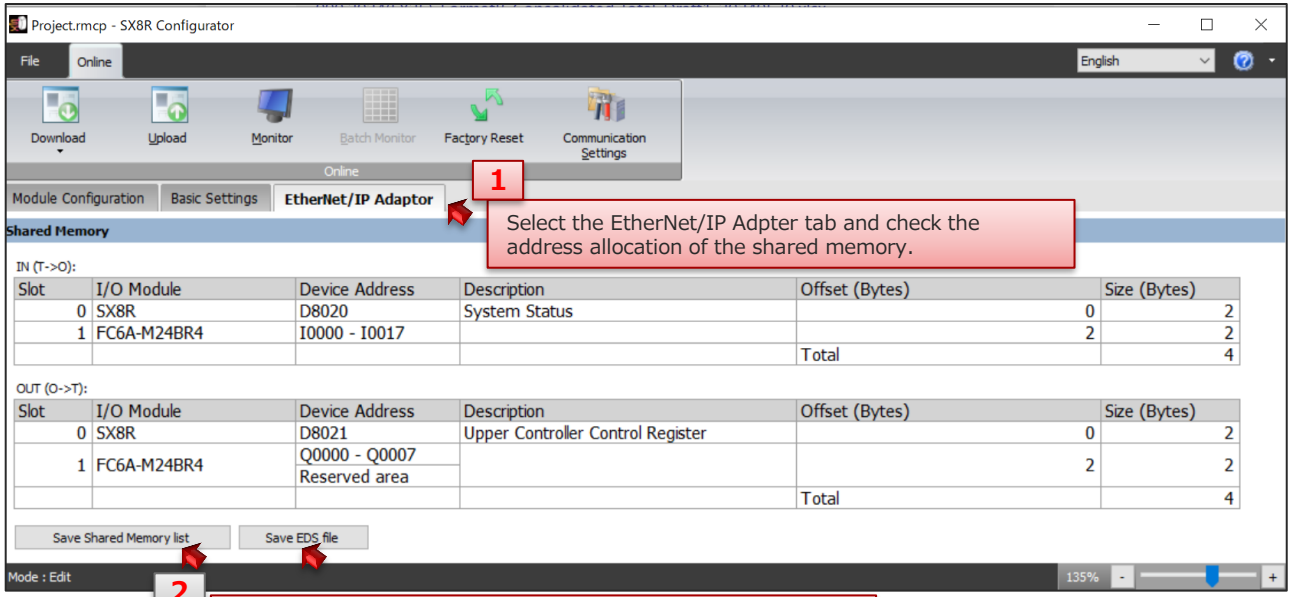
FT2J and SX8R: EtherNet/IP protocol

Step3: Check the address allocation of the EtherNet/IP shared memory in SX8R (EtherNet/IP Adpter#1)

EtherNET/IP Ad#1			
Status	2 byte	SX8R-ECB4	
INPUT	2 byte	FC6A-M24BR1	Slot #1
Control	2 byte	SX8R-ECB4	
OUTPUT	2 byte (1byte Reserved)	FC6A-M24BR1	Slot #1



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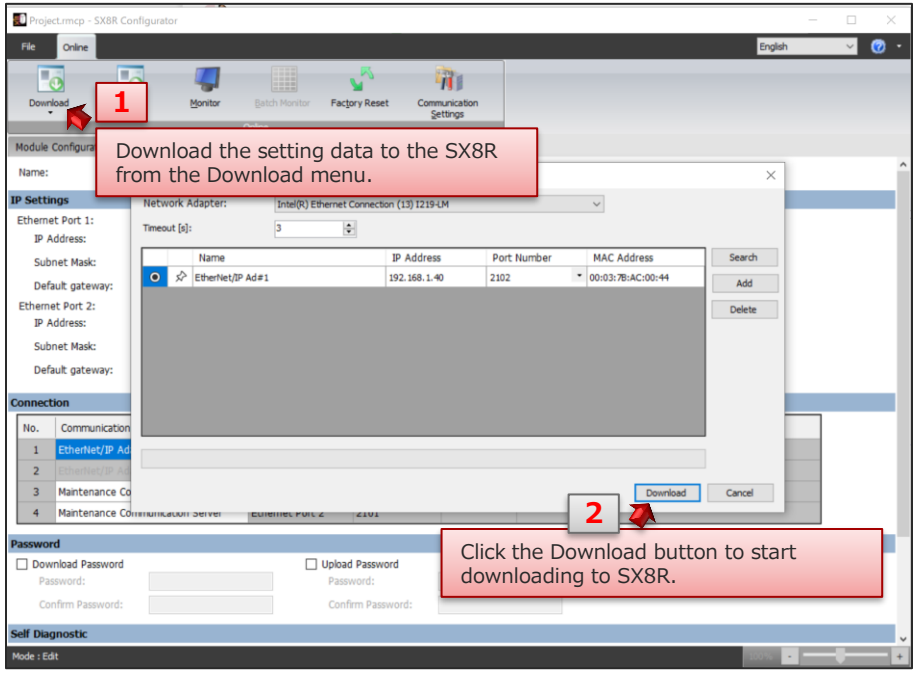
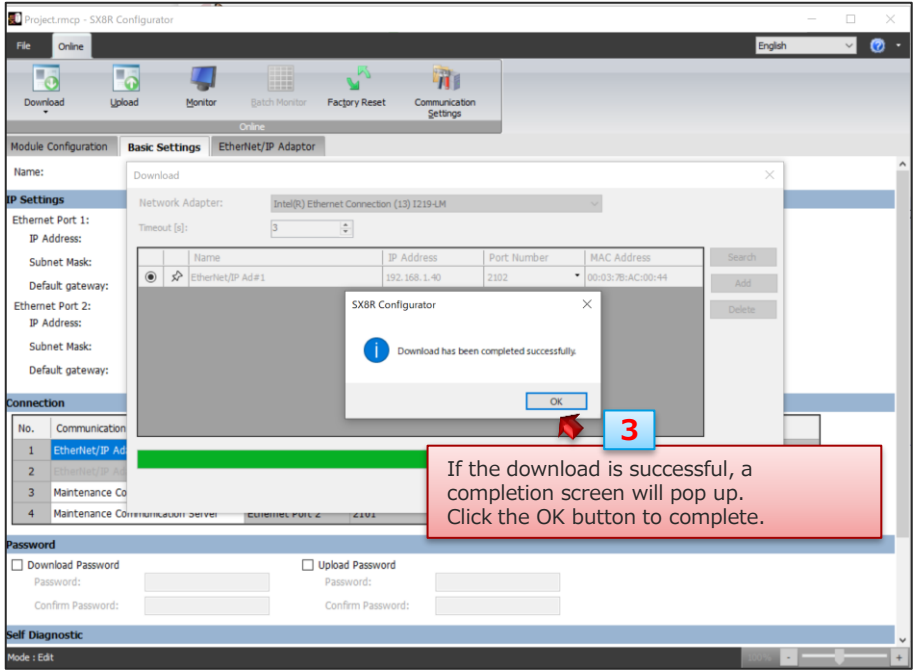
FT2J and SX8R: EtherNet/IP protocol

