

Rockwell EtherNet/IP (ControlLogix) – Free Tag Names

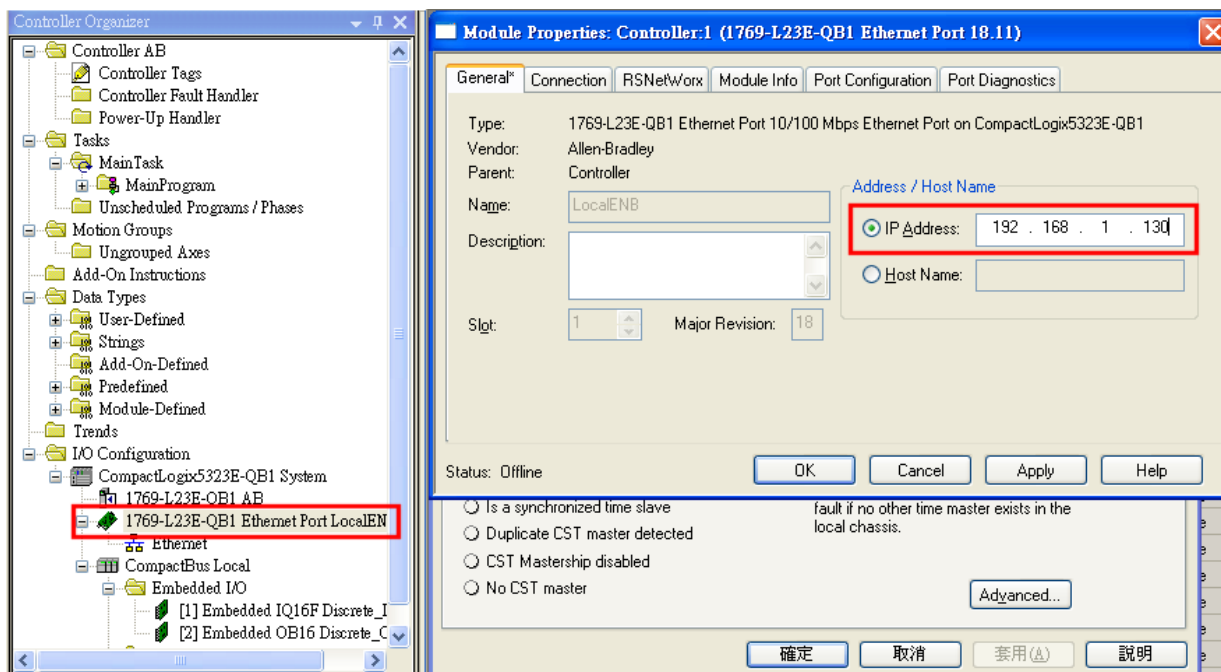
Supported Series: Rockwell ControlLogix, CompactLogix, FlexLogix Ethernet,
CompactLogix 1768-L43 1768-L45 with 1768-ENBT/A Ethernet module
Website: <http://www.ab.com>

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Rockwell EtherNet/IP (ControlLogix) – Free Tag Names		
PLC I/F	Ethernet		
Port no.	44818		
PLC sta. no.	The same as CPU Slot No.		

