



Communicate with S7-1200 via Ethernet



Website: <http://www.we-con.com.cn/en>

Technical Support: support@we-con.com.cn

Skype: fcwkkj

Phone: 86-591-87868869 EXT 88



1.General

WECON VBOX can communicate with devices via Ethernet port, in this document use SIEMENS as example.

2. Select protocol

Please select the Siemens S7-1200 Ethernet protocol in VBOX communication as following figure show:

Port>>Ethernet

Device Type>>Siemens

Protocol>>Siemens S7-1200 Ethernet

PLC IP Address>>192.168.1.202

New Port
✕

Port	<input type="text" value="Ethernet"/>	Device Type	<input type="text" value="Siemens"/>
Protocol	<input type="text" value="Siemens S7-120..."/>	Device Station No.	<input type="text" value="0"/>
Device Station No.	<input type="text" value="2"/>	Retry Count	<input type="text" value="2"/>
		Wait Timeout	<input type="text" value="1500"/> ms
Receive Timeout	<input type="text" value="50"/> ms	Integration interval	<input type="text" value="0"/>
Length	<input type="text" value="0"/>	Delay Time	<input type="text" value="0"/> ms
Retry Timeout	<input type="text" value="0"/> ms	Network type	<input type="text" value="top_client_2n"/>
		Port	<input type="text" value="102"/>
Enable Broadcast	<input type="checkbox"/> OFF	Broadcast Station No.	<input type="text" value="0"/>
IP Address	<input type="text" value="192.168.1.202"/>		

Cancel
OK

3. Remark

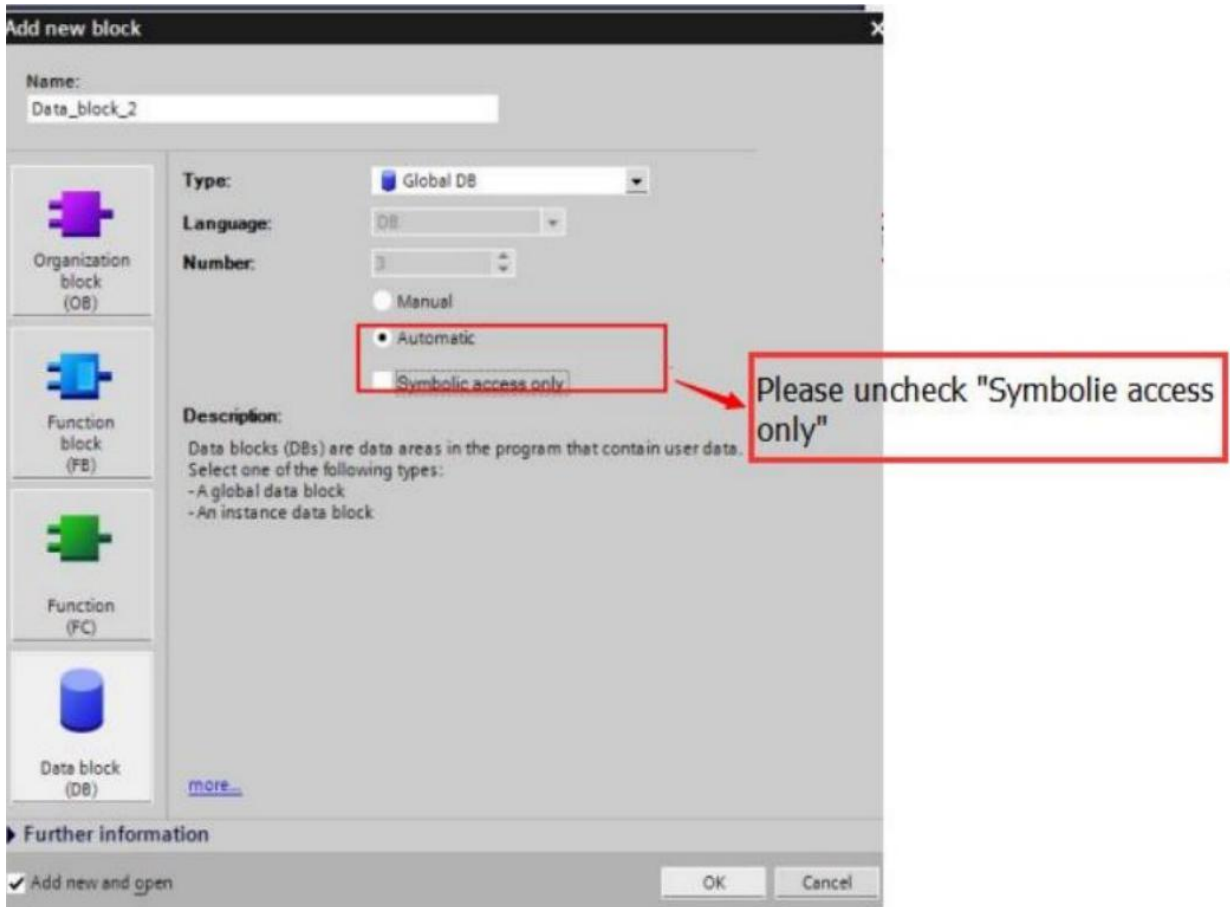
1) S7-1200 supports three devices connected at the same time, so the protocol supports three accesses From VBOX to PLC.

2) VBOX access PLC, using the S7 protocol. The TSAP in PLC is 02.01 (S7-1200 PROFINET interface only three connections supported by default). Please reference S7-1200 system manual for detailed

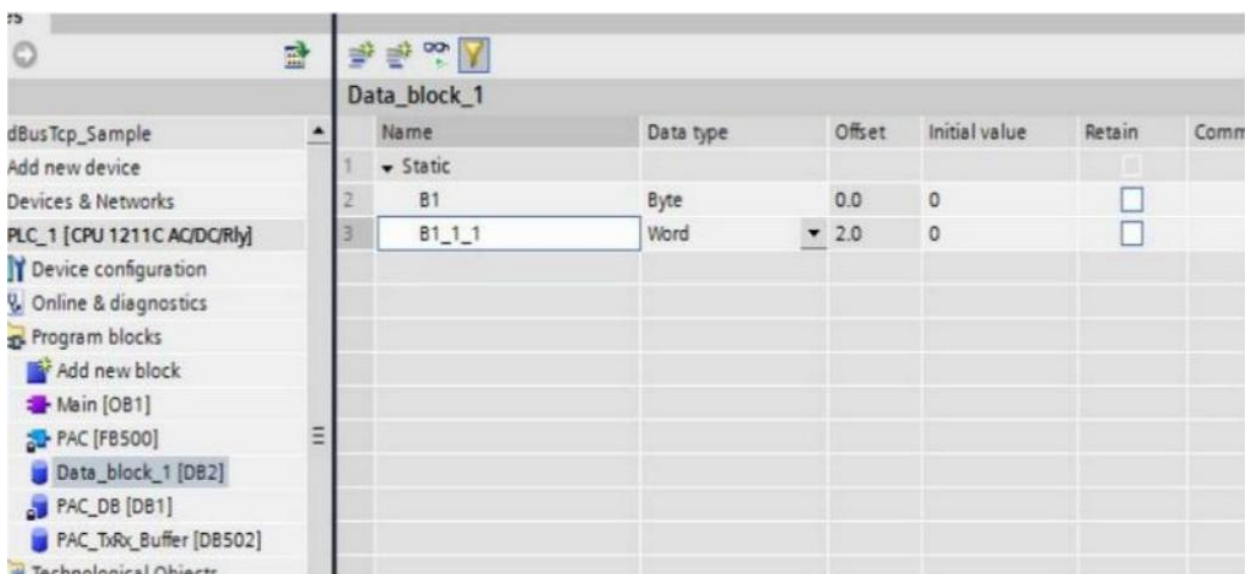
information.

3) Access BD data block

Add BD data block



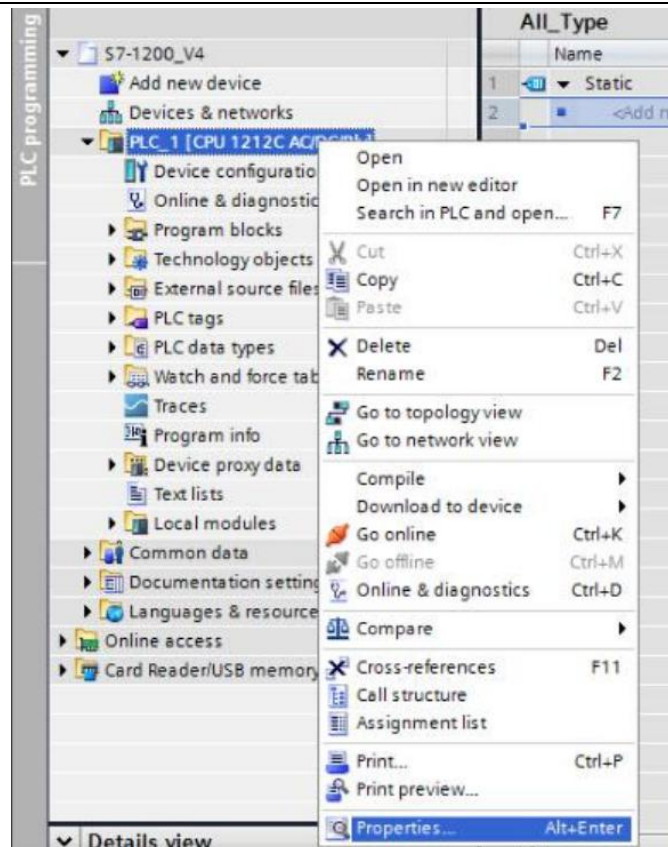
As the following figure shows, for DB2, offset is the DB address



Name	Data type	Offset	Initial value	Retain	Comment
1 Static				<input type="checkbox"/>	
2 B1	Byte	0.0	0	<input type="checkbox"/>	
3 B1_1_1	Word	2.0	0	<input type="checkbox"/>	

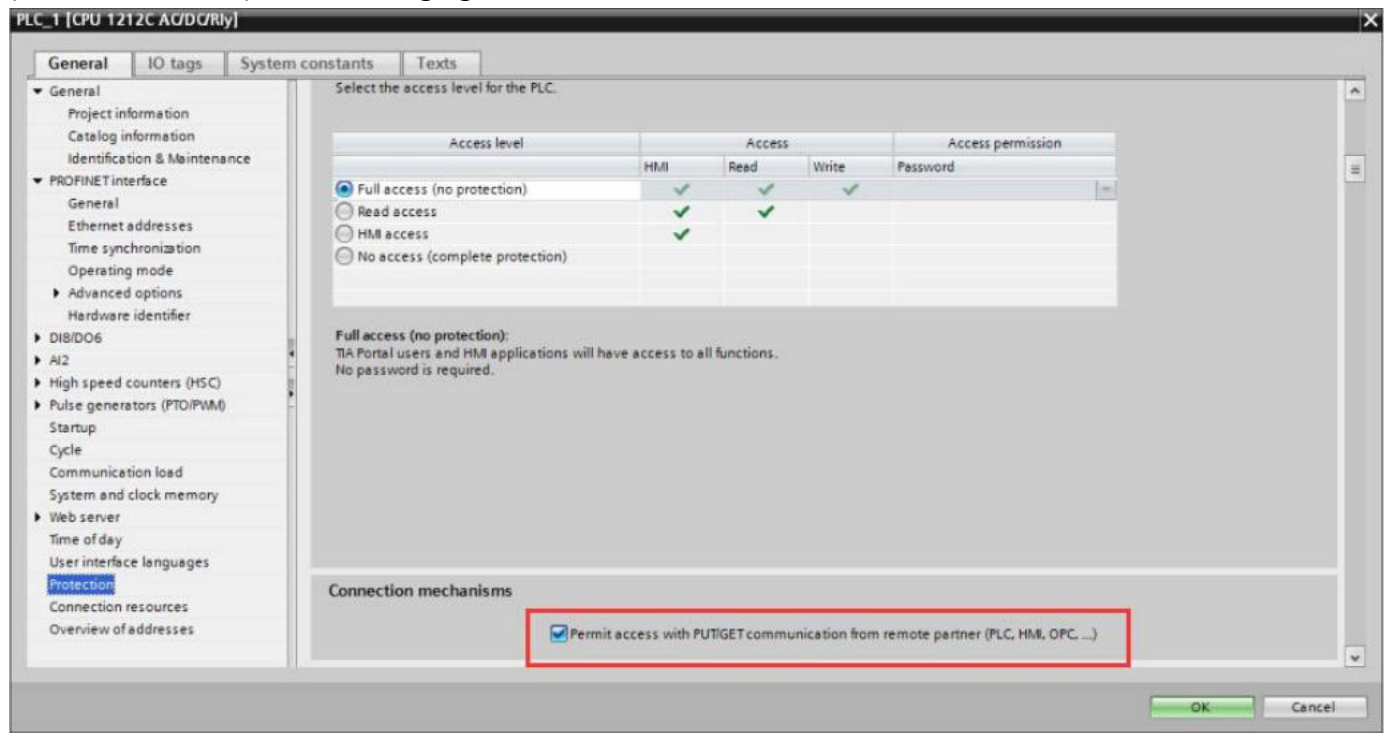
4) Communicate with S7-1200 (firmware version is V4.0 or later)

Now SIEMENS PLC has released new firmware version, it is V4.0, in this version, plc contain new protect method, so many VBOX can't communicate with it by old setting. Please view the following content to change some settings.



4.1) Right-click on the PLC Project, press [Properties].

4.2) Select [Protection], check [Permit access with PUT / GET communication from remote partner (PLC, HMI, OPC, ...)], as following figure shows.



4. Register

The register setting for SIEMENS S7-1200 in HMI screen as following table shows.

Register types	VBOX registers	PLC registers	Format	Range	Remark
Word registers	MB	M	MB _n	0 – 99,999	
	MW	M	MW _n	0 – 99,999	MW0=MB0-1, MW1=MB2-3.
	MD	M	MD _n	0 – 99,999	MD0=WB0-3, MD1=WB4-7 Parts need to be set as double word.
	IW	I	IW _n	0 – 99,999	
	QW	Q	QW _n	0 – 99,999	
	DBxDBB	DB0.DB – DB99.DB	DBxDBB _{nnxxxx}	000,000 – 999,999	“nn” means block number, “xxxx” means address.
	DBxDBW	DB0.DB – DB99.DB	DBxDBW _{nnxxxx}	000,000 – 999,999	
	DBxDBD	DB0.DB – DB99.DB	DBxDBD _{nnxxxx}	000,000 – 999,999	
Bit registers	I	I	M _n .x	0.0-99999.7	
	Q	Q	Q _n .x	0.0-99999.7	
	M	M	M _n .x	0.0-99999.7	
	DBxDB	DB0.DB – DB99.DB	BDxDB _{nnxxxx} .y	000000.0 -999999.7	“nn” means block number, “xxxx” means address.