Step4: Download the setting data to SX8R (EtherNet/IP Adpter#1)





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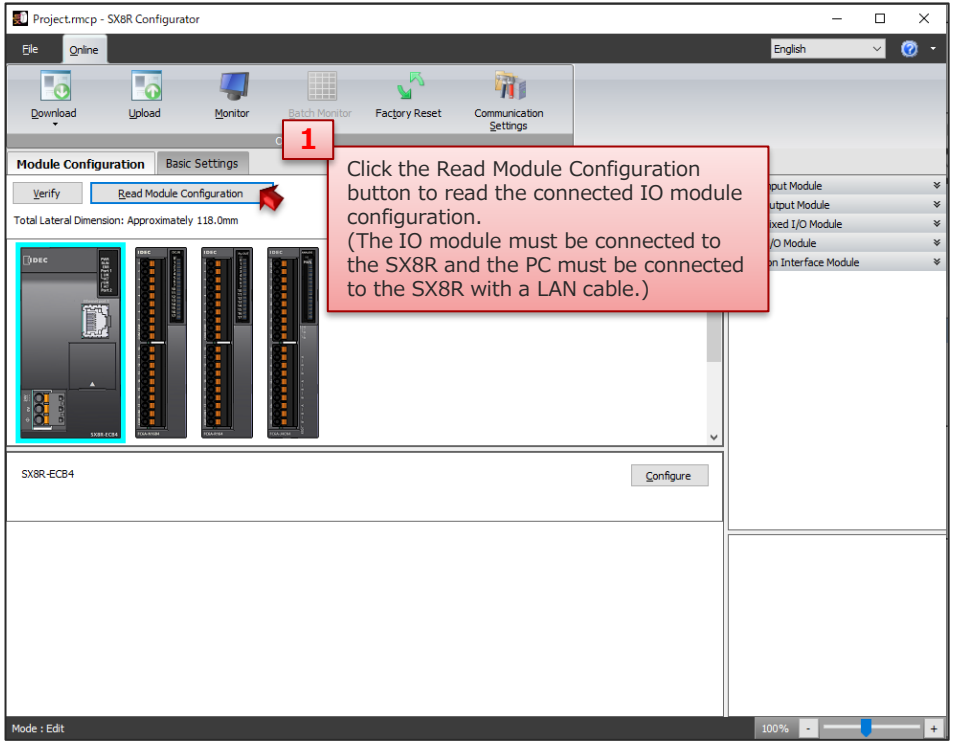
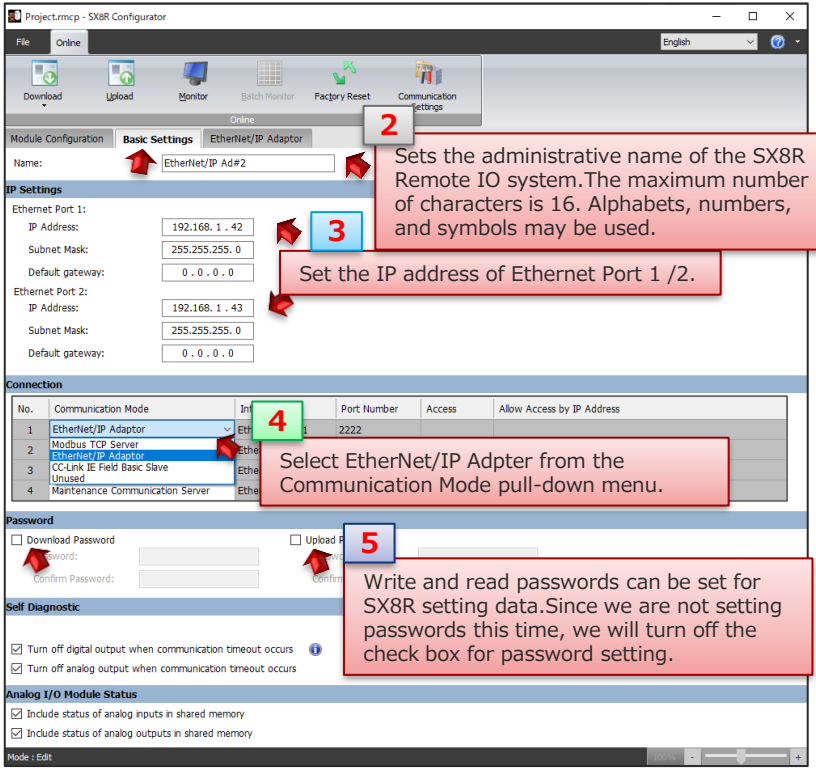
FT2J and SX8R: EtherNet/IP protocol