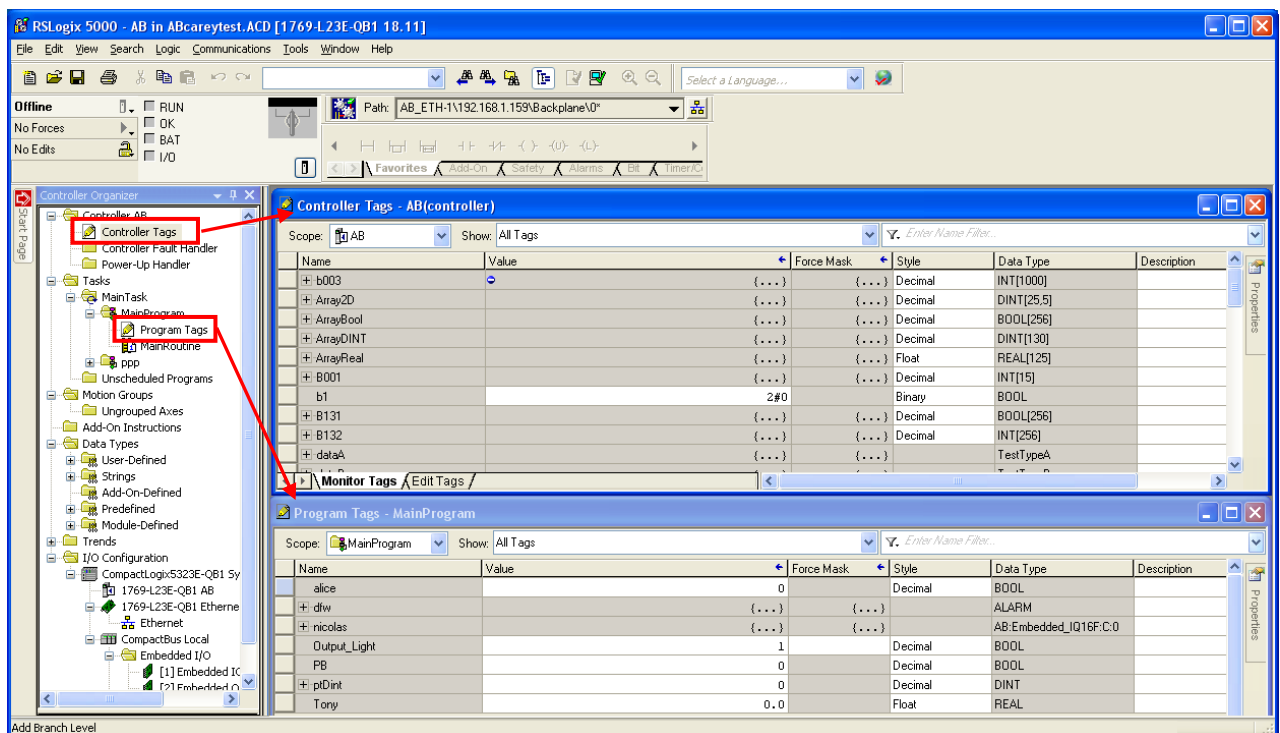
PLC Setting:

- Set PLC IP address.

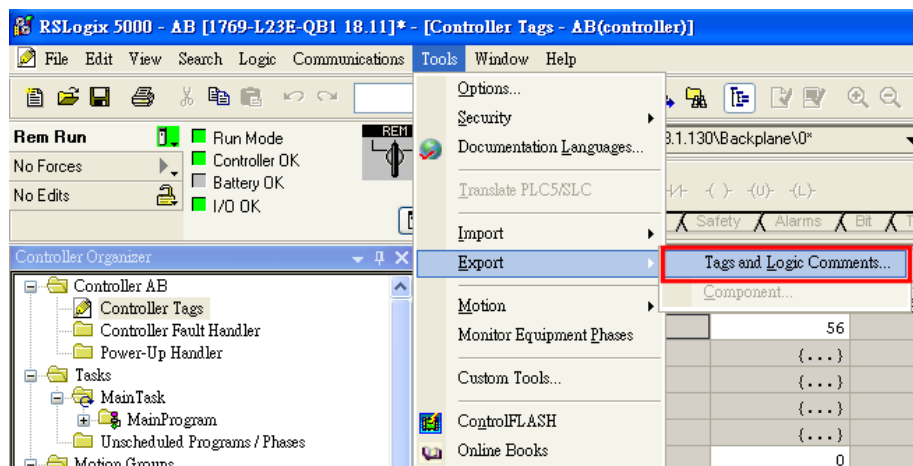


The screenshot shows the Rockwell Studio 5000 interface. On the left is the Controller Organizer tree, where the '1769-L23E-QB1 Ethernet Port LocalEN' module is selected and highlighted with a red box. On the right is the 'Module Properties' dialog box for 'Controller:1 (1769-L23E-QB1 Ethernet Port 18.11)'. The 'General' tab is active, showing the module's name as 'LocalENB' and its slot as '1'. The 'Address / Host Name' section has the 'IP Address' radio button selected, with the address '192.168.1.130' entered in the text field, which is also highlighted with a red box. The 'Host Name' radio button is unselected. At the bottom of the dialog, there are buttons for 'OK', 'Cancel', 'Apply', and 'Help', along with Japanese equivalents '確定', '取消', '套用(A)', and '説明'.

2. Create new tags (Controller Tags and Program Tags supported).



3. Export Tag data to CSV file. ([Tools] » [Export] » [Tags and Logic Comments])



Note: The separator character in CSV file must be a comma “,” otherwise the file is invalid.

The directory of changing system settings: [Control Panel] » [Date, Time, Language, and Regional Options] » [Change the format of numbers, dates, and times] » [Customize] » [List separator]. Please select “,” and export CSV file after setting.

TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
ALIAS	ConveyorProgram	Output_Conveyor		BOOL	Local2:O.Data.2
TAG	ConveyorProgram	PB_Conveyor		BOOL	
TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
ALIAS	MainProgram	Output_Light		BOOL	Local2:O.Data.1
TAG	MainProgram	PB		BOOL	

4. Open EasyBuilder project file, select the driver and set IP address. Click **[Data Type]** to open **[Structure Editor]** and edit the data type of the tags.

TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER	ATTRIBUTES
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		

TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
ALIAS	ConveyorProgram	Output_Conveyor			Local:2:O.Data.2
TAG	ConveyorProgram	PB_Conveyor		BOOL	

TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
ALIAS	MainProgram	Output_Light			Local:2:O.Data.1
TAG	MainProgram	PB		BOOL	

5. In **[Structure Editor]** edit the data type of **[Program Tag]**.

The imported csv file is shown below:

Note: The Program Tag can directly be imported in EasyBuilder Pro V3.00.05, EasyBuilder 8000 V4.65.08, and the later versions. Please go to step 6 without editing manually.

7	TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
8	TAG		Local:1:C		AB:Embedded_IQ16F:C:0	
9	TAG		Local:1:I		AB:Embedded_IQ16F:I:0	
10	TAG		Local:2:C		AB:Embedded_OB16:C:0	
11	TAG		Local:2:I		AB:Embedded_OB16:I:0	
12	TAG		Local:2:O		AB:Embedded_OB16:O:0	
13	TAG		PB_ControllerTag		BOOL	
14	TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
15	TAG	ConveyorProgram	Output_Conveyor			Local:2:O.Data.2
16	TAG	ConveyorProgram	PB_Conveyor		BOOL	
17	TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
18	TAG	MainProgram	Output_Light			Local:2:O.Data.1
19	TAG	MainProgram	PB		BOOL	

Step 1

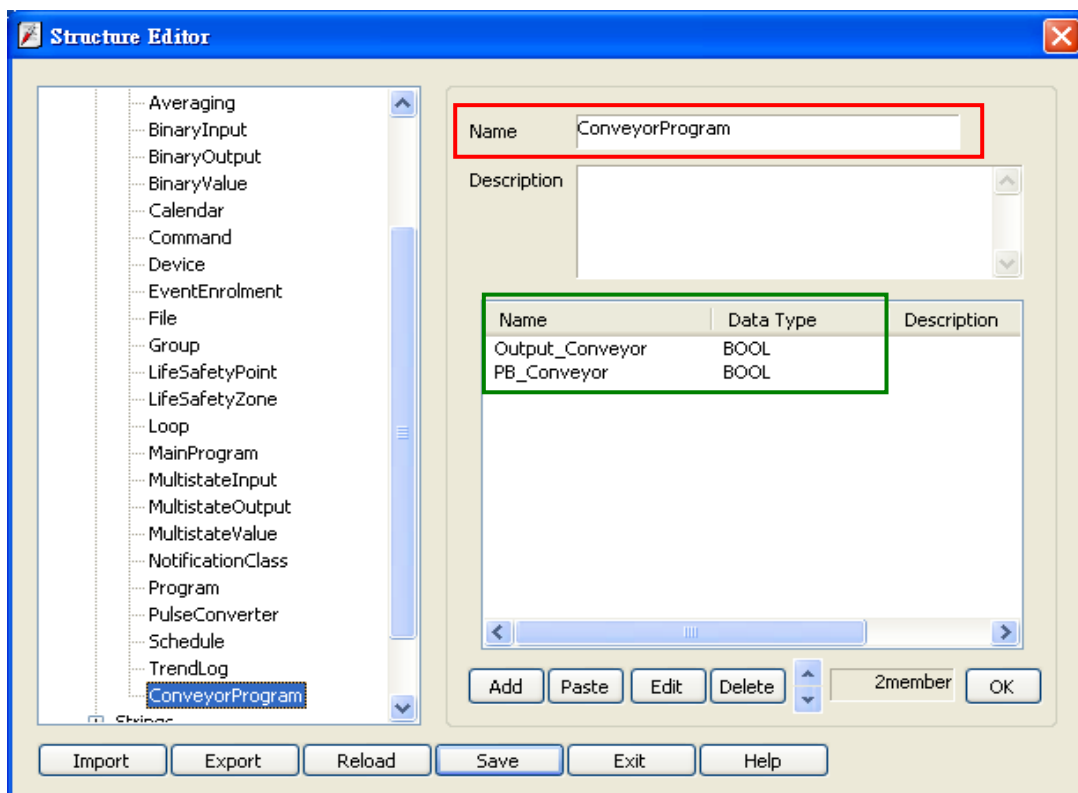
Right click on **[Structure Editor]** » **[User-Defined]** to add a **[new data type]**.

New Data Type...

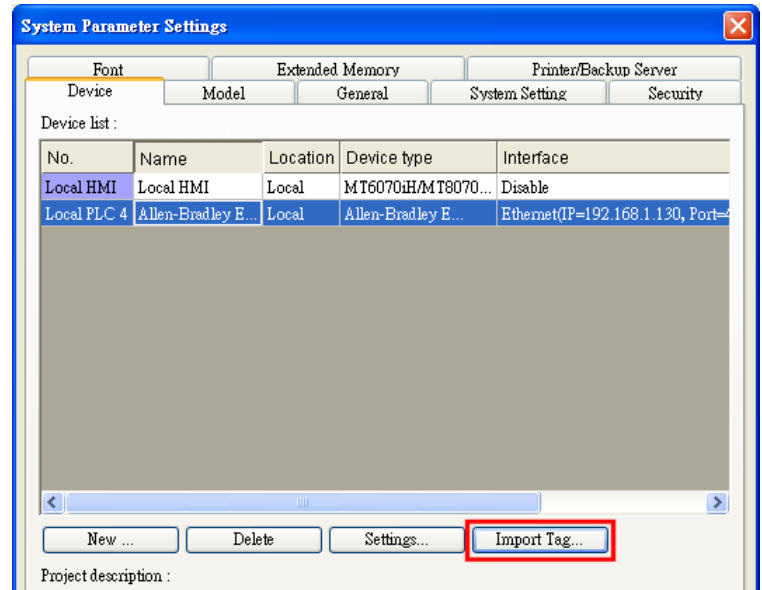
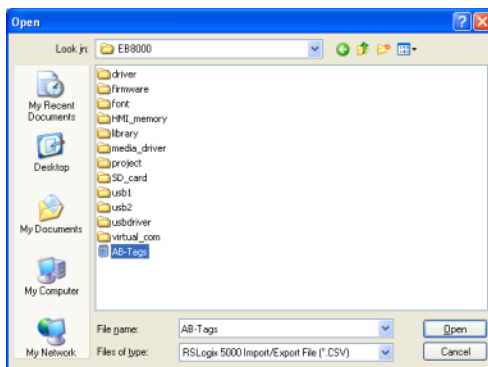
Step 2

After adding all Program Tags, click **[OK]** » **[Save]** » **[Exit]** to leave the editor dialog.

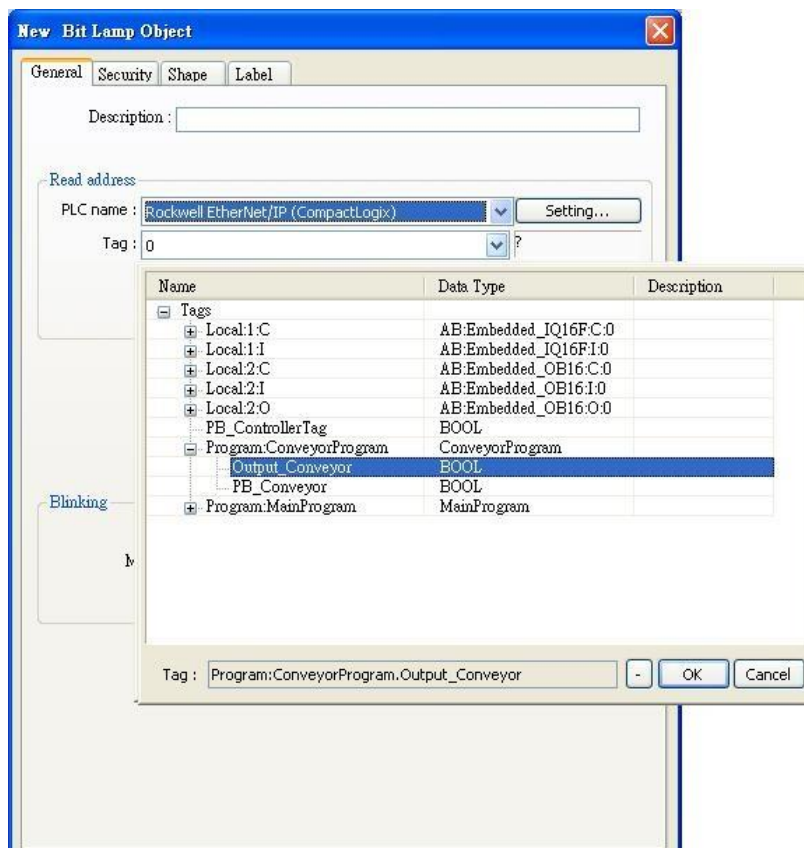
TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
ALIAS	ConveyorProgram	Output_Conveyor			Local:2:O.Data.2
TAG	ConveyorProgram	PB_Conveyor		BOOL	
TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
ALIAS	MainProgram	Output_Light			Local:2:O.Data.1
TAG	MainProgram	PB		BOOL	



6. In **[System Parameter Settings]**, click **[Import Tag]**, select the csv file. After importing a message window is displayed.



7. In the object property dialog, select PLC Tag address.



Device Address:

PLC data type name	Bit/Word	EasyBuilder data format	Memo
BOOL	Boolean	Bit object	
BitArray			
SINT			
INT	Integer	16-bit signed, ASCII	-32768 ~ 32767
DINT	Double Integer	32-bit signed	$-2^{31} \sim (2^{31}-1)$
REAL	Single Precision Float	32-bit Float	IEEE 754

Wiring Diagram:

Diagram 1

Ethernet cable:

