

YASKAWA MP2300Siec (Ethernet)

Website: <http://www.yaskawa.com/site/home.nsf/home/home.html>

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YASKAWA MP2300Siec (Ethernet)		
PLC I/F	Ethernet		
Port no.	44818		
Assembly instance	Input::101 Output:111	Input::101~106 Output:111~116	

PLC Setting:

MP2300Siec-Motion Works IEC Express (YASKAWA) Settings:

Step 1. Before HMI communicates with MP2300Siec using Ethernet/IP, the Instance Input and Instance Output of MP2300Siec device must be set correctly. Multiple Instances are allowed to be built at one time, please click [Save] after setting.

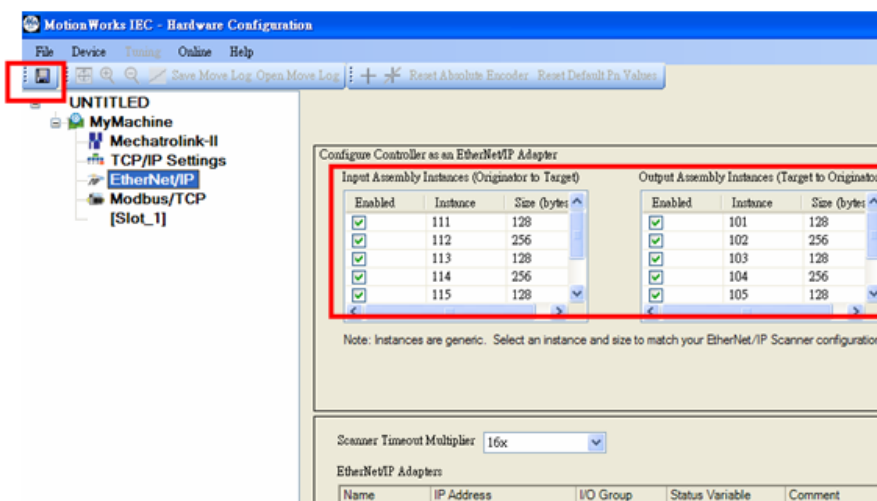


Fig. 1 Assembly Instances

Step 2. Global Variables will automatically add in E/IP Input and Output data, Input and Output data name and address type can be user-defined.

Name	Type	Usage	Description	Address	Init	Retain	PDD	OPC	TB
PLC_TASK_6	EXT_TASK_IN...	VAR_GLO...		\$MB1.1324					
PLC_TASK_7	EXT_TASK_IN...	VAR_GLO...		\$MB1.1388					
PLC_TASK_8	EXT_TASK_IN...	VAR_GLO...		\$MB1.1452					
PLC_TASK_9	EXT_TASK_IN...	VAR_GLO...		\$MB1.1516					
PLC_TASK_10	EXT_TASK_IN...	VAR_GLO...		\$MB1.1580					
PLC_TASK_11	EXT_TASK_IN...	VAR_GLO...		\$MB1.1644					
PLC_TASK_12	EXT_TASK_IN...	VAR_GLO...		\$MB1.1708					
PLC_TASK_13	EXT_TASK_IN...	VAR_GLO...		\$MB1.1772					
PLC_TASK_14	EXT_TASK_IN...	VAR_GLO...		\$MB1.1836					
PLC_TASK_15	EXT_TASK_IN...	VAR_GLO...		\$MB1.1900					
PLC_TASK_16	EXT_TASK_IN...	VAR_GLO...		\$MB1.1964					
= User Variables									
NewVar260	DWORD	VAR_GLO...							
= E/IP Output Instance #101, Qty: 128 Bytes, Address Range: \$QB21488-\$QB21615									
= E/IP Output Instance #102, Qty: 256 Bytes, Address Range: \$QB22000-\$QB22255									
= E/IP Output Instance #103, Qty: 128 Bytes, Address Range: \$QB22512-\$QB22639									
= E/IP Output Instance #104, Qty: 256 Bytes, Address Range: \$QB23024-\$QB23279									
= E/IP Output Instance #105, Qty: 128 Bytes, Address Range: \$QB23536-\$QB23663									
= E/IP Output Instance #106, Qty: 256 Bytes, Address Range: \$QB24048-\$QB24303									
= E/IP Input Instance #111, Qty: 128 Bytes, Address Range: \$IB21488-\$IB21615									
= E/IP Input Instance #112, Qty: 256 Bytes, Address Range: \$IB22000-\$IB22255									
NewVar261	DWORD	VAR_GLO...		\$ID22252					
NewVar267	DWORD	VAR_GLO...		\$ID22000					
= E/IP Input Instance #113, Qty: 128 Bytes, Address Range: \$IB22512-\$IB22639									
= E/IP Input Instance #114, Qty: 256 Bytes, Address Range: \$IB23024-\$IB23279									
= E/IP Input Instance #115, Qty: 128 Bytes, Address Range: \$IB23536-\$IB23663									
= E/IP Input Instance #116, Qty: 256 Bytes, Address Range: \$IB24048-\$IB24303									