Step5: Configure communication settings for SX8R (EtherNet/IP Adpter#1) using SX8R Configurator



Click the Read Module Configuration button to read the connected IO module configuration.
(The IO module must be connected to the SX8R and the PC must be connected to the SX8R with a LAN cable.)



Sets the administrative name of the SX8R Remote IO system.The maximum number of characters is 16. Alphabets, numbers, and symbols may be used.

Set the IP address of Ethernet Port 1 /2.

Select EtherNet/IP Adpter from the Communication Mode pull-down menu.

Write and read passwords can be set for SX8R setting data.Since we are not setting passwords this time, we will turn off the check box for password setting.

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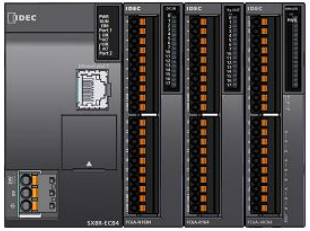
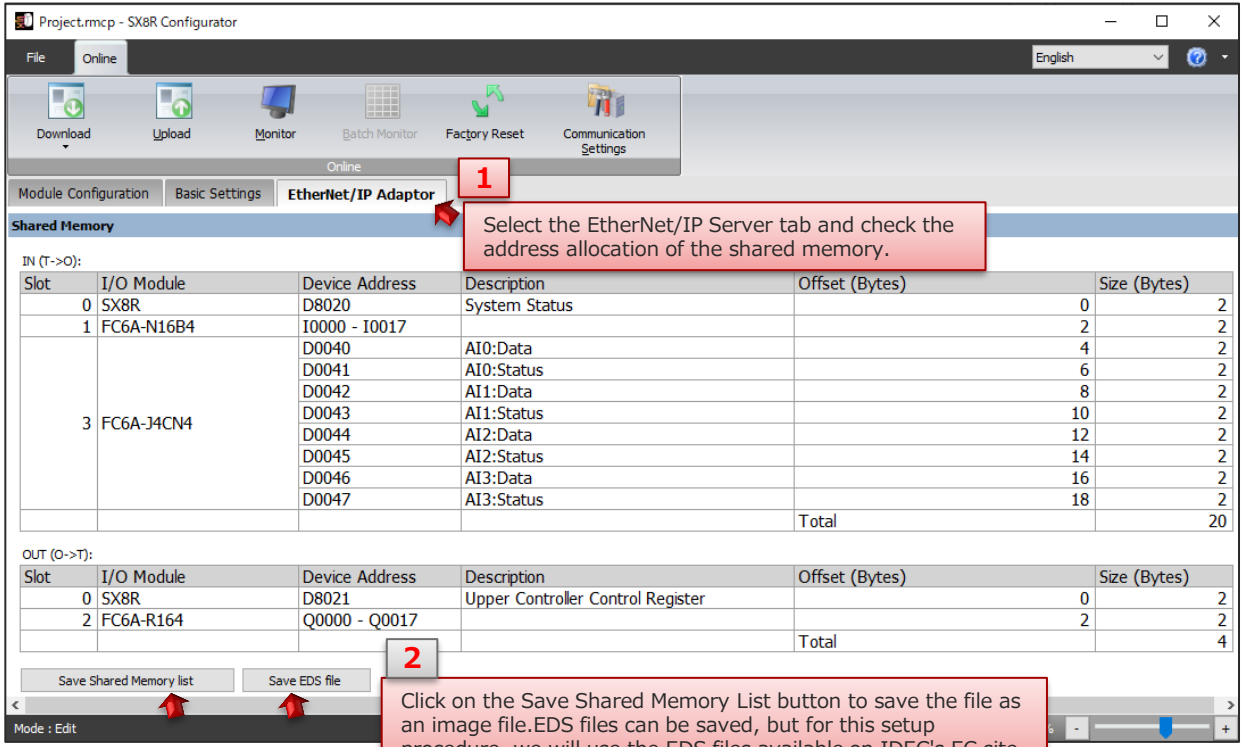
FT2J and SX8R: EtherNet/IP protocol

