



X2KNX User Manual

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1 Perforce

1.1 Statement

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1.2 Technical Support

- Email: support@opcmaster.com
- TEL: +86 021-58776098
- website: <http://www.opcmaster.com/english/>

<http://www.bacnetchina.com/english/>

1.3 Software Install and Uninstall

X2KNX software is a green installation.

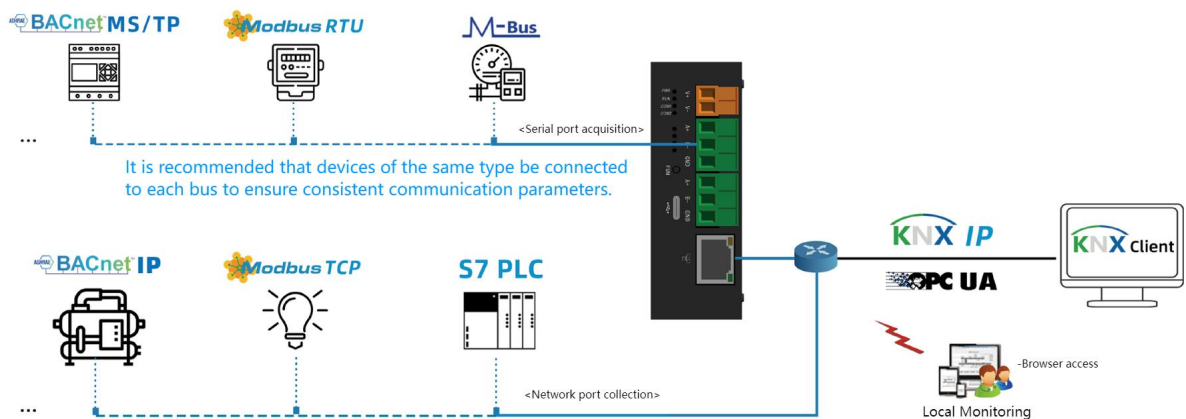
- No operation of the registry
- Do not operate the sensitive area of the system, including the root directory of the system starting area, the installation directory (Windows directory), the program directory (Program Files), and the account specific directory.
- Do not write anything to the directory outside my directory.
- Because the program itself does not have any effect on any file other than its directory, there is no installation and unloading problem at all.
- The deletion of the program, as long as the directory of the program and the corresponding shortcut are deleted (if you manually set a shortcut on the desktop or other position), the program is completely clean from your computer, without leaving any garbage.

- No need to install, copy and copy at will.

2 Overview

2.1 Function Description

- X2KNX is called KNX gateway, which can convert any device protocol into KNX interface, and then other KNX clients such as computer room management system can access and monitor third-party device data through the KNX interface of Sunfull.
- How it works: on-site devices are connected to the "X2KNX" hardware gateway. The gateway collects data and provides the KNX agent interface. KNX clients can manage and monitor on-site devices by accessing the X2KNX hardware gateway.



● Advantages:

1. Green installation free, strong configurability, simple operation, stable and reliable, convenient fault diagnosis.
2. Support JS scripts.
3. Support multi-language switching to facilitate user operation.
4. In PC monitoring mode, configure the software XKNX, which can be used for PC simulation.

5. The gateway has a built-in WEB server. Users can view the real-time changing data and communication status through the browser, which is convenient for on-site debugging. You can also download configuration software X2KNX and project files.
6. Support the simultaneous conversion of different protocols into KNX protocols.
7. Gateway analog quantity supports linear conversion, bit-fetching function and high-low byte exchange function.
8. Support user permission management

2.2 Operating Environment

- X2KNX Configuration Software can support many kinds of OS, such as Windows XP/2000/2003/7/10/Vista.
- WEB supports IE9 and above, Opera, apple's Safari, Google Chrome, and firefox.

2.3 Application area

Solve Siemens ABB、Haige, Schneider, Legrand, Guangzhou Vision, Hedong and other intelligent lighting system software integration non KNX devices. The gateway supports access to over 500 protocols, including smart lighting (non KNX), HVAC, smart homes, customer control systems, fire protection, and more PLC、Various equipment such as water meters, electricity meters, elevators, UPS, etc.

3 Operating Steps

X2KNX is a configuration software running on a PC, used to configure projects and upload them to the hardware gateway after configuration.

3.1 Select Operation Language

Firstly open and run the main program X2KNX.exe. In the main program interface,

click the view menu to select View->Language Settings, as shown in figure 3-1-1.

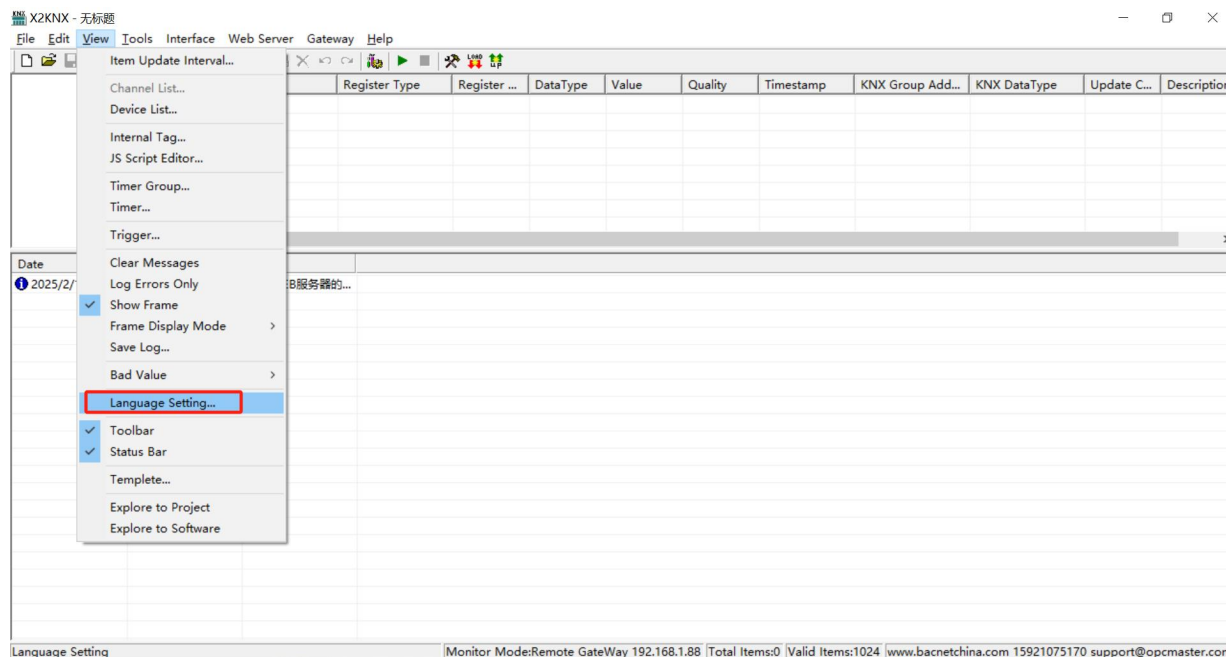


Figure 3-1-1 Select Operation Language

Note: The upper computer configuration software X2KNX and the uploaded project can be downloaded from the gateway.

Select the operating language in the pop-up dialog box, as shown in figure 3-1-2.

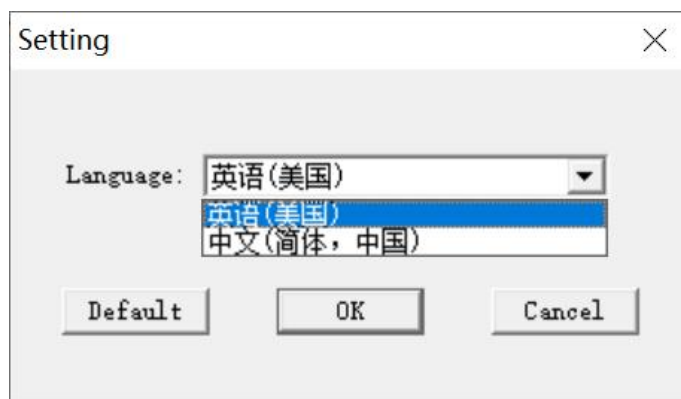


Figure 3-1-2 Select Operation Language

3.2 New Driver

As one of the many protocols covered by X, Modbus RTU protocol is selected as the example. If you need to understand the configuration of other protocols, click "communication connection instructions" under the help menu to open

CommunicationManual- en.pdf.Click edit to select "add driver" or click the toolbar icon, as shown in figure 3-2-1.

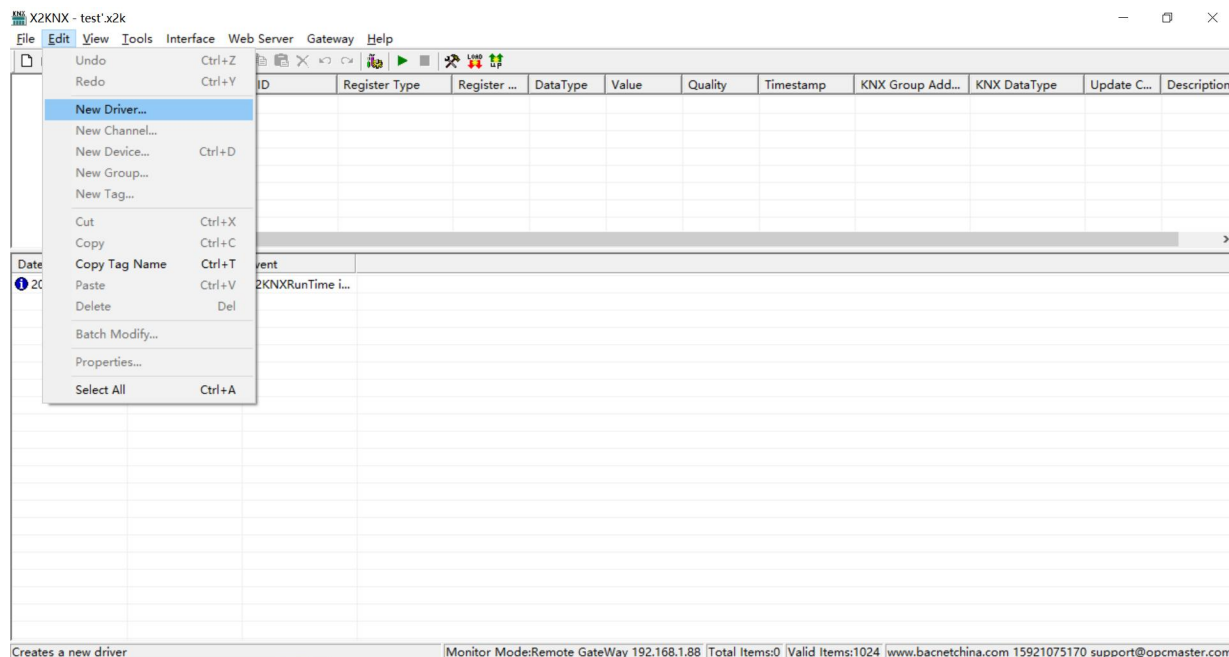


Figure 3-2-1 Select New Driver

Then select the driver in the popup window to add, as shown in figure 3-2-7 below.

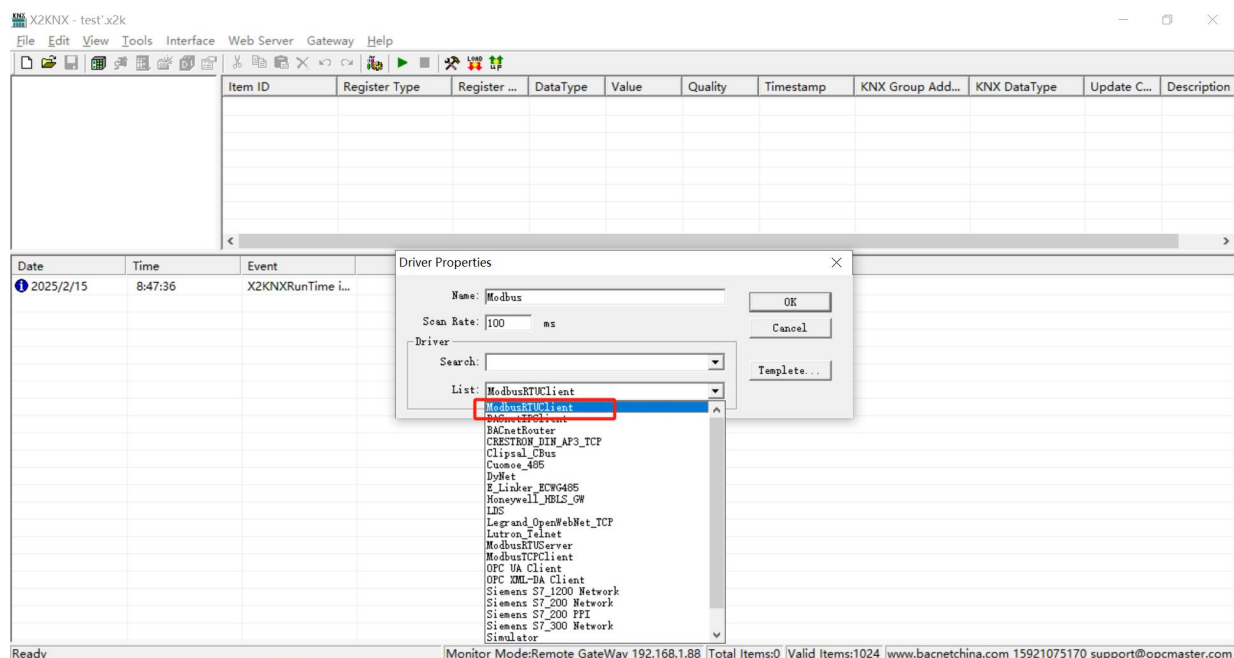


Figure 3-2-7 Select Driver

You can enable custom driver names, As shown in figure 3-2-3.

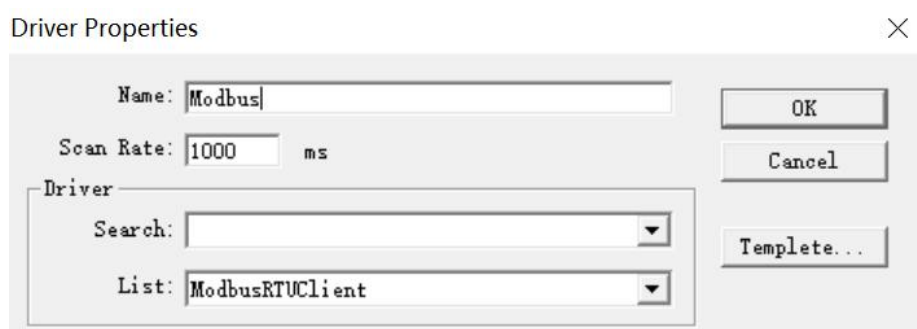


Figure 3-2-3 Driver Properties

Input custom driver name in the name of the project, the default time is 1000 milliseconds, polling polling time can adjust the frequency of access to all equipment, if visiting all the equipment needed is greater than the set time, polling time, then this setting, on the other hand if visiting all the equipment needed time is less than set the polling time, you will need to wait time to set the polling time later, can be the next visit. Users can change the polling time as they see fit. ModbusRTU protocol is selected here and added as shown in figure 3-2-4.

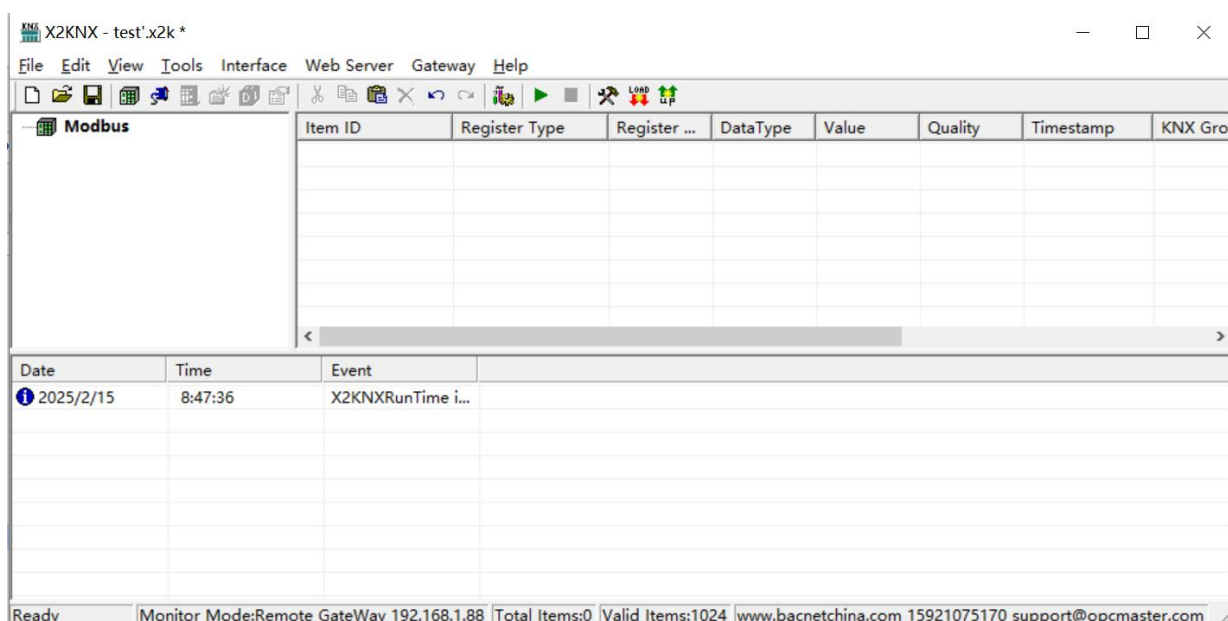


Figure 3-2-4 Complete add driver

3.3 New Channel

Select the current driver, right-click to select "new channel" or click  the toolbar, as shown in figure 3-3-1.

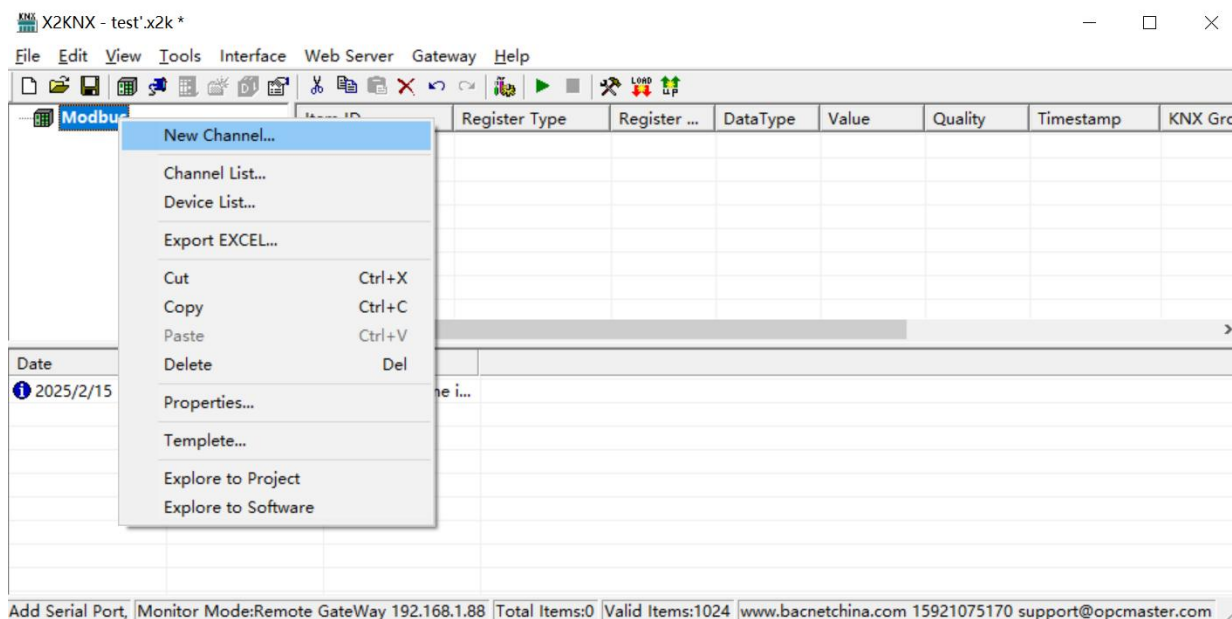


Figure 3-3-1 Select new channel

In the popup window, the corresponding Settings are made according to the driver communication protocol, and the channel name can be freely named, but the serial communication parameters must be consistent with the communication parameters of the data acquisition end, as shown in figure 3-3-2.

Port: External device access KNX gateway by COM1.

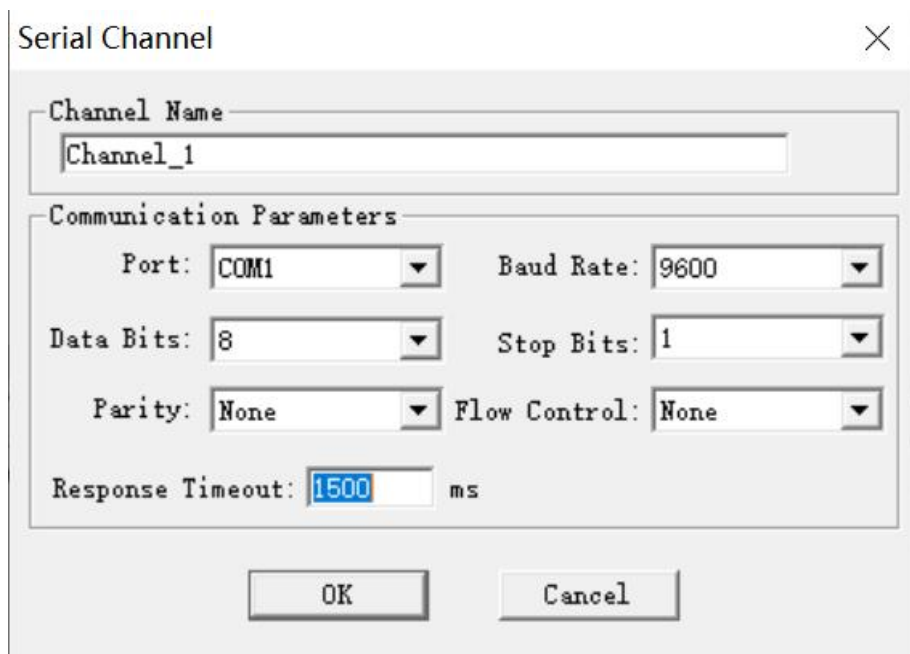


Figure 3-3-2 sets channel parameters

When the channel addition is complete, see figure 3-3-3.

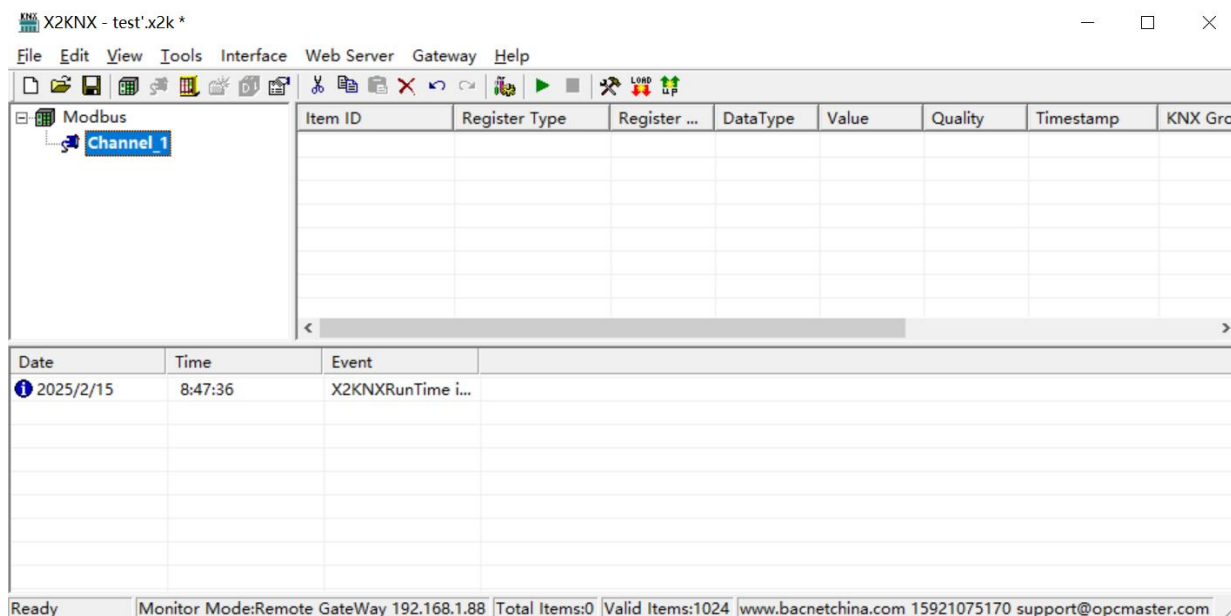


Figure3-3-3 Complete add channel

3.4 New Device

Select the current channel, right-click to select "new device" or click the toolbar , as shown in figure 3-4-1.