Fig. 2 Global Variables

Step 3. When download Project to device (MP2300Siec), please go to (Fig. 3) Resource->Settings to access setting dialog (Fig. 4) for setting MP2300Siec IP address.

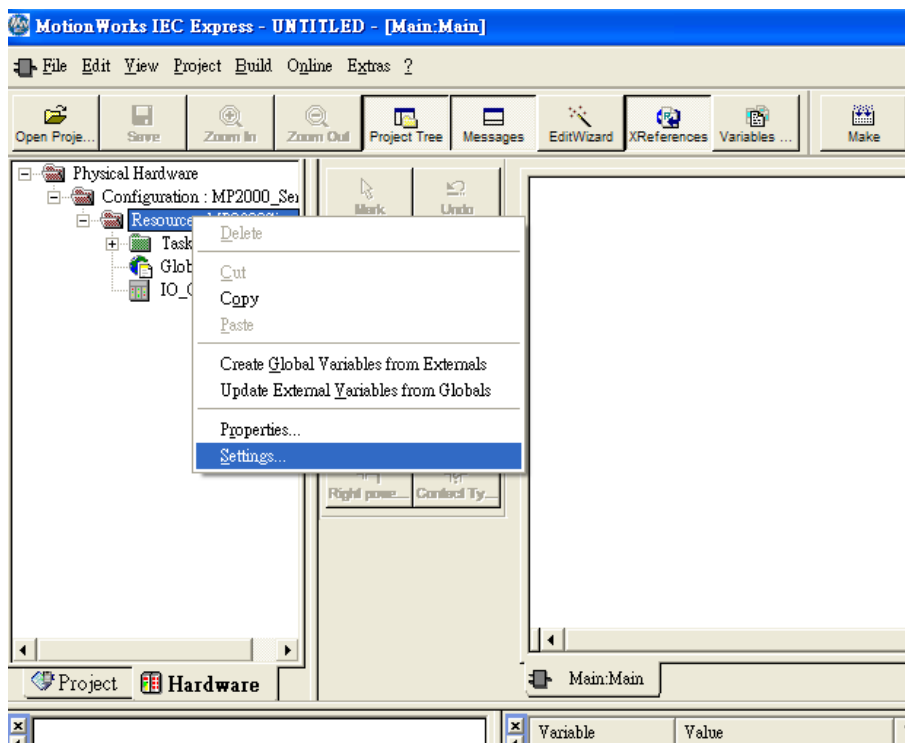


Fig. 3 Motion Works IEC Express – Settings

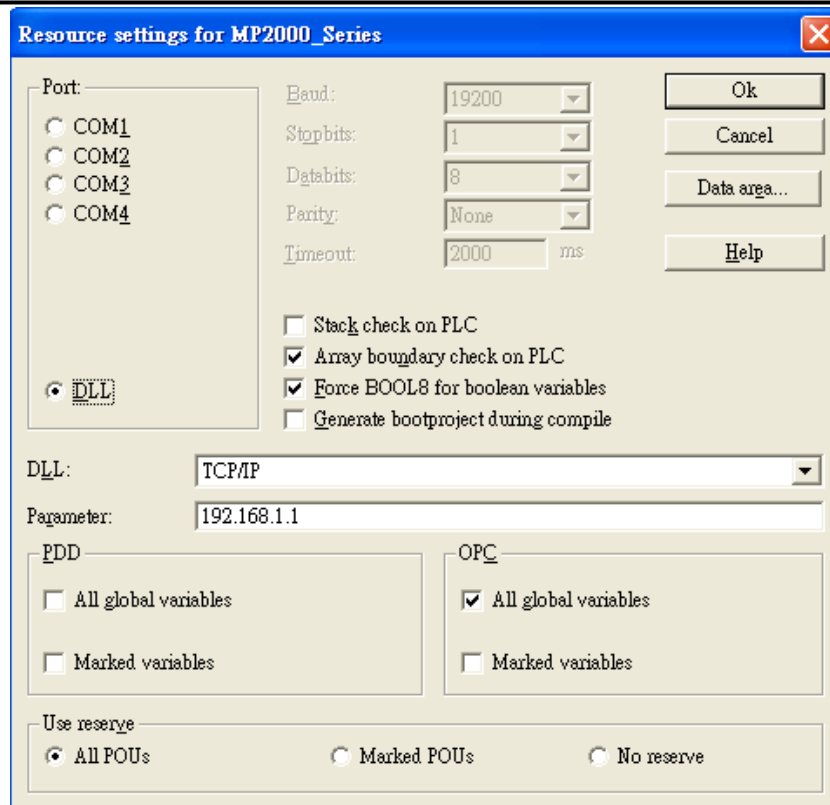


Fig. 4 Resource Settings

Step 4. Start compilation.

