OMRON EtherNet/IP (NJ/NX Series)

Supported Series: OMRON EtherNet/IP NJ / NX1P Series PLC
Website: http://www.omron.com/

HMI Setting:

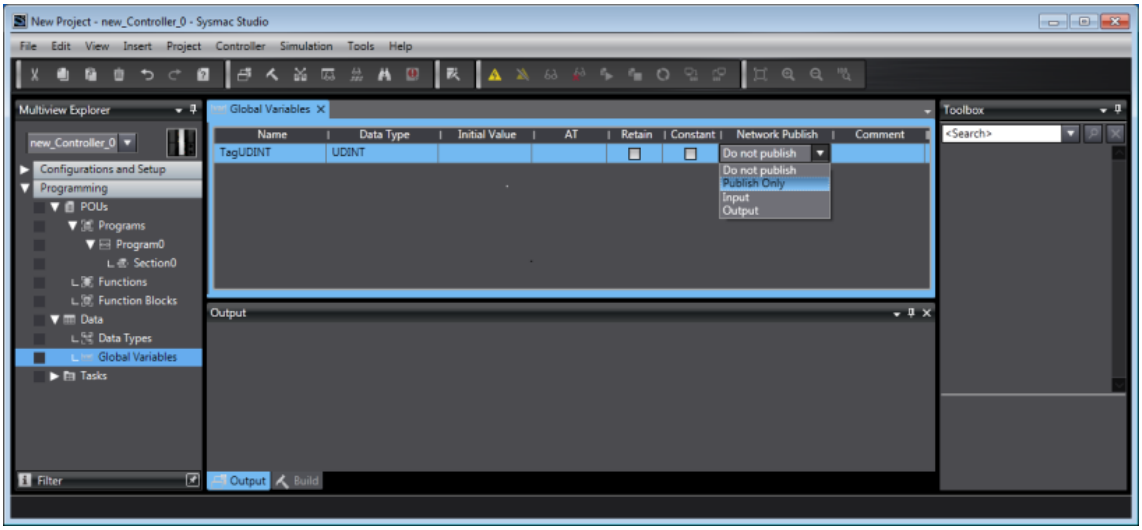
Parameters	Recommended	Options	Notes
PLC type	OMRON EtherNet/IP (NJ Series)		
PLC I/F	Ethernet		
Port no.	44818		
PLC sta. no.	1		

On-line simulator	Yes	**Multi-HMI connect**	Yes
Array Index Register	Yes		

Instructions:

Note:

1. In Sysmac Studio, please select **[Publish Only]** for **[Network Publish]** when setting address tag.
2. When **[Do not publish]** is selected for a tag, different import methods may lead to different results. When import tags by **[Get Tags from Device]**, the tag will be eliminated. If **[Import tags]** is selected, the tags will be imported, but the communication will not succeed.



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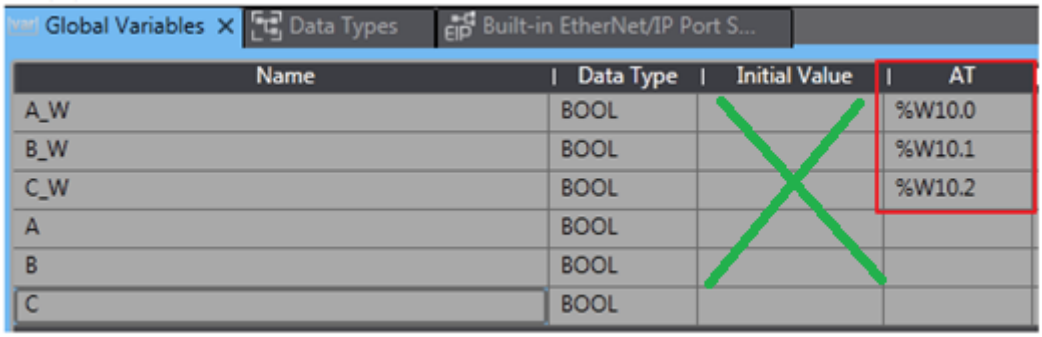
3. Bool data type cannot be mapped to contiguous memory addresses. To use this function, you need to allocate one word for each bool type variable. In the following case, please respectively set to **%W10.0**, **%W11.0**, **%W12.0**. **(Only required if absolute addresses are used)**



