

# Siemens S7-1200/S7-1500 (Absolute Addressing) (Ethernet)

Supported Series: Siemens S7-300/1200/1500 series Ethernet.

Website: <http://www.siemens.com/entry/cc/en/>

## HMI Setting:

Parameters	Recommended	Options	Notes
<b>PLC type</b>	Siemens S7-1200/S7-1500 (Absolute Addressing) (Ethernet)		
<b>PLC I/F</b>	Ethernet		
<b>Port no.</b>	102		
<b>PLC sta. no.</b>	2		
<b>Rack</b>	0		
<b>CPU slot</b>	1		

<b>On-line simulator</b>	Yes	<b>Multi-HMI connect</b>	Yes (Max:3 HMI)
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\*Connect S7-300 settings

**IP Address Settings**

IP address :  Accessible Nodes...

Port no. :

Timeout (sec) :  Turn around delay (ms) :

Link type :

**CPU settings**

Rack (0~7) :  CPU slot (1~31) :

## Support Device Type:

S7-1200 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
Array		

## Device Address:

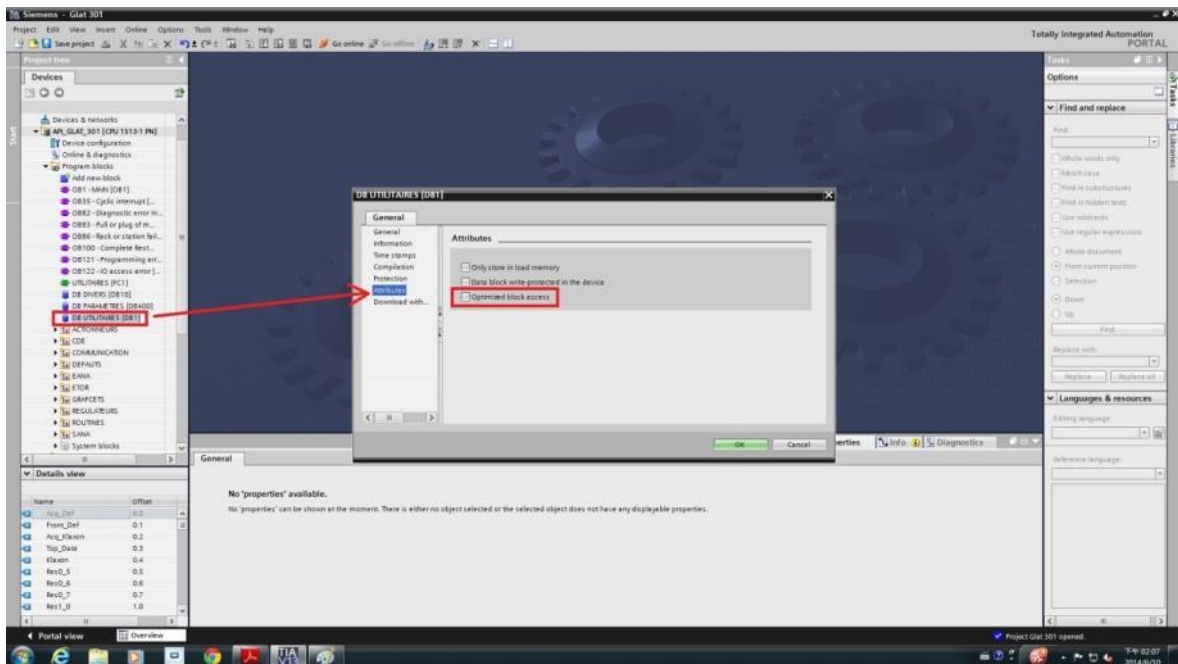
Bit/Word	Device type	Format	Range	Memo
B	I	DDDDDo	0 ~ 655357	Input (I)
B	Q	DDDDDo	0 ~ 655357	Output (O)
B	M	DDDDDo	0 ~ 655357	Bit Memory
B	DBnBit	FFFFFFDDDDo	0 ~ 655359997	
B	DBxBit	FFFFFFDDDDDo	0 ~ 10700655327	
B	DB1Bit-DB99Bit	DDDDDo	0 ~ 655327	Data Register Bit
BYTE	IB	DDDDD	0 ~ 65535	Input (I)
W	IW	DDDDD	0 ~ 65533	Input (I)
DW	ID	DDDDD	0 ~ 65532	Input (I)
BYTE	QB	DDDDD	0 ~ 65535	Output (O)
W	QW	DDDDD	0 ~ 65533	Output (O)
DW	QD	DDDDD	0 ~ 65532	Output (O)
BYTE	MB	DDDDD	0 ~ 65535	Bit Memory
W	MW	DDDDD	0 ~ 65533	Bit Memory
DW	MD	DDDDD	0 ~ 65532	Bit Memory
BYTE	DBBn	FFFFFFDDDD	0 ~ 655359999	Data Register
BYTE	DBBx	FFFFFFDDDD	0 ~ 1070065532	Data Register
W	DBn	FFFFFFDDDD	0 ~ 655359999	Data Register
W	DBx	FFFFFFDDDD	0 ~ 1070065532	Data Register
DW	DBDn	FFFFFFDDDD	0 ~ 655359999	Data Register
DW	DBDx	FFFFFFDDDD	0 ~ 1070065532	Data Register
W	DBn_String	FFFFFFDDDD	0 ~ 655359999	Char Array
W	DBx_String	FFFFFFDDDD	0 ~ 1070065532	Char Array
W	DBn_String1	FFFFFFDDDD	0 ~ 655359999	String
W	DBx_String1	FFFFFFDDDD	0 ~ 1070065532	String
DW	DBDn_String	FFFFFFDDDD	0 ~ 655359999	Char Array
DW	DBDx_String	FFFFFFDDDD	0 ~ 1070065532	Char Array
W	DB1 ~ DB99	DDDDD	0 ~ 65532	Data Register
DW	S5TIME_10Ms	FFFFFFDDDD	0 ~ 655359999	
DW	S5TIME_100Ms	FFFFFFDDDD	0 ~ 655359999	
DW	S5TIME_1S	FFFFFFDDDD	0 ~ 655359999	
DW	S5TIME_10S	FFFFFFDDDD	0 ~ 655359999	