Step6: Check the address allocation of the EtherNet/IP shared memory in SX8R (EtherNet/IP Adpter#1)



EtherNET/IP Ad#2				
Status		2 byte	SX8R-ECB4	
INPUT		2 byte	FC6A-N16B4	Slot #1
AD Ch.0	DATA	2 byte	FC6A-J4CN4	Slot #3
	Status	2 byte		
AD Ch.1	DATA	2 byte		
	Status	2 byte		
AD Ch.2	DATA	2 byte		
	Status	2 byte		
AD Ch.3	DATA	2 byte		
	Status	2 byte		
Control	2 byte		SX8R-ECB4	
OUTPUT	2 byte		FC6A-R164	Slot #2



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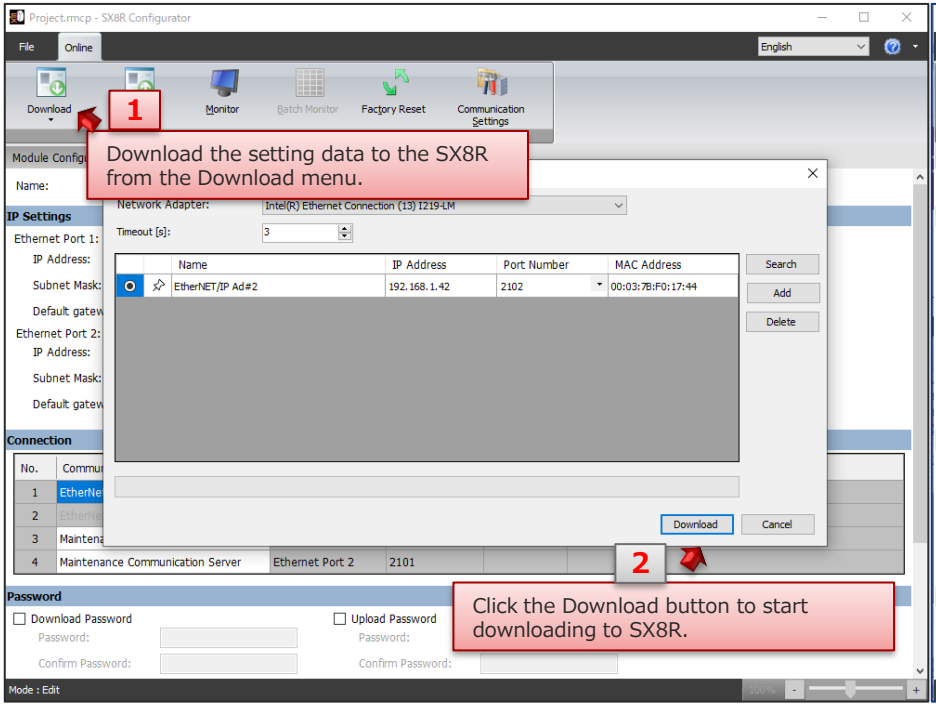
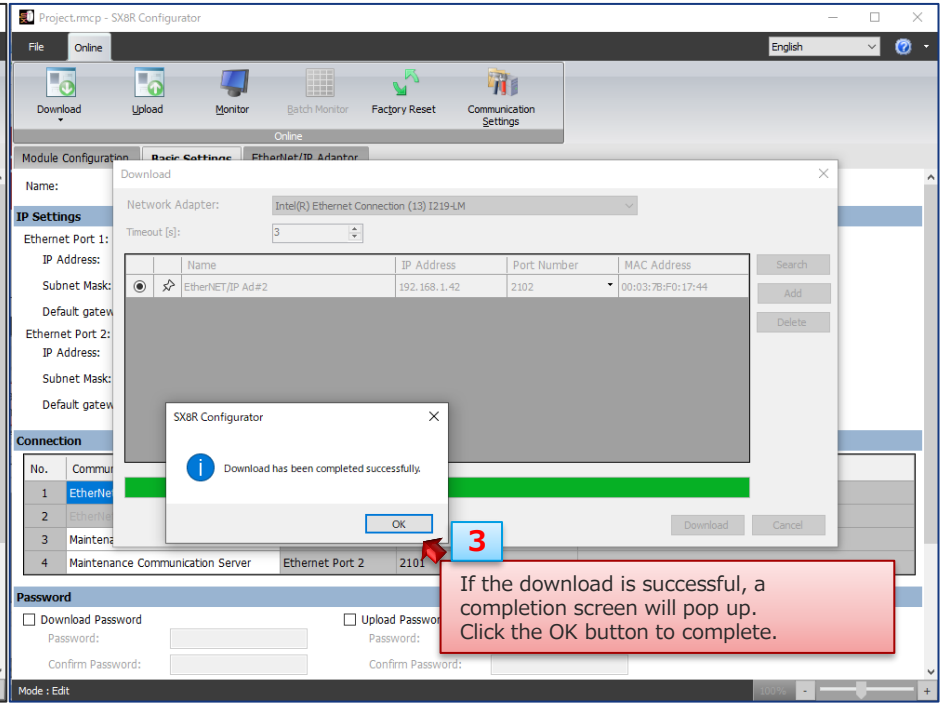
FT2J and SX8R: EtherNet/IP protocol

Step7: Download the setting data to SX8R (EtherNet/IP Adpter#2)





