Carrier

BACnet Gateway

Installation and Owner's Manual

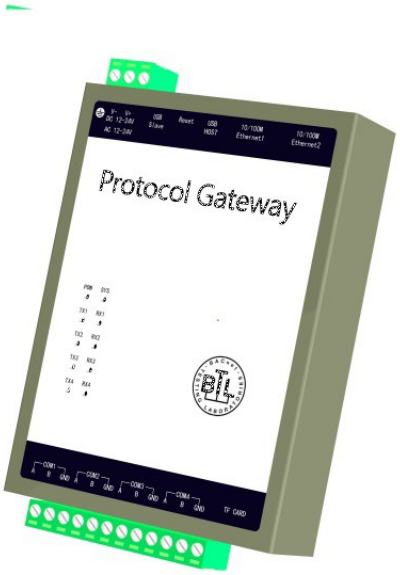
MODEL NAME:

40VCBB17FQEE

1-T-40VCQUE-231020-EN-0

XCT 7™

1. Bacnet gateway----40VCBB17FQEE

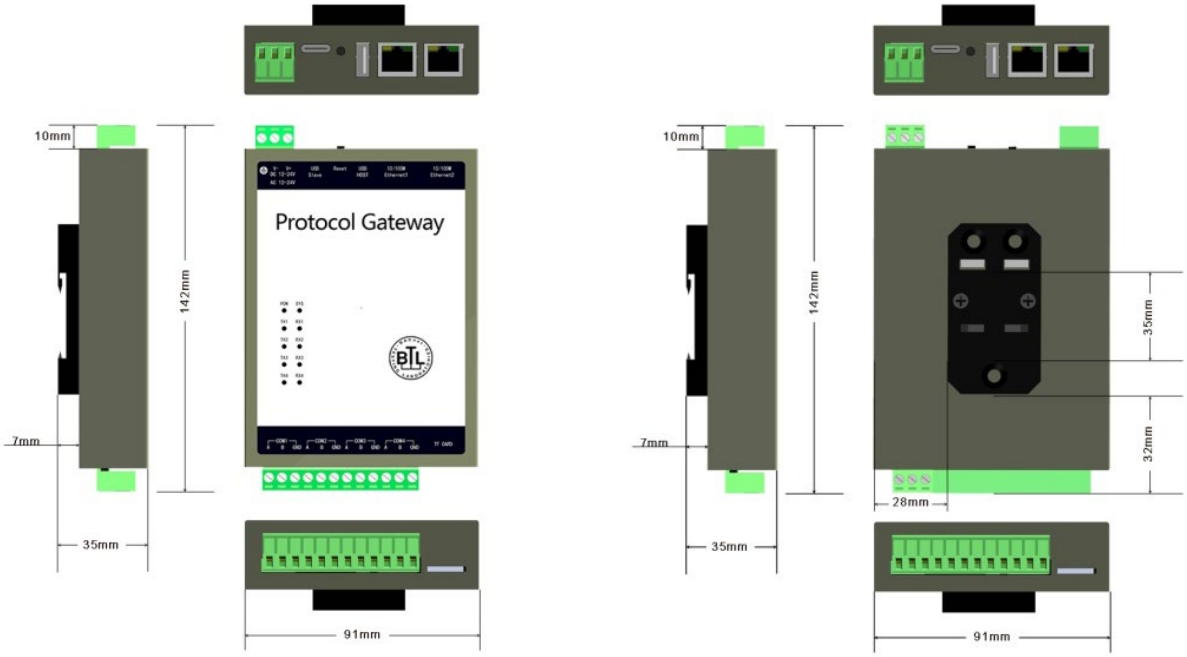


- Third party interface: BACnet ip
- Max. 128 indoor units can be controlled for 40VCBB17FQEE;
- Max. 4 systems. Each SD system requires one 40VCCR17FQEE
- Operation status setting & monitoring
- Schedule setting
- Multi user management with different authorized levels

40VCBB17FQEE Wiring & Operating Instructions

The core function of the protocol converter is to convert Modbus protocol into BACnet protocol, implement Modbus device integration into BACnet network. That is, the gateway acts as a Modbus Master (master station) and supports connection of 4 Modbus Slaver devices. 40VCBB17FQEE is a standard BACnet network device in the BACnet network, and the user can map the device data points in the MODBUS network one by one to the data points in the BACnet network. The gateway provides the BACnet service interface, and the third-party BACnet Client software integrates the Modbus Slaver device into the system through the gateway.