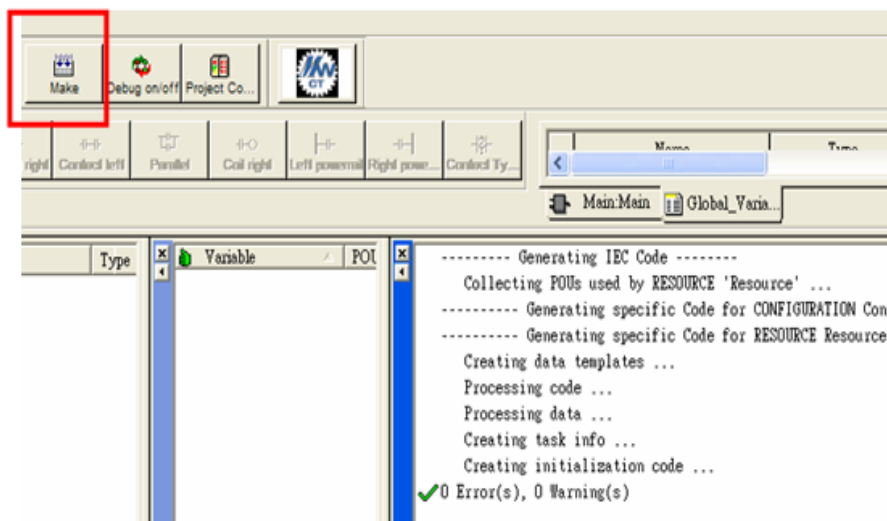


Fig. 5 Editing Screen

Step 5. Download project to device- MP2300Siec, and execute Cold.

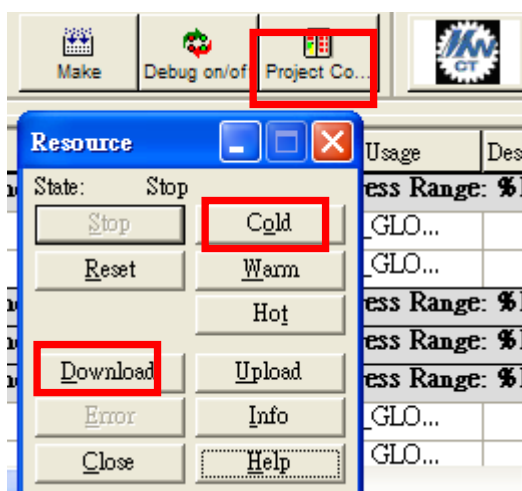


Fig. 6 Project Downloading

You may use one of the two drivers to connect Yaskawa MP2300Siec:

1. Yaskawa MP2300Siec driver.
2. Rockwell EtherNet/IP (CompactLogix) – Free Tag Names driver.

(1) Yaskawa MP2300Siec driver.