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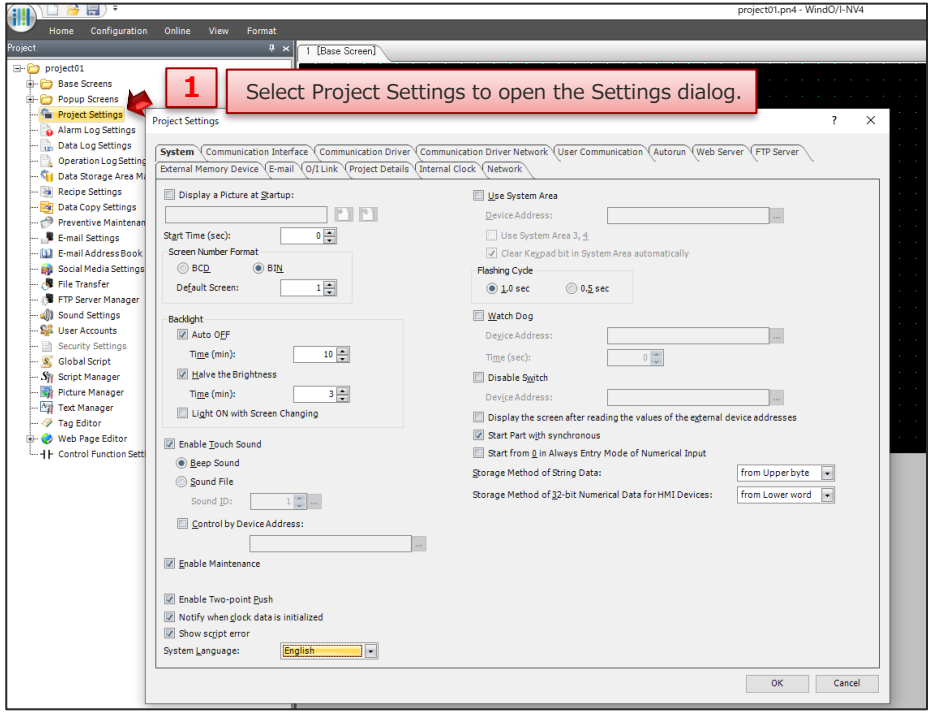
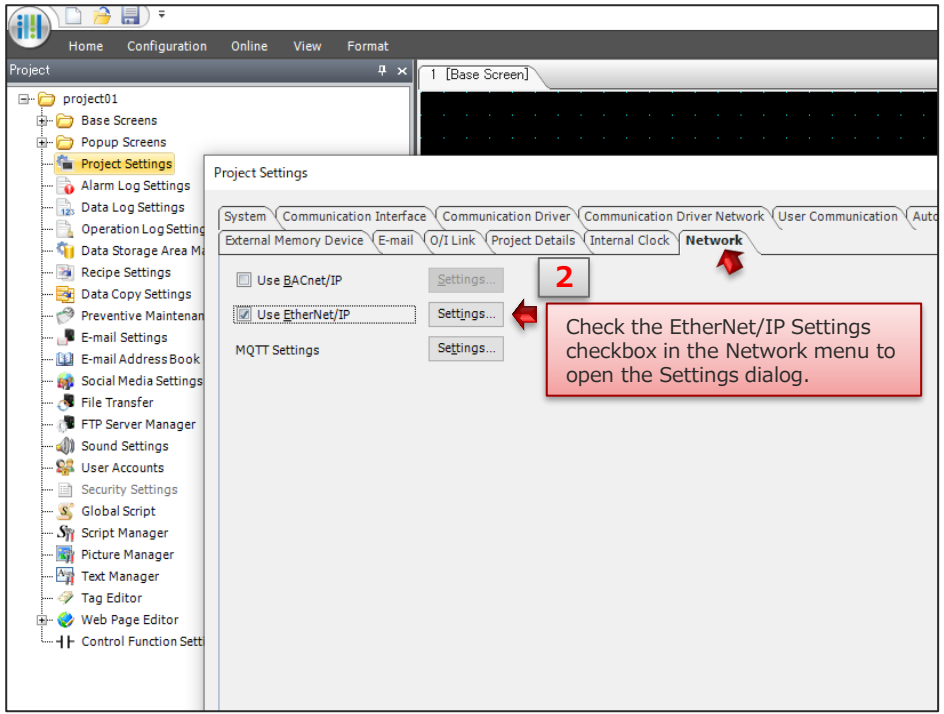
FT2J and SX8R: EtherNet/IP protocol

Step8: Configure communication settings for FT2J (EtherNet/IP Scanner) using WindO/I-NV4