- Double word and floating point value must use DBDn device type.

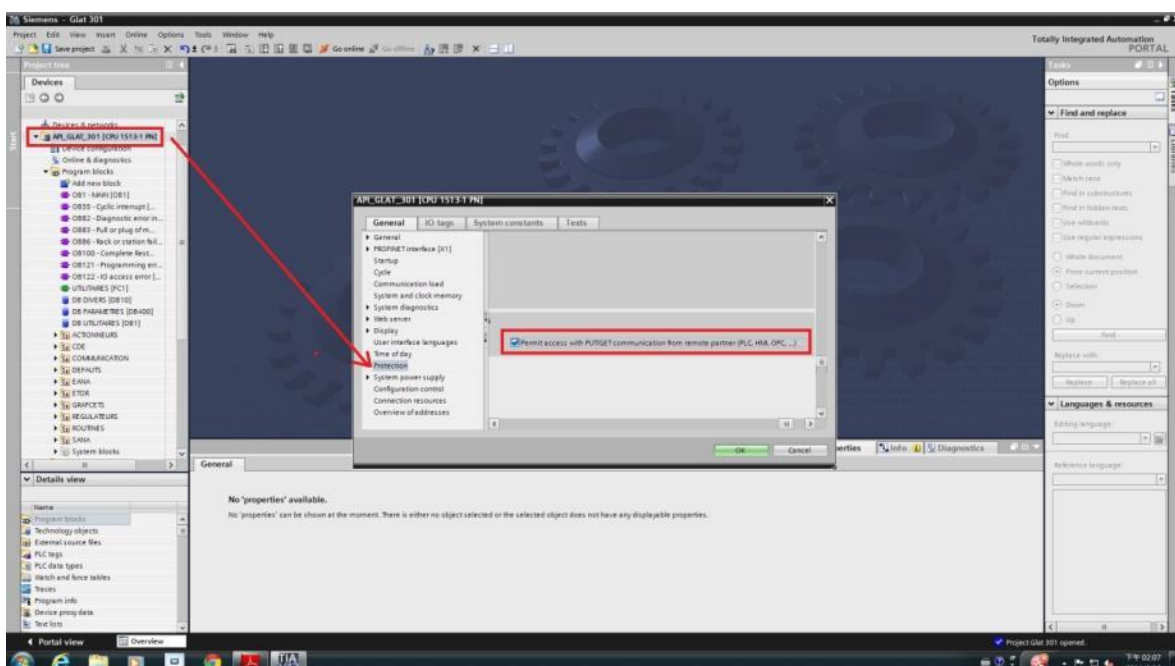
## PLC Setting:

Note: Please follow the settings below, or the communication may fail.