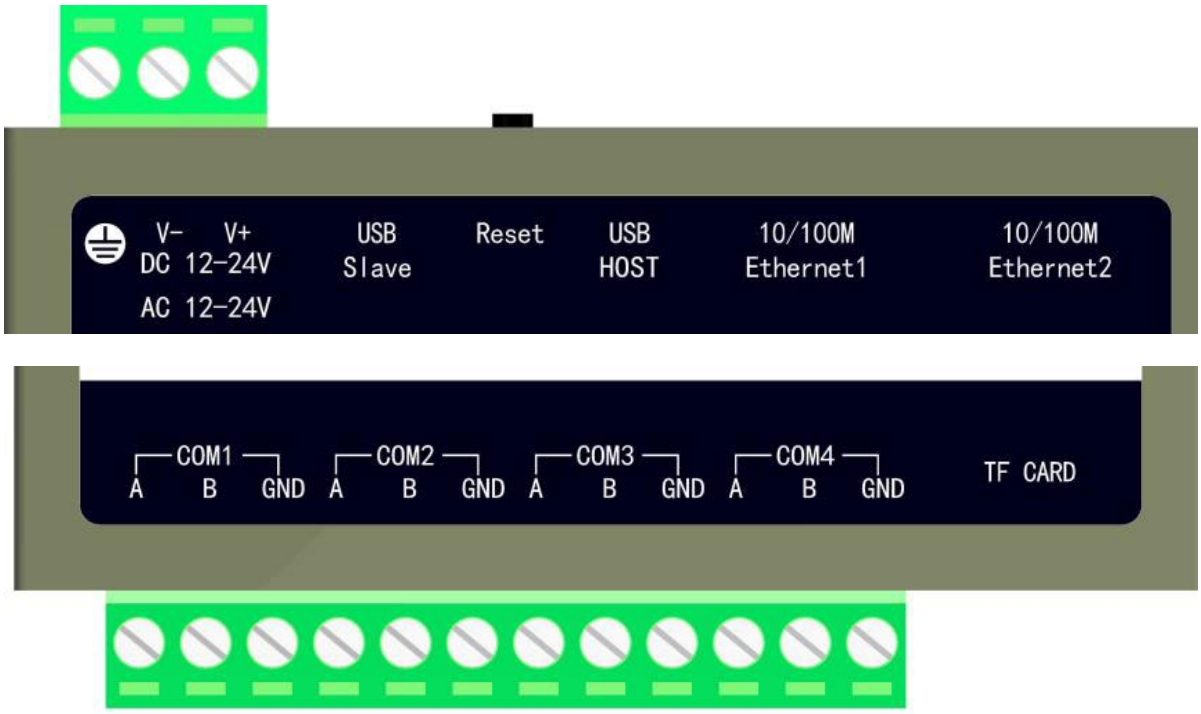
Appearance



Specification

Function	Specification
Power supply	AC and DC rated voltage 24V, working range 12V to 24V.
ROM	256M Flash
RAM	64M DDR2
Working condition	-20°C -- 70°C, 5--90%RH (non-condensing)
Storage Conditions	-40°C -- 85°C, 5--95%RH (non-condensing)
Ethernet communication	
Specification	High-performance 100M/10M adaptive Industrial Network Card, support AUTO
Protocol	BACnet IP
RS-485 bus communication	
Bus quantity	2 way RS485 bus communication, Support 2 Modbus Slaver per way
485 communication parameters	9600 baud rate / 8 data bits /non parity /1 stop bit

Interface Features



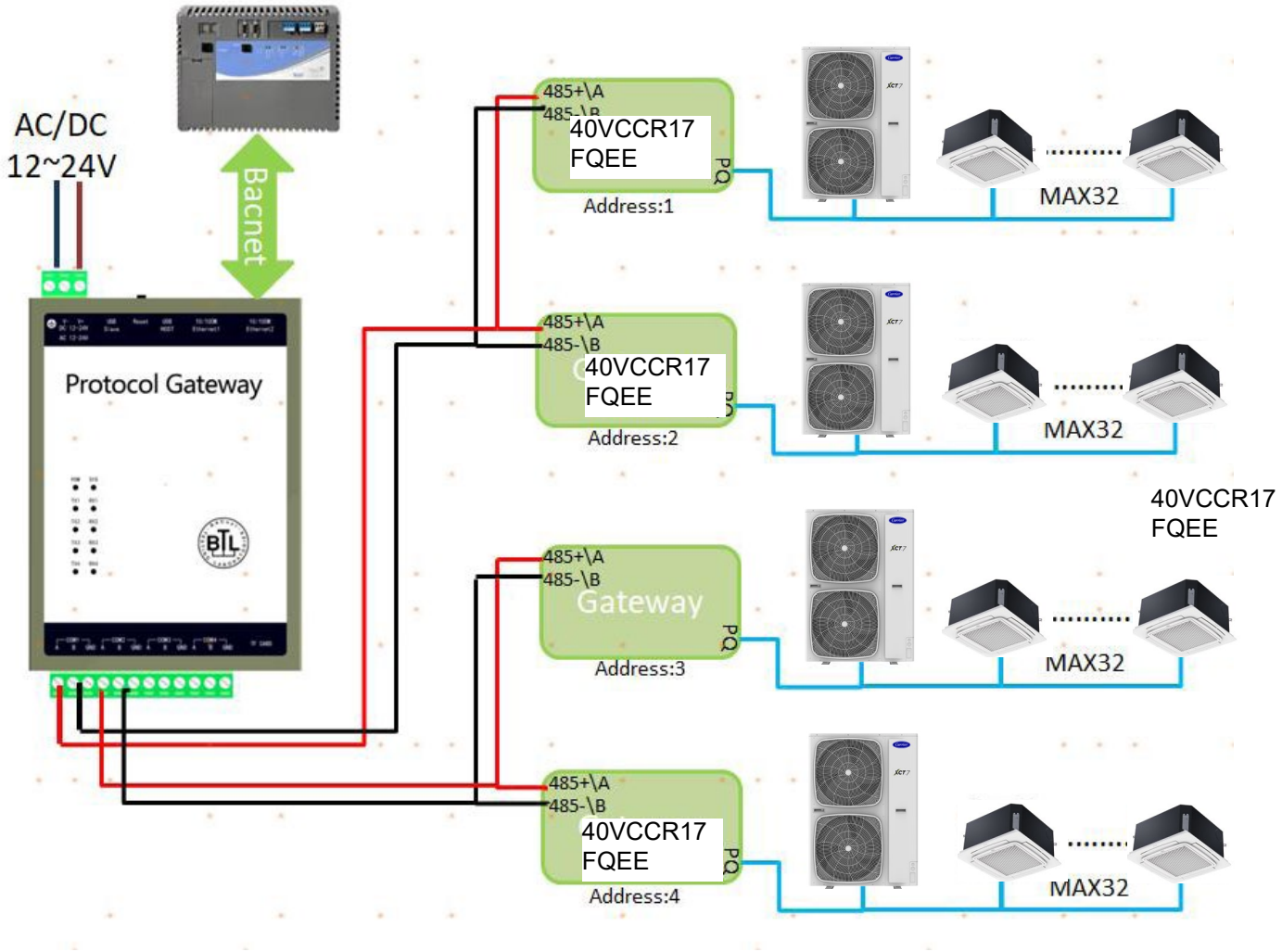
Category	Ports	Function
Power supply	V-	+12/24V
	V+	GND

Ethernet port	Ethernet2	BACnet IP interface / Debug Interface
Modbus interface 1	A	“A” of Modbus interface 1 (Access gateway device which address is 1,2)
COM1	B	“B” of Modbus interface 1(Access gateway device which address is 1,2)
Modbus interface 2	A	“A” of Modbus interface 2(Access gateway device which address is 3,4)
COM2	B	“B” of Modbus interface 2(Access gateway device which address is 3,4)
RESET	RESET	Press the button 8 S continuously to restart the factory settings.

Wiring Instructions

40VCBB17FQEE default network port parameters are as follows:
IP address192.168.1.88
Subnet mask 255.255.255.0
Default gateway 192.168.1.1
40VCBB17FQEE can be used with gateway 40VCBM17FQEE or 40VCCR17FQEE. The default is 40VCCR17FQEE. If you need to use the 40VCBM17FQEE, you need to replace the 40VCBB17FQEE configuration file. For details, see the following instructions.
COM 1(A,B) is the first MODBUS communication interface, which can connect the gateway equipment whose address is 1&2.
COM 2(A,B) is the first MODBUS communication interface, which can connect the gateway equipment whose address is 3&4.

The specific connection diagram is as follows:



Gateway and Indoor Unit Dip Switch

The address cannot be duplicated between the gateways connected to the same 40VCBB17FQEE. COM1 interface connect the gateway whose address is 1&2; COM2 interface connect the gateway whose address is 3&4.

The indoor unit addresses under the same gateway cannot be duplicated, and the address range is 1~32. The indoor units between different gateways do not affect each other.

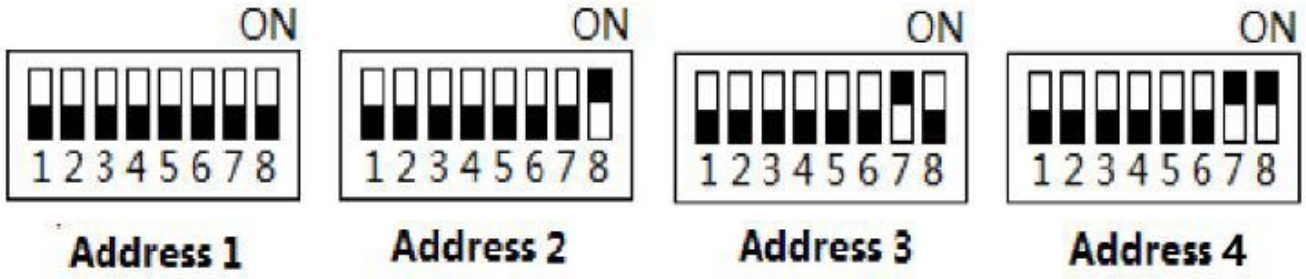
40VCBM17FQEE Dip Switch

40VCBM17FQEE dip switch : ON for 0, OFF for 1

40VCBM17FQEE needs to be set to Modbus protocol, dip switch setting as follows:

40VCCR17FQEE Dip Switch

When connected to the 40VCCR17FQEE, 40VCBB17FQEE needs to be connected to the U1 port of the 40VCCR17FQEE.



Indoor Unit Dip Switch

The address dip switch of the indoor unit is SW03, ON is 1, OFF is 0;
The address dip switch range is 1~32, dip switch setting as follows:

SW03								Address
1	2	3	4	5	6	7	8	
1	0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	1	2
1	0	0	0	0	0	1	0	3
1	0	0	0	0	0	1	1	4
1	0	0	0	0	1	0	0	5
1	0	0	0	0	1	0	1	6
1	0	0	0	0	1	1	0	7
1	0	0	0	0	1	1	1	8
1	0	0	0	1	0	0	0	9
1	0	0	0	1	0	0	1	10
1	0	0	0	1	0	1	0	11
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
1	0	0	1	0	0	1	1	20
1	0	0	1	0	1	0	0	21
1	0	0	1	0	1	0	1	22
1	0	0	1	0	1	1	0	23
1	0	0	1	0	1	1	1	24
1	0	0	1	1	0	0	0	25
1	0	0	1	1	0	0	1	26
1	0	0	1	1	0	1	0	27
1	0	0	1	1	0	1	1	28
1	0	0	1	1	1	0	0	29
1	0	0	1	1	1	0	1	30
1	0	0	1	1	1	1	0	31
1	0	0	1	1	1	1	1	32

40VCBB17FQEE Configuration File Replacement Instructions

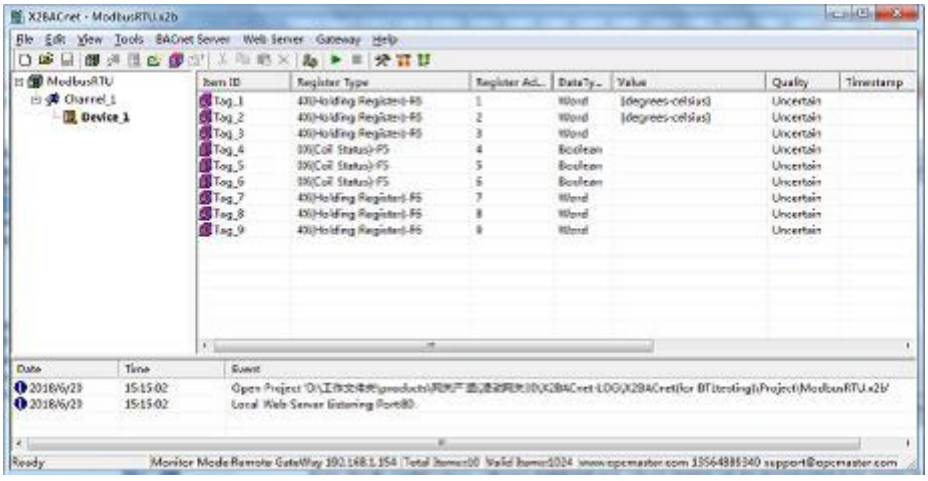
1.The default IP of 40VCBB17FQEE is 192.168.1.88 .

2.First, set the IP of the computer to the same network segment as 40VCBB17FQEE. Then “ping” the IP “192.168.1.88” to see if it can work; if it works, then you can do the next setting.

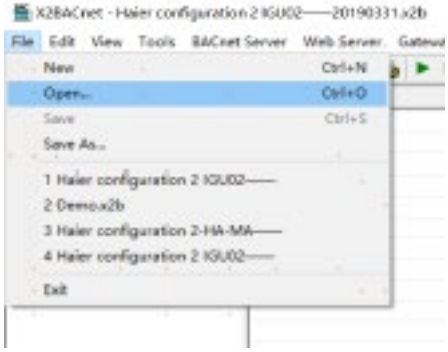
3.If “192.168.1.88” cannot be pinged, press the RESET button for 8 seconds. After 40VCBB17FQEE restarts, ping 192.168.1.88. After pinging, you can start setting 40VCBB17FQEE.

4.File configuration

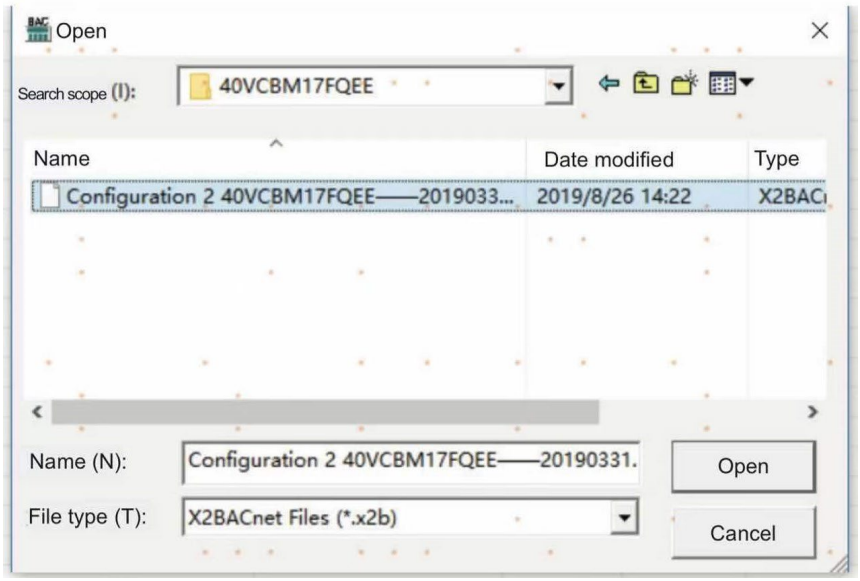
First double click to open “X2BACnet.exe” debugging software.



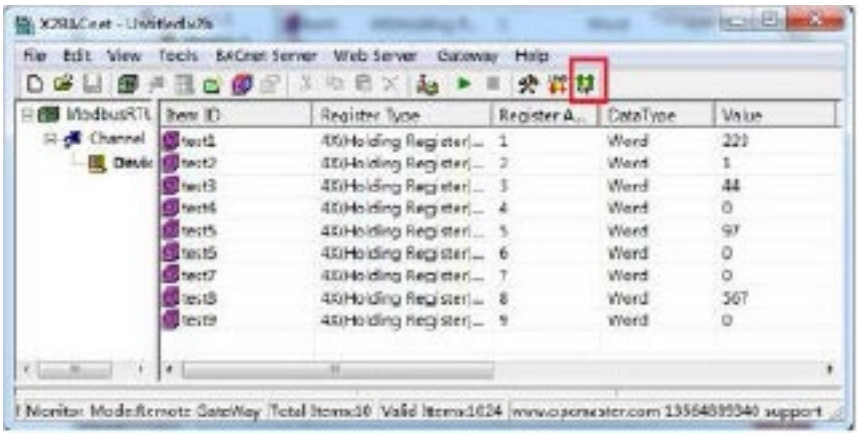
Click "File" on the menu bar to choose "Open… " or click on the toolbar project.



In the dialog box, select the project file that you want to burn

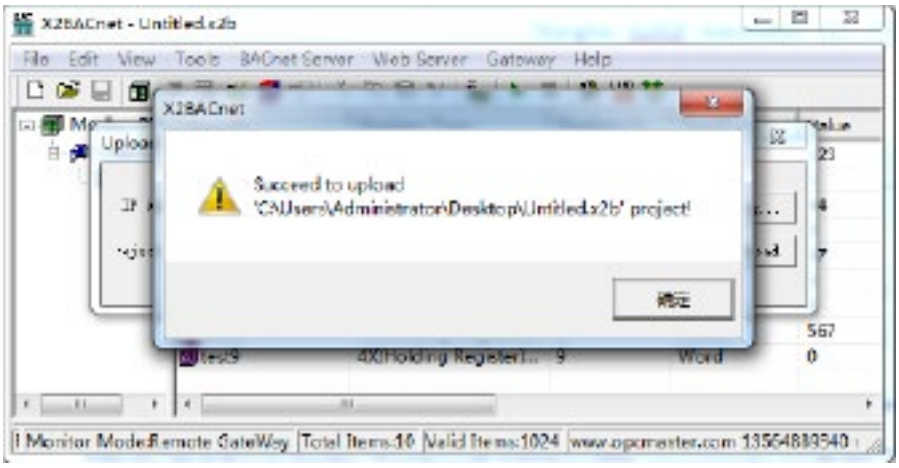


Click "Gateway" on the menu bar to choose "Upload " or click on the toolbar upload the project.



In the pop up dialog box enter the gateway IP address, click the "Upload".

After uploading, the pop-up dialog prompt succeed to upload

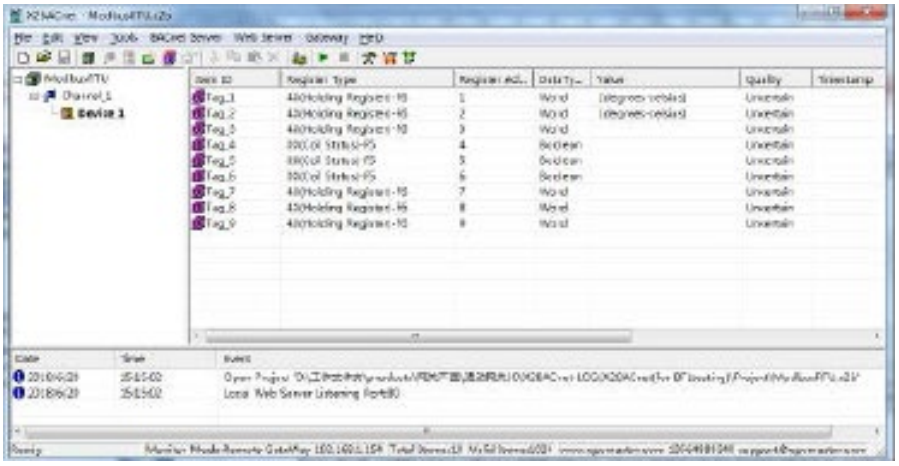


Note: the IP address of the gateway must be correct. the default gateway IP address is 192.168.1.88, the IP address of PC to set up to he same network segment, the project can be uploaded after successfully Ping.

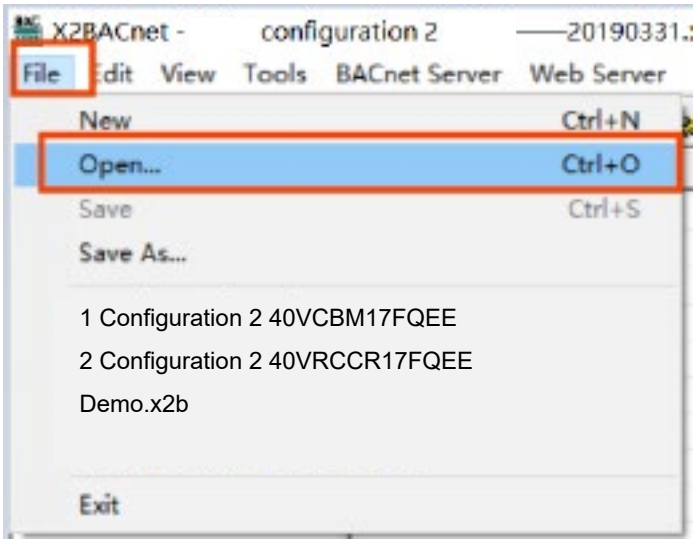
40VCBB17FQEE IP Modifying Instructions

First double click to open “X2BACnet.exe” debugging software

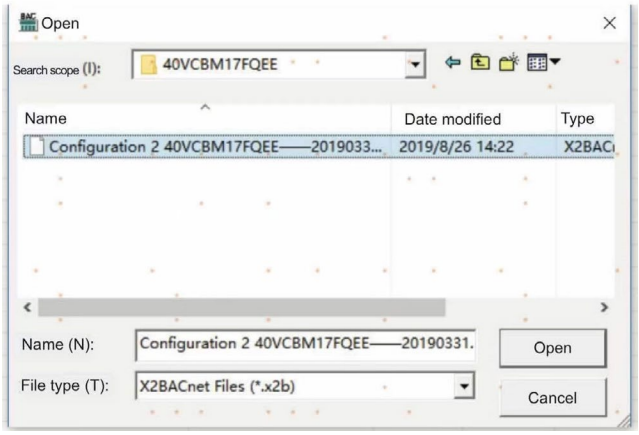
X2BACnet.exe

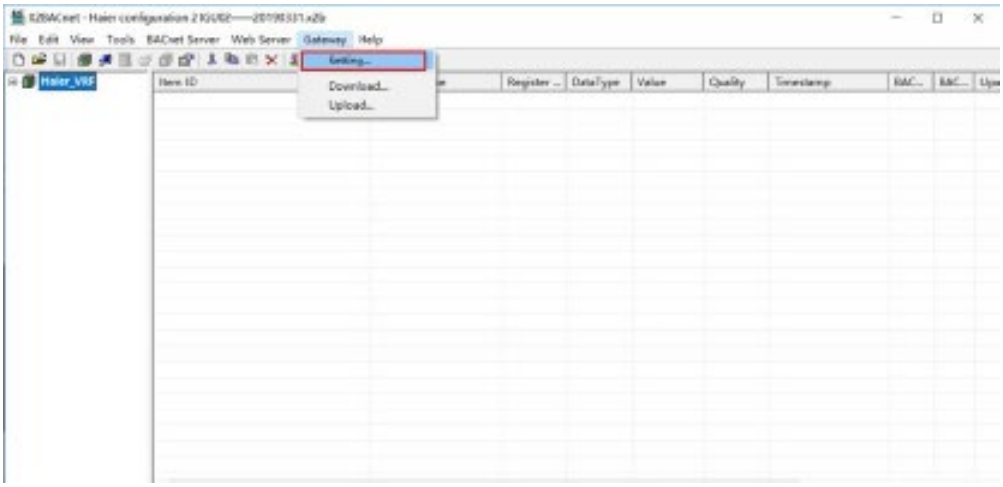


Click "File" on the menu bar to choose "Open… " or click on the toolbar project. to Open the project

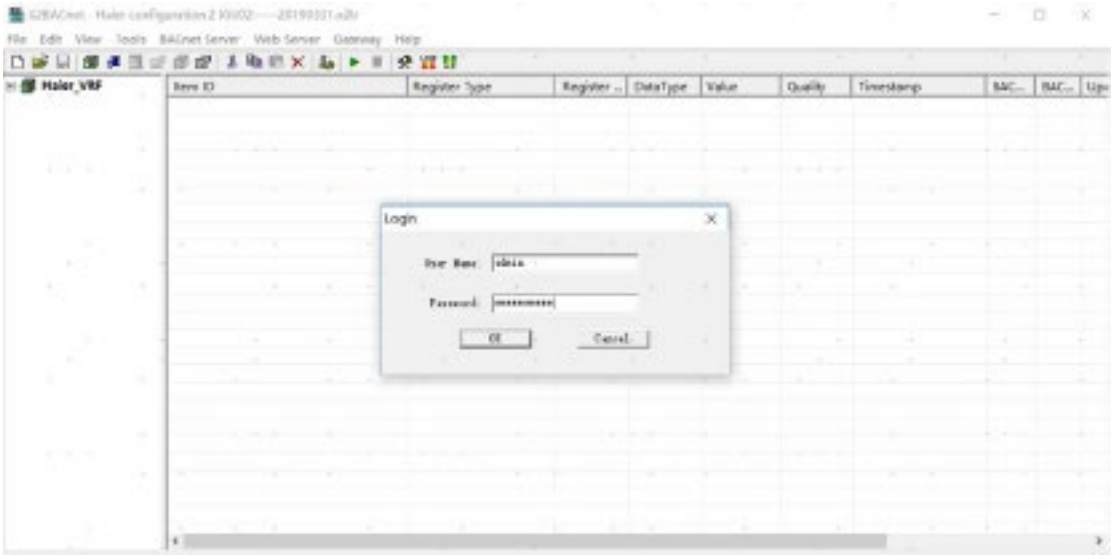


In the dialog box, select the project file that you want to burn





In the dialog box that pops up, enter the user name and password. The user name is fixed to “admin” and the password is fixed to “admin123456”. After the input is successful, the system parameters related to the gateway can be set.



Network port setting: You can change the IP address of the hardware gateway. The default IP address of the gateway is 192.168.1.88, the default subnet mask is 255.255.255.0, and the default gateway is 192.168.1.1. Click OK after setting. The “Ping” function tests whether the current IP address is successful. The “Login Page Function” can be logged in to the WEB server where the gateway is located.

Attached document

1. Debugging Software “X2BACnet.exe”

2. Standard Configuration File connected to 40VCBM17FQEE Configuration 2 40VCBM17FQEE——20190331

Configuration 2 40VCBM17FQEE——20190331

3. Standard Configuration File Connected to 40VCCR17FQEE Configuration 2-40VCCR17FQEE——20190331

Configuration 2-40VCCR17FQEE——20190331

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