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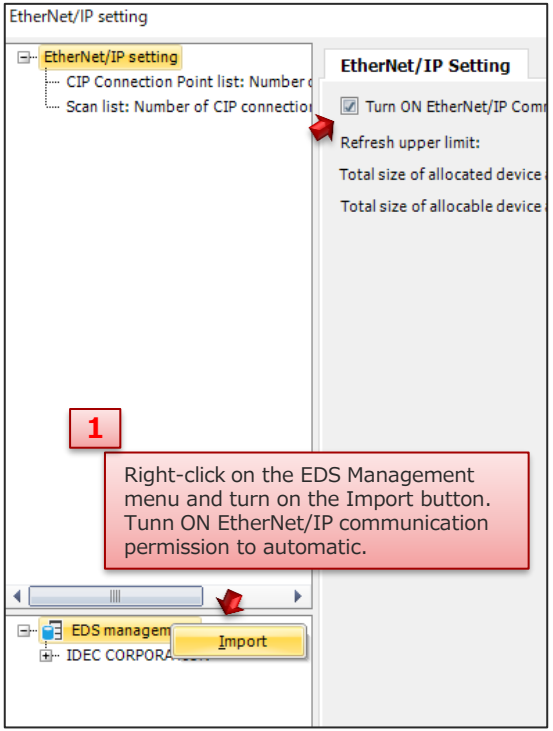
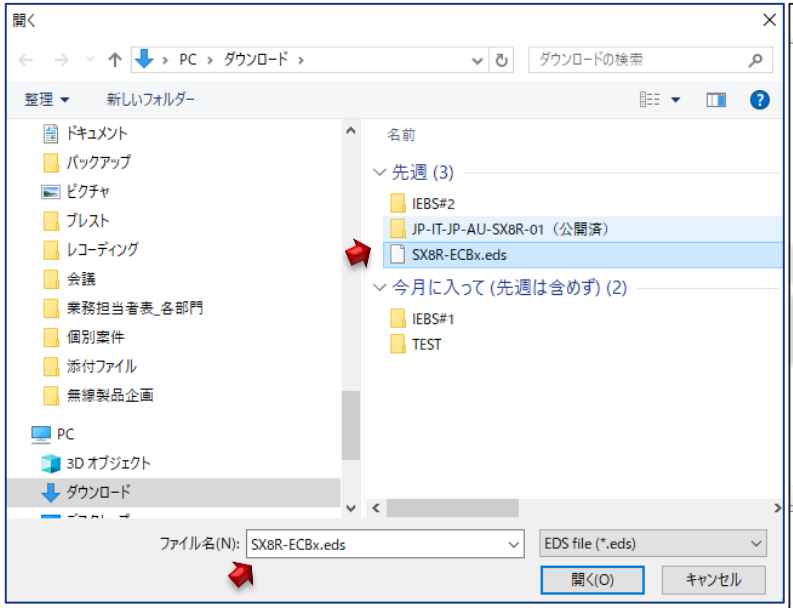
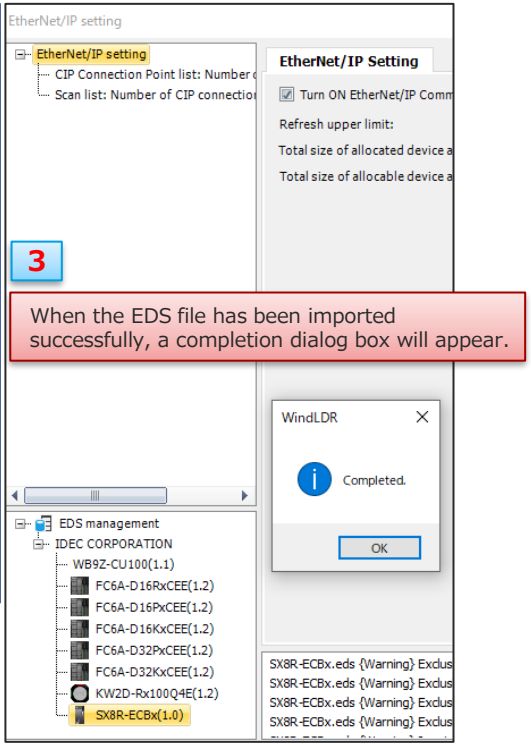
FT2J and SX8R: EtherNet/IP protocol

Step9:Download the EDS file from the IDEC EC site and import the EDS file into WindO/I-NV4







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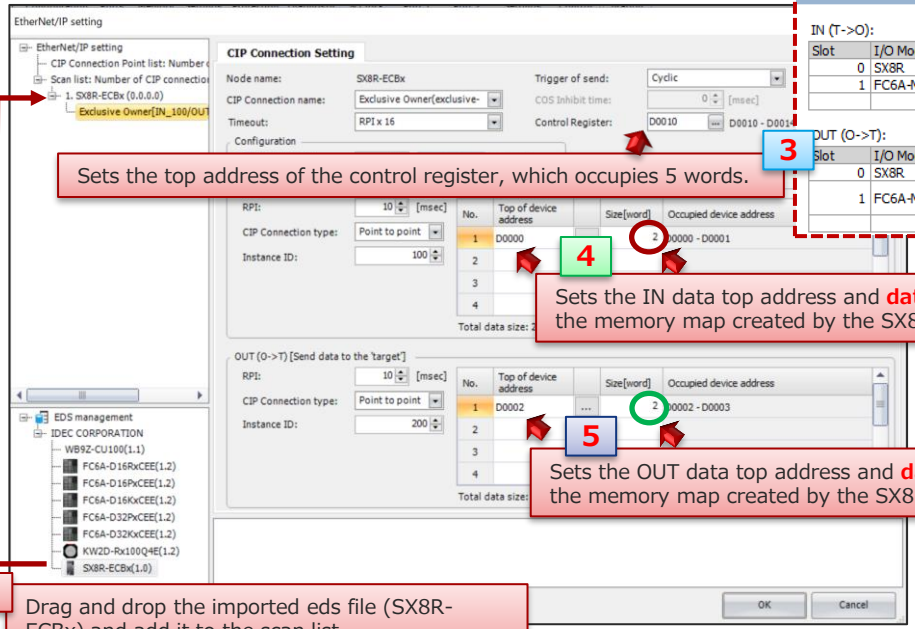
FT2J and SX8R: EtherNet/IP protocol