1. Do not check [DB UTILITAIRES] -> [Attributes] -> [Optimized block access]



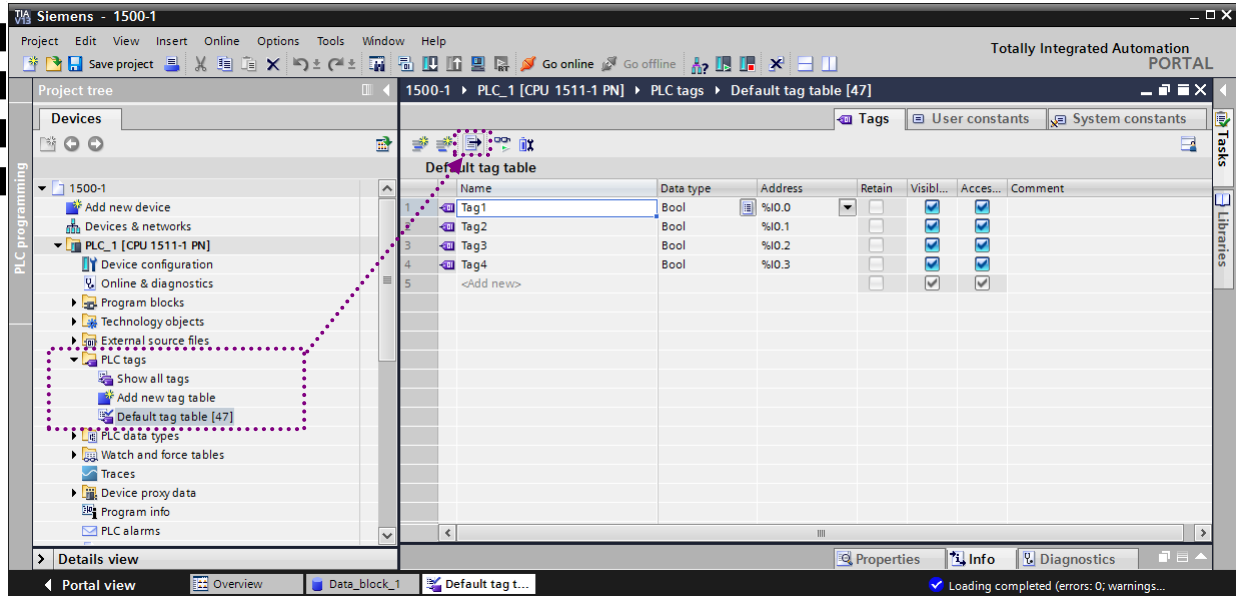
2. Check [General] -> [Protection] -> [Permit access with PUT/GET communication from remote partner]



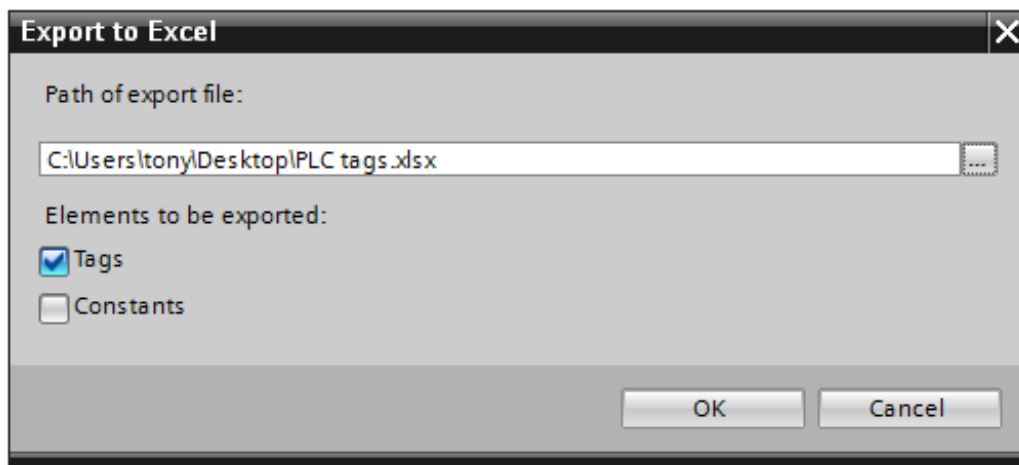
## How to import address tags using TIA portal?