Step 1. System Parameter Settings

Open EasyBuilder project, as shown in Fig. 7, Assembly Instance and Size must match the software default factory settings, and please don't select UDP. Fig.8 below shows how HMI Input / Output address is mapped to MP2300Siec device.

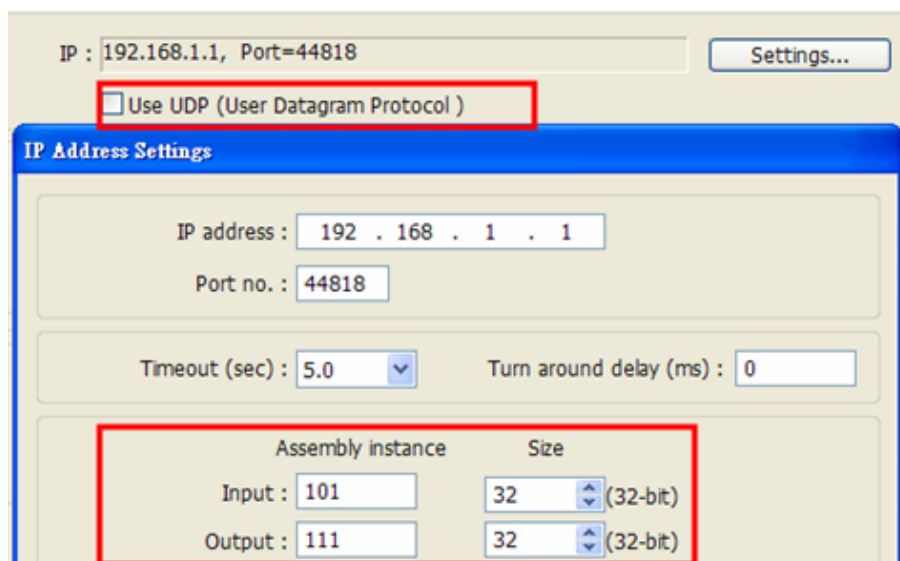


Fig. 7 Instance Setting

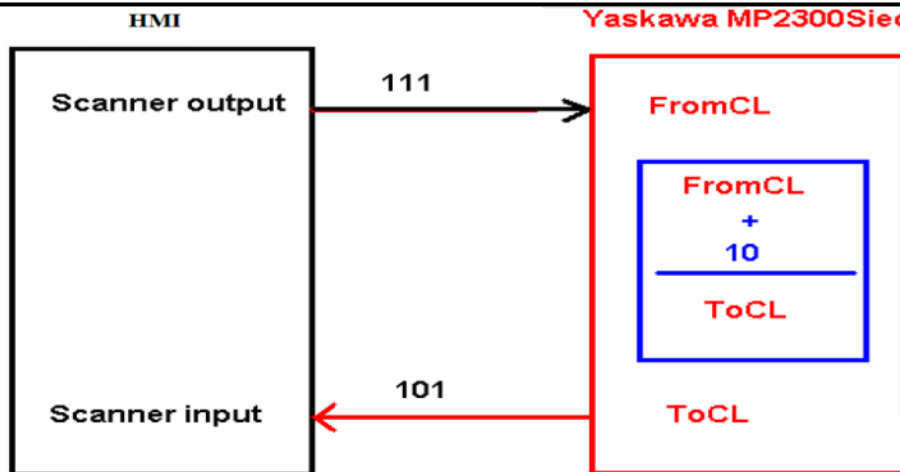


Fig.8 HMI and MP2300Siec I/O Mapping

Step 2. Address Setting:

Instance 101 and Instance 111 are defined as 128Bytes, on the project window , WORD objects can be used, with data typed defined as 32-Bit Unsigned, Input addresses set to 0、2、4、6.....62 for reading Instance 101 data.

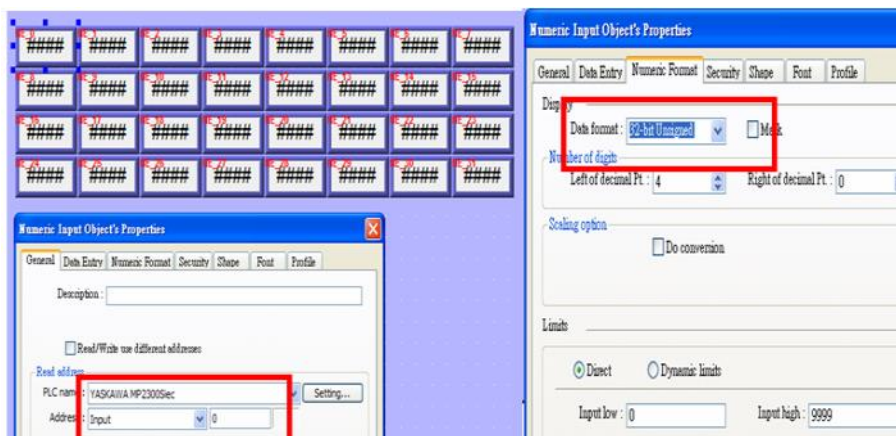


Fig. 9 Address Setting

(1) Rockwell EtherNet/IP (CompactLogix) – Free Tag Names driver.

Step 1. In EasyBuilder8000/EasyBuilder Pro project, when using Rockwell EIP driver to import CSV file (as in Fig. 10), please open Structure Editor (Fig. 11), and right click on Module Defined to add New Data Type.

TYPE	SCOPE	NAME	DESCRIPTION	DATA TYPE	SPECIFIER
TAG		MF2300Sec:C		AB:ETHERNET_MODULE:C:0	
TAG		MF2300Sec:I		AB:ETHERNET_MODULE_DINT_128Bytes:I:0	
TAG		MF2300Sec:O		AB:ETHERNET_MODULE_DINT_128Bytes:O:0	
TAG		Local:1:C		AB:Embedded_IQ16F:C:0	
TAG		Local:1:I		AB:Embedded_IQ16F:I:0	
TAG		Local:2:C		AB:Embedded_OB16:C:0	
TAG		Local:2:I		AB:Embedded_OB16:I:0	
TAG		Local:2:O		AB:Embedded_OB16:O:0	
TAG		Bits		BOOL[32]	
TAG		Timer1		TIMER	

Fig. 10 RSLogix 5000 (Rockwell Software) Export Free Tag CSV File

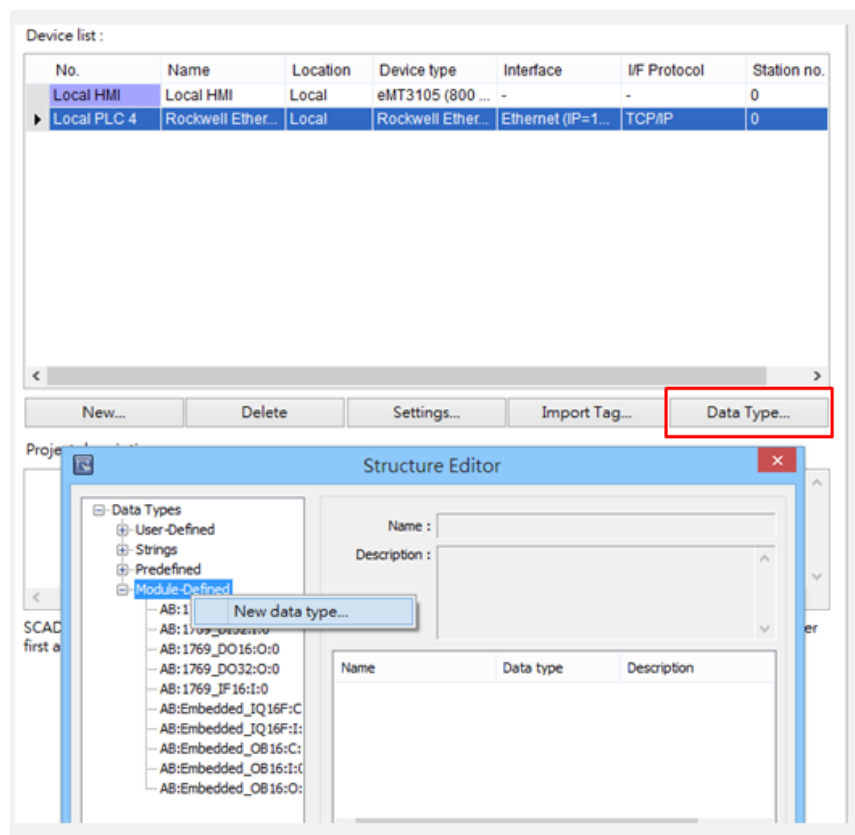


Fig.11 Structure Editor

Step 2. As in Fig 12, in Structure Editor add Name of the new data type. The Name must be set identically to the Data Type in Free Tag CSV file. As in Fig 14, Data Member Name

must be set identically to the Rockwell software (as Data in Fig. 13), then click [Save] (Fig. 15).

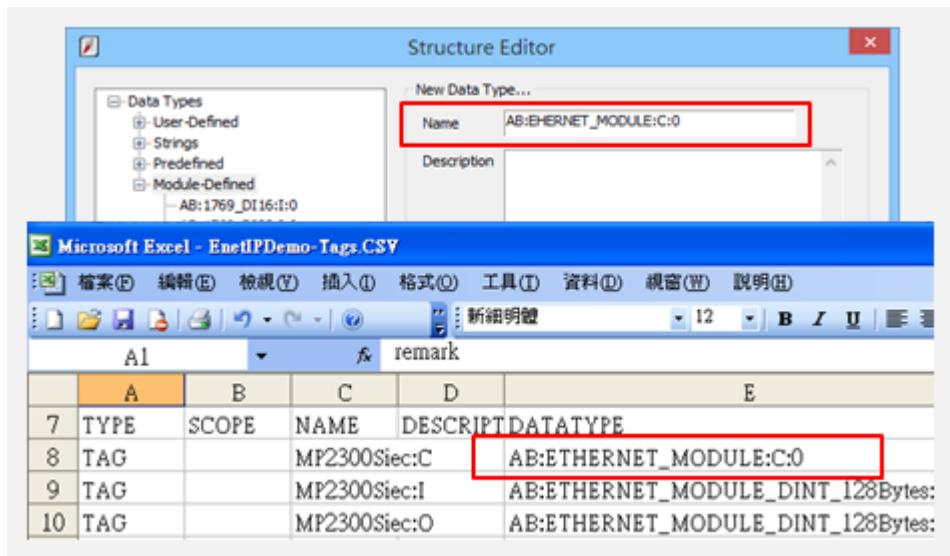


Fig.12 Structure Editor

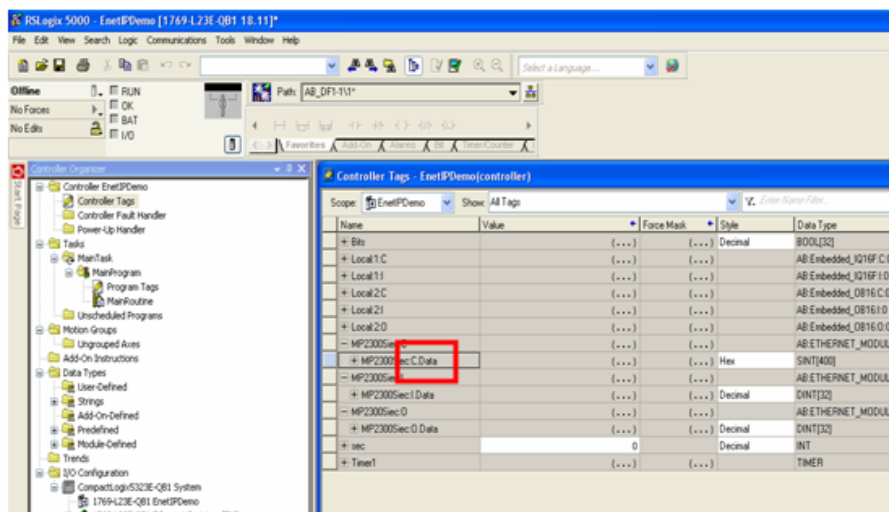


Fig.13 Tag Information

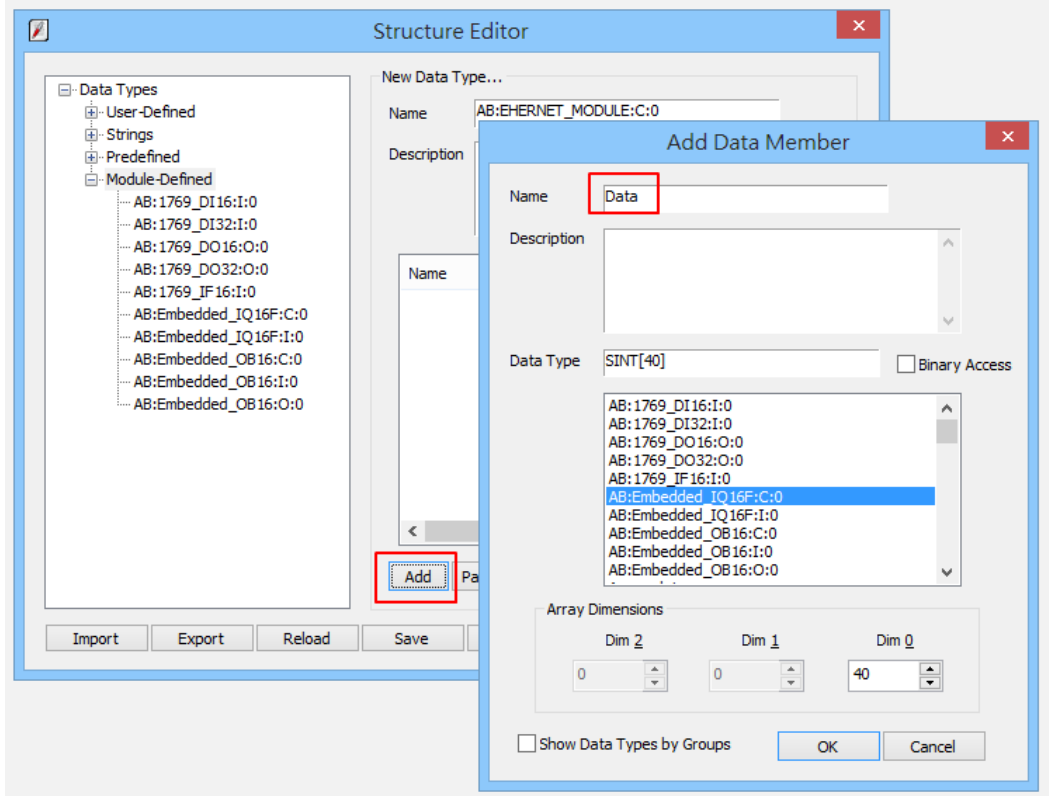


Fig.14 Add Data Member - Name Tag Information

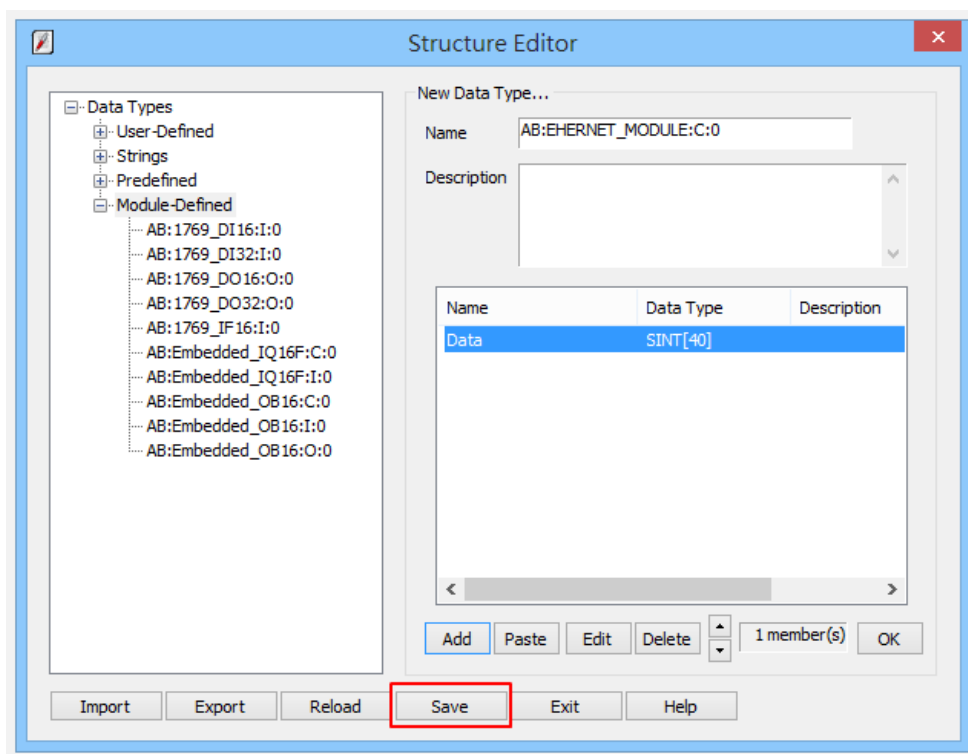


Fig. 15 Add Data Member-Settings - Save

Step 3. Import CSV file, Tag Information can be viewed from object address.

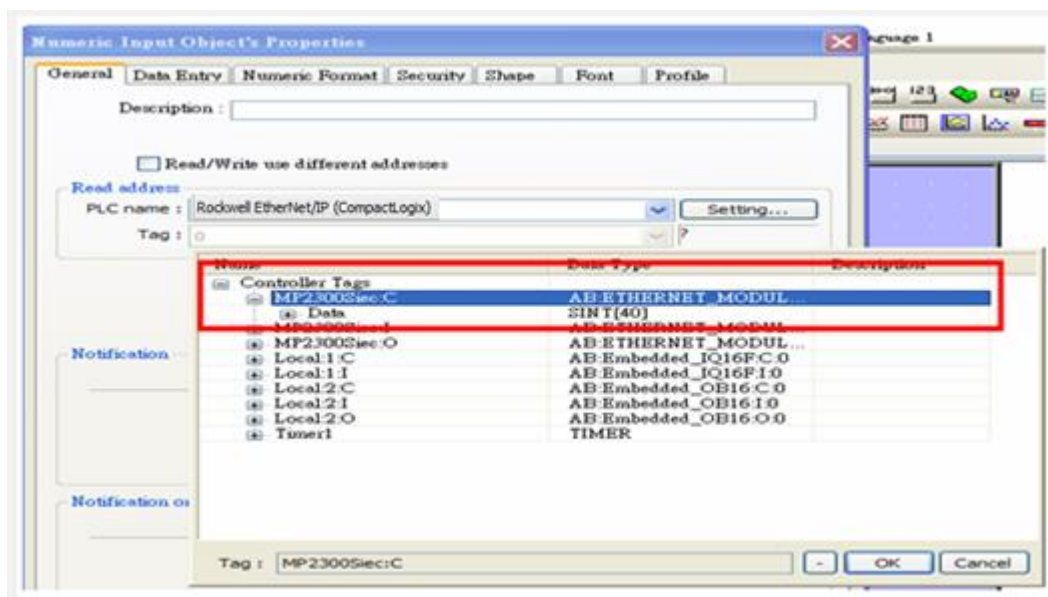


Fig.16 Tag Information

Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Input_Bit	DDDdd	0 ~ 51215	
B	Output_Bit	DDDdd	0 ~ 51215	
DW	Input	DDD	0 ~ 512	
DW	Output	DDD	0 ~ 512	

Wiring Diagram:

Ethernet cable