Step10: Add SX8R EDS file to the scan list and configure CIP connection settings for EtherNet/IP Adpter#1

2 CIP connection settings (control register, first device, size).



3 Sets the top address of the control register, which occupies 5 words.

4 Sets the IN data top address and **data size in words** according to the memory map created by the SX8R Configurator.

5 Sets the OUT data top address and **data size in words** according to the memory map created by the SX8R Configurator.

1 Drag and drop the imported eds file (SX8R-ECBx) and add it to the scan list.

EtherNet/IP Adapter#1

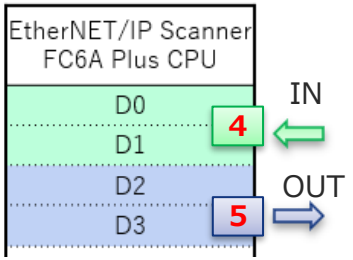
Shared Memory

IN (T->O):

Slot	I/O Module	Device Address	Description	Offset (Bytes)	Size (Bytes)
0	SX8R	D8020	System Status	0	2
1	FC6A-M24BR4	I0000 - I0017		2	2
				Total	4

OUT (O->T):

Slot	I/O Module	Device Address	Description	Offset (Bytes)	Size (Bytes)
0	SX8R	D8021	Upper Controller Control Register	0	2
1	FC6A-M24BR4	Q0000 - Q0007		2	2
		Reserved area			
				Total	4



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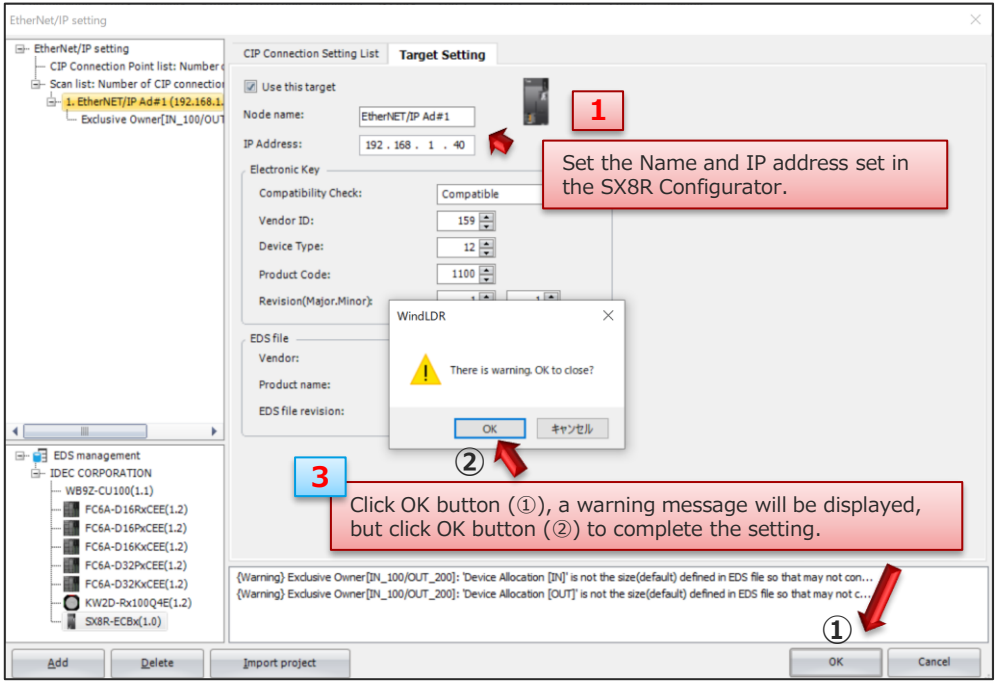
FT2J and SX8R: EtherNet/IP protocol

Step11: Configure target settings for EtherNet/IP Adpter#1 from scanlist



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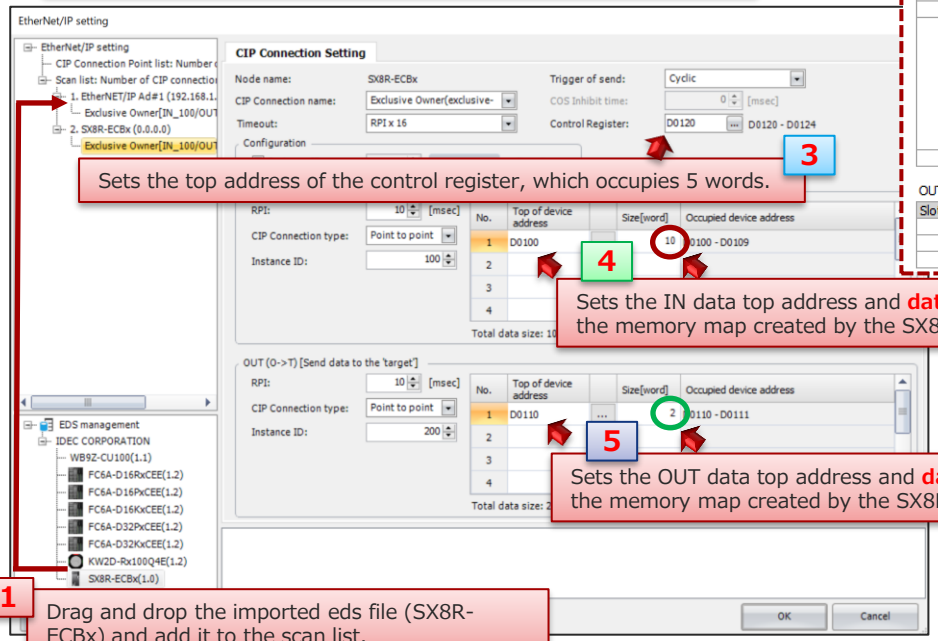
FT2J and SX8R: EtherNet/IP protocol

Step12: Add SX8R EDS file to the scan list and configure CIP connection settings for EtherNet/IP Adpter#2

2 CIP connection settings (control register, first device, size).



3 Sets the top address of the control register, which occupies 5 words.

4 Sets the IN data top address and **data size in words** according to the memory map created by the SX8R Configurator.

5 Sets the OUT data top address and **data size in words** according to the memory map created by the SX8R Configurator.

1 Drag and drop the imported eds file (SX8R-ECBx) and add it to the scan list.

Shared Memory

EtherNet/IP Adapter#2

IN (T->O):

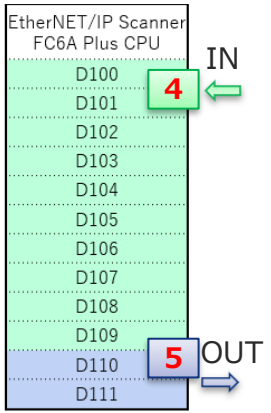
Slot	I/O Module	Device Address	Description	Offset (Bytes)	Size (Bytes)
0	SX8R	D8020	System Status	0	2
1	FC6A-N16B4	I0000 - I0017		2	2
3	FC6A-J4CN4	D0040	AI0:Data	4	2
		D0041	AI0:Status	6	2
		D0042	AI1:Data	8	2
		D0043	AI1:Status	10	2
		D0044	AI2:Data	12	2
		D0045	AI2:Status	14	2
		D0046	AI3:Data	16	2
		D0047	AI3:Status	18	2
				Total	20

4

OUT (O->T):

Slot	I/O Module	Device Address	Description	Offset (Bytes)	Size (Bytes)
0	SX8R	D8021	Upper Controller Control Register	0	2
2	FC6A-R164	Q0000 - Q0017		2	2
				Total	4

5



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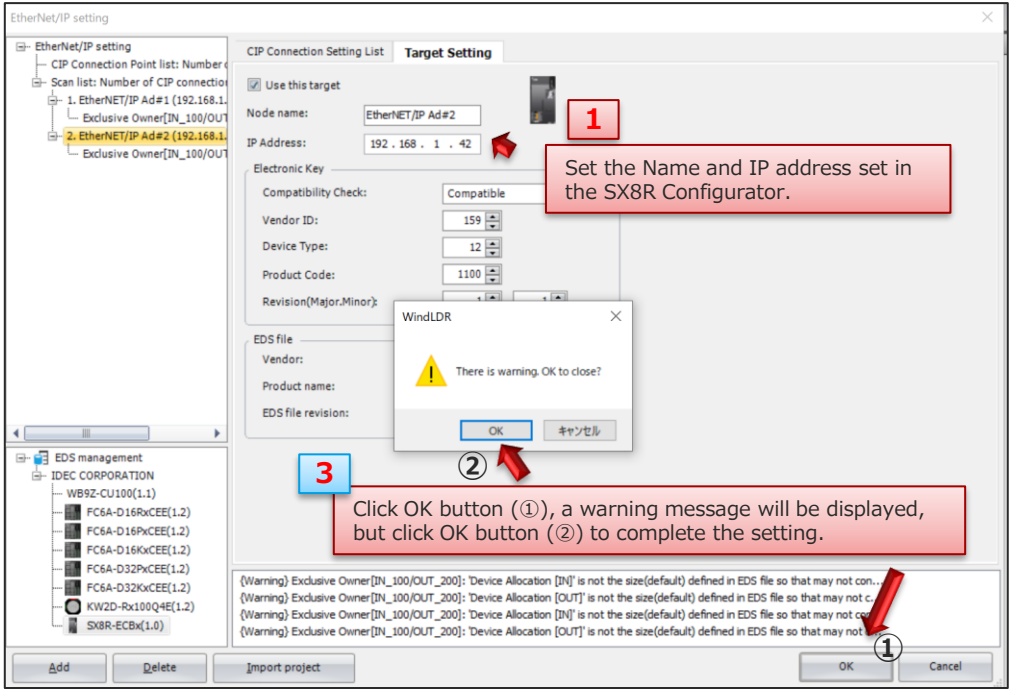
FT2J and SX8R: EtherNet/IP protocol

Step13: Configure target settings for EtherNet/IP Adpter#1 from scanlist



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FT2J and SX8R: EtherNet/IP communication settings have been completed.

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