1. Exporting PLC Tags (.xlsx file format).

1.1 Under [PLC tags] create the address tags and then click the Export icon.

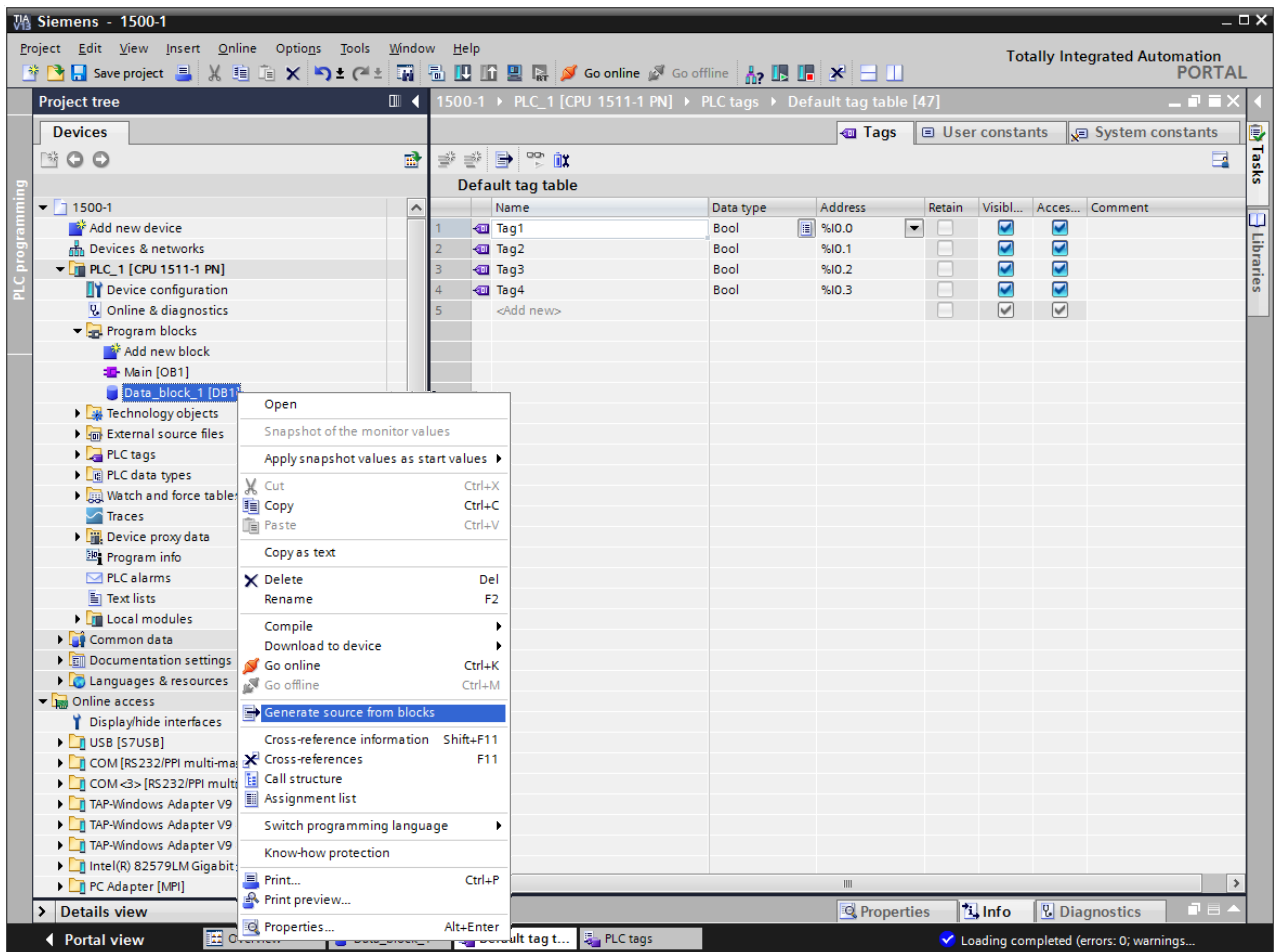


1.2 Designate the directory to save the file and click OK button.

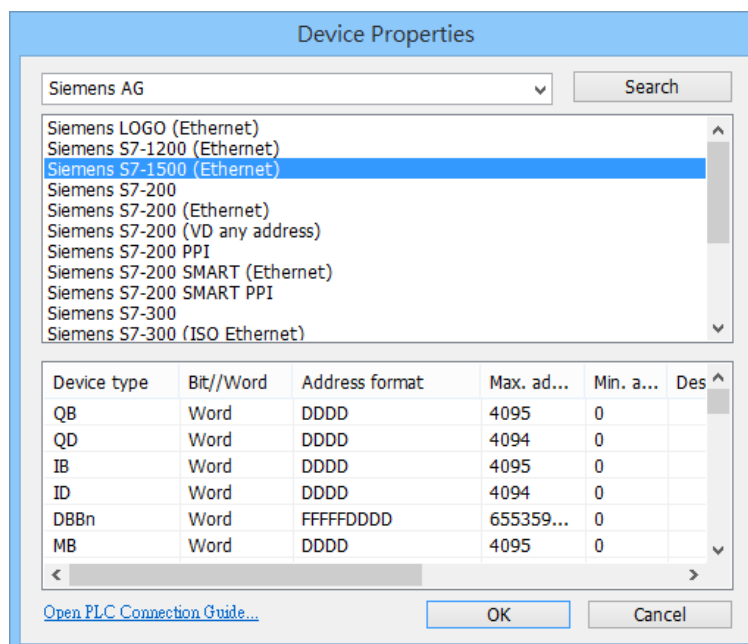


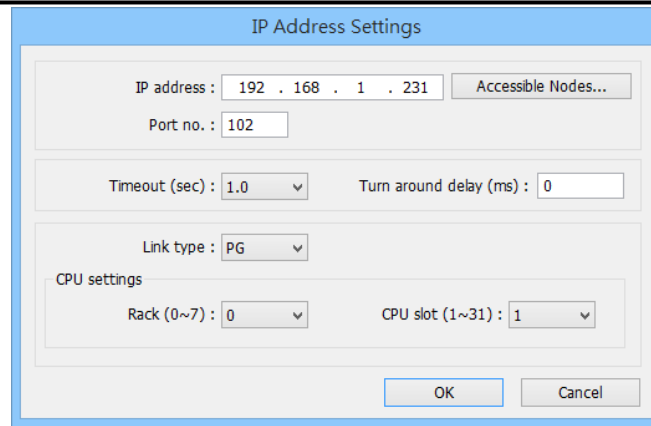
## 2. Exporting Program Blocks (.scl file format).

2.1 Under [Program blocks] create “Data\_block\_1 [DB1]” as shown in the following figure. Click the right mouse button on [DB1] and then click [Generate source from blocks].

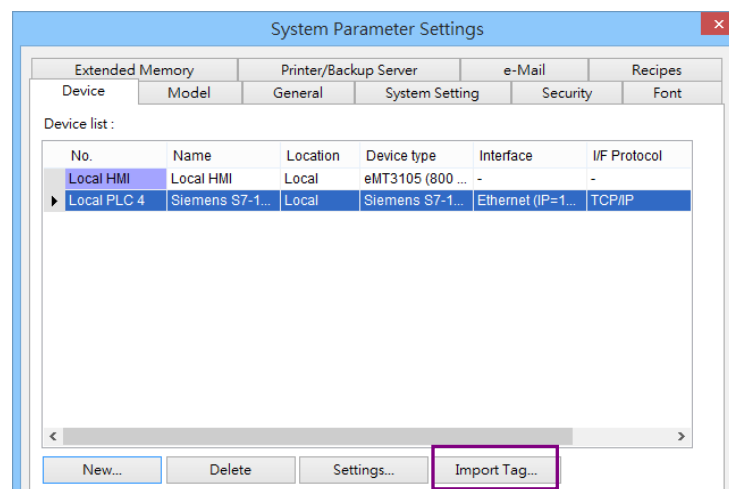


2.2 In EasyBuilder click [New PLC...], select *Siemens S7-1500 (Ethernet)* PLC type, and then click [Settings...] to set the parameters.



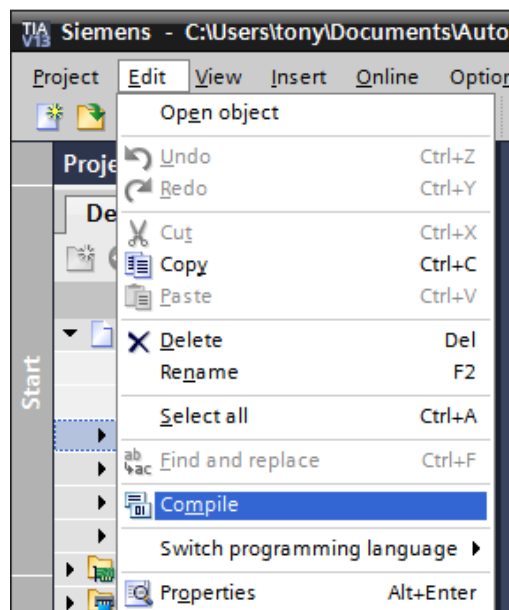


2.3 Click [Import Tag...] button.

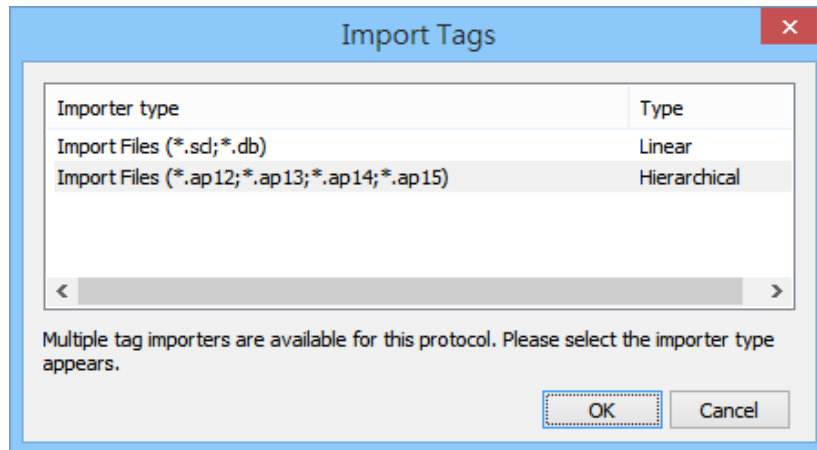


2.4 Select file type (\*.sd; \*.db) or select TIA file (\*.ap12; \*.ap13; \*.ap14, \*.ap15) for import. Compiling the TIA file by using TIA software before import is necessary to avoid importing incomplete data.

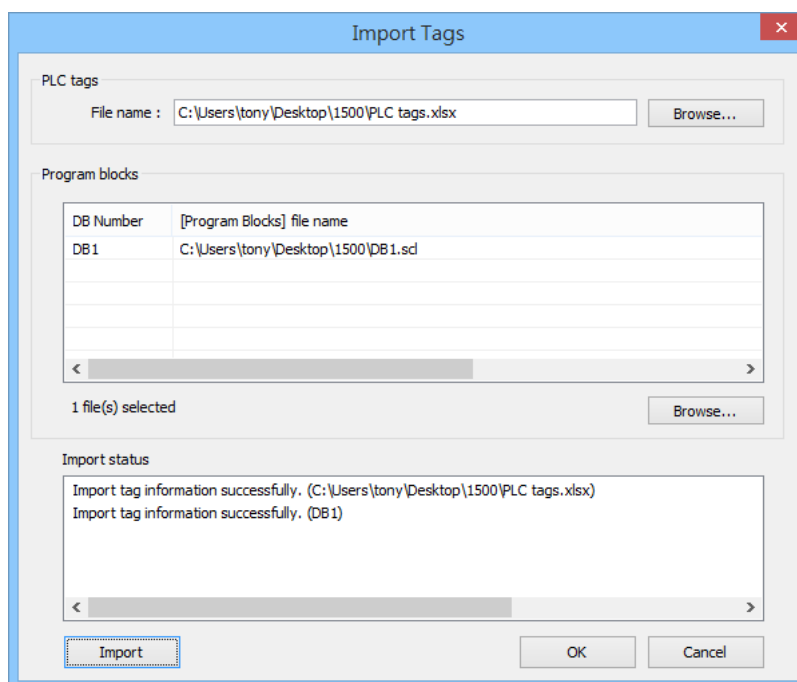
\*Note1. Please compile your project before importing TIA files (\*.apxx).



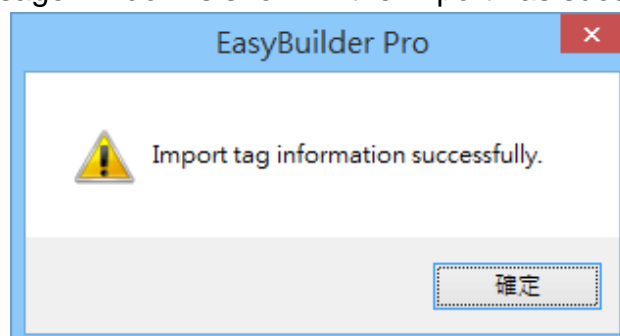
\*Note2. Please change the file extension from .ap15\_1 to .ap15 if the project is created using TIA15.1 and later versions.



2.5 Select the PLC Tags and Program Blocks to be imported, click [Import] button, and then click [OK] to leave when the tags are imported successfully.



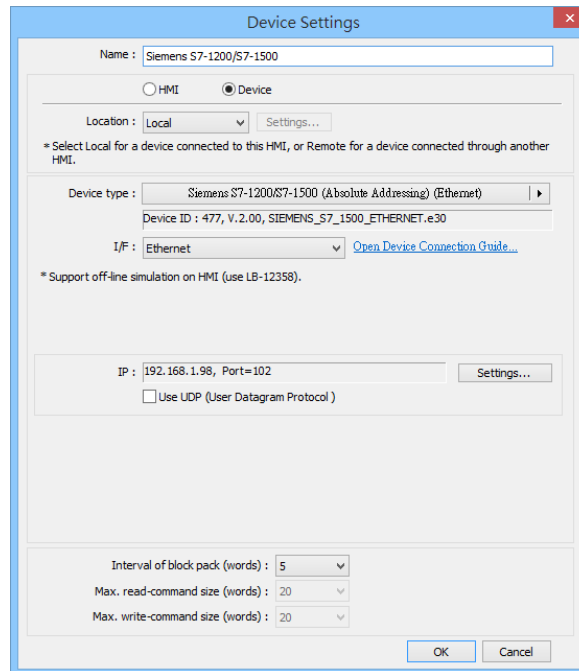
2.6 The following message window is shown if the import has succeeded.