4. %H and %W are 16-bit addresses, so the following mapping method is recommended for better communication efficiency.
Tag1 array of [0..15] bool mapping to %H200.00
Tag2 array of [0..15] bool mapping to %W200.00
It is recommended not to use the following methods:
Tag1 BOOL Mapping to %H200.00

4. Avoid using the **[Get Tag Info]** method to obtain the **structure** tag, and use the **[Import Tags]** method.

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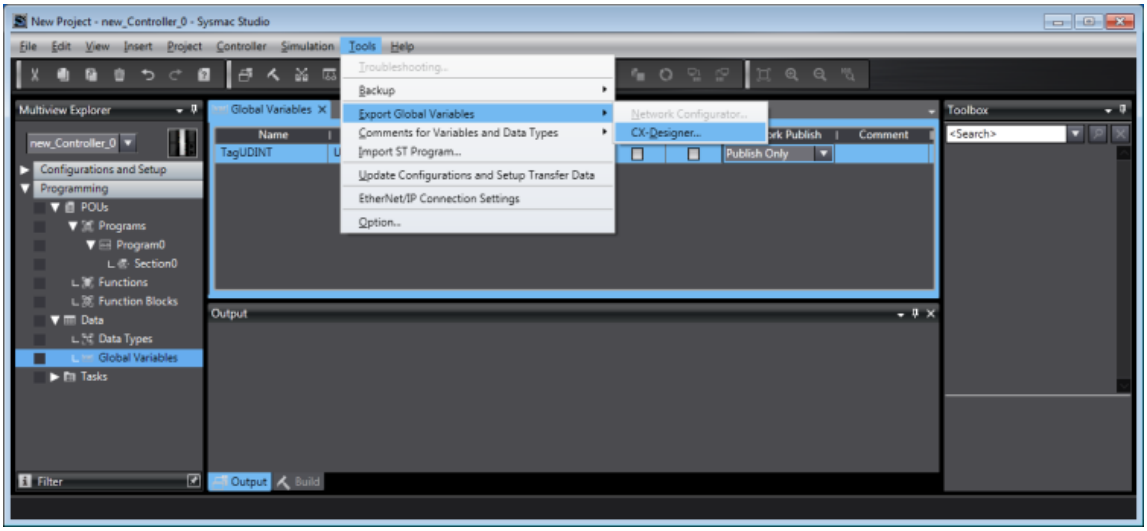
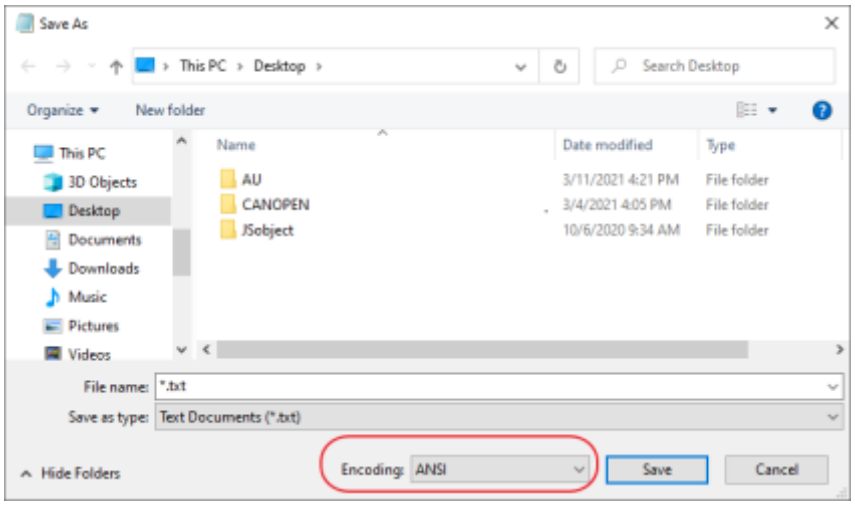
Export Tags from Sysmac Studio

1. Launch Sysmac Studio, under Global Variables create the address tags, and then select **[Tools]** » **[Export Global Variables]** » **[CX-Designer]**, it copies to clipboard.



2. Open Notepad, paste the content and save as *.txt. (Encoding option select ANSI)



3. Launch EasyBuilder, in System Parameter Settings add **Omron EtherNet/IP (NJ/NX series)**.

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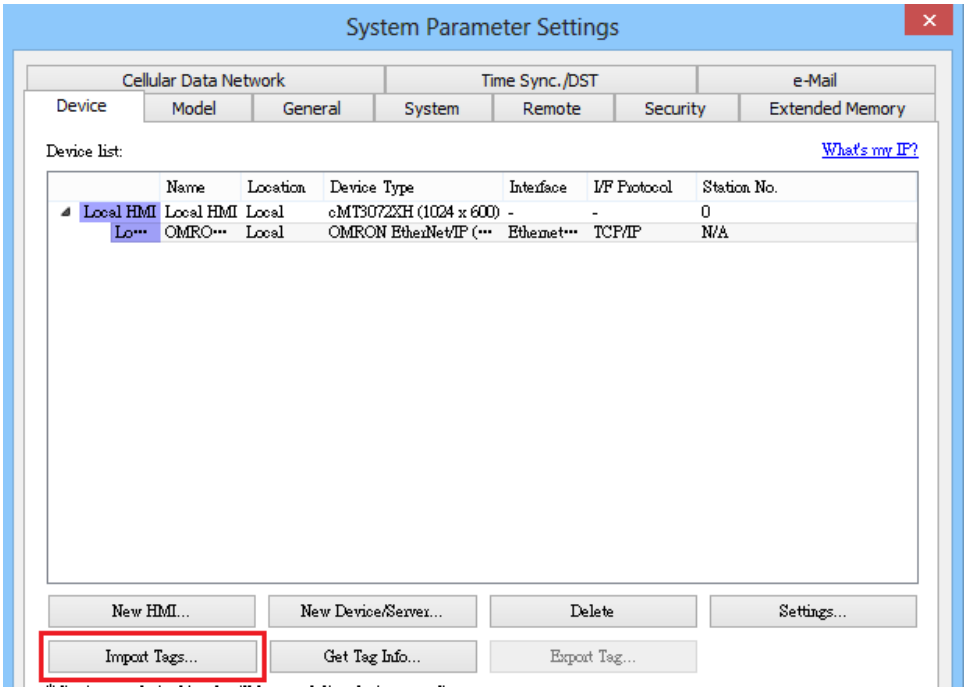
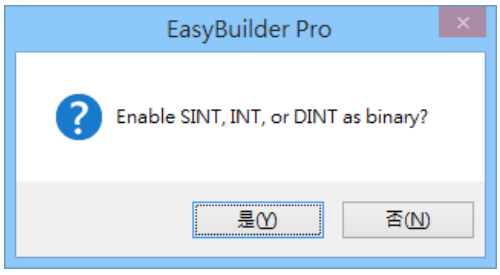
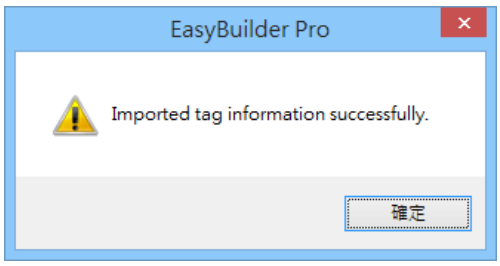
4. Click **[Import Tags]** and select the txt file to be imported.



5. Enable SINT, INT or DINT as binary?



6. The following message is displayed when the import has succeed.



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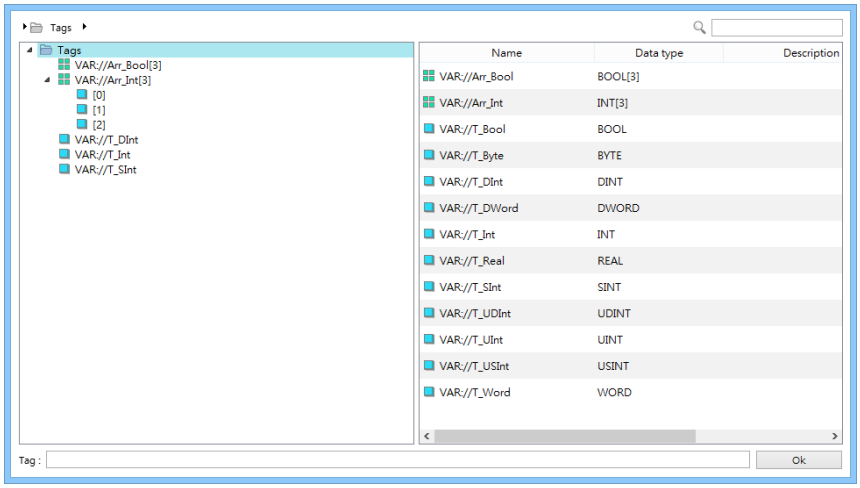
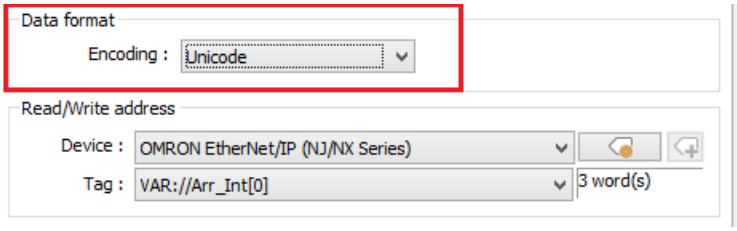
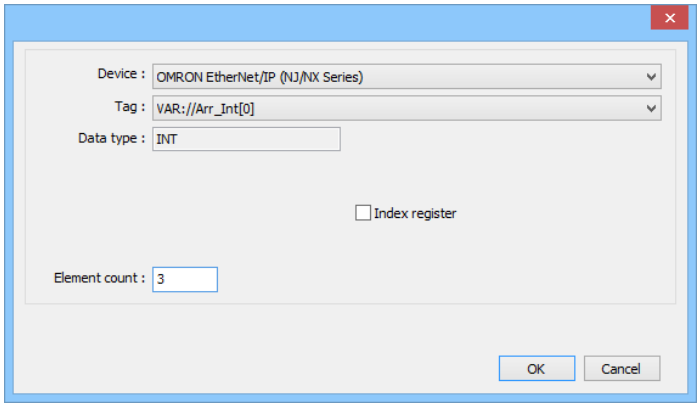


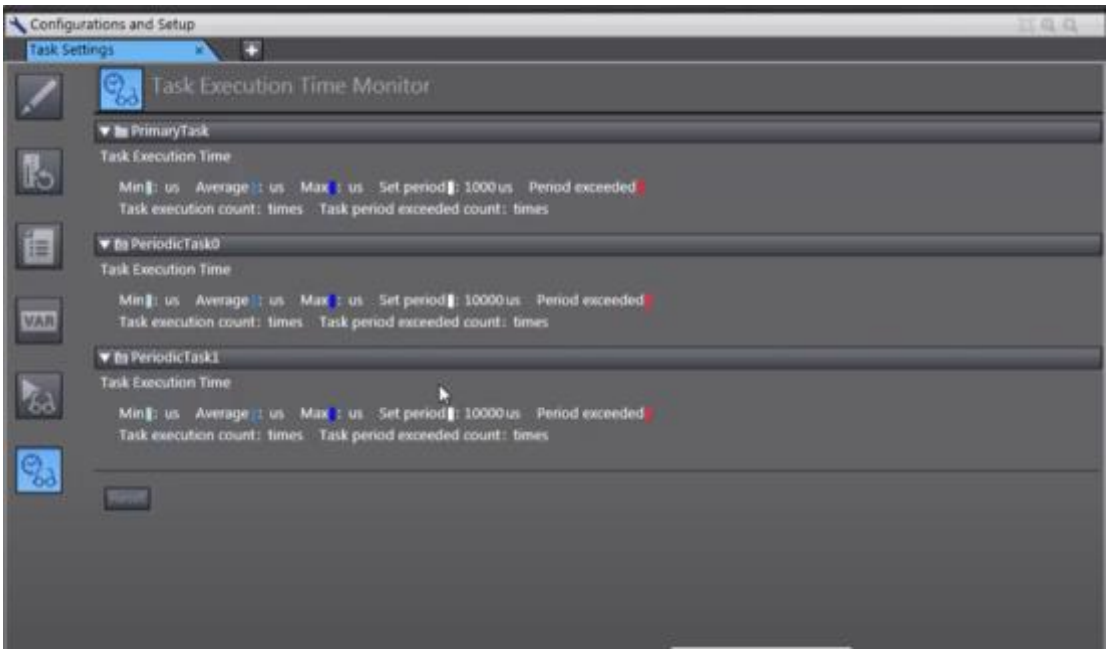
- Supported data types include: BOOL, SINT, BYTE, USINT, INT, WORD, UINT, DINT, REAL, UDINT and DWORD. These data types support multiple dimensional array (Array index must start from 0).
- String length must be set to even. (Limitations of driver version v3.90 or earlier).
- String can use ASCII or UNICODE to communicate, it is recommended to use UNICODE.



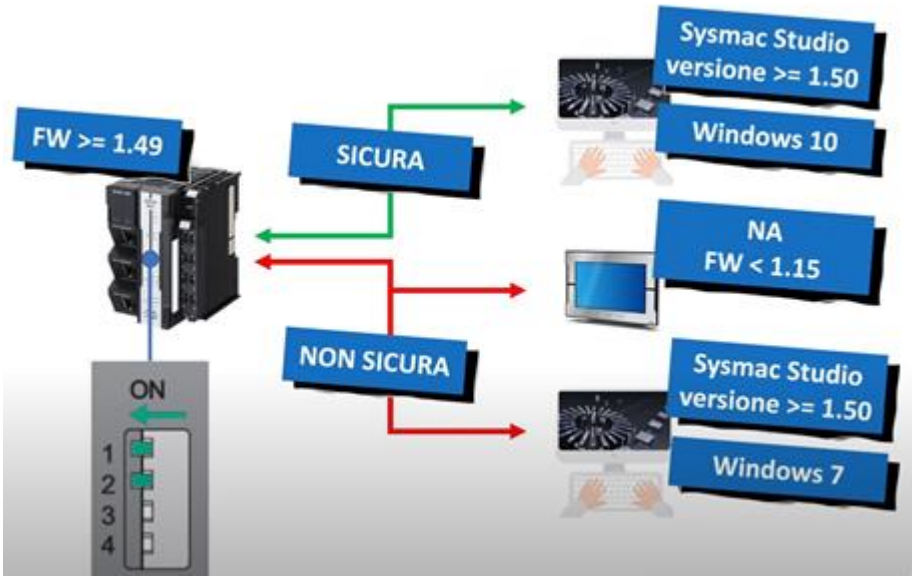


PLC Settings:

[Task Execution Time] / **[Set Period]** needs to be set reasonably, otherwise it will affect the response speed of the PLC



After firmware version V1.49, certain security features have been enabled. To establish communication, switch DIP switch 1 and 2 to the ON position.



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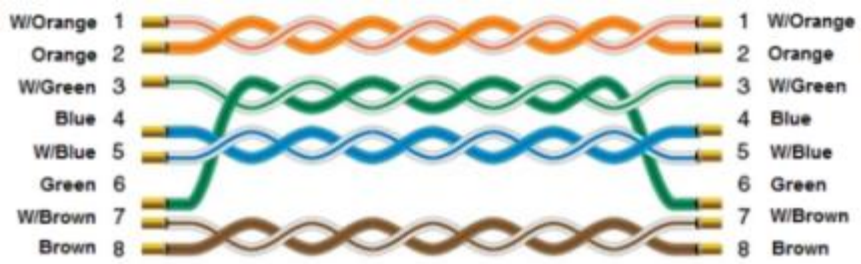
Support Device Type:

Data type	EasyBuilder data format	Memo
Bool	bit	
Byte	16-bit BCD, Hex, Binary, Unsigned	8-bit
SInt	16-bit BCD, Hex, Binary, Signed	8-bit
USInt	16-bit BCD, Hex, Binary, Unsigned	8-bit
Word	16-bit BCD, Hex, Binary, Unsigned	16-bit
Int	16-bit BCD, Hex, Binary, Signed	16-bit
UInt	16-bit BCD, Hex, Binary, Unsigned	16-bit
DWord	32-bit BCD, Hex, Binary, Unsigned	32-bit
DInt	32-bit BCD, Hex, Binary, Signed	32-bit
Real	32-bit Float	32-bit
UDInt	32-bit BCD, Hex, Binary, Unsigned	32-bit
LInt	64-bit Signed	64-bit
ULInt	64-bit USigned	64-bit
LWord	64-bit USigned	64-bit
LReal	64-bit Float	64-bit
Array	All of the above types	

Note: EBPro V6.03.02 or later supports 64 bits data type **(cMT Series only),** but please note that the address limit range is 48 bits in maximum..

Wiring Diagram:

Ethernet cable:



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