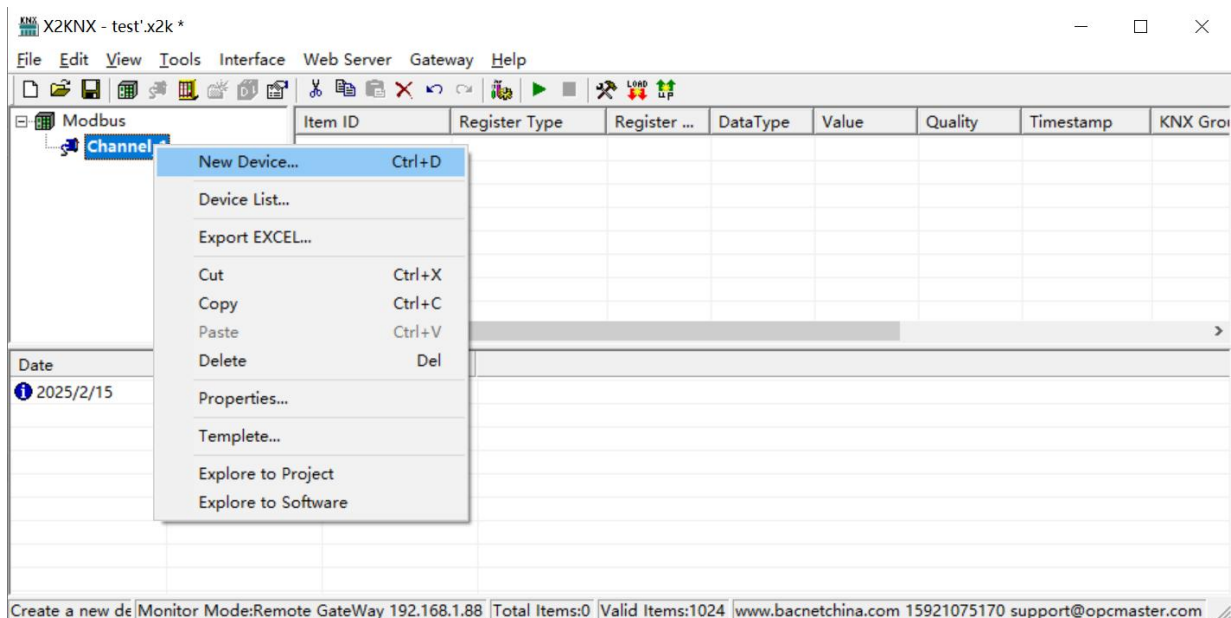


Figure 3-4-1 Select New Device

Set device-related properties in the pop-up dialog box. Under the communication protocol that supports group packet, in order to improve the communication speed, group packet communication can be realized under the continuous register address for

the same register type. When the device does not support group packet communication, the group packet parameters should be set to 0. In addition, when the response time of the device is slow, the time interval between data frames can be set, with the default frame interval set to 25 milliseconds. Note that the order adjustment is based on the order in which the high and low byte transfers are made when the device data is transferred. See figure 3-4-2.

Device ID: The station number of corresponding equipment.

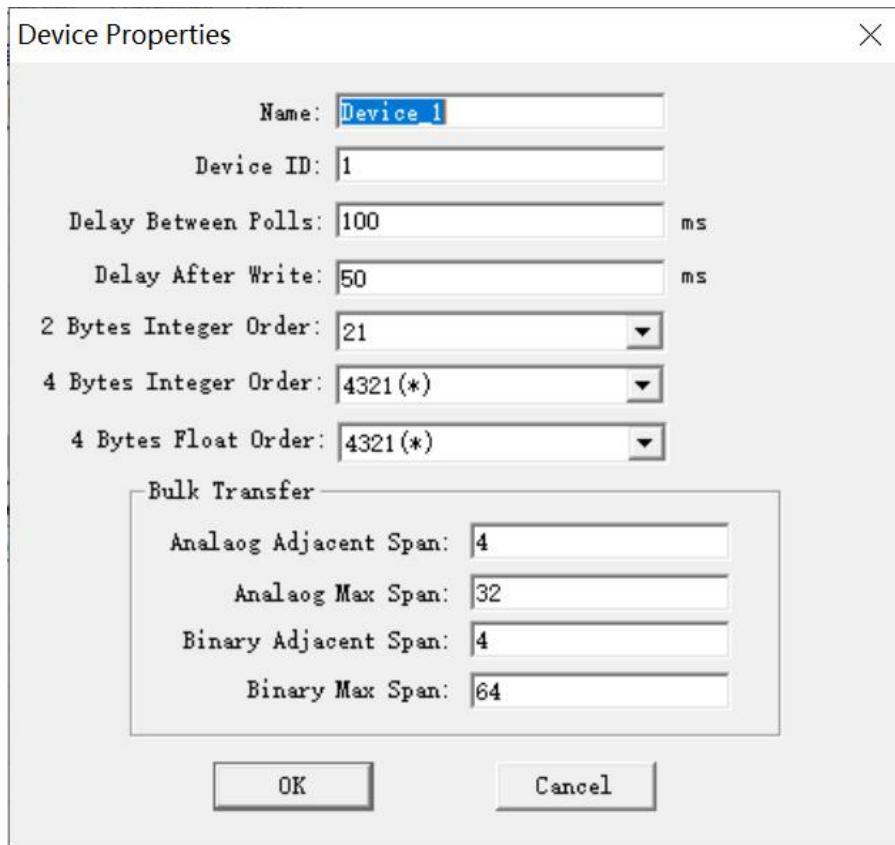


Figure 3-4-2 sets device properties

Click "ok" to complete adding the device, as shown in figure 3-4-3.

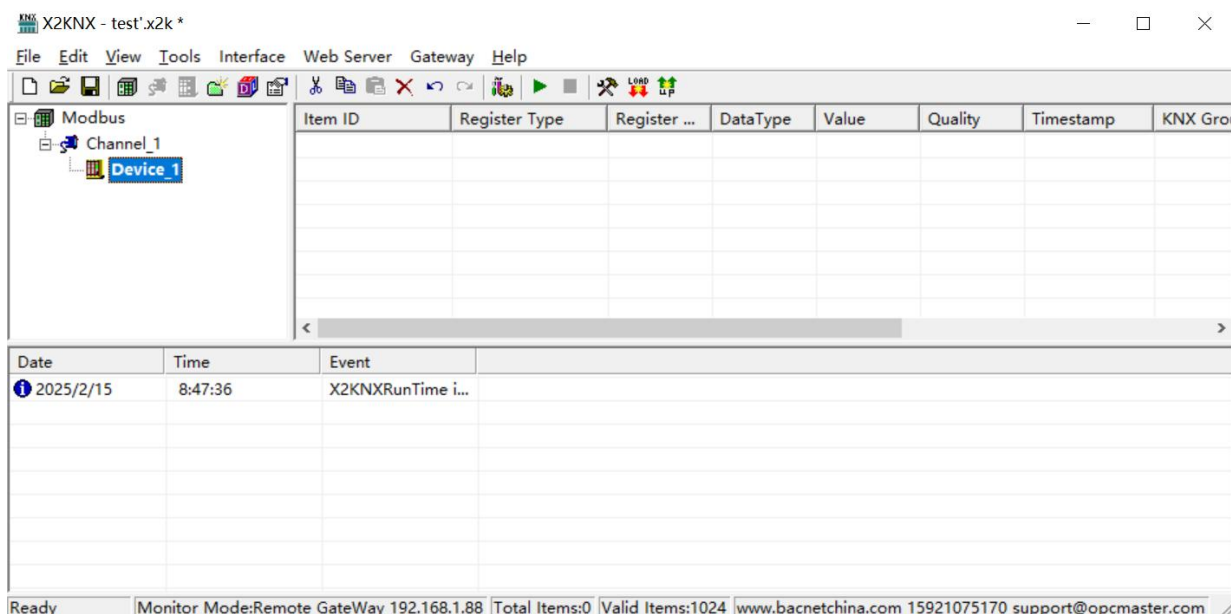


Figure 3-4-3 Complete New Device

3.5 New Tag

You can directly create a new label under the device (you can also create a group first, and then create a new label in the group), select the device and right-click to select a new label or click the toolbar icon , as shown in figure 3-5-1.

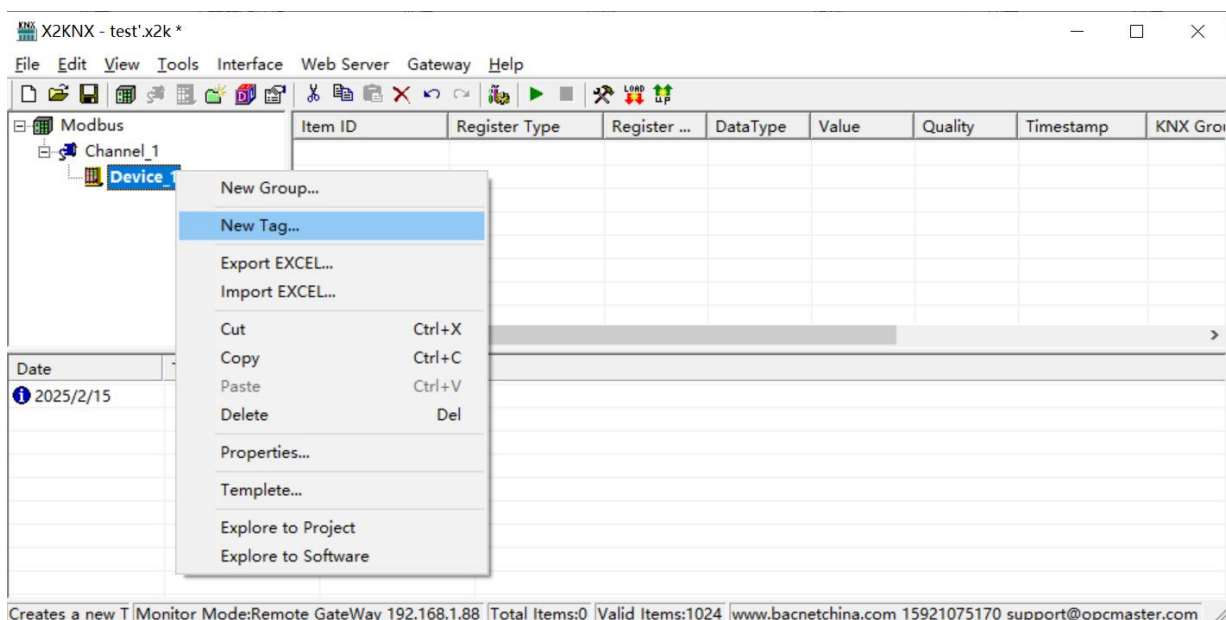
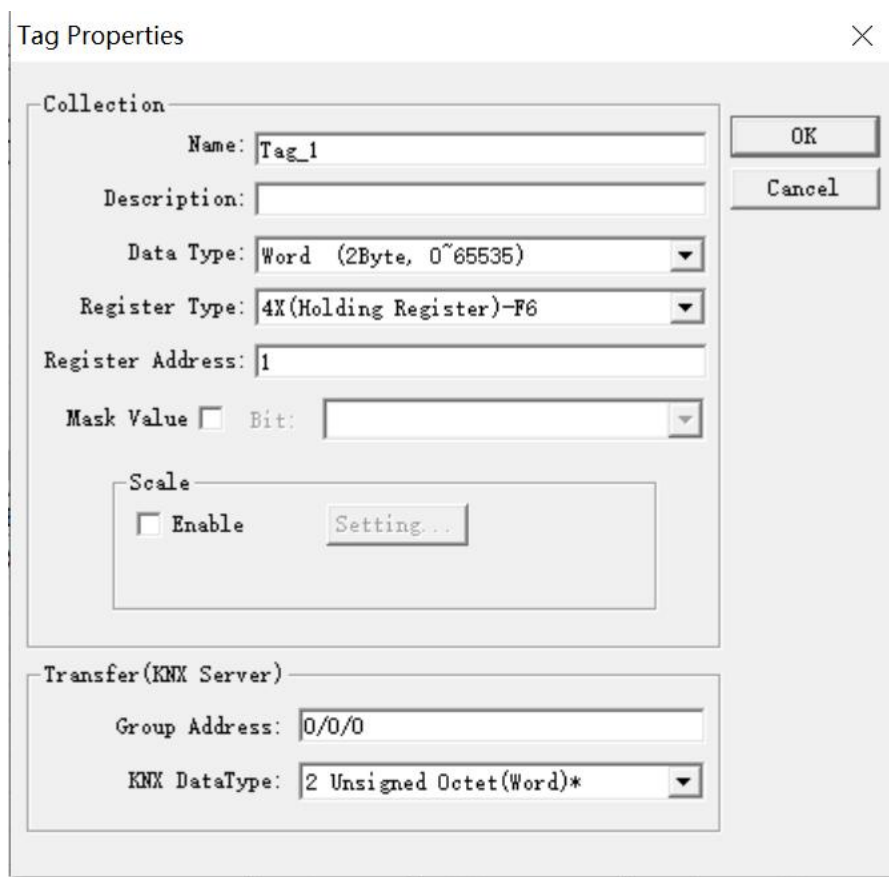


figure3-5-1 Select New Tag

Set the parameters of the collection end and transfer end in the pop-up dialog box, as shown in Figure 3-5-2.



The image shows a 'Tag Properties' dialog box with the following fields and options:

- Collection**
 - Name: Tag_1
 - Description: (empty)
 - Data Type: Word (2Byte, 0~65535)
 - Register Type: 4X(Holding Register)-F6
 - Register Address: 1
 - Mask Value ☐ Bit: (empty)
 - Scale**
 - ☐ Enable
 - Setting...
- Transfer(KNX Server)**
 - Group Address: 0/0/0
 - KNX DataType: 2 Unsigned Octet(Word)*

Buttons: OK, Cancel

figure3-5-2 New Tag Properties

Set the name, data type, register type, and register address of the collection end in the tag properties. The selected acquisition end register address in the above figure is 4x, address 1, and the data type is Word type. In addition, when the data type is Short, Word, Long, or DWord, values can be taken in bytes. For some special data, the linear transformation function can also be enabled to achieve linear amplification and reduction of the data.

Note that the initial address of the KNX server group starts from 0/0/1 and is maximum up to 31/7/255.

Register addresses use three-level addresses, Main Group0-31 (32 in total for X) Middle Group0-7 (8 in total for Y) Group Address1-255 (255 in total for Z)

Click "ok" to complete adding the label, as shown in figure 3-5-3.

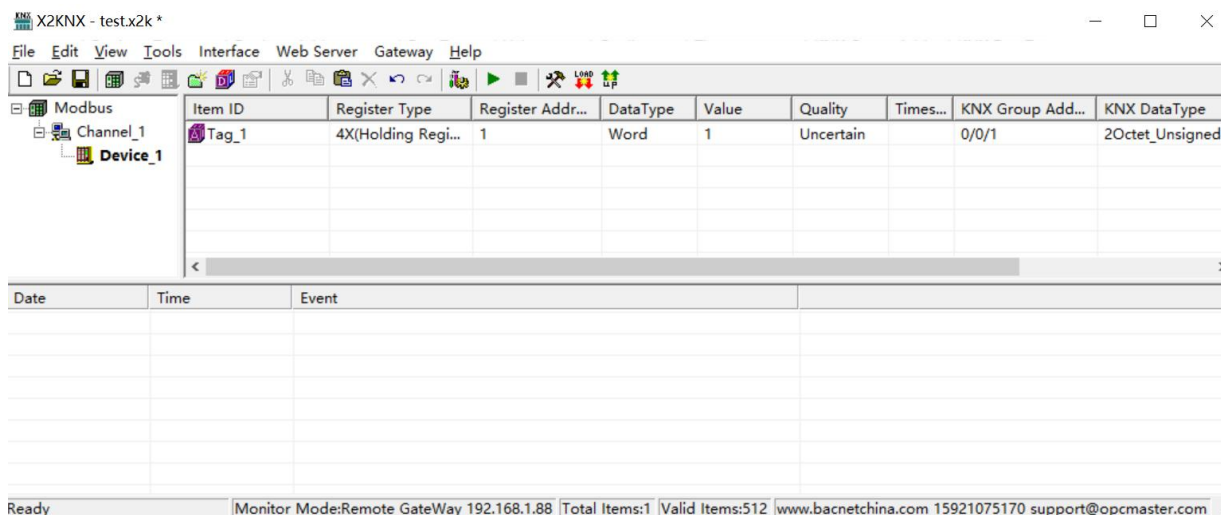


Figure 3-5-3. Adding labels is complete

Multiple points can be added one by one according to the above steps. It is recommended to copy and paste the toolbar. The specific operations are as follows:

(1) select the label to be copied, click the copy button in the toolbar, or right-click and select "copy" as shown in figure 3-5-4.

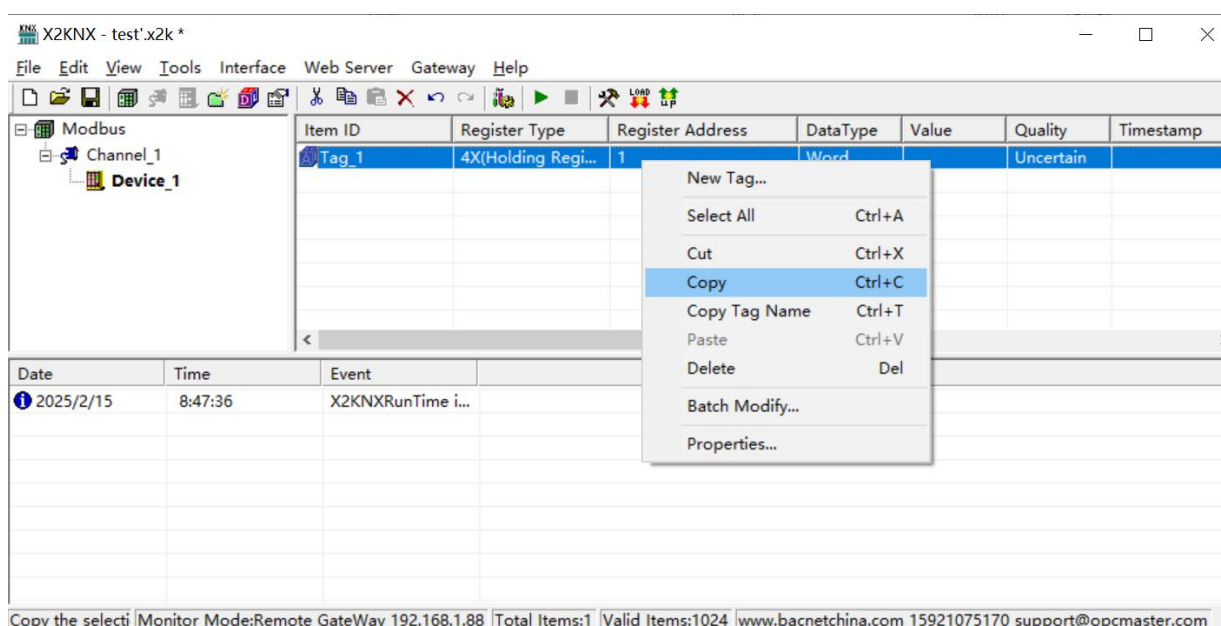


Figure 3-5-4 copies the current label

(2) right click on the blank and choose paste, as shown in figure 3-5-5.

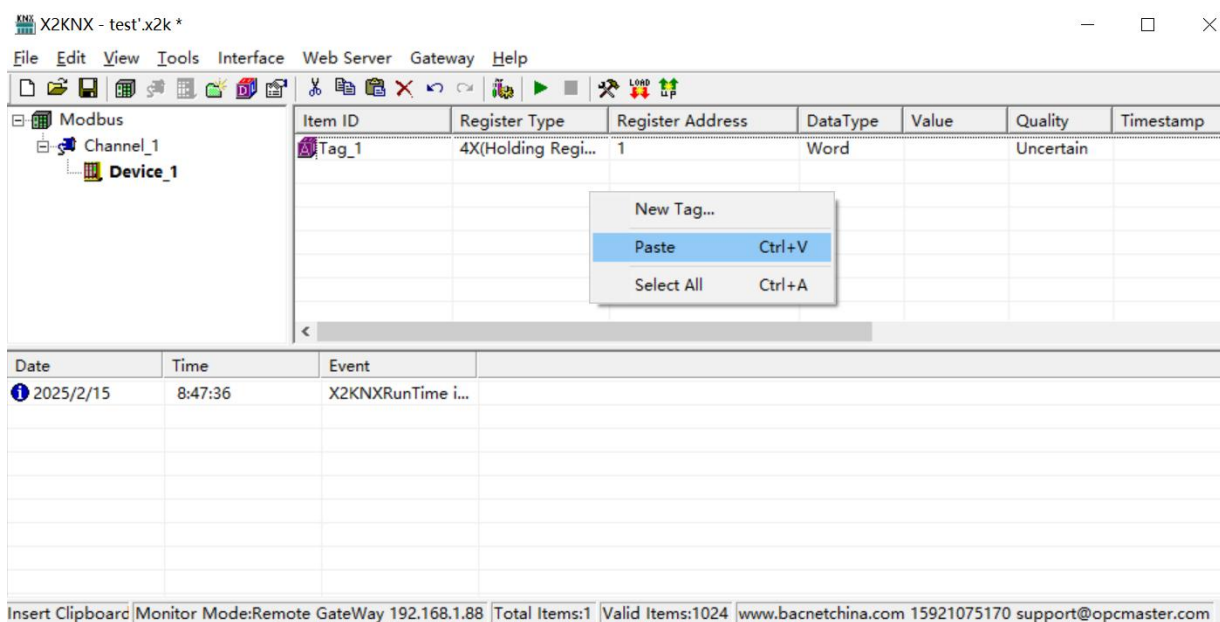


Figure 3-5-5 paste the label

Some parameters of the new tag (such as the address of Modbus register) will be generated automatically accordingly, which needs to be set according to the field situation, as shown in figure 3-5-6.

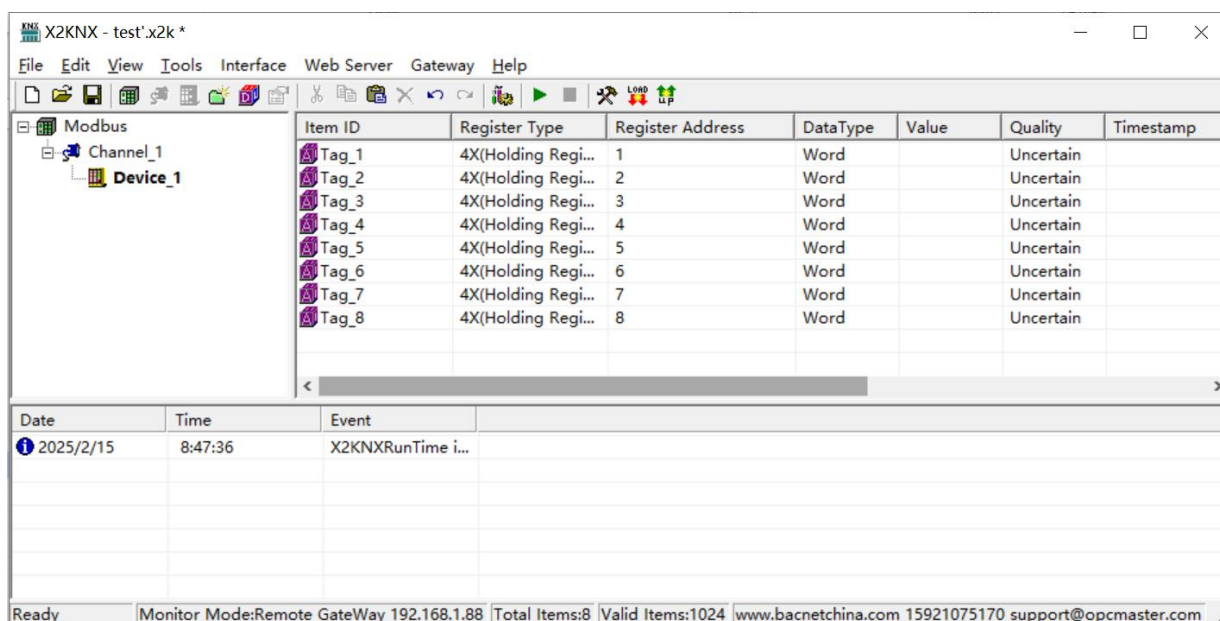
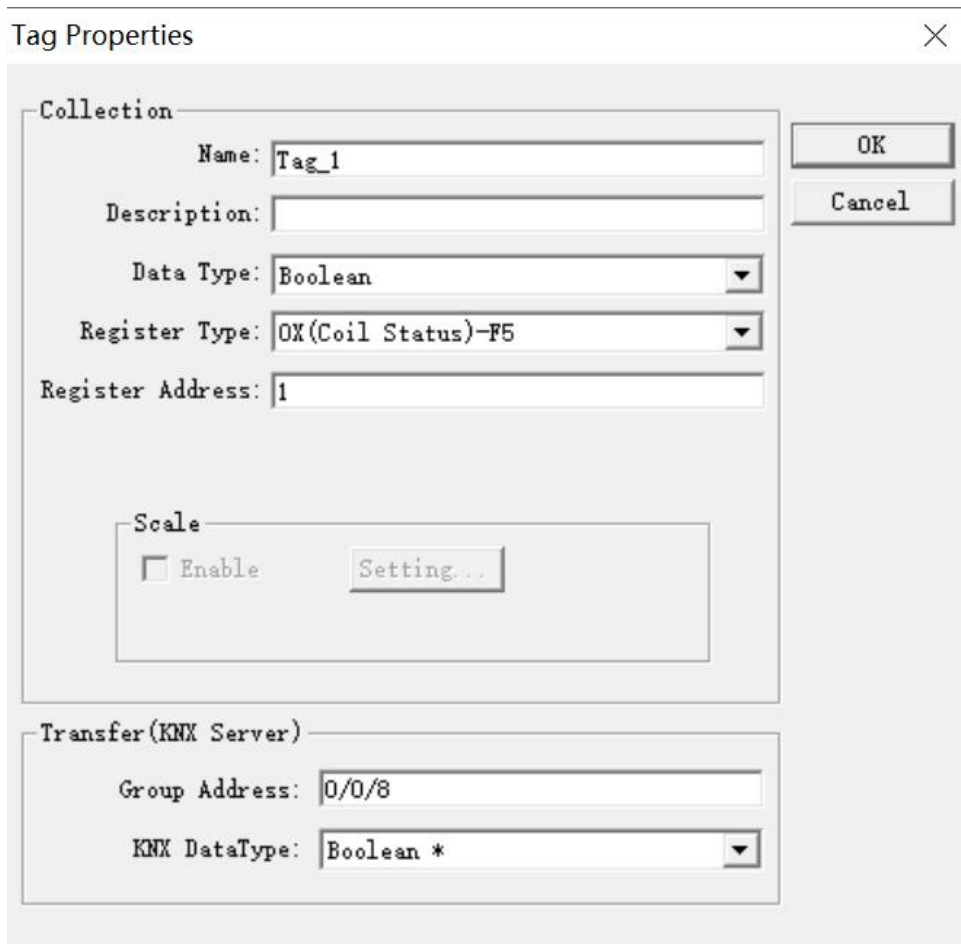


Figure 3-5-6 shows that the copy label is complete

In addition, editing can also be done in an Excel spreadsheet, and the project can be edited through import and export functions.

Create a new label under the newly created device, as shown in Figure 3-5-7.



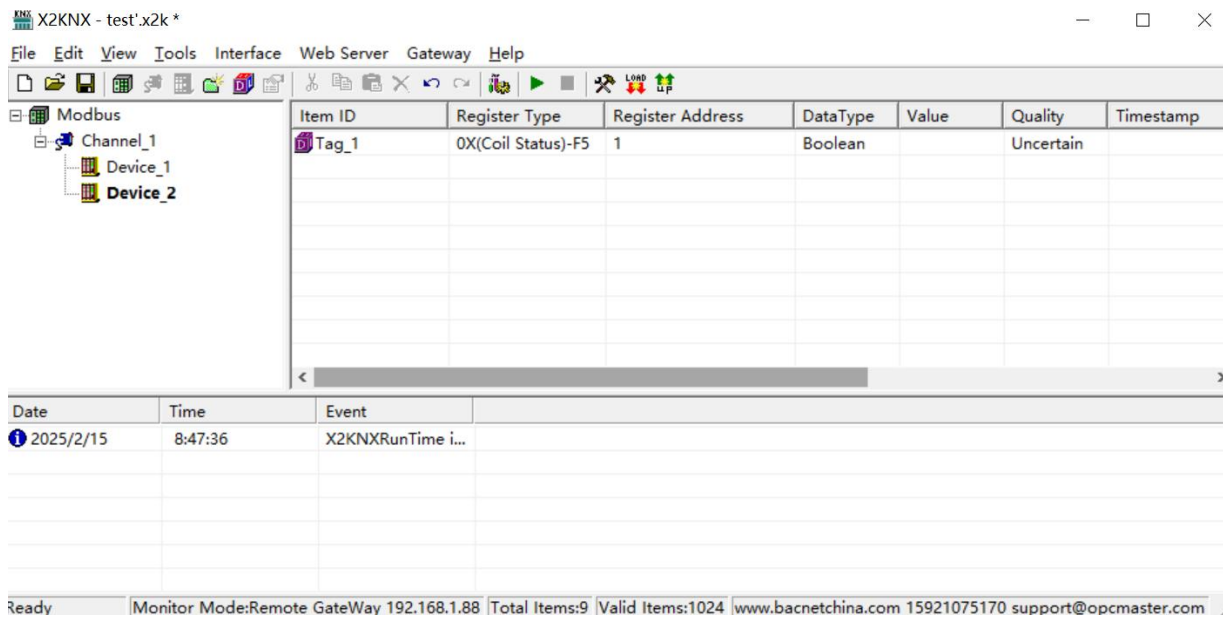
The 'Tag Properties' dialog box is shown with the following fields and options:

- Collection:**
 - Name: Tag_1
 - Description: (empty)
 - Data Type: Boolean
 - Register Type: 0X(Coil Status)-F5
 - Register Address: 1
- Scale:**
 - ☐ Enable
 - Setting... (button)
- Transfer (KNX Server):**
 - Group Address: 0/0/8
 - KNX DataType: Boolean *

Buttons: OK, Cancel

Figure 3-5-7 transfers the KNX parameter of the originator

Taking Boolean data type as an example, create a new label as shown in Figure 3-5-7.



The screenshot shows the X2KNX - test.x2k * application window. The 'Modbus' tree on the left shows 'Channel_1' with 'Device_1' and 'Device_2'. The main table displays the following data:

Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp
Tag_1	0X(Coil Status)-F5	1	Boolean		Uncertain	

The bottom status bar shows: Ready | Monitor Mode:Remote GateWay 192.168.1.88 | Total Items:9 | Valid Items:1024 | www.bacnetchina.com 15921075170 support@opcmaster.com

Figure 3-5-8 New label completed

Select the current device, right-click and choose "Export to Excel", as shown in

Figure 3-5-7.

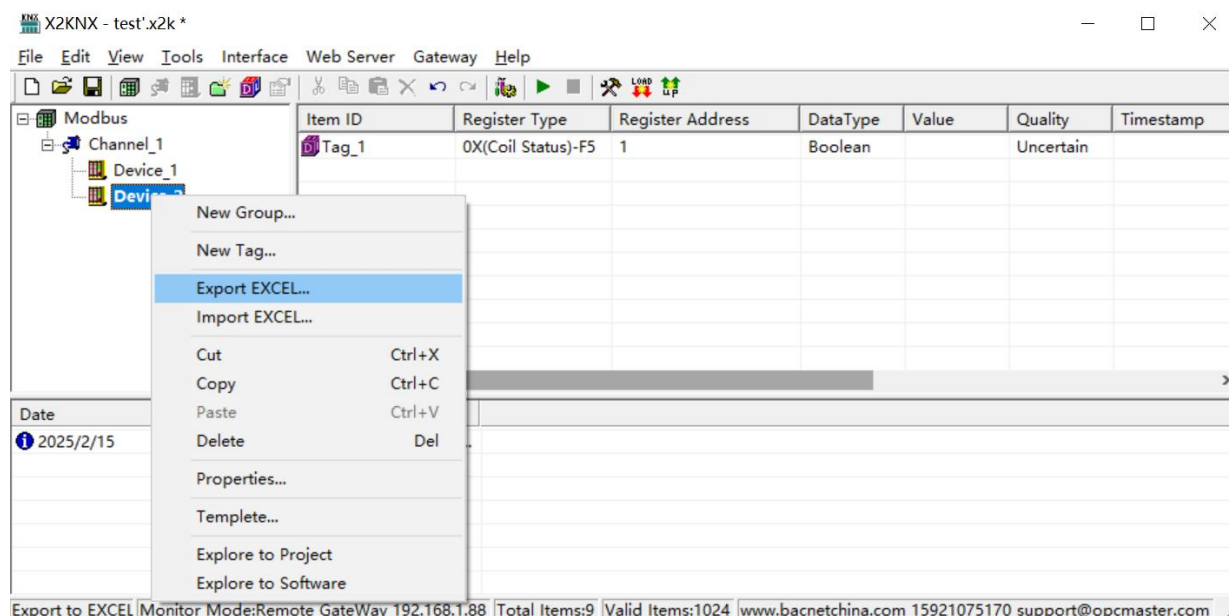


Figure 3-5-9 Choose to export EXCEL table

After saving the Excel sheet, open it as shown in Figure 3-5-10.

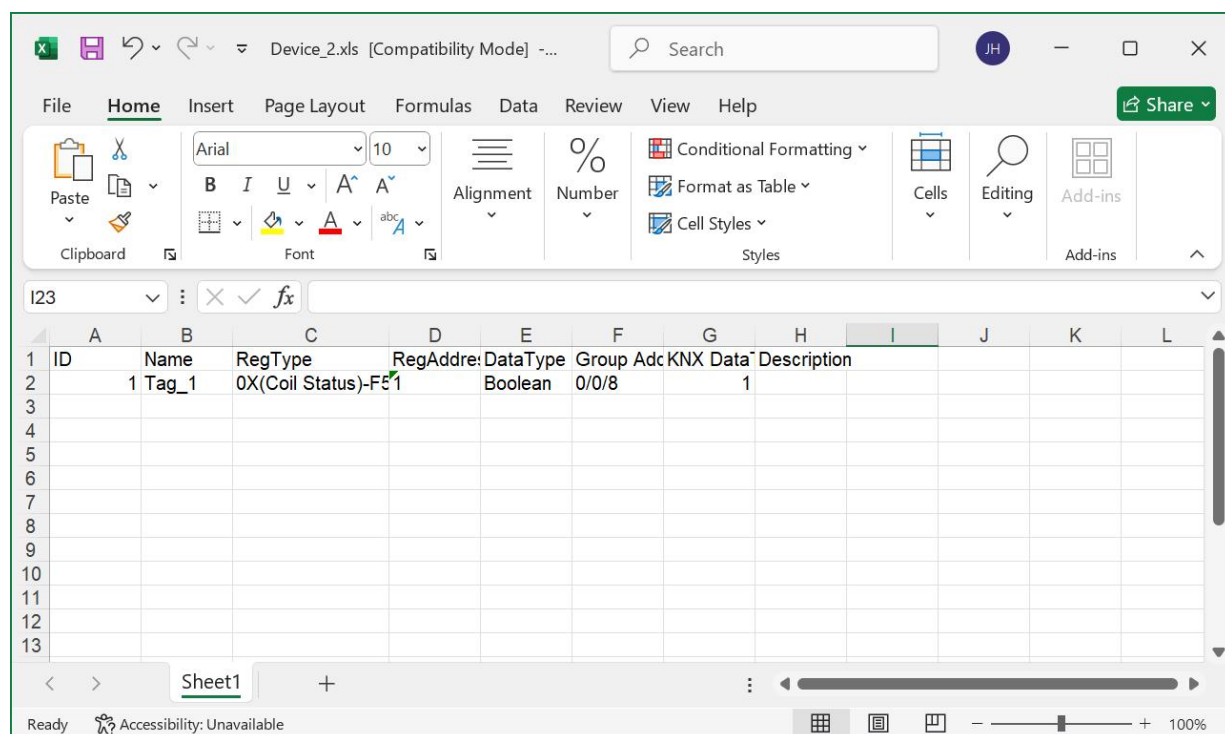


Figure 3-5-10 Open EXCEL sheet

Then perform batch editing in EXCEL, as shown in Figure 3-5-11.

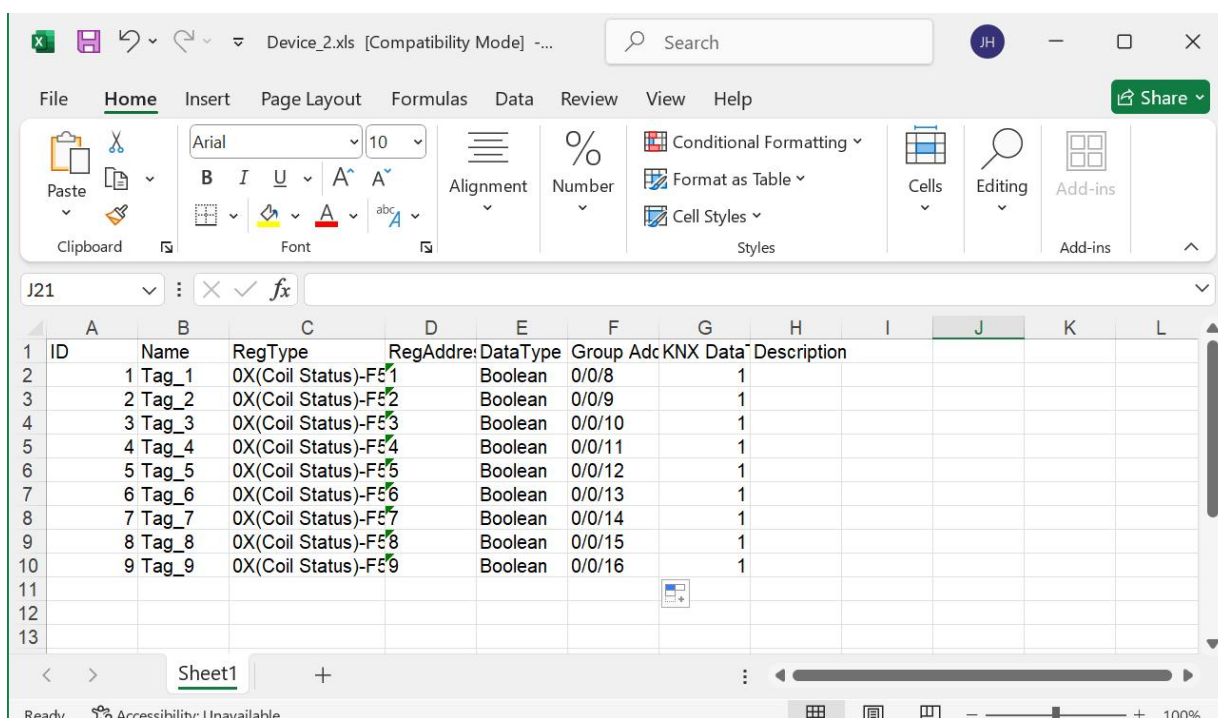


Figure 3-5-11 Edit EXCEL sheet

After editing, save the EXCEL table, right-click on the current device and select "Import EXCEL Table", as shown in Figure 3-5-12.

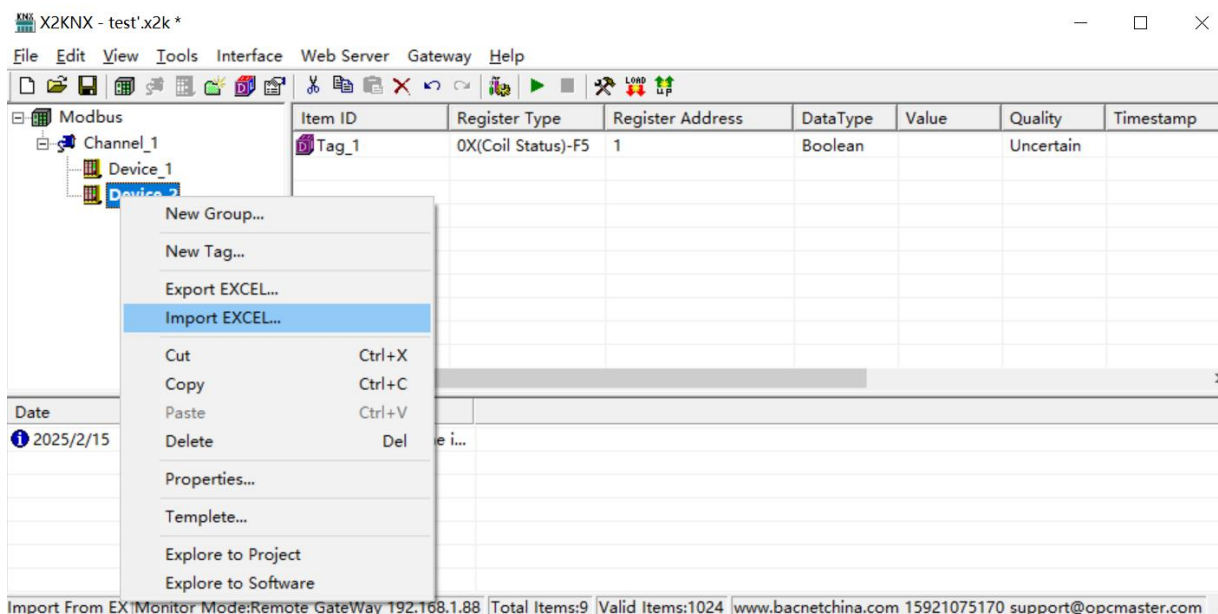


Figure 3-5-12 Select to import EXCEL table

The completion of importing the EXCEL table is shown in Figure 3-5-13.

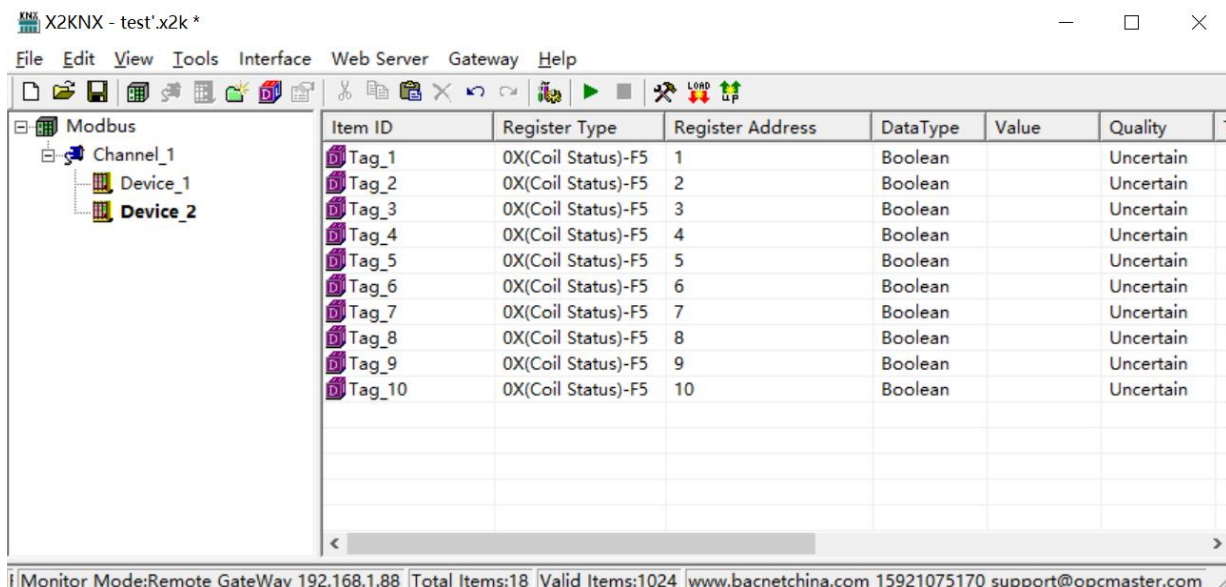


Figure 3-5-13 Import EXCEL table completed

3.6 KNX Server Settings

3.6.1 KNX server

The default factory port number for KNX gateway is 3671. If the user needs to change it, they can click on "KNX Server" settings, as shown in Figure 3-6-1.

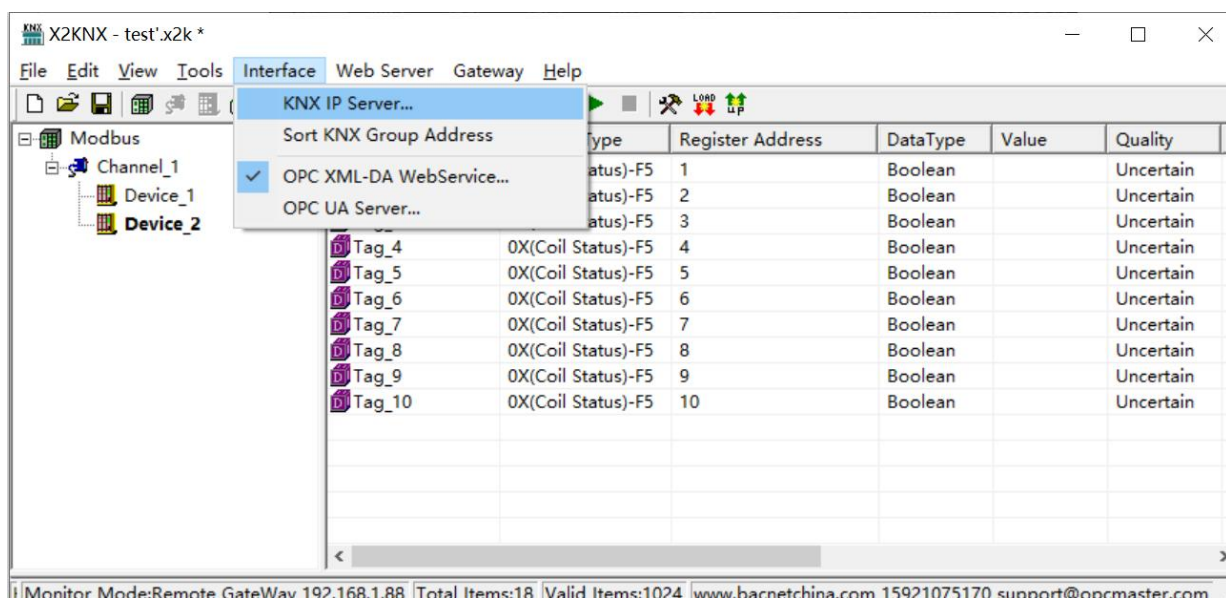


Figure 3-6-1: Selecting KNX Settings

In the pop-up dialog box, the KNX server settings default to port number 3671 and

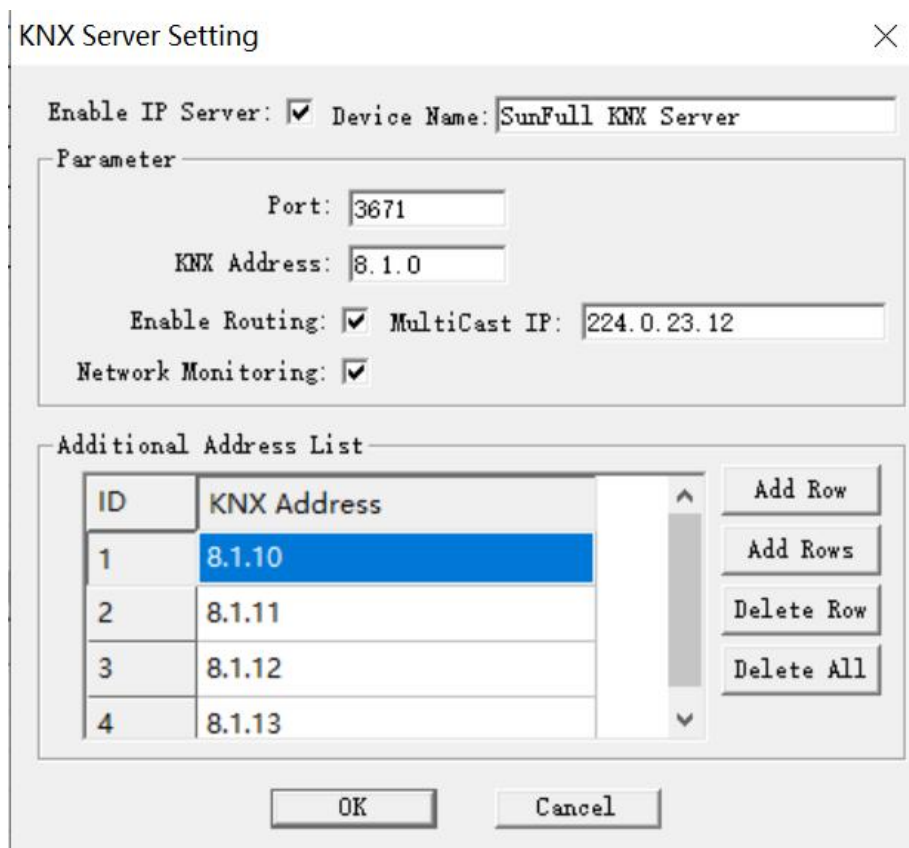
do not need to be changed. As shown in Figure 3-6-2.

KNX physical address: represents the physical address of the gateway.

KNX routing must be enabled, and the default multicast IP is 224.0.23.12

Enable network monitoring: Network monitoring allows bus monitoring, while disabling it means it cannot be monitored (providing tunnel connections on the KNX bus monitor layer (set to true) or rejecting such connection requests (set to false)).

Allow access to address list: The number of concurrent connections open to the server. The client can monitor the gateway simultaneously through the following physical addresses. Open at least two lists. (Contains a list of KNX individual addresses assigned to KNXnet/IP tunnel connections (may be empty). A single address must match the KNX subnet (region, line), otherwise it will not be used! If no additional address is provided, a single address of the service container is used, and the maximum value of a tunnel connection opened at once is limited to 1.



KNX Server Setting

Enable IP Server: ☒ Device Name: SunFull KNX Server

Parameter

Port: 3671

KNX Address: 8.1.0

Enable Routing: ☒ MultiCast IP: 224.0.23.12

Network Monitoring: ☒

Additional Address List

ID	KNX Address
1	8.1.10
2	8.1.11
3	8.1.12
4	8.1.13

Add Row

Add Rows

Delete Row

Delete All

OK Cancel

Figure 3-6-2 KNX parameter settings

3.6.2 Automatically arrange register addresses

The function of "automatically arranging register addresses" is that after the user completes the allocation, if the associated KNX server register addresses are messy and may have duplicates, they can directly click the "automatically arranging register addresses" function. The system will automatically sort the registers according to their types, saving allocation time, as shown in Figure 3-6-3.

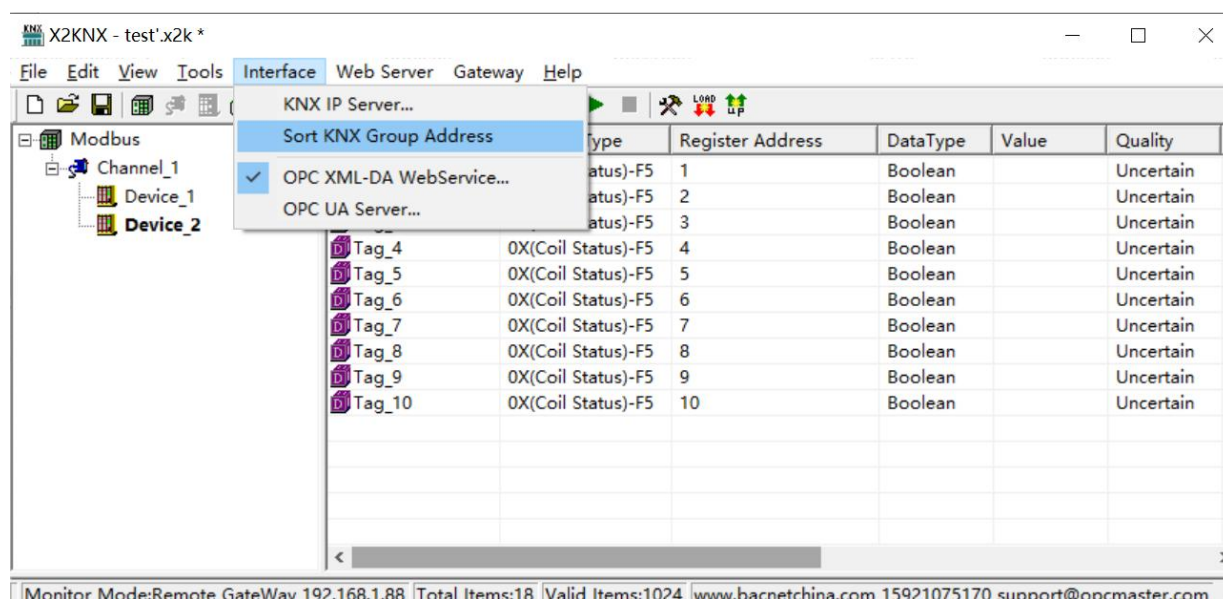


Figure 3-6-3 Automatic Register Address Arrangement

3.7 Select monitoring mode

The monitoring mode is divided into local mode and gateway mode. The local mode refers to running pure software gateway program X2KNXRuntime.exe on PC and realizing protocol conversion function on PC. Gateway mode refers to the hardware gateway. Configuration engineering is uploaded to the hardware gateway on the PC to realize protocol conversion function in the hardware gateway and monitor the communication status of the hardware gateway on the PC. You can select the monitoring mode under the toolbar "monitoring mode", or double-click the "monitoring mode" in the bottom status bar to switch the mode, as shown in figure 3-7-1.

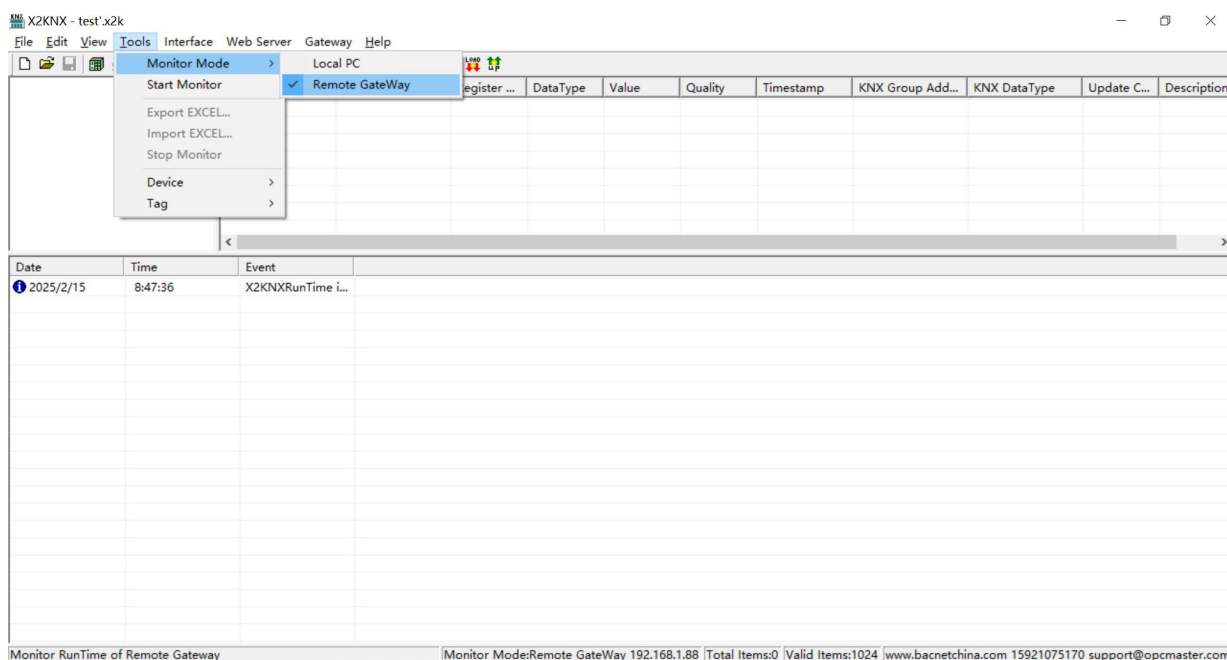


Figure 3-7-1 Select Monitor Mode

Local mode is only used for data collection and debugging on PC, without forwarding function, and has a 30 minute limit.

3.8 X2KNXRunTime

After the project configuration is completed, click the menu bar "Tools" in local mode to select "Start Monitoring" or click the toolbar icon  (note that the X2KNXRunTime program is enabled only when the soft gateway is used on the PC or during simulation), as shown in figure 3-6-1.

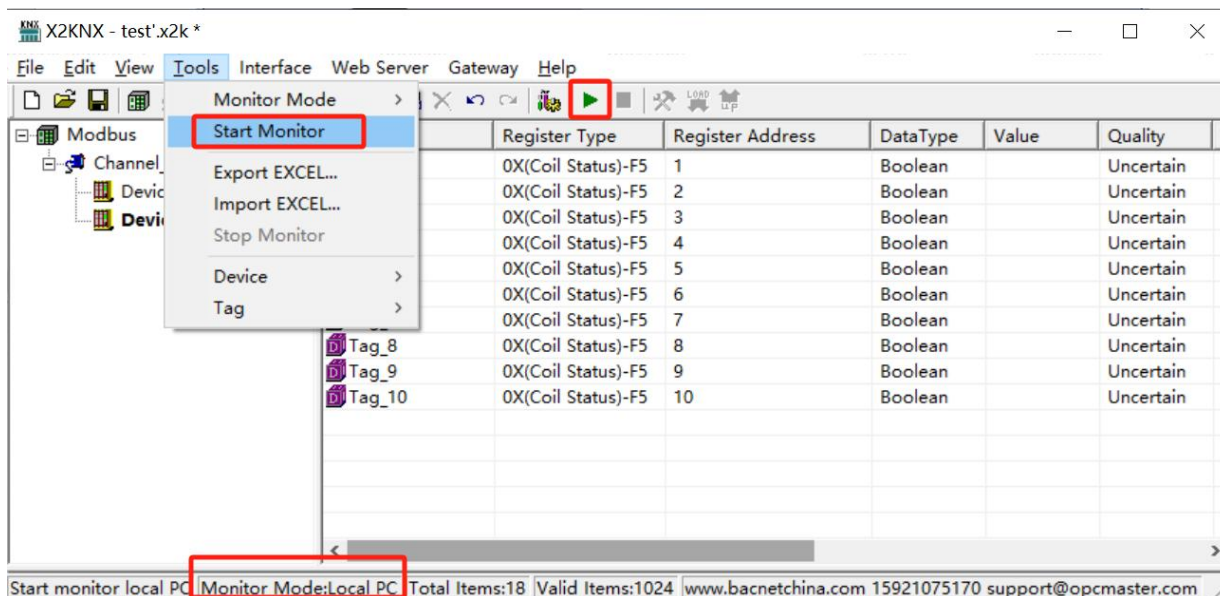
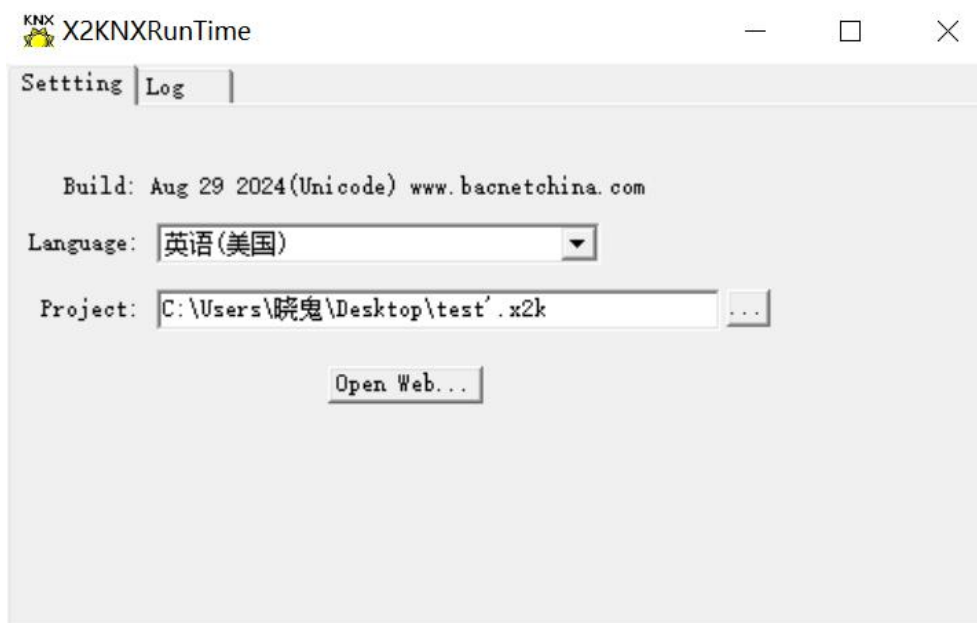


Figure 3-6-1 select start monitoring

X2KNXRunTime running time program will then be started. In normal use, it only needs to be started in the background to realize the function of data collection on PC. Click the login page to browse the local WEB server. If some Internet explorer browser opens a blank page, you can refresh the page, as shown in figure 3-6-2.



In the X2KNX software monitoring, you can see that some real-time data on the device is consistent with the data on the interface, as shown in figure 3-6-4.

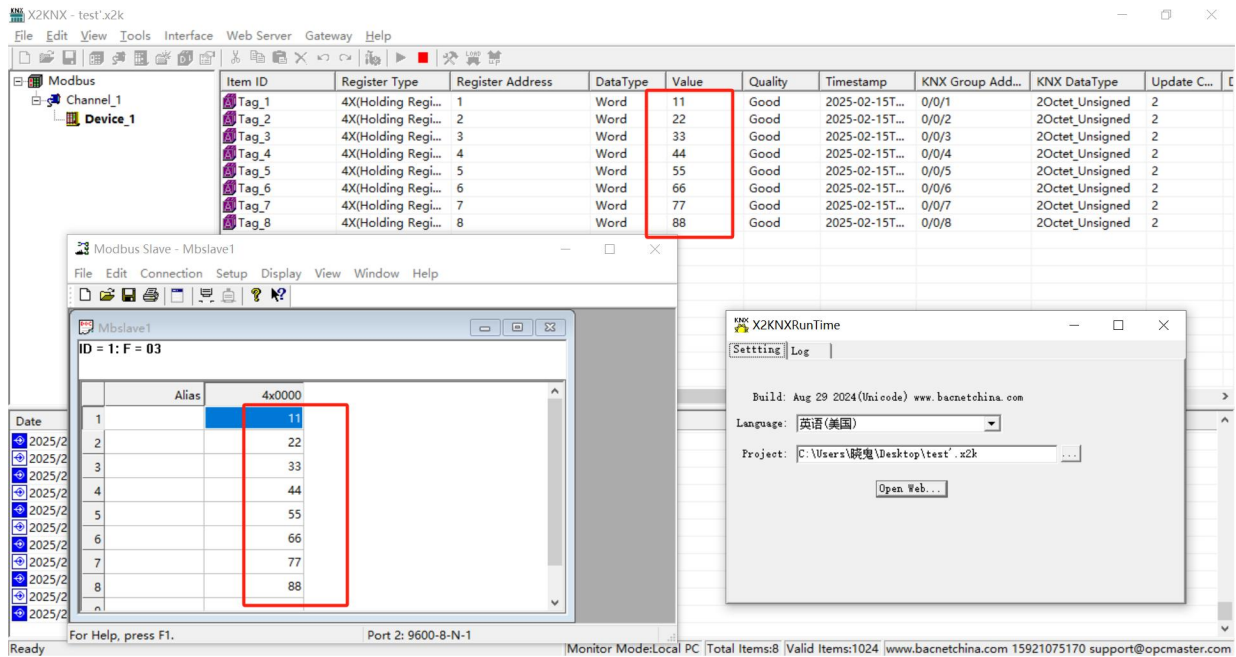


Figure 3-6-4 data collection was successful

3.9 Upload project to gateway

After the project is configured and the test on PC is ok, the project can be uploaded to the hardware gateway of the next computer (note: the upload engineering function is effective in gateway monitoring mode). In the gateway mode, click "gateway" in the menu bar to select upload or click the toolbar , as shown in figure 3-8-1.

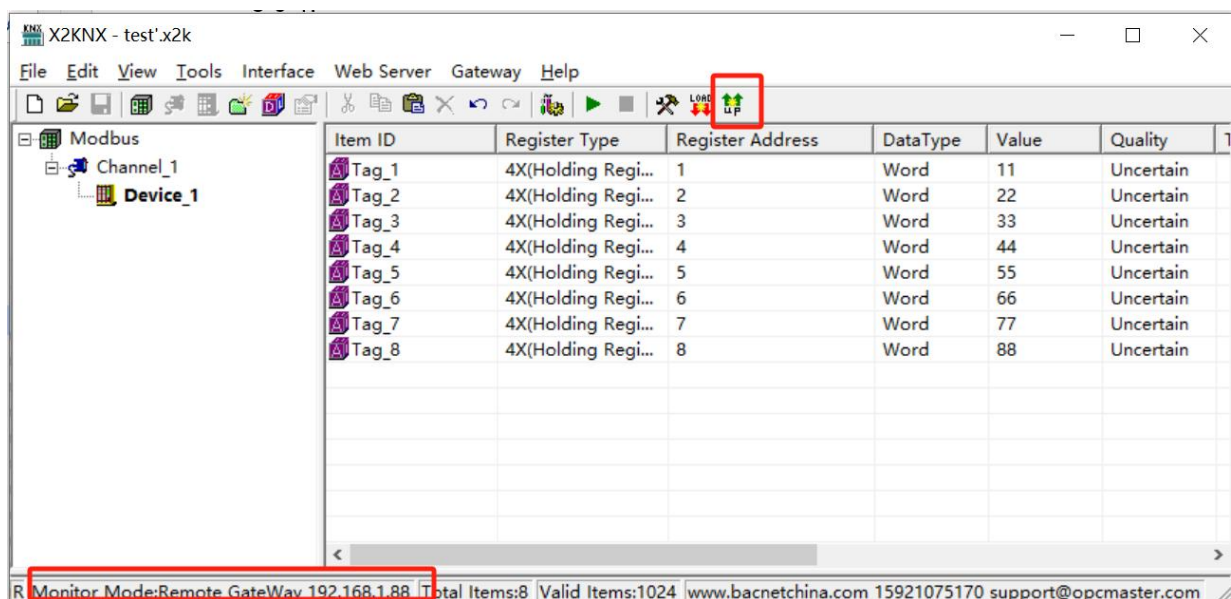


Figure 3-8-1 Select upload the project

Enter the gateway IP address in the popup dialog box (note: the IP address of the gateway must be correct, the default IP address of the gateway factory is 192.167.1.88, the IP address on the PC should be set to the same network segment, Ping can be uploaded after.), click "upload". After successful upload, a dialog box will pop up to indicate successful upload, as shown in figure 3-8-2.

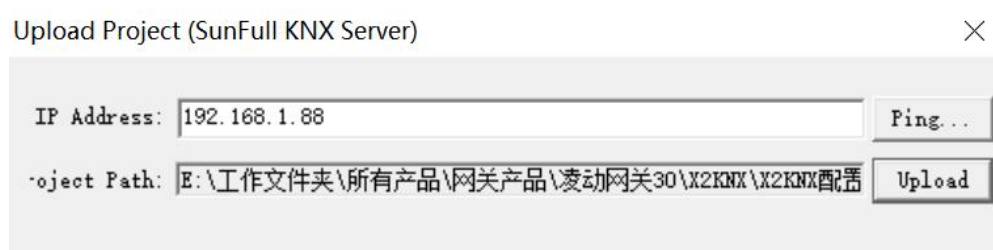


Figure 3-8-2 Upload project parameter Settings

3.10 Gateway Setting

In gateway monitoring mode, click "gateway" in the menu bar, select "parameter setting", and set hardware gateway configuration parameters in the pop-up dialog box, as shown in figure 3-10-1.

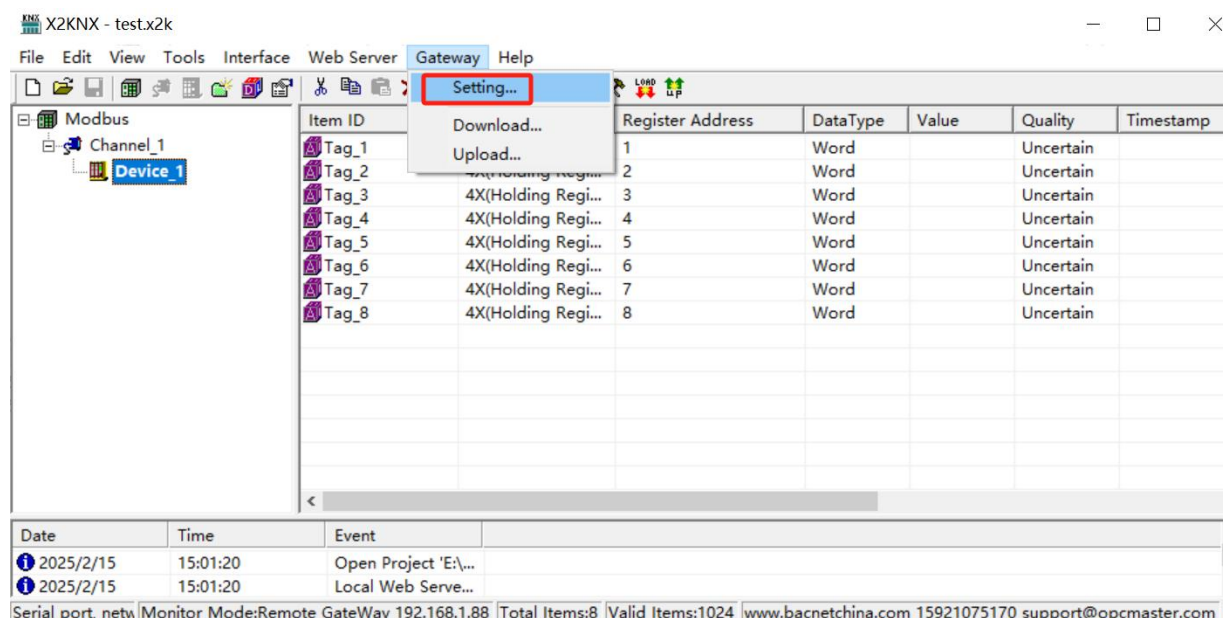


Figure 3-10-1 select Gateway setting

Network port settings: You can change the IP address of the hardware gateway. The default IP address for the gateway is 192.167.1.88, the subnet mask is

255.255.255.0, and the default gateway is 192.167.1.1. After setting, click OK. The 'Ping' function tests whether ping the current IP address is successful. The 'login webpage function' can log in to the web server where the gateway is located, as shown in Figure 3-10-2.

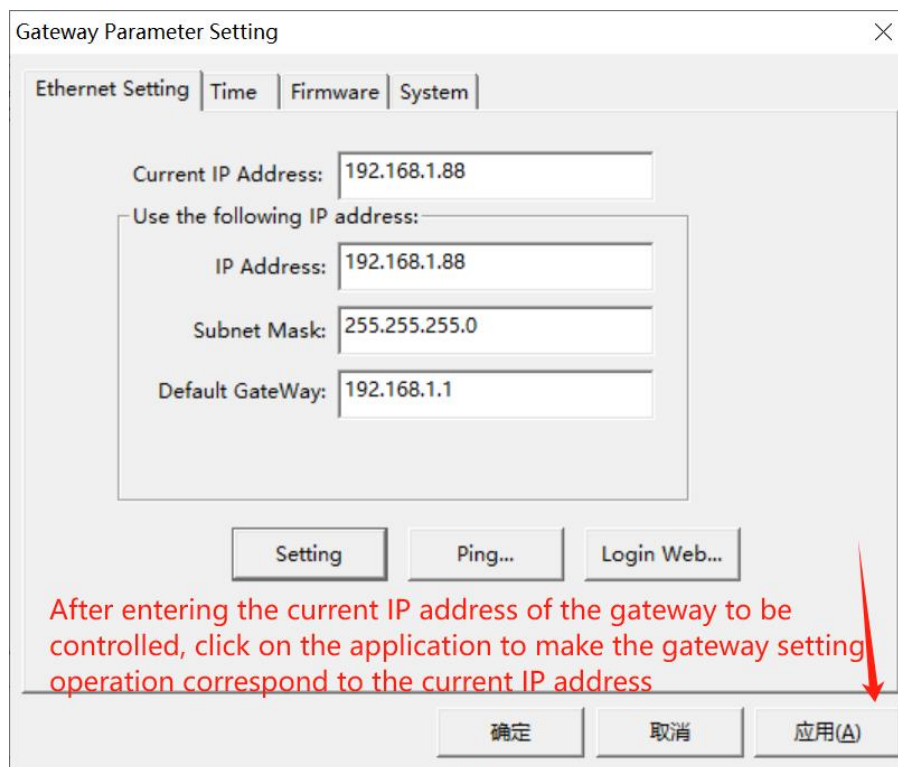
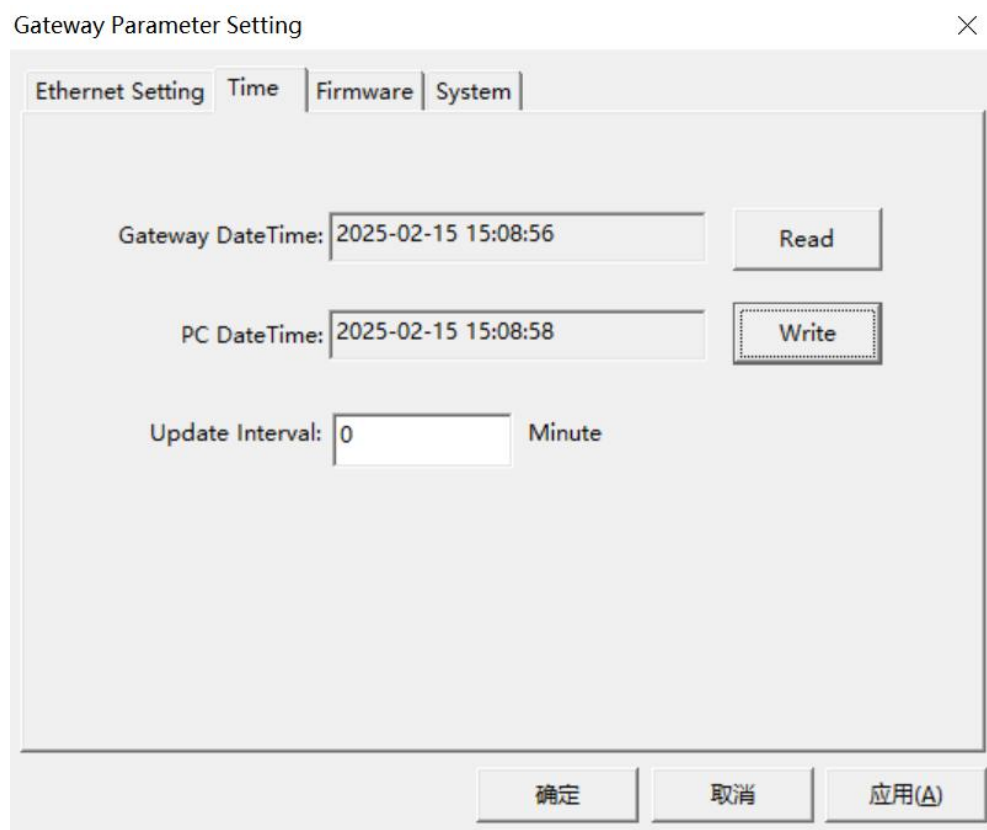


figure 3-10-2 Network port settings

Note: The default IP address for the gateway at the factory is 192.167.1.87. If the user is changing the IP address for the first time, they only need one Ethernet cable (cross or direct connection) to connect with the gateway. You need to first set the PC to be on the same network segment as the gateway, then enter the current IP address 192.167.1.88 of the gateway in the current IP address text box, and click apply to set the gateway parameters to correspond to the gateway of the current IP address, and then set a new IP address.

System Time: It can read the current system time of the hardware gateway. If the time does not match the normal time, you can click the "Write" function to refresh the hardware gateway system time. The automatic update cycle refers to the interval between updating the system time of the hardware gateway to the underlying end

device. This function can only be used by special sea PLCs. In other cases, it can be set to 0. As shown in Figure 3-10-3.



Gateway Parameter Setting

Ethernet Setting | Time | Firmware | System

Gateway DateTime: 2025-02-15 15:08:56 Read

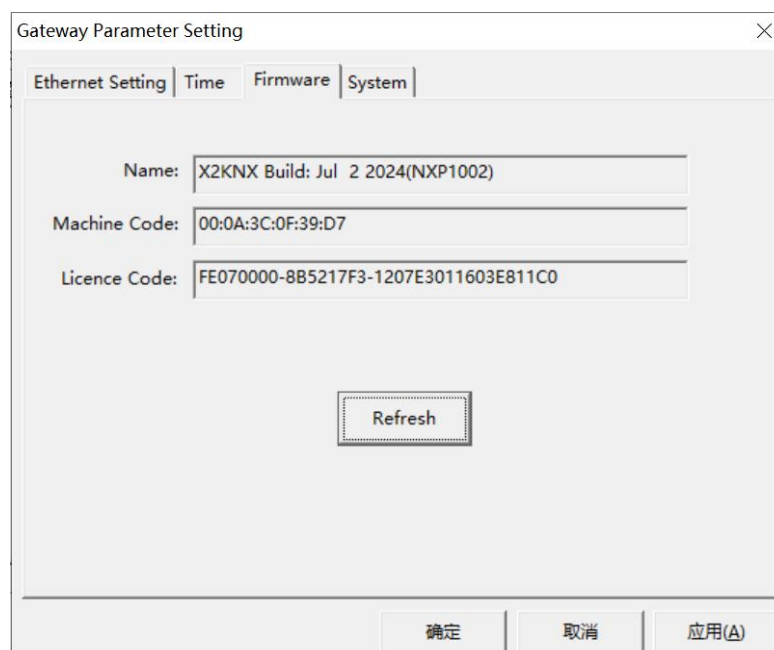
PC DateTime: 2025-02-15 15:08:58 Write

Update Interval: 0 Minute

确定 取消 应用(A)

Figure 3-10-3 Time

Firmware information: you can view firmware information burned into the hardware gateway, as shown in figure 3-10-4.



Gateway Parameter Setting

Ethernet Setting | Time | Firmware | System

Name: X2KNX Build: Jul 2 2024(NXP1002)

Machine Code: 00:0A:3C:0F:39:D7

Licence Code: FE070000-8B5217F3-1207E3011603E811C0

Refresh

确定 取消 应用(A)

Figure 3-10-4 Firmware Information

System: 1. View system memory usage (this feature automatically refreshes gateway memory information every 5 seconds).

2. Restart the gateway remotely.

3. Delete configuration project (delete the current gateway configuration project).

4. Backup configuration project (can backup the current project to the isolation zone).

5. Restore configuration project (restore the project that the user has already backed up). The project can be backed up to the isolation zone to prevent accidental uploading of incorrect projects, which can be quickly restored. Secondly, it is convenient for debugging. After the user completes the table and backs up the project, if there are any modifications, they can quickly restore them. As shown in Figure 3-10-5.

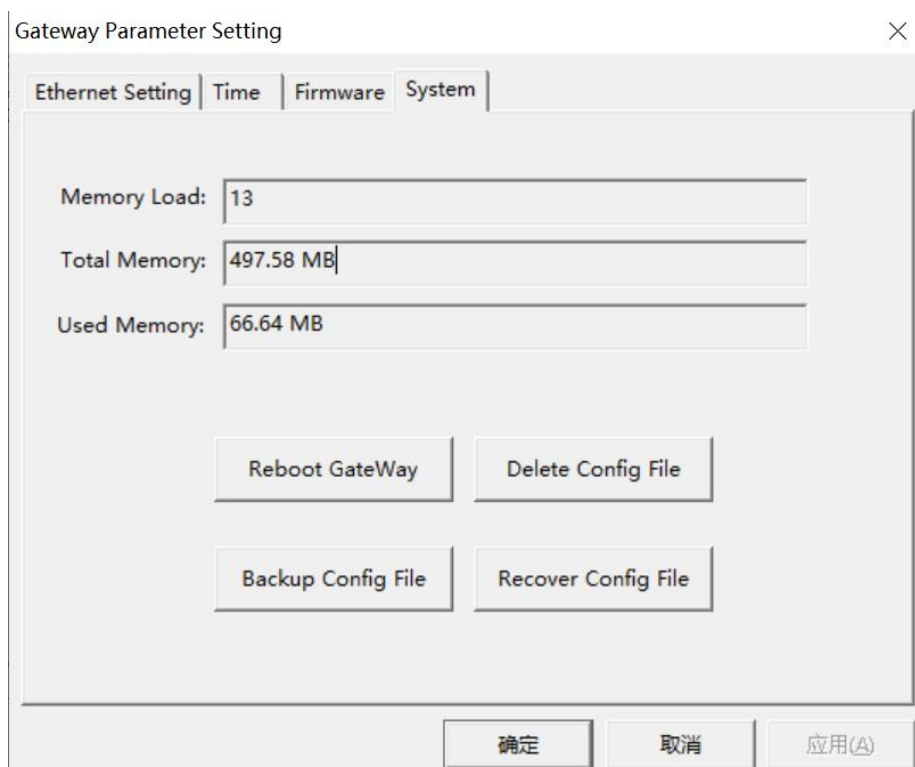


Figure 3-10-6 System Setting

The above functions can also be accessed through a web server and set up on the

webpage.

3.11 Download Project to PC

Download project is to download the last configured project from the hardware gateway to the PC (note: the download project function is effective in gateway monitoring mode). On the PC, you can edit the project and view real-time data for debugging. Click "gateway" to select "download project", as shown in figure 3-11-1.

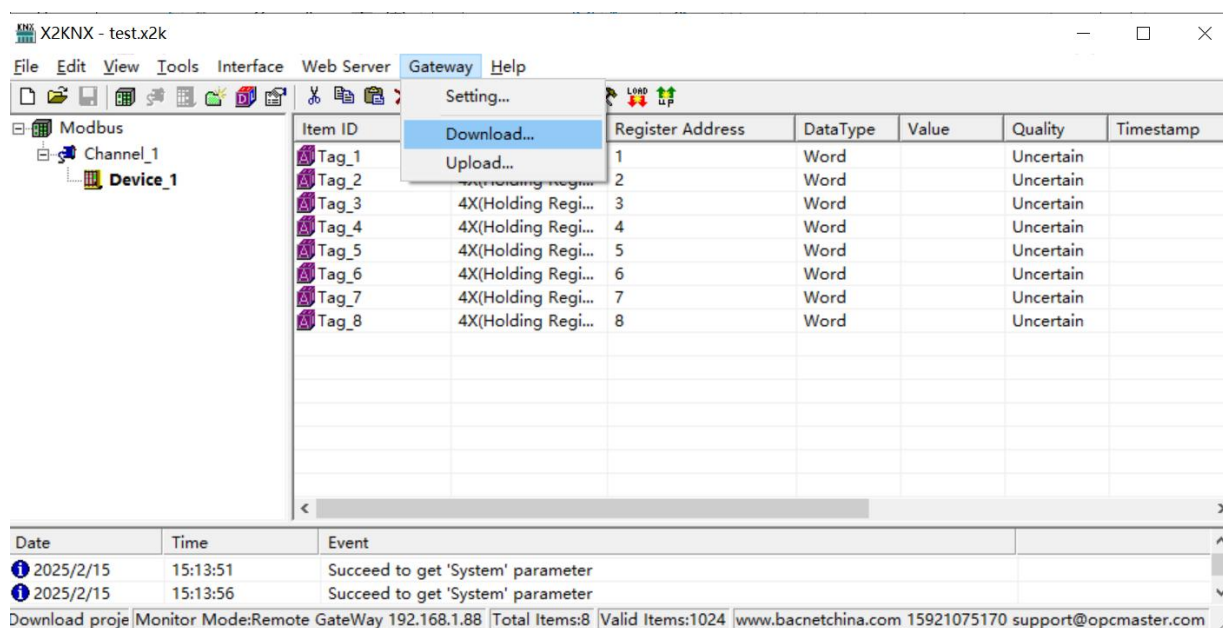


Figure 3-11-1 Download the Project

Enter the gateway IP address in the pop-up dialog box to download the current project from the gateway (users can also download the project by logging into the gateway's WEB server), as shown in figure 3-11-2.

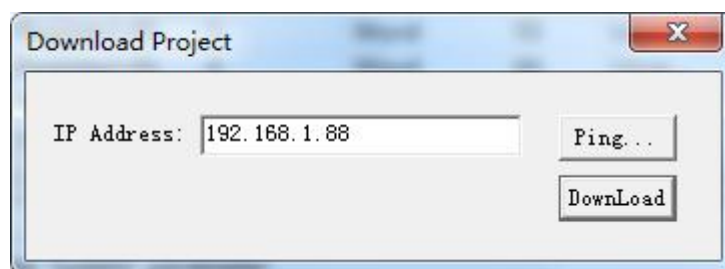


Figure 3-11-2 Download Project

In the pop-up dialog box, enter your username and password. The username

defaults to "admin" and the password defaults to "admin123456", as shown in Figure 3-11-3. After the gateway is online and successfully entered, the system parameters related to the gateway can be set.

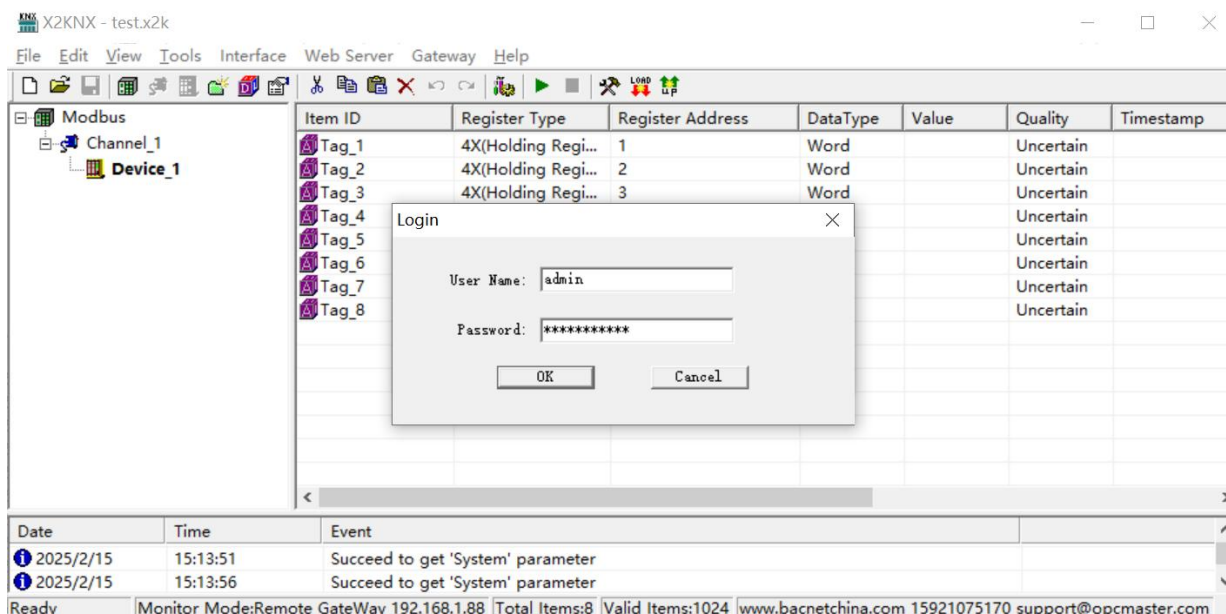


Figure 3-11-3 Enter username and password

Users can also download projects by logging into the gateway's web server.

3.12 Software licensing

The hardware gateway has been authorized at the factory.

The configuration software is used to configure the project and provide 30 minutes of local simulation monitoring for debugging. After configuring the project, upload it to the gateway and monitor it through the hardware gateway, so the software does not require authorization.

3.13 Timer and Timer Group List

3.13.1 Timed Group List

The timed group list function is designed to facilitate user management of points within the same time period. It allows users to consolidate the scheduled points within a

group, making it easier for them to view and manage. The timing group list also refers to the internal clock of the gateway, so please calibrate the gateway's time before using the timer function.

Click on the menu bar "Monitoring Objects" and select "Timer Group List" or the shortcut key icon "" in the pop-up dialog box to enter the timer group list, as shown in Figure 3-13-1:

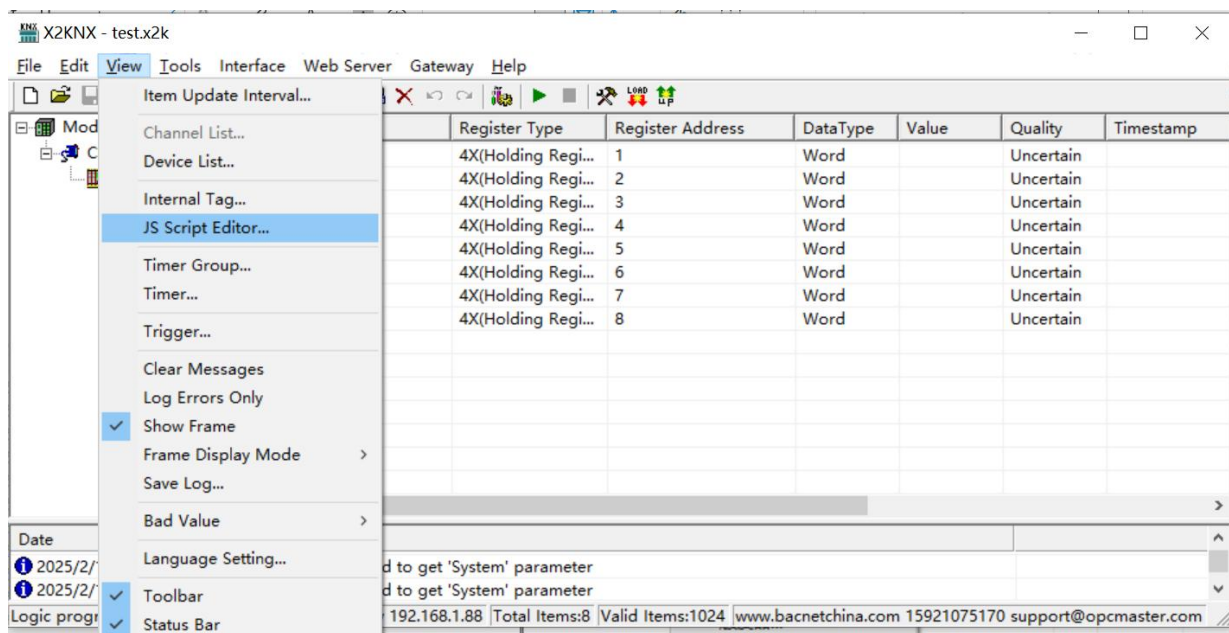


Figure 3-13-1 Timed Group List Menu Bar

In the pop-up "Timer Group List" dialog box, right-click and select "New Timer Group", as shown in Figure 3-13-6.

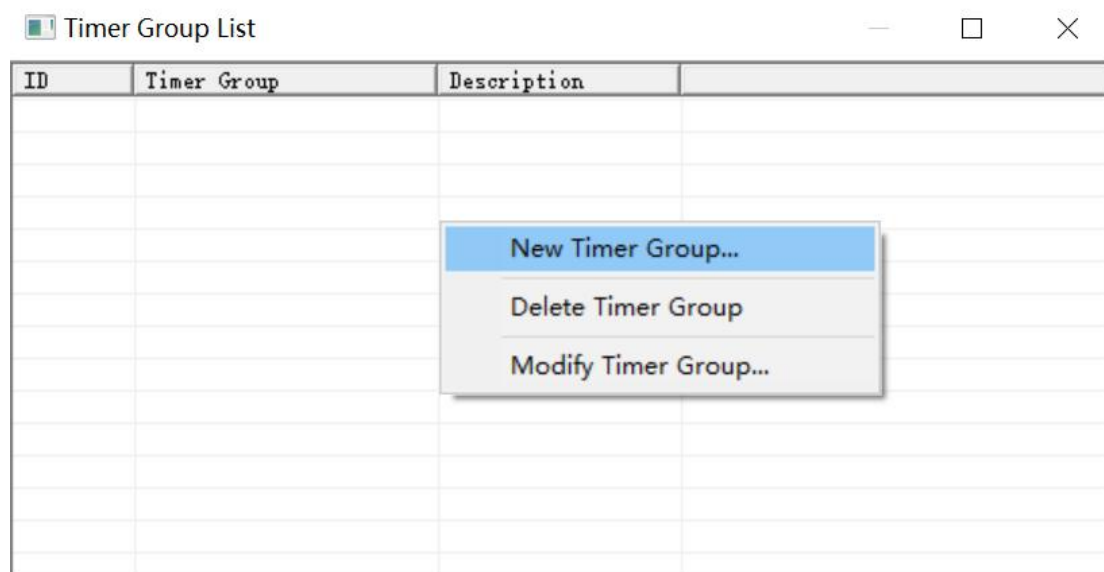


Figure 3-13-6 New Timer Group List

In the pop-up "Timer Group" dialog box, set the corresponding properties and double-click the label to complete the addition. **Note that the selected point must be a controllable point.**

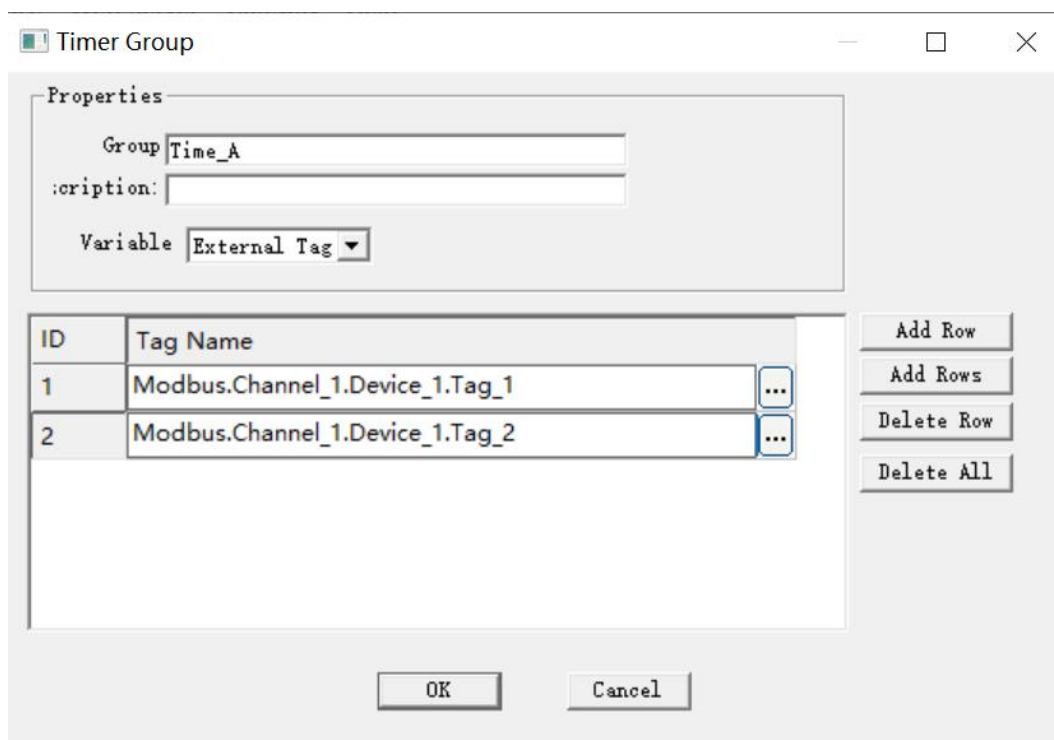


Figure 3-13-6 Completion of Creating a New Timer Group

After clicking "OK", return to the "Timer Group List" dialog box and you can see the newly created timer group, as shown in Figure 3-13-2.

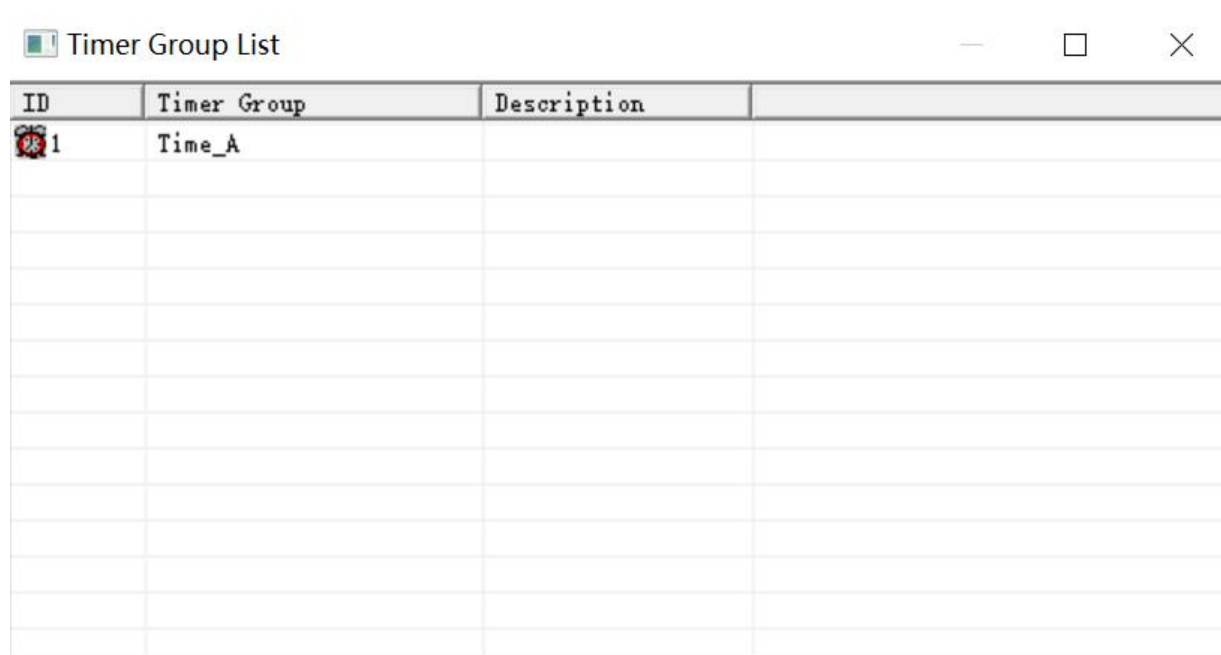


Figure 3-13-2 Completed timing group setting

By repeating the above steps, users can add multiple timed group lists according to their actual needs. Right click to edit or delete a timed group.

3.13.2 Timer

The timer function is to edit and manage the timing of already grouped timers when they are grouped. The operation steps are as follows:

Click on the "Monitoring Object" menu and select "Timer" or shortcut key icon in the pop-up dialog box, as shown in Figure 3-13-3.

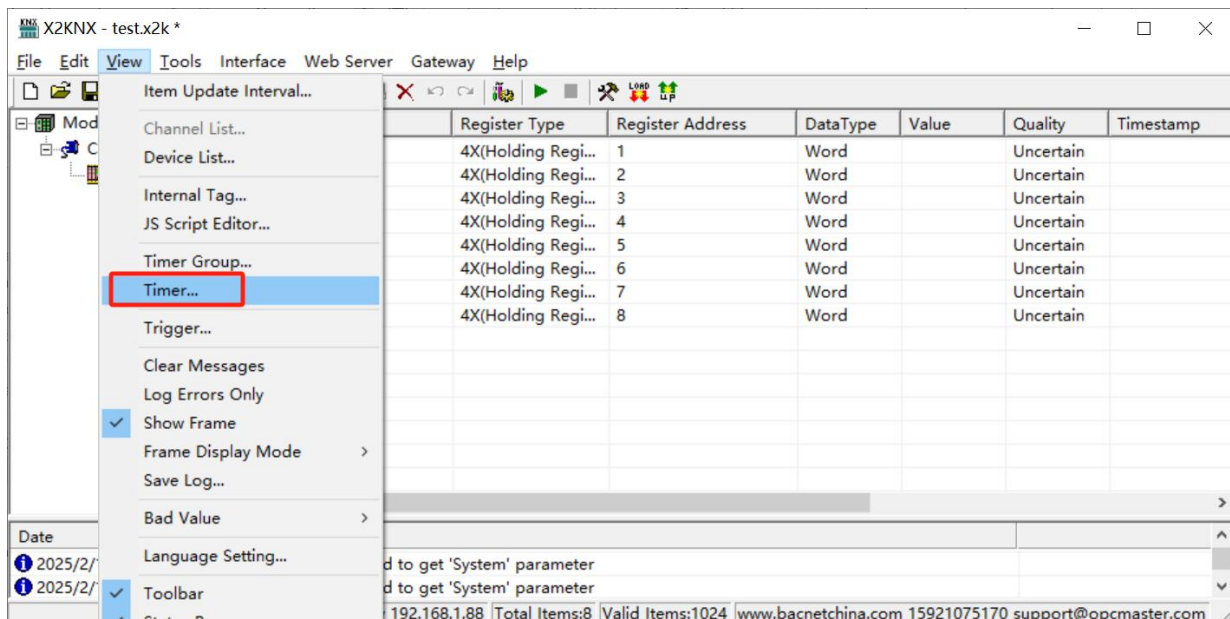


Figure 3-13-3 Selecting Timer

When the "Timer" dialog box pops up, its properties are shown in Figure 3-13-4.

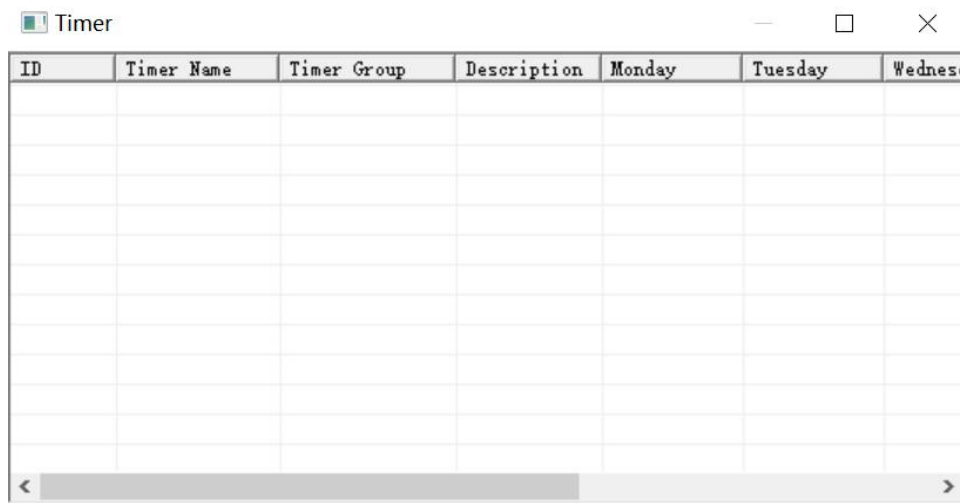


Figure 3-13-4 "Timer" dialog box

Right click on the blank space and select "New" from the pop-up list to open the "Timer" editing window. Its related properties include:

- 1) Timer Name: Set the current timer name.

- 2) Timed Group: Select a timed group.
- 3) Description: Customize the selective description of the current timer.

The specific configuration is shown in Figure 3-13-5.

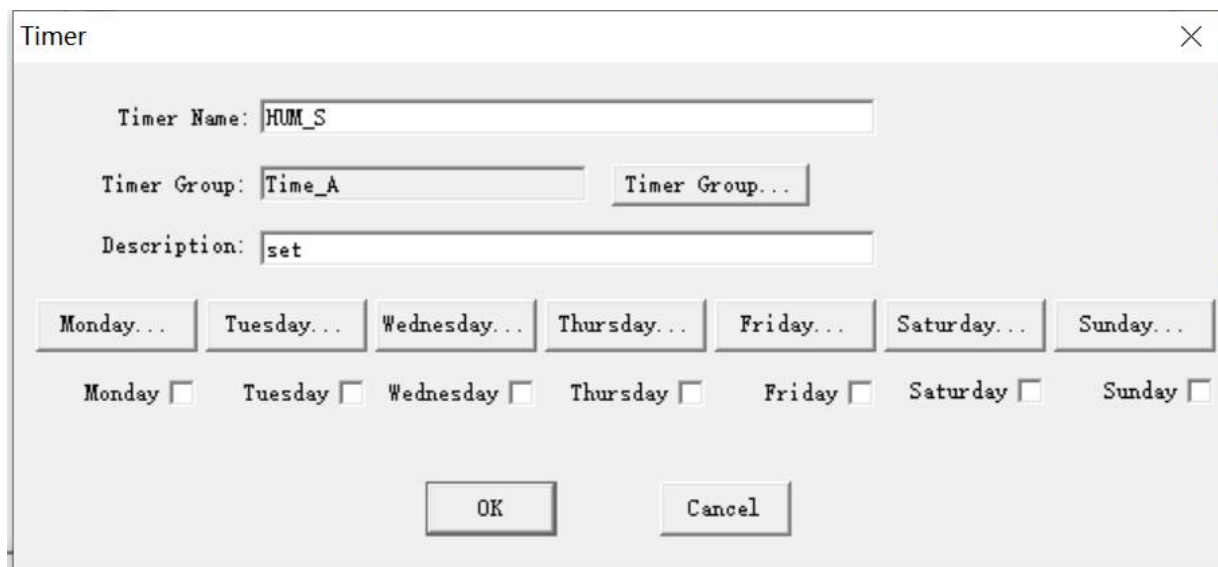
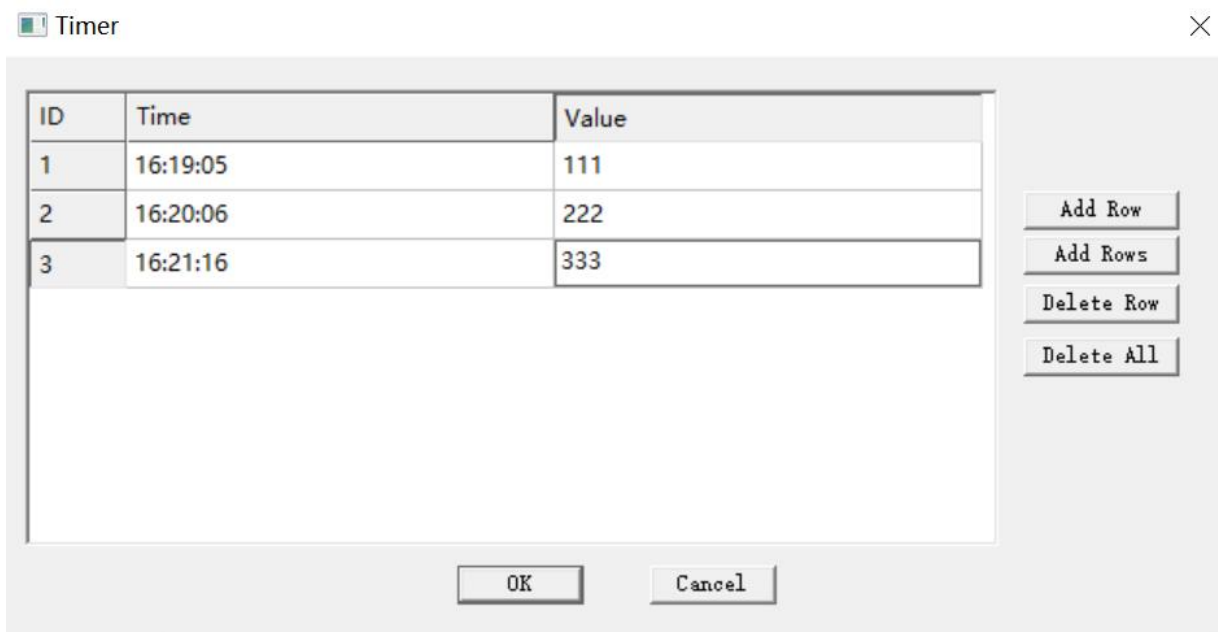


Figure 3-13-5 Name and timing group selection

- 4) **Time and Value:** Click on "Monday..." to enter the timer settings for Monday; After the current time of the gateway reaches the set time, the set value will be written into the variable of the timing group. As shown in Figure 3-13-6.



ID	Time	Value
1	16:19:05	111
2	16:20:06	222
3	16:21:16	333

Figure 3-13-6 "Timer" Editing Dialogue Box

- 5) Valid from Monday to Sunday: can be selected as a single or multiple choice. Once selected, the timer will only run during the selected time.

The specific configuration is shown in Figure 3-13-6.

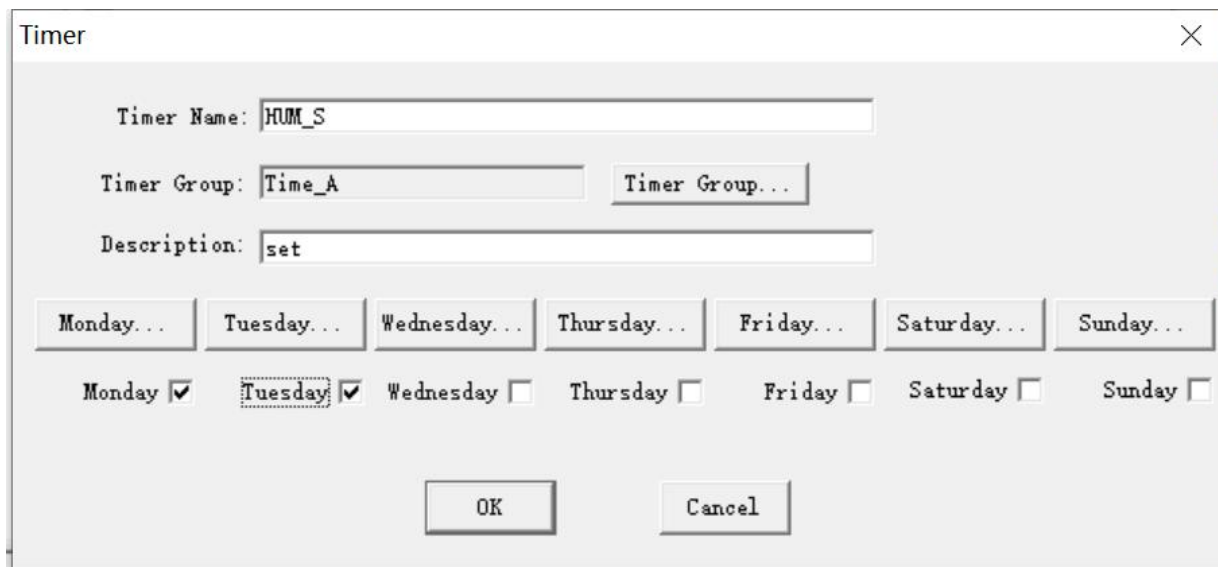


Figure 3-13-8 Timer Setting

Follow the above steps to add multiple timers and complete the schedule.

3.14 Trigger

The trigger function is located under the "Monitoring Object" section of the menu bar, which enables data transfer between two variables through the mechanism of executing changes. The operation steps are as follows:

Click on the "Monitoring Objects" menu and select "Trigger" in the pop-up dialog box, as shown in Figure 3-14-1.

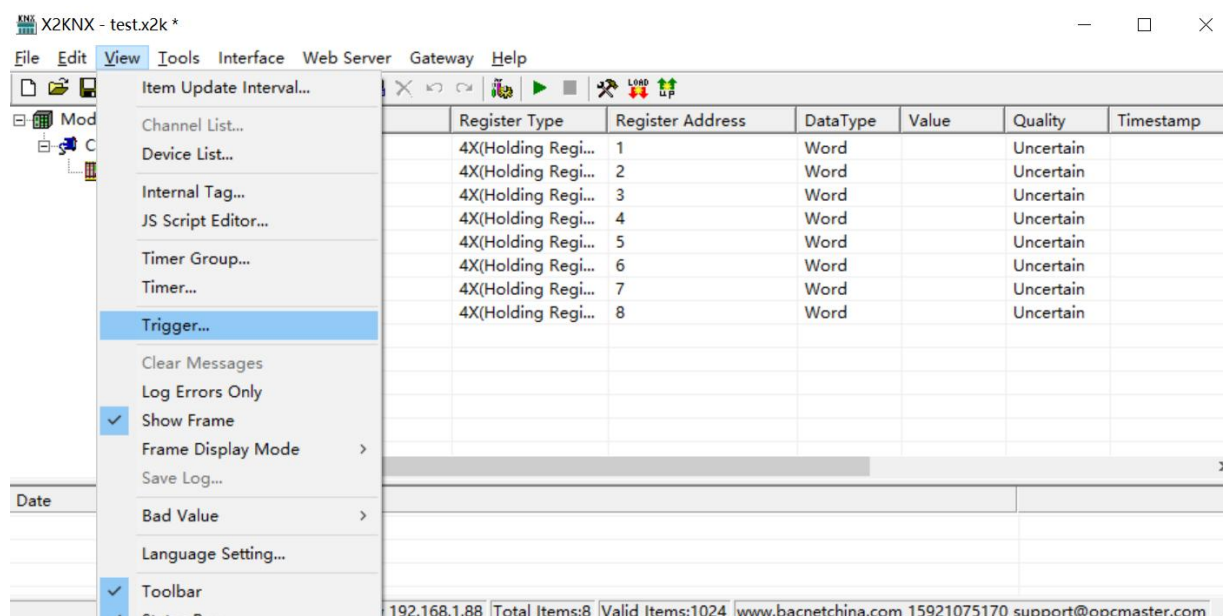


Figure 3-14-1 Select Trigger

After selecting "Trigger" in "Monitoring Objects", the "Trigger" dialog box will pop up, with its properties shown in Figure 3-14-2.

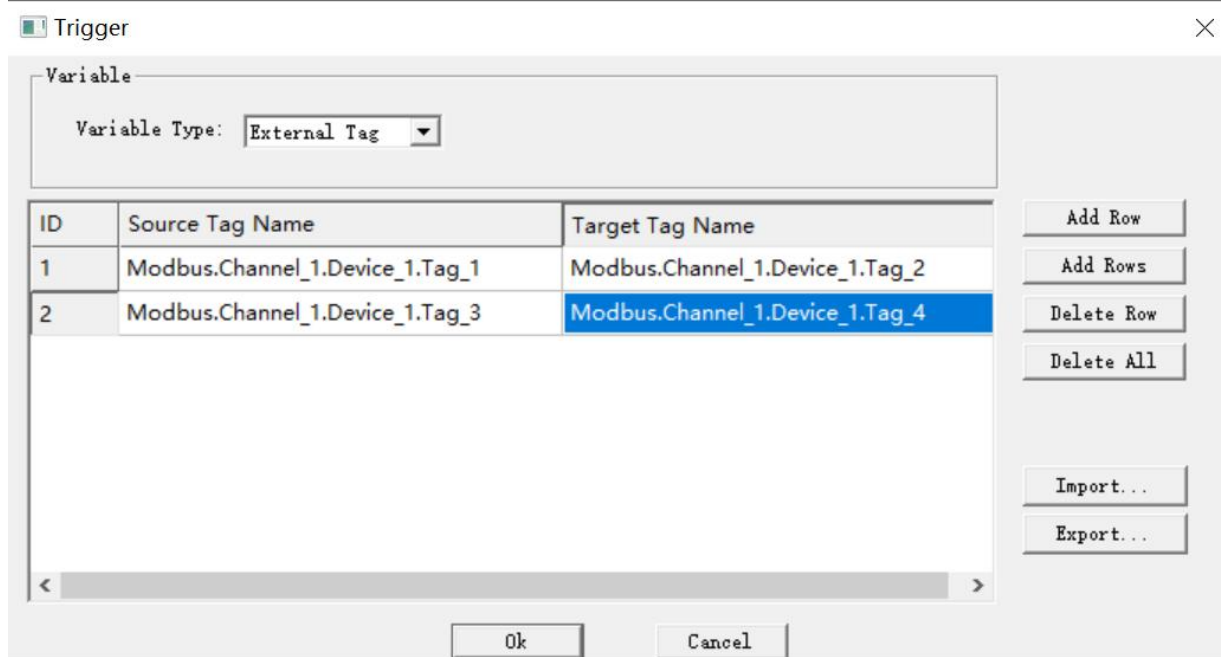


Figure 3-14-2 Trigger Editing Window

Select "." under the variable name to enter the variable selection interface, bind the variable that needs data transmission, and enable real-time writing of data changes from the left variable to the right variable.

4 WEB Service

The gateway comes with a WEB server and the default port is fixed at 80. Users can log into the WEB server through the browser, modify the IP address of the hardware gateway, view real-time data, download X2KNX configuration software and engineering files, etc.

4.1 Website login

Enter the IP address of the hardware gateway in the browser. The default IP address of the gateway is 192.167.1.87. If the user changes the IP address for the first time, the user only needs one network line (either cross or direct connection is ok) and the gateway is directly connected. It is necessary to set the PC and gateway as the same network segment, and then enter 192.167.1.88 in the browser to complete the modification of gateway IP address. As the figure 4-1-1.

Enter the user name and password in the pop-up window. Note that the factory default user name is "admin" and the password is "admin123456". Users can add personal accounts in user management after logging in successfully. As the figure 4-1-2.

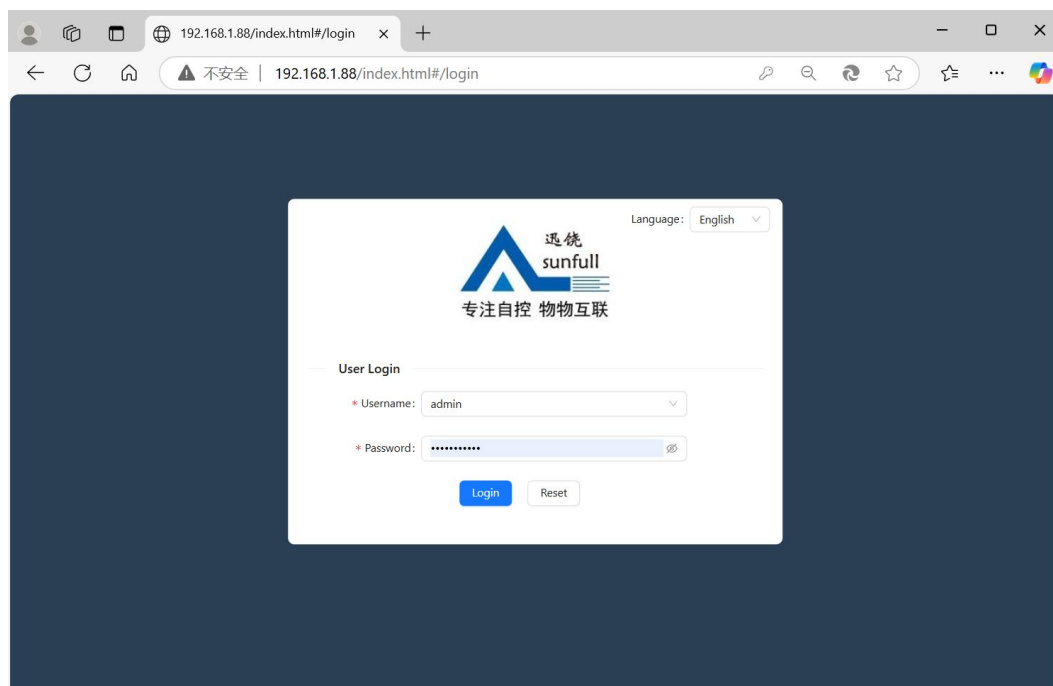


Figure4-1-2 User Login

4.2 Download

Download: Download the configuration software used to complete the gateway, the current engineering file and the help document, as shown in figure 4-2-1.

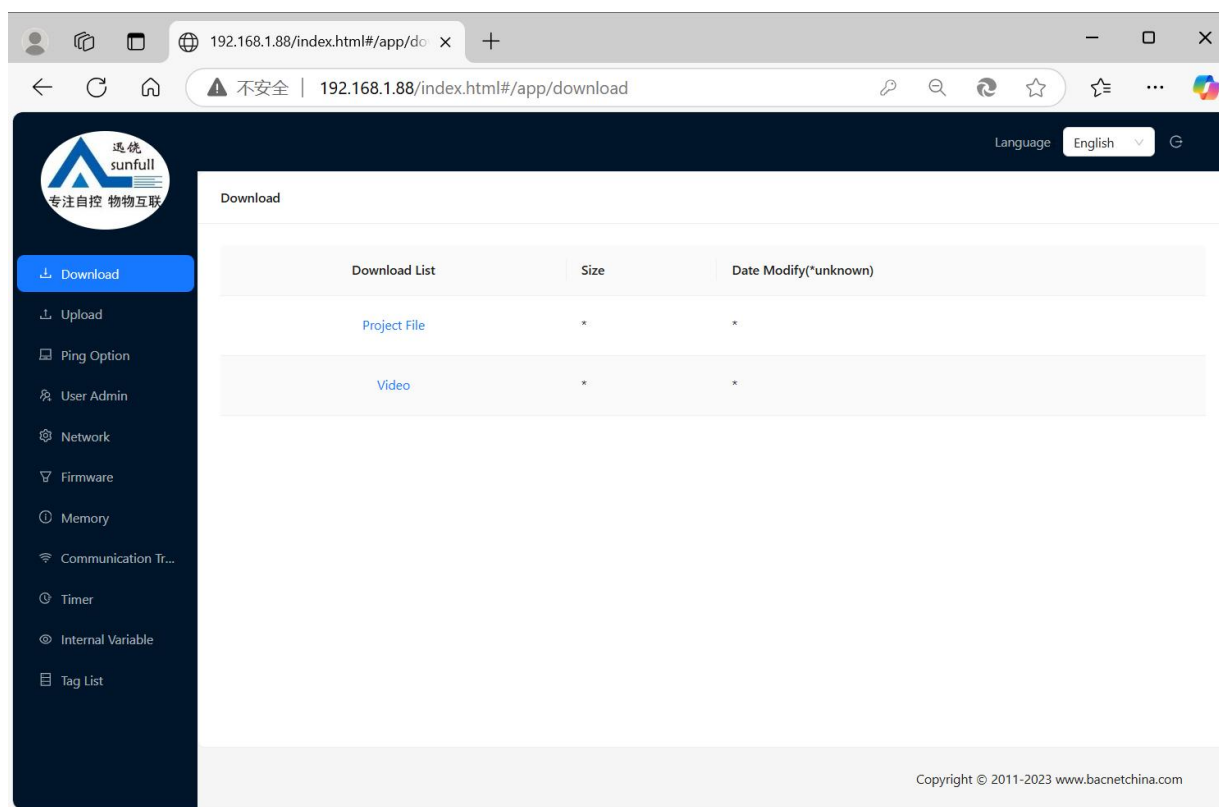


Figure 4-2-1 Download

4.3 User Admin

User Admin: users can manage their login accounts by adding, modifying and deleting, as shown in Figure 4-3-1.

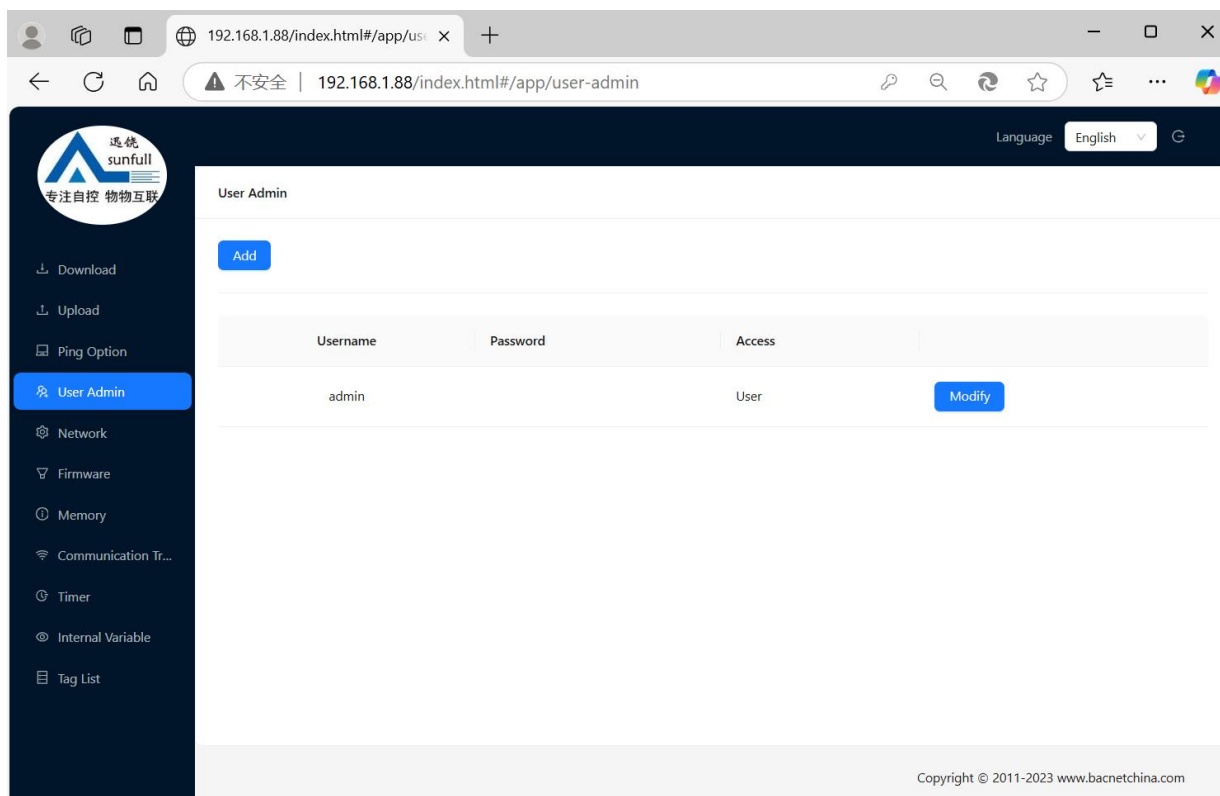


Figure 4-3-1 User Admin

4.4 Network

2004 supports dual network ports:

Default IP address for network port 1 is 172.24.13.88 (default gateway cannot be set, enabled in dual network segments);

The default IP address for network port 2 is 192.167.1.88 (which is prioritized as the communication port by default and can be set as the default gateway);

1002 / 1001 only supports one network port, with a default IP address of 192.167.1.88 (network communication port);

Set the IP address of the lower computer hardware gateway network port, as shown in Figure 4-4-1.

Network: Set the IP address of the hardware gateway network port, as shown in figure 4-4-1 below.

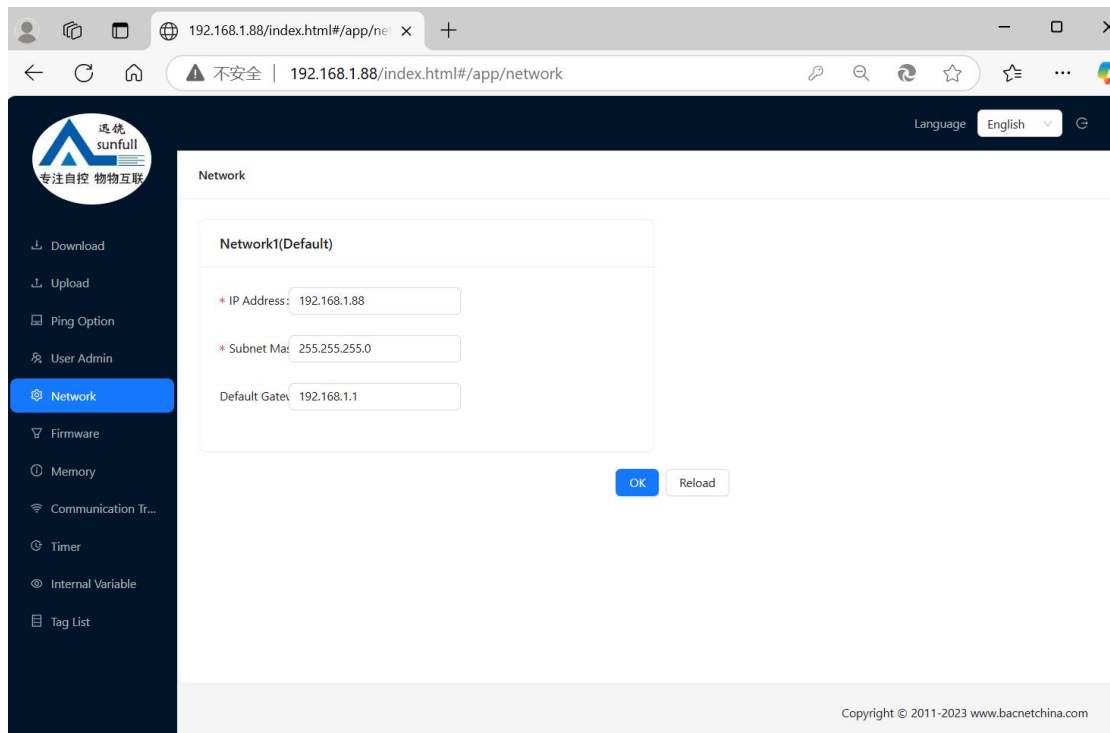


Figure 4-4-1 Network

4.5 Firmware

Firmware: Firmware information means that users can view the firmware version information, machine code and registration code currently burned, as shown in figure 4-5-1 below.

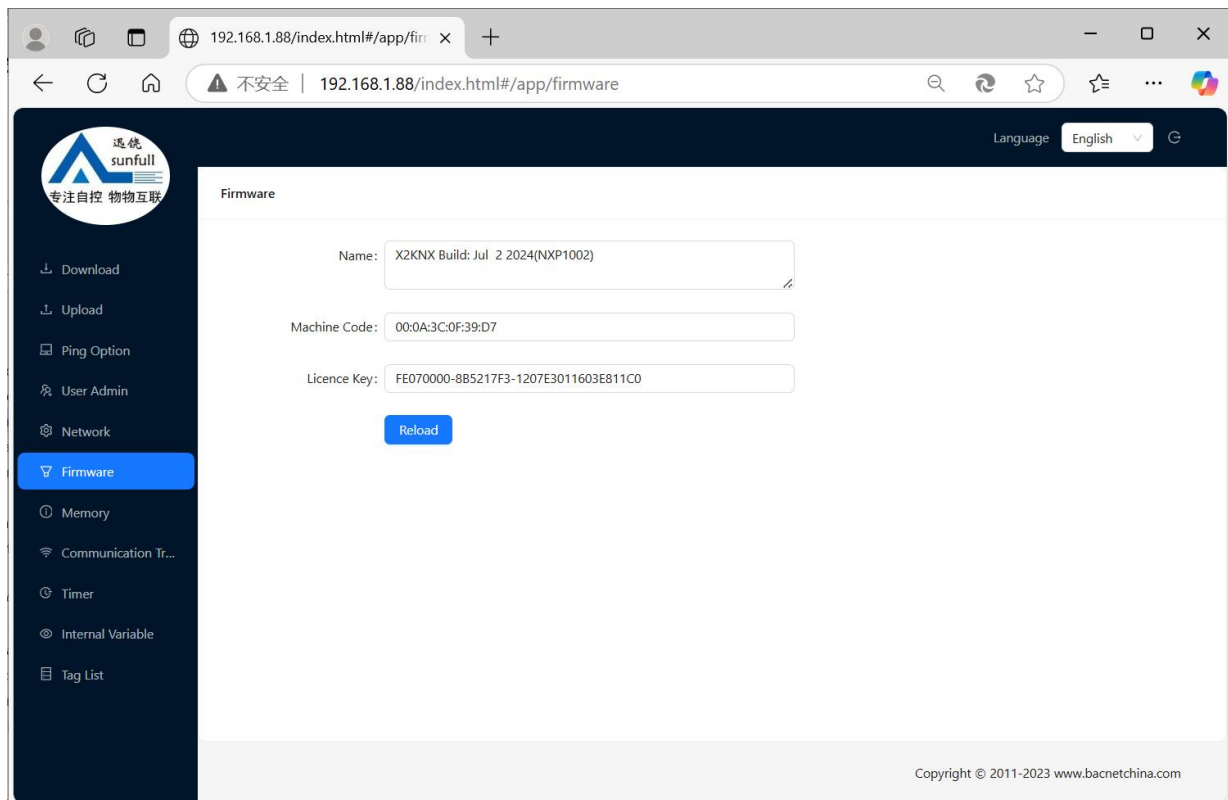


Figure 4-5-1 Fireware

4.6 Memory

Memory: You can view the memory usage of the gateway, restart the gateway remotely, and so on. Delete project and restore configuration project are generally used when gateway is updated. In general, you do not need to click, as shown in figure 4-6-1 below.

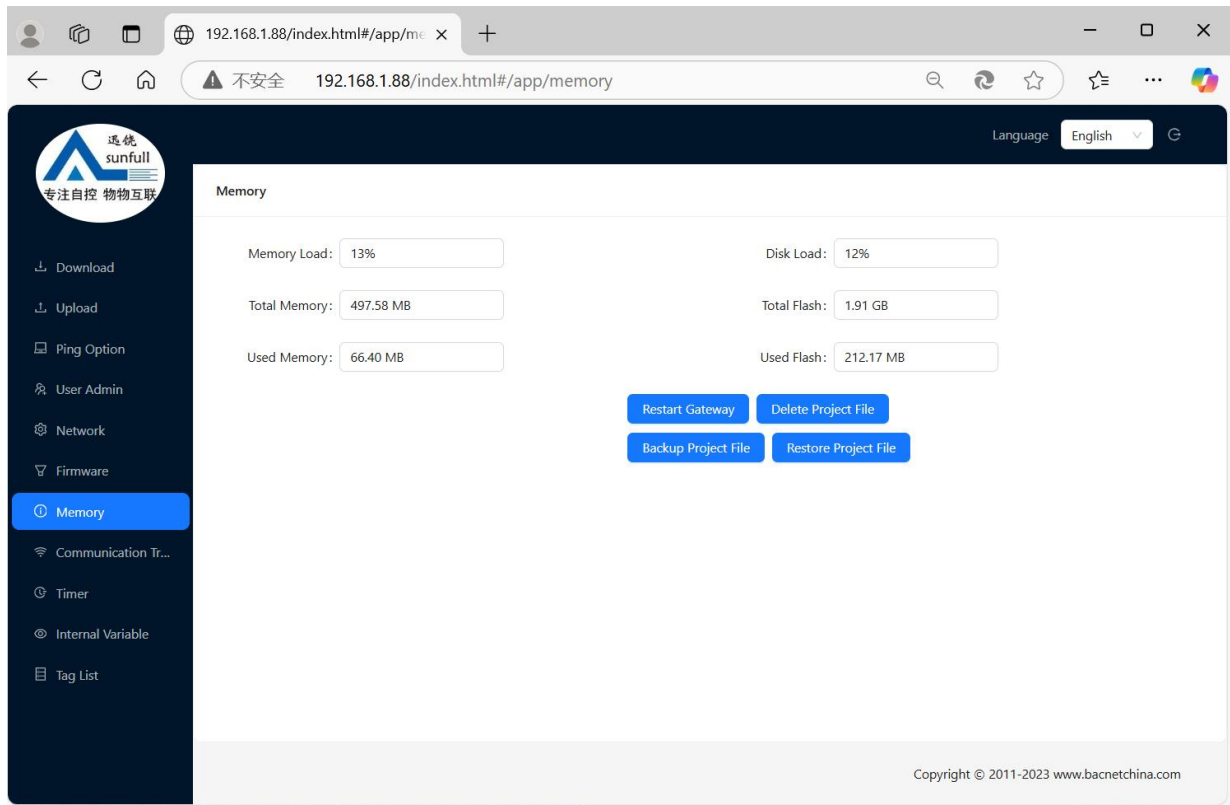


Figure 4-6-1 Memory

4.7 Communication Traffic

Communication Traffic: In addition, the real-time dynamic data frame can be viewed in the web page to facilitate users to intuitively understand the real-time communication status. Through the analysis of the data frame, the cause of fault can be found out, which brings great convenience to users, as shown in Figure 4-7-1.

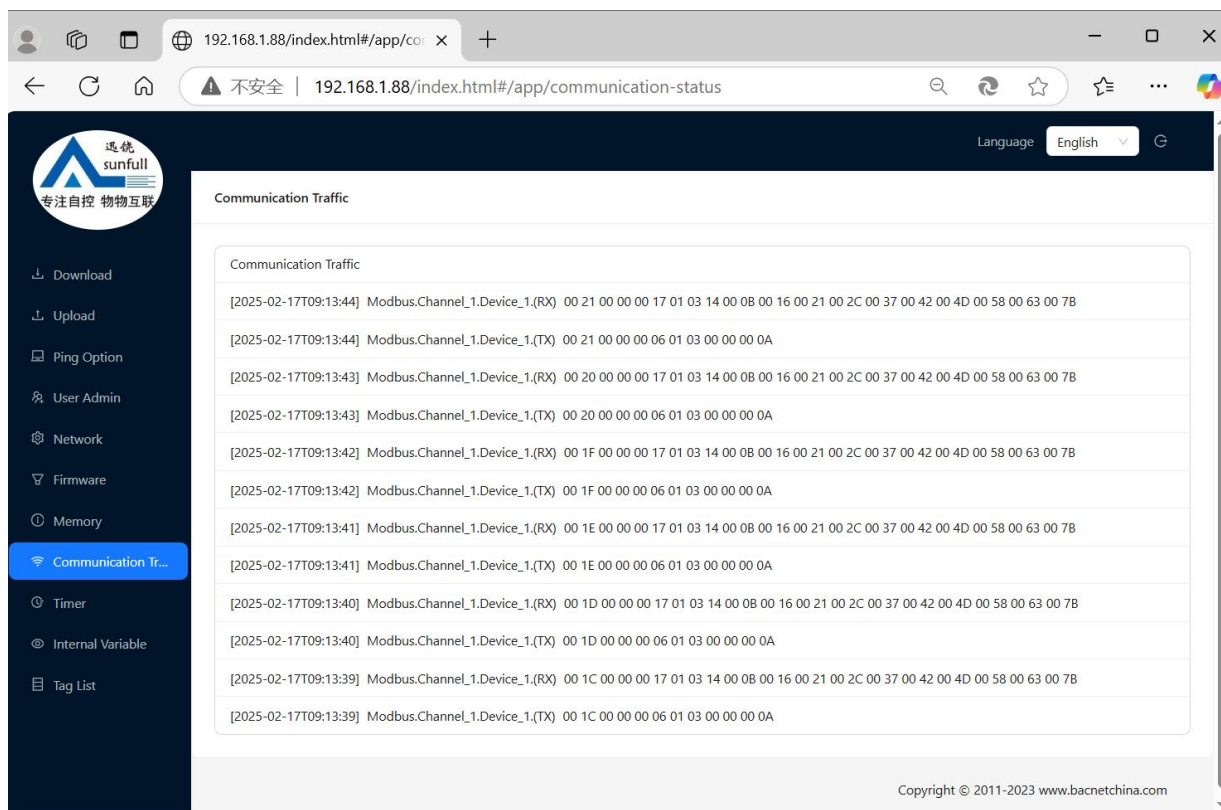


Figure 4-7-1 Communication Traffic

4.8 Internal Variable

Internal Variable: You can view the gateway's internal variables on the web page, as shown in figure 4-7-1.

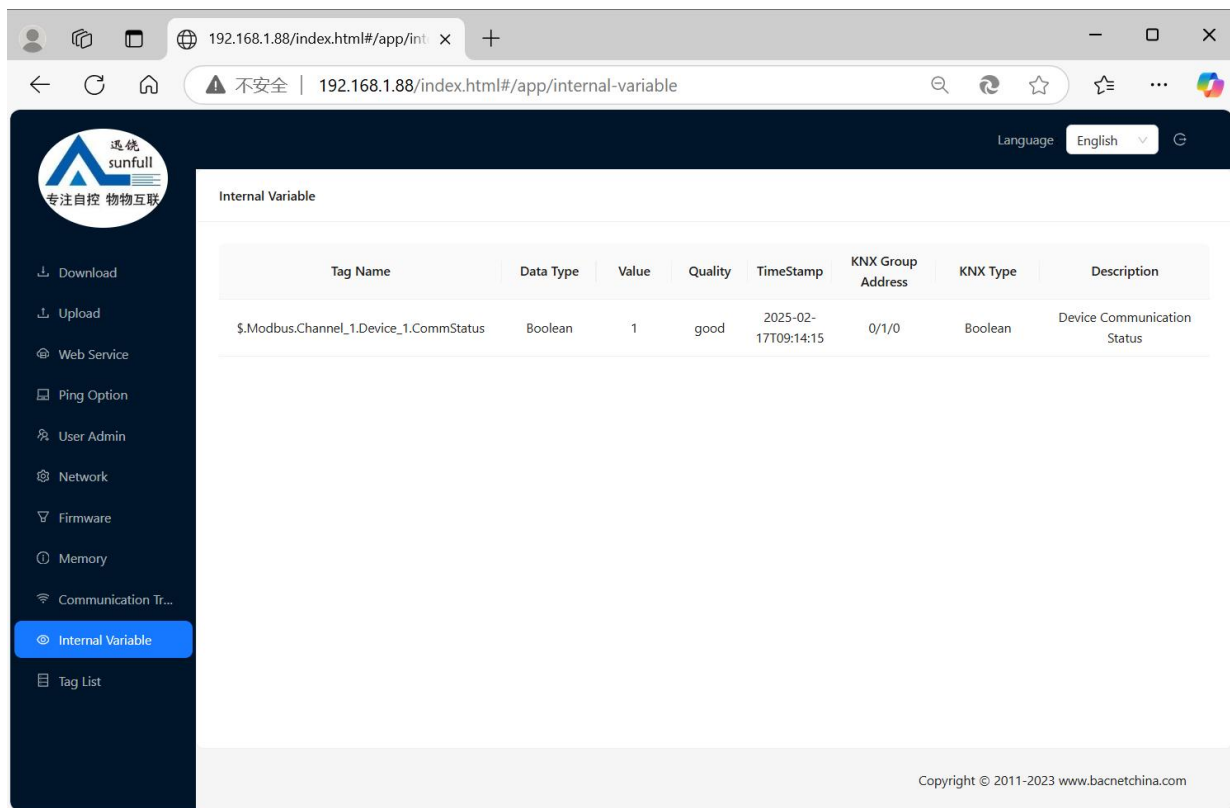


Figure 4-7-1 Internal Variable

4.9 Tag List

Tag List: You can view the gateway's tag list on the web page, as shown in figure 4-8-1.

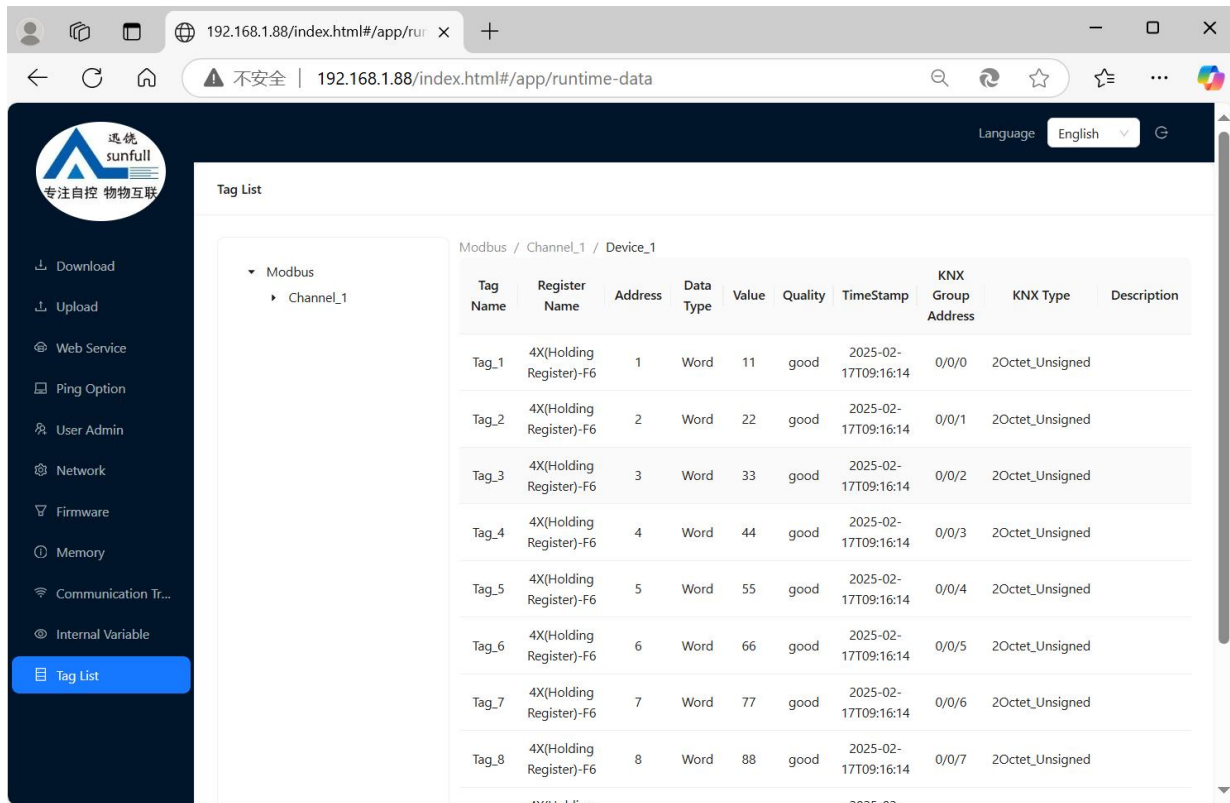


Figure 4-8-1 Internal Variable

You can also write values on a web page, as shown in figure 4-8-2.

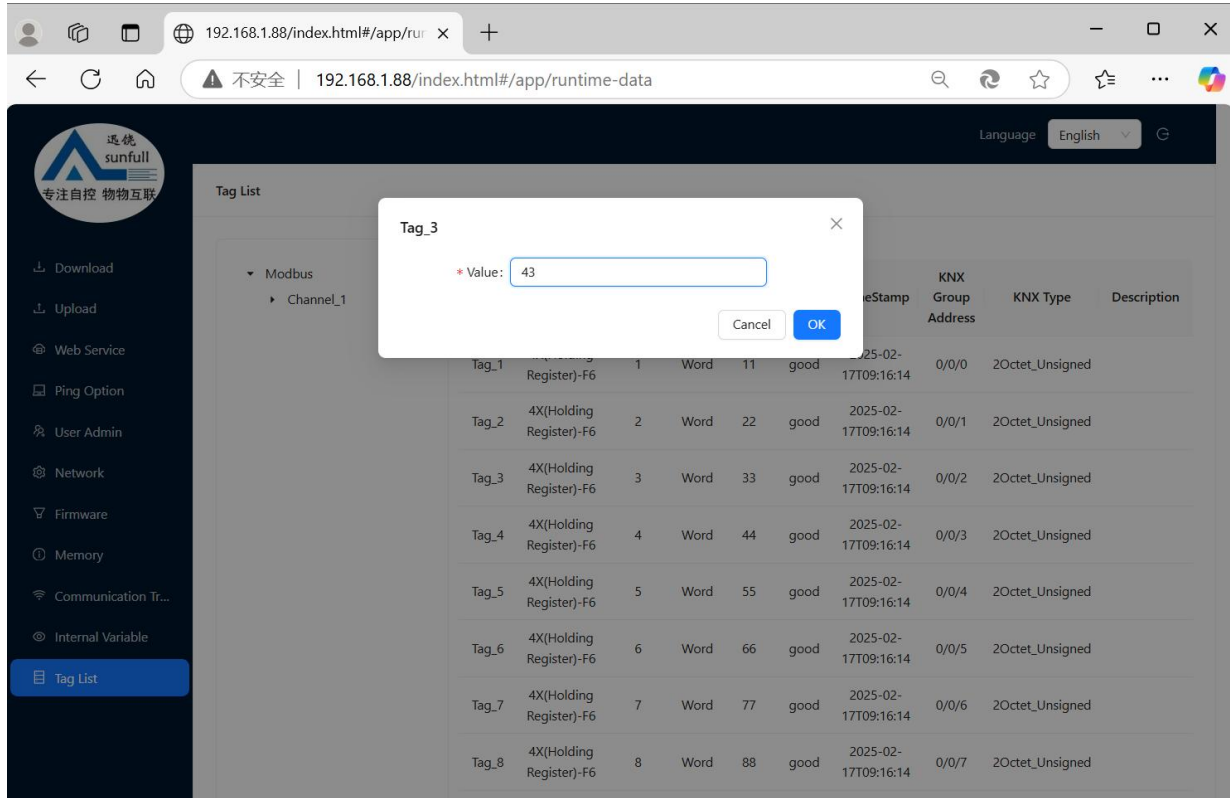


Figure 4-7-2 Write Value

Click KNX of the menu, select the KNX IP Server, as the below figure 5-1。

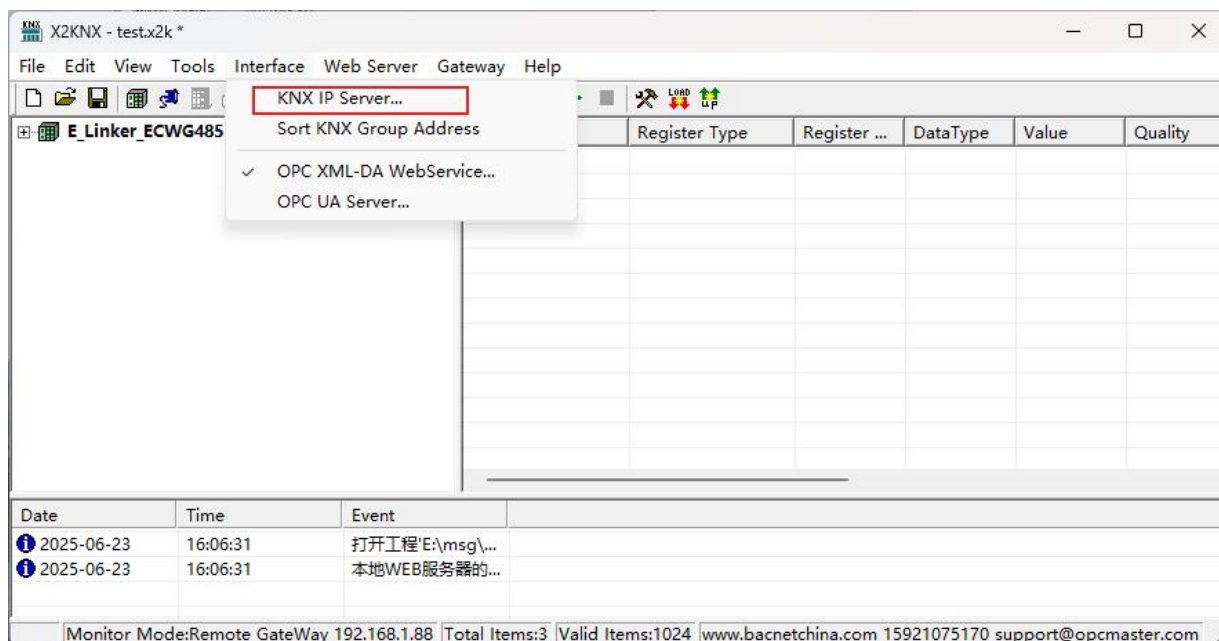


Figure 5-1 KNX Select Setting

The port number is fixed as 161, and the type is fixed as public. These two properties cannot be modified. As the below figure 5-2.

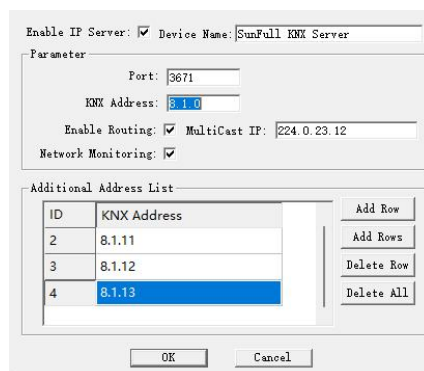


Figure 5-2 KNX Server Setting

5 ETS client (main site) access

5.1 ETS Access

Open the ETS software and in the current interface, you can discover the multicast address and IP address of the gateway, which indicates success. You can see the physical address of gateway 7.1.0.

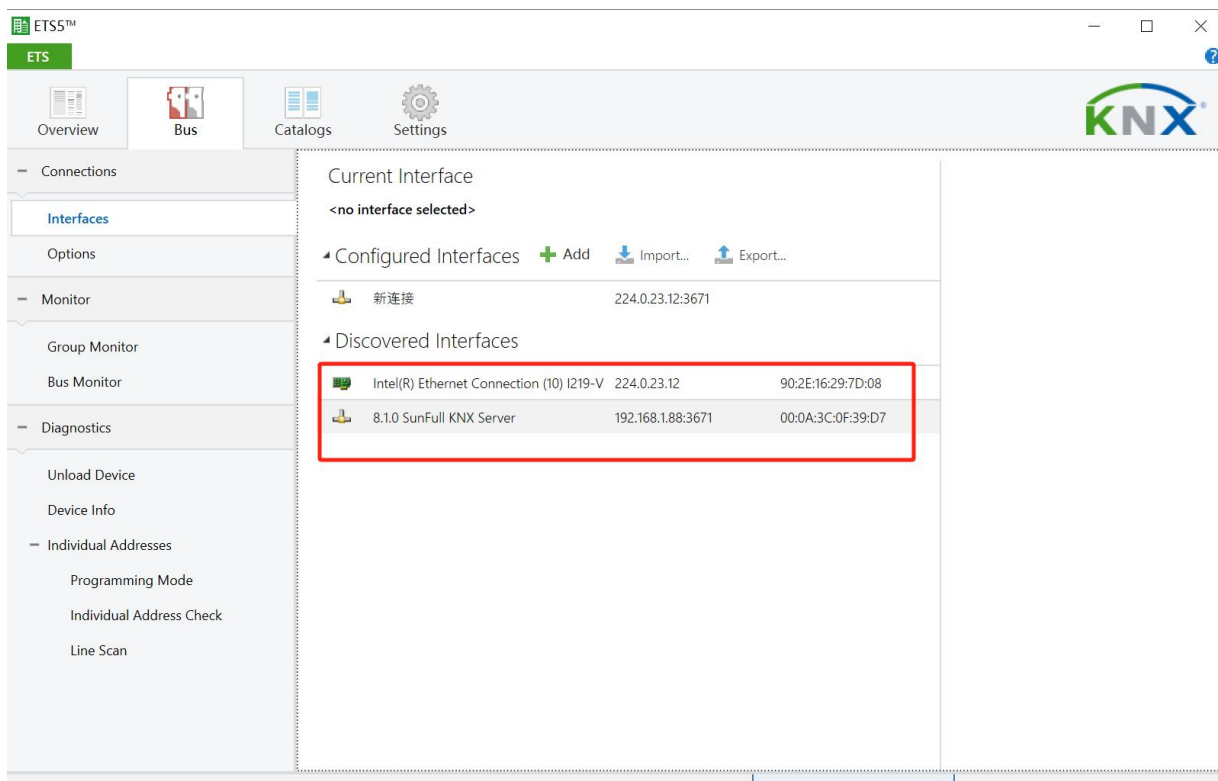


Figure 5-1-1 ETS

Group monitoring can monitor both multicast addresses and IP addresses.

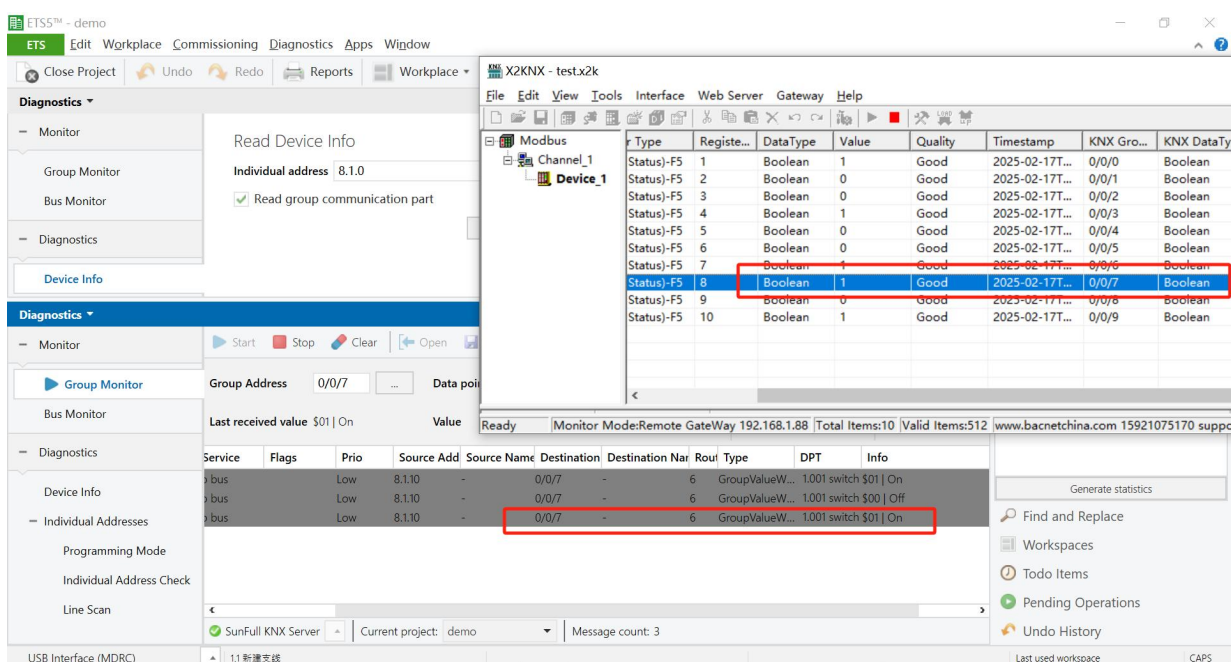


Figure 5-1-2 Group Monitoring

6 JS Script Logic Control

This gateway also comes with a JS script editor, which allows users to implement some logical controls by editing the script language. The script editor has some

commonly used functions built-in, and users can choose some function editing languages. After editing, clicking "syntax check" will automatically check the syntax. If there is a grammar error, it will prompt which line of grammar is problematic.

6.1 Operation steps

Click on "View" in the menu bar and select "JS Script Editor", or click on the toolbar to open the script editor, as shown in Figure 6-1-1.

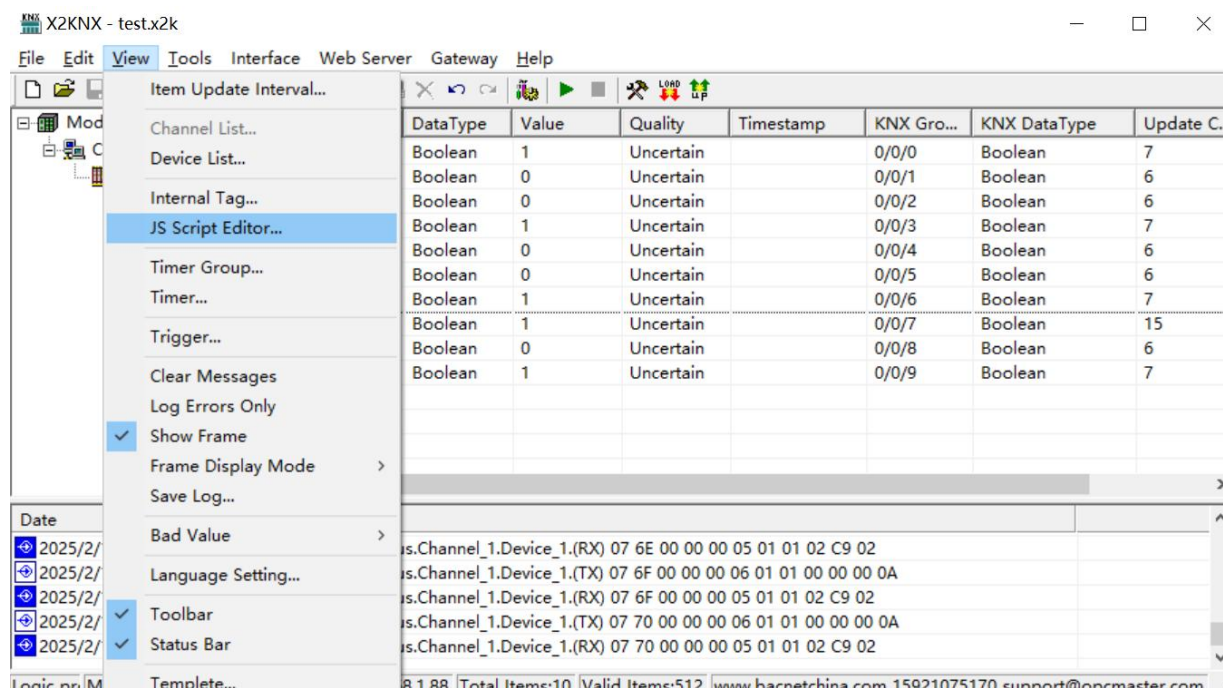


Figure 6-1-1 Open JS Script Editor

Right click on the blank space in the pop-up script editor and select 'New Script', as shown in Figure 6-1-2.

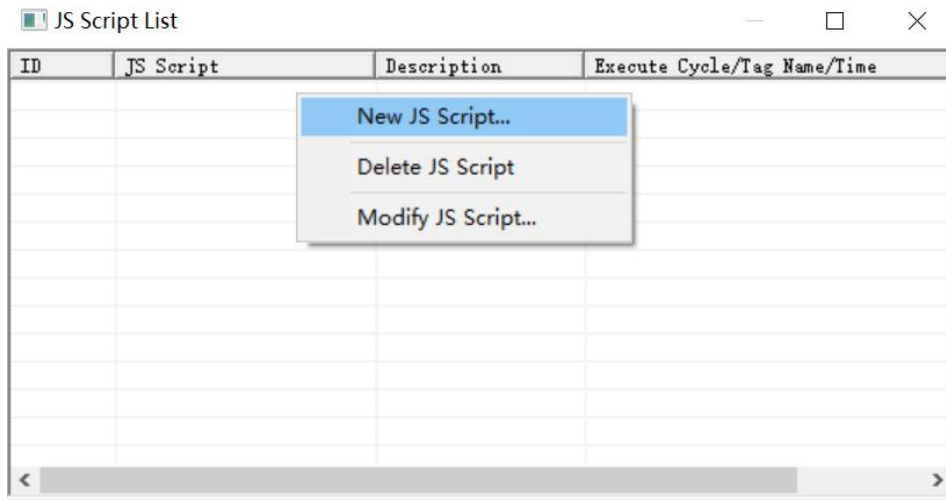


Figure 6-1-2: Creating a JS Script

Open and you can see the JS editing script, as shown in Figure 6-1-3.

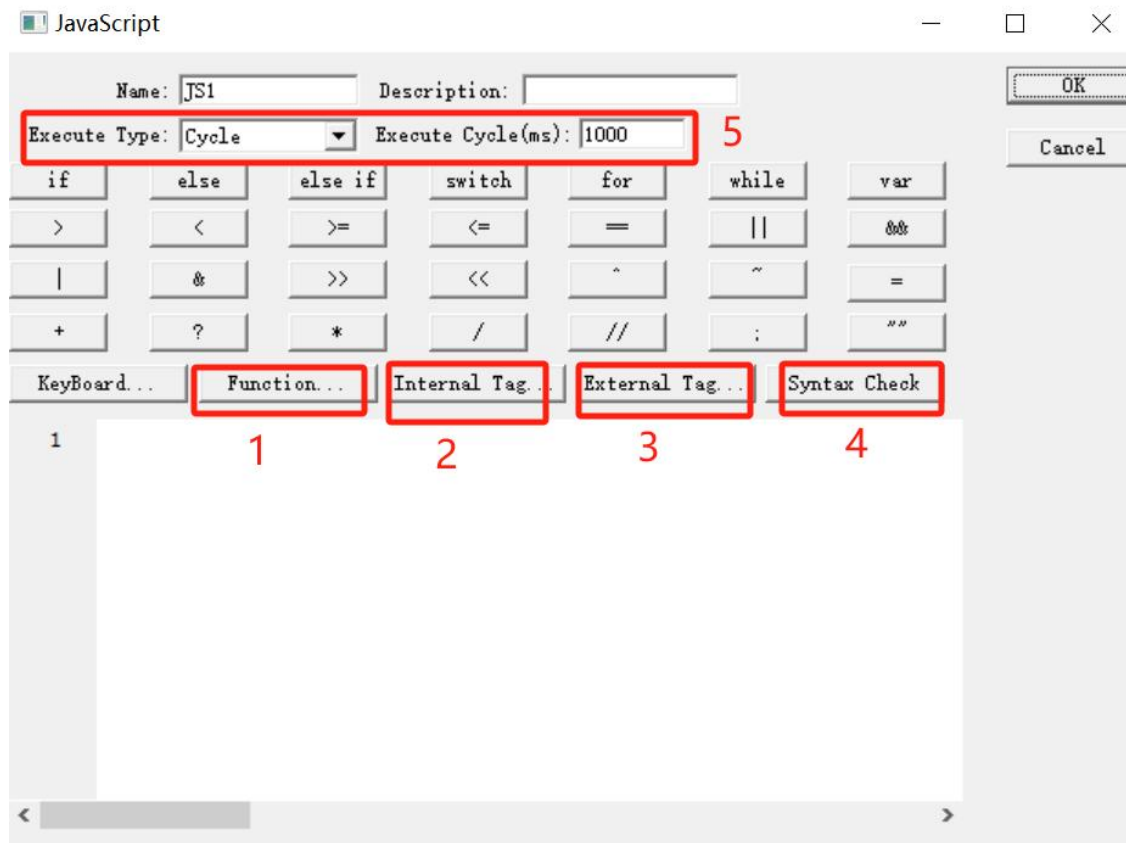


Figure 6-1-3 JS Script Editor Editing Interface

For detailed operation steps, please refer to the software Help folder JavaScript Editor_en. pdf manual.

7 Common Problems

7.1 Hint ” Failed to call ‘http://192.167.1.88/soap’ WEB server!”

When starting monitor in the Local PC monitor mode, the error message is constantly prompted in the print message bar ” Failed to call ‘http://192.167.1.88/soap’ WEB server!”. There are three main reasons for this situation:

- The first possibility is that the current monitoring mode is gateway mode, which needs to be adjusted to Local PC monitor mode.
- The second possibility is that the port number of the current WEB server is occupied by other applications on the local computer.
- The third possibility is that the X2KNXRuntime program is closed, and only needs to restart the monitor.

7.2 Pay attention to the difference of “Upload” and “Download”

It is particularly reminded that after the completion of the project configuration on PC, the project will be uploaded to the gateway through the button "Upload project". When you look at the project in the gateway, you download the project inside the gateway to the configuration software through the button "download project" .