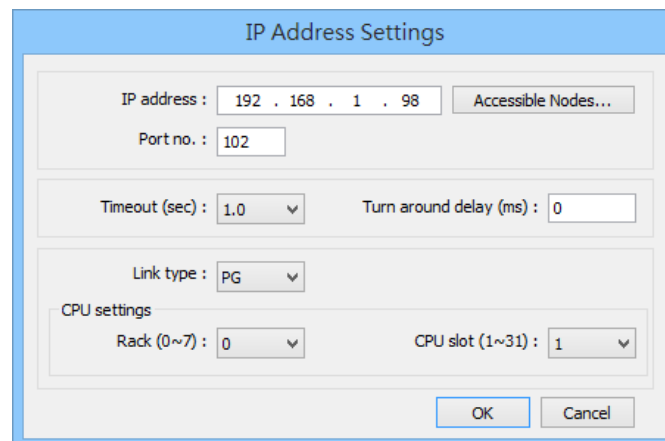


## Get tag info:

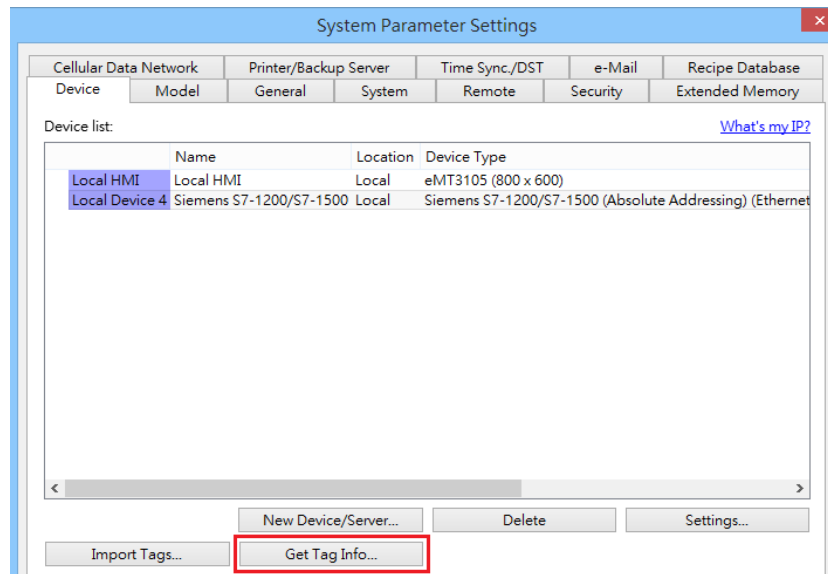
1. In S7-1200/1500 program software create PLC program and tag and then download to PLC.
2. Select Go offline, EasyBuilder will connect to PLC and get tag data. In PLC type select “**SIEMENS S7-1200/1500 (Absolute Addressing) (Ethernet)**”.



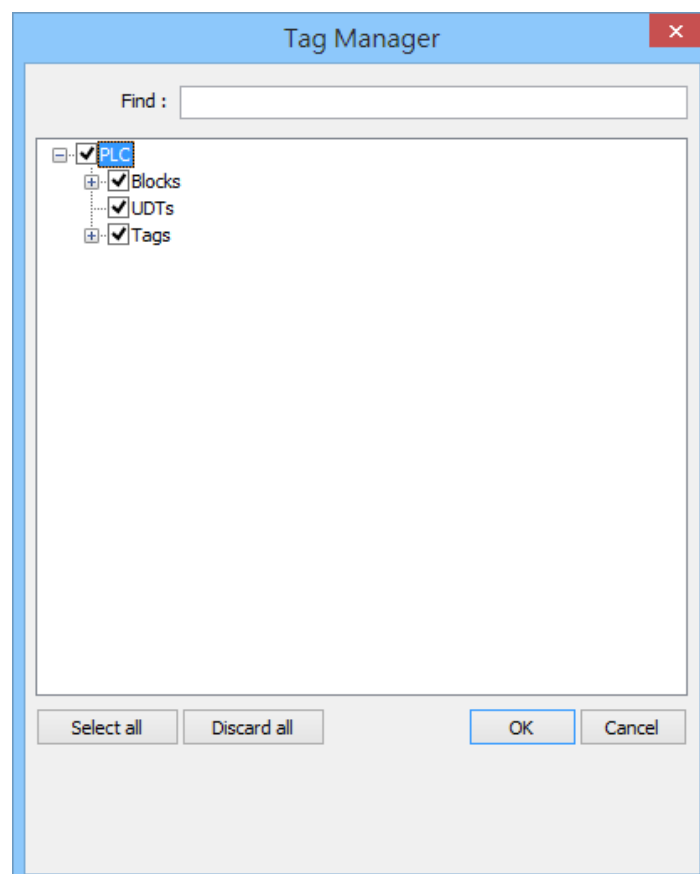
3. Click “**Settings...**”, input PLC IP address.



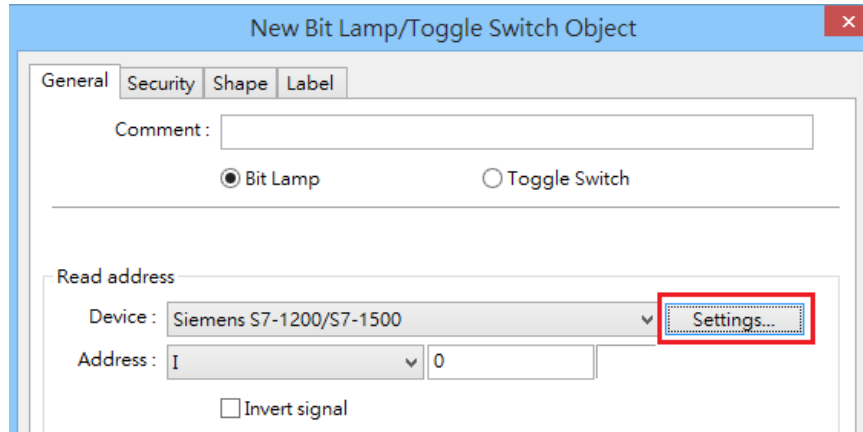
4. Check the PLC that is not connected to any PC. Click **“Get tag info...”**.



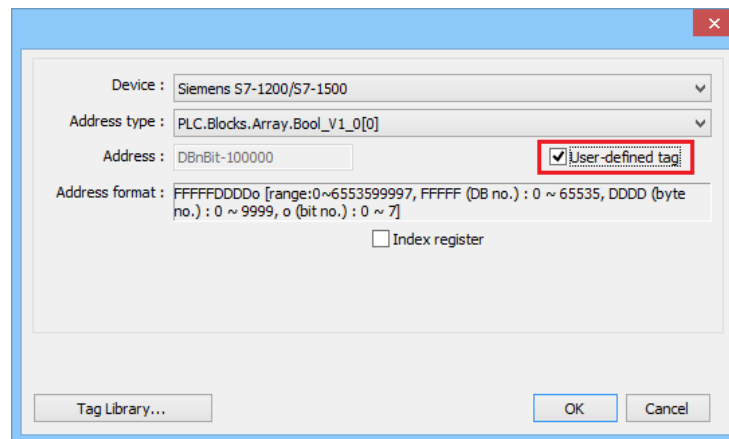
5. Added Tag Manager that allows selecting the Siemens S7-1200/1500 PLC tags to be imported.



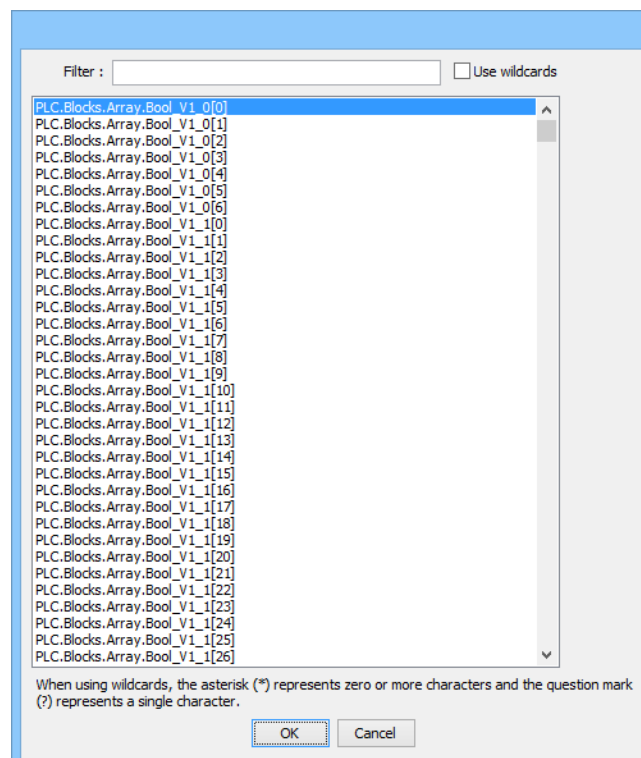
6. Create an object and click read address “**Settings...**”



7. In device select “**S7-1200/1500**” then select “**user-defined tag**”.



8. Select PLC tag.



## Wiring Diagram:

### Ethernet cable:

