

X2KNX User Manual

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Singapore Milesgo IIoT Pte Ltd



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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.
 - 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.

		item opdate interval	1	es ca 🏘 🛌 🔳	X. 11 th								
		Channel List		Register Type	Register	DataType	Value	Quality	Timestamp	KNX Group Add	KNX DataType	Update C	Description
		Device List											
		Internal Tag JS Script Editor											
		Timer Group Timer											
		Trigger											>
Date 2025/2/ ⁻	~	Clear Messages Log Errors Only Show Frame Frame Display Mode Save Log	B服务	·····································									
		Bad Value	>										
		Language Setting											
	~	Toolbar											
	~	Status Bar	_										
		Fundamente Droiest	_										
		Explore to Software											

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.

Setting		>
Language:	英语(美国)	•
	英语 (美国) 中文 (简体,中国)	
Default	ОК	Cancel

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.

Image: Select All Ctrl+Z	XNX X2K	VX - test'.x2k											-	o ×
Undo Ctrl 22 Ctrl 24	<u>File</u>	dit <u>V</u> iew <u>T</u> ools Int	terface We	b Server Gate	way <u>H</u> elp									
Redo Ctrl +V ID Register Type Register DataType Value Quality Timestamp KNX Group Add KNX DataType Update C Description New Driver New Chanel New Group		Undo	Ctrl+Z	BBX P	· 여 穆종 🕨 🔳	冬 🏥 🏭								
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New Channel New Davice Ctrl +D New Davice Ctrl +D New Tag Ctrl +C Cut Ctrl +C Cut Ctrl +T Copy Ctrl +C Pate Ctrl +T Pate Ctrl +T <th></th> <th>New Driver</th> <th></th>		New Driver												
New Device Ctrl +D New Tag Ctrl +C Ctrl Ctrl +C Ctrl +C Copy Ctrl +C Copy Ctrl +C Paste Ctrl +V Batch Modify Properties Select All Ctrl +A Select All Ctrl +A Monitor ModeRemote GateWay 192.168.1.88 Total Items:0 [Valid Items:1024 www.basnetchina.com 15921075170 support@opcmaster.com		New Channel												
New Group New Tag Image: Cut I Image: Cut I		New Device	Ctrl+D	-										
New Tag Cut Cut/LX Copy Cut/LX		New Group												
Cut Cut+X Copy Cut+X > Copy Cut+C > > Date Copy Tag Name Cut+X > > Paste Cut+X Cut+X > > > Batch Modify Properties > > > > Select All Cut+A Cut+A > > > > Cut+X Cut+A Cut+A > > > > > Cut+X Cut+A Cut+A Cut+A >		New Tag		-										
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Paste Ctrl+V ZKNZRunTime i Delete Del Batch Modify Properties Select All Ctrl+A Creates a new driver Monitor Mode:Remote GateWay 192.168.1.88 Total Items:0 [Valid Items:1024]www.bacnetchina.com 15921075170 support@opcmaster.com	Date	Copy Tag Name	Ctrl+T	vent										
Creates a new driver	1 20	Paste	Ctrl+V	2KNXRunTime	e i									
Batch Modify Properties Select All Ctrl+A		Delete	Del											
Properties Select All Ctrl+A Select All Ctrl+A Creates a new driver Monitor Mode:Remote GateWay 192.168.1.88 Total Items:0 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com		Batch Modify												
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Creates a new driver [Monitor Mode:Remote GateWay 192.168.188 [Total Items:0 [Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com														
	Creates	a new driver				Monitor Mod	e:Remote Gat	eWay 192.10	58.1.88 Total I	tems:0 Valid Iten	s:1024 www.bacnetch	ina.com 15921075	70 support@op	ocmaster.com

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.

X2KNX - test'.x <u>F</u> ile <u>E</u> dit <u>V</u> iew	2k <u>T</u> ools Interface	Web Server G	iateway <u>H</u> elp								-	0 ×
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		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	KNX Group Add	KNX DataType	Update C	Description
		<										>
Date	Time	Event	Driver	Properties				×				
02025/2/15	8:4/:30	X2KNXKun1	S.	Name: Modbu an Rate: 100 Ver List: Modbu Radbu Bache B	at an	P P TCP ork ork	× ×	OK Cancel Templete				

Figure 3-2-7 Select Driver

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



er Properties	
Name: Modbus	ОК
Scan Rate: 1000 ms river	Cancel
Search:	▼ Templete
List: ModbusRTUClient	T

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.

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Modbus		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	KNX Gro
2.1		<							>
1 2025/2/15	8:47:36	X2KNXRunTim	e i						

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.



🗅 🖻 🖪 🎟	I 🚰 🖪 💣 🞒 😭	X 🖻 🖻 🗙	🗠 🖓 👘 🕨	🔳 🛠 🙀 😫					
- Modbur	New Channel	ID	Register Typ	e Register	DataType	Value	Quality	Timestamp	KNX Gro
	Channel List Device List								
	Export EXCEL								
Date	Cut Copy Paste Delete	Ctrl+X Ctrl+C Ctrl+V Del							>
1 2025/2/15	Properties		ne i						
	Templete								
	Explore to Project Explore to Software								

Add Serial Port, |Monitor Mode:Remote GateWay 192.168.1.88 |Total Items:0 |Valid Items:1024 |www.bacnetchina.com 15921075170 support@opcmaster.com 📿

Figure 3-3-1 Select new chennel

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.

jonanner_r					-
Communicat Port:	ion Parame	ters	Baud Bat	e: [9600	•
			and her		10.0
Data Bits:	8	-	Stop Bit	s: 1	•
Parity:	None	▼ F	low Contro	l: None	•
Response T	imeout: 🔟	500 m:	s		

Figure 3-3-2 sets channel parameters

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



	A 🛄 🎬 🛍 😭	X ₪ ₪ X	n 🖓 🎁 🕨 🔳	🛠 🙀 😫					
⊡-∰ Modbus	el_1	Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	KNX Gro
Date	Time	< Event							>
1 2025/2/15	8:47:36	X2KNXRunTi	me i						

Figure 3-3-3 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.

0 🖼 📙 🎟 🤞	🕷 🛄 🖆 🕌 👢		○ 1 → ■	🛠 🛗 👪					
🖃 🇊 Modbus	Item I	D	Register Type	Register	DataType	Value	Quality	Timestamp	KNX Gro
S ^{II} Channel	New Device	Ctrl+D	<u> </u>						
	Device List								
	Export EXCEL								
	Cut	Ctrl+X							
	Сору	Ctrl+C							
	Paste	Ctrl+V							>
Date	Delete	Del							
1 2025/2/15	Properties								
	Templete								
	Explore to Project								
	Explore to Software								

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

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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.

Device Properties	×
Name: Device_1	
Device ID: 1	
Delay Between Polls: 100	ms
Delay After Write: 50	z m
2 Bytes Integer Order: 21	•
4 Bytes Integer Order: 4321(*)	-
4 Bytes Float Order: 4321(*)	•
Bulk Transfer	
Analaog Adjacent Span:	4
Analaog Max Span:	32
Binary Adjacent Span:	4
Binary Max Span:	64
ОК	Cancel

Figure 3-4-2 sets device properties

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



	🧖 🗒 🗳 🗊	' Å ≞ € X '	० व्य 🦍 🕨 🔳	X 1000					
🖃 🇊 Modbus		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	KNX Gro
La Dev	ice_1	<							>
Date	Time	Event							
0 2025/2/15	8:47:36	X2KNXRunTir	ne i						

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.

File Edit View Too	s Interface	Web Server Gat	eway <u>H</u> elp					—	L X
🗅 🗳 🔒 🎯 🏓 🗄	l 💕 👩 😭	🌡 🖻 🛍 🗙 🖌	n 🗠 🐞 🕨 🔳	🛠 🙀 😫					
Modbus		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	KNX Gro
Device_1	New Grou	up							
Date *	Export EX	 (CEL (CEL							
	Cut Copy Paste Delete	Ctr Ctr	1+X 1+C 1+V Del						>
	Properties	S							
	Templete.								
	Explore to Explore to	o Project o Software							

Creates a new T Monitor Mode:Remote GateWay 192.168.1.88 Total Items:0 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com 🦼

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.



Collection		08
Name: Tag_1		
Description:		Lancel
Data Type: Word (2Byte, 0~65535)	-	
Register Type: 4X(Holding Register)-F6	•	
egister Address: 1		
Mask Value 🔲 Bit:	-	
_ Scale	_	
Enable Setting		
ransfer(KNX Server)		
Group Address: 0/0/0		
KNX DeteTume: 2 Mariamed Detet(Word)*	-	

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.



	• 🔳 🗳 👩 🖻		1 🛍 X 🗠 🖓 🖓	🕨 🕨 🖉 🎋 👬	1					
- Modbus	Item ID		Register Type	Register Addr	DataType	Value	Quality	Times	KNX Group Add	KNX DataType
🖻 📜 Channel_1	Tag_1		4X(Holding Regi	1 Word	1	Uncertain		0/0/1	2Octet_Unsigned	
	<									2
Date	Time	Eve	nt							

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.

	Sa 🛅 🔜 🛄	_ ∧ == == × •		X. 👥 🖬			,		
E Modbus		Item ID	Register Type	Registe	ster Address DataType Value		Value	Quality	Timestamp
🖻 🚰 Channe	l_1	A Tag_1	4X(Holding Regi	1		Word		Uncertain	
Dev.	tice_1	-			New Tag				
					Select All	Ctrl+	A		
					Cut	Ctrl+	x		
					Сору	Ctrl+	с		
					Copy Tag Na	ame Ctrl+	т		
		<			Paste	Ctrl+	V		2
Date	Time	Event			Delete	De	el 📃		
1 2025/2/15	8:47:36	X2KNXRunTin	ne i		Batch Modify	/			
					Properties				
				_					

Copy the selecti Monitor Mode:Remote GateWay 192.168.1.88 Total Items:1 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com 🥢

Figure 3-5-4 copies the current label

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



	🧖 🗒 🖀 🛍	* % 画 🖻 🗙	🔊 ଦା 👪 🕨 🔳 🗄	🏷 👯 🗱				
⊡ 🗊 Modbus		Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp
🖻 🚰 Channe 🛄 Dev	_1 ice_1	Tag_1 4X(Holding Regi	1	Word		Uncertain		
				New Tag				
				Paste Ct	rl+V			
				Select All Ct	rl+A			
		<						
Date	Time	Event						
1 2025/2/15	8:47:36	X2KNXRun7	ime i					

Insert Clipboard Monitor Mode:Remote GateWay 192.168.1.88 Total Items:1 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com

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.

	s 🖬 🗳 🚮	X 🖷 🖪 🗙	N CA 👘 🕨 🗎	名 2 2				
⊡ 🗊 Modbus		Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp
🗄 🚰 Channe	el_1	Tag_1	4X(Holding Regi	1	Word		Uncertain	
De	vice_1	Tag_2	4X(Holding Regi	2	Word		Uncertain	
		Tag_3	4X(Holding Regi	3	Word		Uncertain	
		Tag_4	4X(Holding Regi	4	Word		Uncertain	
		Tag_5	4X(Holding Regi	5	Word		Uncertain	
		Tag_6	4X(Holding Regi	6	Word		Uncertain	
		Tag_7	4X(Holding Regi	7	Word		Uncertain	
		Tag_8	4X(Holding Regi	8	Word		Uncertain	
		<						
Date	Time	Event						
2025/2/15	8:47:36	X2KNXRun	Time i					

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.



Tag Properties	×
Collection Name: Tag_1 Description: Data Type: Boolean Register Type: OX(Coil Status)-F5 Register Address: 1	OK Cancel
Scale Enable Setting	
Transfer(KNX Server) Group Address: 0/0/8 KNX DataType: Boolean *	

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.

	🦸 🗒 🗳 👘		🗠 🗠 🌆 🕨 🔳 🗄	🛠 🛱 😫				
⊡ 🗊 Modbus		Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp
🗄 🖪 Channe	L_1	Tag_1	0X(Coil Status)-F5	1	Boolean		Uncertain	
	ice_1							
Dev	ice_2							
		-						
		<						
Date	Time	Event						
2025/2/15	8:47:36	X2KNXRunT	ime i					

Figure 3-5-8 New label completed

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

17 / 52 Add: 28 Senang Crescent,#05-11,Bizhub 28,Singapore 416601 Tel: +65 80385403 URL: www.bacnetchina.com milesgoiiot@gmail.com / sales@opemaster.com



Figure 3-5-7.

X2KNX - test'.x2k	k							
<u>File Edit View To</u>	ols Interface	Web Server Gate	way <u>H</u> elp					
🗅 🗳 🖬 🇊 🗯	🖪 🗳 👩 🖻	X 🖻 🛍 🗙 🗠	○ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 🙀 😫				
⊡ ∰ Modbus	Modbus Item ID		Register Type	Register Address	DataType	Value	Quality	Timestamp
🖻 🚰 Channel_1	E ST Channel_1		0X(Coil Status)-F5	1	Boolean		Uncertain	
Device_1	Device_1							
New Group		•						
			-					
	Export EXCE	L						
Import EX		L						
	Cut	Ctrl+X						
	Сору	Ctrl+C						>
Date	Paste	Ctrl+V						
1 2025/2/15	Delete	Del						
	Properties							
	Templete							
	Explore to Pr	roject						
	Explore to Se	oftware						

Export to EXCEL Monitor Mode:Remote GateWay 192.168.1.88 | Total Items:9 | Valid Items:1024 | www.bacnetchina.com 15921075170 support@opcmaster.com //

Figure 3-5-9 Choose to export EXCEL table

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

🛯 🔚 🏷 🤆	v マ Device_2.xls [Co	ompatibility Mode]	۶) Search			JH	— () X
File <u>Home</u>	Insert Page Layout	Formulas Data	Review	View Help				Ľ	🖻 Share ~
Paste V V	Arial \sim 10 B I \sqcup \sim $A^{^{\circ}}$ \blacksquare \sim $\overset{\circ}{2}$ $\overset{\circ}{A}$ \sim	0 → Alignment	V Number	E Conditional Conditional Cell Styles	l Formatting ~ Fable ~	Cells	C Editing	Add-ins	
	Font	ل <u>د</u> ا	b de	Sty	les			Add-ins	
A E		D E	F	G	H	1	J	K	L
2 1 Tag_ 3	1 0X(Coil Status)-F5	51 Boolea	an 0/0/8	1	Description				
5 6 7									
8 9									
11 12									
< > <u>S</u>	heet1 +			:	•	_		_	
Ready 😚 Accessibilit	y: Unavailable							-	- + 100%

Figure 3-5-10 Open EXCEL sheet

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



File	Hoi	me Ir	isert Page Layou	t Forn	nulas Data	Review	View Help	č.		-	Ľ	ਤੇ Share ∽
Pastu Clip	bboard	- -	Arial B $I \cup \land A^{\uparrow}$ $\blacksquare \land \bigcirc A^{\uparrow} \land A^{\uparrow}$ Font	A [*] abc _A ~	Alignment	0∕0 Number ↓	Conditiona Format as Cell Styles	al Formatting Table ~ ~ yles	✓ Cells	Editing	Add-ins	_
121		~ :	$\times \sqrt{f_r}$									~
4	А	В	C		DE	F	G	Н	1	J	K	L
1 ID		Name	RegType	Reg	Addre: DataTy	pe Group A	dc KNX Data	Description				
2	1	lag_1	0X(Coil Status)-F51	Boolea	n 0/0/8	1					
3	2	Tag_2	OX(Coil Status		Boolea	n 0/0/9	1					
4	3	Tag_3	0X(Coll Status		Boolea	n 0/0/10	1					
	4	Tag_4	UX(Coll Status		Boolea	n 0/0/11	1					
2	5	Tag_5	UX(Coll Status		Boolea	n 0/0/12	1					
	0	Tag_6	OX(Coll Status		Boolea	n 0/0/13	1					
5	1	Tag_/	UX(Coll Status		Boolea	n 0/0/14]					
9	8	Tag_8	UX(Coil Status		Boolea	n 0/0/15	1					
0	9	Tag_9	UX(Coll Status		Boolea	n 0/0/16	1					
1							E					
2												
3												

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.

🗅 🖻 📕 🎟	I 🖪 🗒 💕 🚮	😭 🕺 🖻 🖻 🗙 🖌	n 🗠 🚺 🕨 🔳 🗄	🛠 🙀 😫				
⊡ 🗊 Modbus		Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp
🖻 🚅 Channe	el_1	Tag_1	0X(Coil Status)-F5	1	Boolean		Uncertain	
	vice_1		-					
	New Group	•						
	New Tag							
	Export EXCE	L						
	Import EXCE	L						
	Cut	Ctrl+X						
	Сору	Ctrl+C						
Date	Paste	Ctrl+V						
0 2025/2/15	Delete	Del	ie i					
	Properties							
	Templete							
	Explore to Pr	roject						

Figure 3-5-12 Select to import EXCEL table

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



	X 🖻 🛍 🗙	ດ ຕ [🌆 🕨 🔳] :					
⊡ ∰ Modbus	Item ID	Register Type	Register Address	DataType	Value	Quality	T
⊡ 🚰 Channel_1	Tag 1	0X(Coil Status)-F5	1	Boolean		Uncertain	
Device 1	Tag 2	0X(Coil Status)-F5	2	Boolean		Uncertain	
Device 2	Tag_3	0X(Coil Status)-F5	3	Boolean		Uncertain	
	Tag_4	0X(Coil Status)-F5	4	Boolean		Uncertain	
	Tag_5	0X(Coil Status)-F5	5	Boolean		Uncertain	
	Tag_6	0X(Coil Status)-F5	6	Boolean		Uncertain	
	Tag_7	0X(Coil Status)-F5	7	Boolean		Uncertain	
	Tag_8	0X(Coil Status)-F5	8	Boolean		Uncertain	
	Tag_9	0X(Coil Status)-F5	9	Boolean		Uncertain	
	Tag_10	0X(Coil Status)-F5	10	Boolean		Uncertain	
	<						>

l Monitor Mode:Remote GateWay 192.168.1.88 Total Items:18 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com 📈

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.

🗅 🚔 日 📾 🛤 🔳	(I	KNX IP Server			R LOAD 1			
Modbus		Sort KNX Group A	ddress	уре	Register Address	DataType	Value	Quality
🖻 🚰 Channel_1	~	OPC XML-DA Web	Service	atus)-F5	1	Boolean		Uncertain
Device_1		ODC UA Samuer		atus)-F5	2	Boolean		Uncertain
Device 2		OPC DA Server		atus)-F5	3	Boolean		Uncertain
		Tag_4	0X(Co	oil Status)-F5	4	Boolean		Uncertain
		DTag_5	0X(Co	oil Status)-F5	5	Boolean		Uncertain
		Tag_6	0X(Co	oil Status)-F5	6	Boolean		Uncertain
		DTag_7	0X(Co	oil Status)-F5	7	Boolean		Uncertain
		DTag_8	0X(Co	oil Status)-F5	8	Boolean		Uncertain
		DTag_9	0X(Co	oil Status)-F5	9	Boolean		Uncertain
		DTag_10	0X(Co	oil Status)-F5	10	Boolean		Uncertain

i Monitor Mode:Remote GateWay 192.168.1.88 Total Items:18 Valid Items:1024 www.bacnetchina.com 15921075170 support@oocmaster.com 😕

Figure 3-6-1: Selecting KNX Settings

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

Figure 3-5-13 Import EXCEL table completed



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.

Parame	ter		
	Port: 3671		
	KNX Address: 8 1 0		
1	nable Ronting: Ed. Welt/Cont TR:	004 0 02	10
л.	hable houting. V Multicast IF:	224.0.23.	12
Netwo	rk Monitoring: 🖌		
Additi	onal Address List		
Additi	onal Address List KNX Address	^	Add Row
Additi	onal Address List KNX Address 8.1.10	^	Add Row Add Rows
Additi ID 1 2	onal Address List KNX Address 8.1.10 8.1.11		Add Row Add Rows Delete Row
Additi ID 1 2 3	onal Address List KNX Address 8.1.10 8.1.11 8.1.12		Add Row Add Rows Delete Row Delete All



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.

🗅 🚔 🔲 🎯 🍠 🛄 1	k	(NX IP Server		► = 3					
⊡ ∰ Modbus	S	Sort KNX Group Addre	ess	уре	Register Address	DataType	Value	Quality	Т
⊡ 🚰 Channel_1 □ 🛄 Device_1	~ 0	OPC XML-DA WebServ	ice	atus)-F5 atus)-F5	1 2	Boolean Boolean		Uncertain Uncertain	
Device_2		DPC UA Server		atus)-F5	3	Boolean		Uncertain	
		D Tag_4	0X(Coil St 0X(Coil St	atus)-F5 atus)-F5	4	Boolean		Uncertain	
		Tag_6	0X(Coil St	atus)-F5	6	Boolean		Uncertain	
		Tag_7	0X(Coil St	atus)-F5	7	Boolean		Uncertain	
		D Tag_8	0X(Coil St	atus)-F5	8	Boolean		Uncertain	
		DTag_9	0X(Coil St	atus)-F5	9	Boolean		Uncertain	
		D lag_10	0X(Coil St	atus)-F5	10	Boolean		Uncertain	
		<			-				

Monitor Mode:Remote GateWay 192.168.1.88 Total Items:18 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com 😕

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.



🗅 🖼 🔚 🎟	Monitor M	ode >	Local PC									
	Start Monit	tor	✓ Remote GateWay	egister	DataType	Value	Quality	Timestamp	KNX Group Add	KNX DataType	Update C	Description
	Export EXC Import EXC Stop Monit	CEL CEL tor										
	Device Tag	>										
D :		<										3
Date	Time	Event	(D T 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 \blacktriangleright (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.



X2KNX - test'.x	2k *					(j	
<u>File Edit View</u>	Tools Interface V	Veb Server	r Gateway <u>H</u> elp				
D 🖻 🔒 🎯	Monitor Mode	>	×∽∝ ‱►∎ ;	LOAD MP			
⊡ 🗊 Modbus	Start Monitor		Register Type	Register Address	DataType	Value	Quality 1
⊡-,∰ Channel_ Devic	Export EXCEL		0X(Coil Status)-F5 0X(Coil Status)-F5	1 2	Boolean Boolean		Uncertain Uncertain
Devi	Stop Monitor		0X(Coil Status)-F5 0X(Coil Status)-F5	3 4	Boolean Boolean		Uncertain Uncertain
	Device	>	0X(Coil Status)-F5 0X(Coil Status)-F5	5 6	Boolean Boolean		Uncertain Uncertain
	Tag	, Tag 8	0X(Coil Status)-F5 0X(Coil Status)-F5	7	Boolean Boolean		Uncertain Uncertain
	Ď	Tag_9	0X(Coil Status)-F5	9	Boolean		Uncertain
		Tag_10	0X(Coil Status)-F5	10	Boolean		Uncertain
	s	_					>

Start monitor local PC Monitor Mode:Local PC Total Items:18 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com 🥢

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.

X2KNXRunTime			\times
Settting Log			
Build: Aug 29 2024(Un Language: 英语(美国) Project: C:\Users\暁鬼	icode) www.bacnetchina.com Desktop\test'.x2k Open Web		
Language: 英语(美国) Project: C:\Users\晓鬼	▼ \Desktop\test'.x2k Open Web		

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.



				[+ + + + + + + + + + + + + + + + + + +	1	1	1	1	1	1	1	1
Modb	ous		Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp	KNX Group Add	KNX DataType	Update C
- Ch	nannel_1		Tag_1	4X(Holding Regi	1	Word	11	Good	2025-02-15T	0/0/1	2Octet_Unsigned	2
	Device_1	1	Tag_2	4X(Holding Regi	2	Word	22	Good	2025-02-15T	0/0/2	2Octet_Unsigned	2
			Tag_3	4X(Holding Regi	3	Word	33	Good	2025-02-15T	0/0/3	2Octet_Unsigned	2
			Tag_4	4X(Holding Regi	4	Word	44	Good	2025-02-15T	0/0/4	2Octet_Unsigned	2
			Tag_5	4X(Holding Regi	5	Word	55	Good	2025-02-15T	0/0/5	2Octet_Unsigned	2
			Tag_6	4X(Holding Regi	6	Word	66	Good	2025-02-15T	0/0/6	2Octet_Unsigned	2
			Tag_7	4X(Holding Regi	7	Word	77	Good	2025-02-15T	0/0/7	2Octet_Unsigned	2
			Tag_8	4X(Holding Regi	8	Word	88	Good	2025-02-151	0/0/8	2Octet_Unsigned	2
F	ile Edit	us Slave - Mbsla Connection	ve1 Setup Display	View Window Help			<					
F	ile Edit	us Slave - Mbsla Connection	ve1 Setup Display	View Window Help			<	_				
F	ile Edit	us Slave - Mbsla Connection	ve1 Setup Display	View Window Help				X2KNXRu	nTime		- 0	×
F	ile Edit	us Slave - Mbsla Connection	ve1 Setup Display	View Window Help				X2KNXRu Settting Lo	nTime		- 0	×
FI	ile Edit $\square e Uit$ Mbslav ID = 1: F	us Slave - Mbsla Connection	ve1 Setup Display	View Window Help				X2KNXRu Settting Lo	nTime		- 0	×
F	Modbus Edit Edit Mbslav ID = 1: F	us Slave - Mbsla Connection	Vel Display	View Window Help				X2KNXRu Settting Lo Build: Au	nTime 5 5 29 2024 (Unicode)	www.bacnetchina.com	- 0	×
F [Modbus Edit Edit B B Mbslav ID = 1: F = 1	Is Slave - Mbsla Connection I	ve1 Setup Display	View Window Help				X2KNXRu Settting Lo Build: Au Language: 3	nTime 3 29 2024(Unicode) 波语(美国)	www.bacnetchina.com	- 0	×
e 025/2 025/2	Modbus Edit Edit Mbslav ID = 1: F	Is Slave - Mbsla Connection C	Ve1 Setup Display () () () () () () () () () () () () () (View Window Help				Settling Lo Build: Au Language: 5 Project: C	nTime 5 29 2024(Unicode) 5语(美国) :\Users\联鬼\Deskt	www.bacnetchina.com		×
e 025/2 025/2 025/2	Modbus ile Edit Mbslav ID = 1: F = 1 2 3	Is Slave - Mbsla Connection C	Vel Setup Display	View Window Help				Setting Lo Build: Au Language: Project: C	nTime g 29 2024(Unicode) 許语(美国) : \Vsers\疑鬼\Deskt	www.bacnetchina.com		×
e 025/2 025/2 025/2 025/2 025/2	Modbus ile Edit Mbslav ID = 1: F = 1 2 3 4	Is Slave - Mbsla Connection	ve1 Setup Display ▲ ♥ ♥ 4x0000 11 22 33 44	View Window Help	-			Settting Lo Build: Au Language: Project: C	nTime 5 5 2024 (Unicode) 5语 (地国) : \Users\脱鬼 (Deskt [<u>Open </u>	www.bacnetchina.com		×
e 025/2 025/2 025/2 025/2 025/2 025/2	23 Modbus ile Edit □ 22 3 4 5	Is Slave - Mbsla Connection Connection Connection Connection Connection Connection Connection Alias	4x0000 4x0000 4x0000 11 22 33 44 55	View Window Help				X2KNXRu (Setting) Lo Build: Au Language: Froject: C	nTime : : 29 2024(Unicode) : USers(脱炮(Deskt (Open.)	www.bacnetchina.com		×
e 025/2 025/2 025/2 025/2 025/2 025/2 025/2	2 Modbus ile Edit D 2 2 Mbslav ID = 1: F : 1 2 3 4 5 6	Is Slave - Mbsla Connection 3 4 1 2 4 Inve1 = 03 Alias	4x0000 4x0000 4x0000 4x0000 4x0000 4x0000 4x0000 4x0000 4x0000 5x0 5x0 5x0 5x0 5x0 5x0 5x0	View Window Help				X2KNXRu Settting Lo Build: Au Language: Z Project: C	nTime g 29 2024(Unicode) 范语(美国) (Users) 現現(Deskt	www.bacnetchina.com		×
e 025/2 025/2 025/2 025/2 025/2 025/2 025/2 025/2	3 Modbus ile Edit ile Edit ile Edit ile Ile ile <td>Is Slave - Mbsla Connection</td> <td>vel Setup Display ▲ ♥ №</td> <td>View Window Help</td> <td></td> <td></td> <td></td> <td>X2KNXRu Settting Lo Build: Au Language: Froject: C</td> <td>nTime g 29 2024 (Vinicode) 安语 (美国) : \Vsers\税鬼\Deskt [Open.]</td> <td>www.bacnetchina.com</td> <td></td> <td>×</td>	Is Slave - Mbsla Connection	vel Setup Display ▲ ♥ №	View Window Help				X2KNXRu Settting Lo Build: Au Language: Froject: C	nTime g 29 2024 (Vinicode) 安语 (美国) : \Vsers\税鬼\Deskt [Open.]	www.bacnetchina.com		×
e 025/2 025/2 025/2 025/2 025/2 025/2 025/2 025/2 025/2 025/2	Modbus Image: Constraint of the second	Is Slave - Mbsla Connection	4x0000 4x0000 4x0000 11 22 33 44 55 666 777	View Window Help				X2KNXRu (Settting) Lo Build: Au Language: [3 Project: [0	nTime : : 29 2024(Unicode) : (Users()現現() Ueskt (Open.)	www.bacnetchina.com v op\test',x2k Reb		X

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 toolbar¹¹, as shown in figure 3-8-1.

ile Edit View Tools Interfa	ice Web Server G	ateway <u>H</u> elp				
🗅 🚔 🔛 🎟 🏓 🗒 🚳	🖻 🕺 🛍 🛣 🗙	🗠 🗠 🌆 🕨 🔳 😽	R 199			
Modbus	Item ID	Register Type	Register Address	DataType	Value	Quality
⊟ 🚰 Channel_1	Tag_1	4X(Holding Regi	1	Word	11	Uncertain
Device_1	Tag_2	4X(Holding Regi	2	Word	22	Uncertain
	Tag_3	4X(Holding Regi	3	Word	33	Uncertain
	Tag_4	4X(Holding Regi	4	Word	44	Uncertain
	Tag_5	4X(Holding Regi	5	Word	55	Uncertain
	Tag_6	4X(Holding Regi	6	Word	66	Uncertain
	Tag_7	4X(Holding Regi	7	Word	77	Uncertain
	Tag_8	4X(Holding Regi	8	Word	88	Uncertain

Figure 3-8-1 Select upload the project

25 / 52 Add: 28 Senang Crescent,#05-11,Bizhub 28,Singapore 416601 Tel: +65 80385403 URL: www.bacnetchina.com milesgoiiot@gmail.com / sales@opcmaster.com 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.

Upload Project (SunFull KNX Server)	×
IP Address: 192.168.1.88	Ping
·oject Path: ℤ:\工作文件夹\所有产品\网关产品\凌动网关30\%2KM%\%2KM%配置[Upload

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.

🗅 🖻 🖬 🗊	🖻 🗒 🖆 🗊	🖌 🖻 🖻 🕽	Setting	Lond Lp					
⊡ 🗊 Modbus		Item ID	Download	Register Address	DataType	Value	Quality	Timestamp	
🖻 🚰 Channe	1_1	Tag_1	Upload	1	Word		Uncertain		
Dev	ice_1	Tag_2	TAULIDIALITY REGIM	2	Word		Uncertain		
		Tag_3	4X(Holding Regi	3	Word		Uncertain		
		Tag_4	4X(Holding Regi	4	Word		Uncertain		
		Tag_5	4X(Holding Regi	5	Word		Uncertain		
		Tag_6	4X(Holding Regi	6	Word		Uncertain		
🚺 Tag		Tag_7	4X(Holding Regi	7	Word		Uncertain		
		Tag_8	4X(Holding Regi	8	Word	Word	Uncertain		
		<							
Date	Time	Event							
0 2025/2/15	15:01:20	Open Projec	t 'E:\						
A 0005 10 145	15.01.20	Local Wah C	0010						

Serial port, netv Monitor Mode:Remote GateWay 192.168.1.88 Total Items:8 Valid Items:1024 www.bacnetchina.com 15921075170 support@opcmaster.com

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

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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.

Gateway Parameter Setting			×
Ethernet Setting Time Firmv	vare System		
Current IP Address: Use the following IP a	192.168.1.88 address:		
IP Address:	192.168.1.88		
Subnet Mask:	255.255.255.0		
Default GateWay:	192.168.1.1		
Setting	Ping	Login Web	
After entering the curre controlled, click on the operation correspond	ent IP address of th application to ma to the current IP ac	ne gateway to ke the gatewa Idress	o be ay setting
	确定	取消	应用(A)

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.

ateway Parameter Setting	×
Ethernet Setting Time Firmware System	1
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	(<u>A</u>)

Figure 3-10-3 Time

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

ateway Parameter	Setting)
Ethernet Setting	Time	Firmware S	ystem		
Name:	X2KN	K Build: Jul 2	2024(NXP1002)		
Machine Code:	00:0A:	3C:0F:39:D7			
Licence Code:	FE070	000-885217F	3-1207E3011603E	811C0	
	,				
		ſ	Refresh		
					200

28 / 52 Add: 28 Senang Crescent,#05-11,Bizhub 28,Singapore 416601 Tel: +65 80385403 URL: www.bacnetchina.com milesgoiiot@gmail.com / sales@opcmaster.com



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.

Gateway Parameter S	Setting	\times
Ethernet Setting	Time Firmware System	
Memory Load:	13 497.58 MP	
Used Memory:	66.64 MB	
	1	
	Reboot GateWay Delete Config File	
	Backup Config File Recover Config File	
	确定 取消 应用(A)

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.

🗅 🛸 🖬 🇊	🦸 🗒 💕 🗊	* 🎖 🖻 🛍 🕻	Setting					
🗉 🗊 Modbus		Item ID	Download	Register Address	DataType	Value	Quality	Timestamp
🖻 🚰 Channe	1	Tag_1	Upload	1	Word		Uncertain	
Lev	ice_i	Tag 3	4X(Holding Regi	3	Word		Uncertain	
		Tag 4	4X(Holding Regi	4	Word		Uncertain	
		Tag 5	4X(Holding Regi	5	Word		Uncertain	
		Tag 6	4X(Holding Regi	6	Word		Uncertain	
		Tag_7	4X(Holding Regi	7	Word		Uncertain	
		Tag_8	4X(Holding Regi	8	Word		Uncertain	
		<						
Date	Time	Event						
2025/2/15	15:13:51	Succeed to	get 'System' parameter					
		C						

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.

Download Project	×
IP Address: 192.168.1.88	Ping
	DownLoad



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.

	🖻 🗒 🖆 🗊	X 🖻 🛍	X P G 👘 🕨 🔳	🛠 🙀 😫				
🖃 🗊 Modbus		Item ID	Register Type	Register Address	DataType	Value	Quality	Timestamp
🗄 🚰 Channe	_1	Tag_1	4X(Holding Regi	1	Word		Uncertain	
E Dev	ice_1	Tag_2	4X(Holding Regi	2	Word		Uncertain	
		Tag_3	4X(Holding Regi	3	Word		Uncertain	
		Tag_4	Login		×		Uncertain	
		Tag_5					Uncertain	
		Tag_6					Uncertain	
		Tag_7	User Name: admin				Uncertain	
		Tag_8					Uncertain	
			Password: ******	lokojok				
			OK	Cancel	_			
		<						
Date	Time	Event						
2025/2/15	15:13:51	Succeed	to get 'System' parameter					
-								

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:

			X. 11 11				
Mod	Channel List	Register Type	Register Address	DataType	Value	Quality	Timestamp
∃ 🚰 C	Device List	4X(Holding Regi	1	Word		Uncertain	
L		4X(Holding Regi	2	Word		Uncertain	
	Internal Tag	4X(Holding Regi	3	Word		Uncertain	
	JS Script Editor	4X(Holding Regi	4	Word		Uncertain	
		4X(Holding Regi	5	Word		Uncertain	
	Timer Group	4X(Holding Regi	6	Word		Uncertain	
	Timer	4X(Holding Regi	7	Word		Uncertain	
	Trigger	4X(Holding Regi	8	Word		Uncertain	
	Clear Messages Log Errors Only						
~	Show Frame						
	Frame Display Mode >						
	Save Log						
	Bad Value >						
e	Language Setting						

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.

New Timer Group Delete Timer Group Modify Timer Group	ID	Timer Group	Description		
Delete Timer Group Modify Timer Group			New Timer Group		
Modify Timer Group			Delete Timer Group		
			Modify Timer Group		



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.**

! lim	er Group			X
Prop :crij Ve	erties Group Time_A etion: riable External Tag 💌			
ID	Tag Name		Add Row	
1	Modbus.Channel_1.Device_1.Tag_1	_	Add Rows	
2	Modbus.Channel_1.Device_1.Tag_2	_1	Delete Row	
	,,		Delete All	
	OK Cancel			

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.

🔳 Tin	ner Group List			\times
ID	Timer Group	Description		
1	Time_A			

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.

	Item Update Interval	X	ଜଜ ∰ ►∎ :	🖈 📫 🚺				
Nod	Channel List		Register Type	Register Address	DataType	Value	Quality	Timestam
C C	Device List		4X(Holding Regi	1	Word		Uncertain	
Ш			4X(Holding Regi	2	Word		Uncertain	
	Internal Tag		4X(Holding Regi	3	Word		Uncertain	
	JS Script Editor		4X(Holding Regi	4	Word		Uncertain	
	-		4X(Holding Regi	5	Word		Uncertain	
_	Timer Group		4X(Holding Regi	6	Word		Uncertain	
	Timer		4X(Holding Regi	7	Word		Uncertain	
	Trigger		4X(Holding Regi	8	Word		Uncertain	
	Clear Messages							
	Log Errors Only							
	cl s							
~	Show Frame							
	Frame Display Mode	>						
	Save Log				_			
_	Bad Value	>						
121	Language Setting	d to a	et 'System' parameter					
121		dtog	et 'System' parameter					
/-/ ~	loolbar	r to g	et system parameter					

Figure 3-13-3 Selecting Timer

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

III Tin	ner					\times
ID	Timer Name	Timer Group	Description	Monday	Tuesday	Wednes
<						>

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.

Timer		×
Timer Name: HUM_S Timer Group: Time_A	ſ	
Monday Tuesday Wednesday Thursday Friday Monday Tuesday Wednesday Thursday Friday	Saturday Saturday 🗖	Sunday Sunday 🗖
OK Cancel		

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.

Timer

	Time	Value	
1	16:19:05	111	
2	16:20:06	222	Add Row
3	16:21:16	333	Add Rows
			Delete Row
			Delete All

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.

Х



Timer		×
Timer Name: HUM_S Timer Group: Time_A	j j	
Monday Tuesday Wednesday Thursday Friday Monday Image: Tuesday Image: Tuesday Image: Tuesday Image: Tuesday Image: Tuesday	Saturday	Sunday Sunday 🗖
OK Cancel		

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.

ê 🔒	Item Update Interval	X	P C ₩ ► ■ \$	🛠 🙀 😫				
Mod	Channel List		Register Type	Register Address	DataType	Value	Quality	Timestam
с С	Device List		4X(Holding Regi	1	Word		Uncertain	
			4X(Holding Regi	2	Word		Uncertain	
	Internal Tag		4X(Holding Regi	3	Word		Uncertain	
	JS Script Editor		4X(Holding Regi	4	Word		Uncertain	
			4X(Holding Regi	5	Word		Uncertain	
	Timer Group		4X(Holding Regi	6	Word		Uncertain	
	Timer		4X(Holding Regi	7	Word		Uncertain	
	Trigger		4X(Holding Regi	8	Word		Uncertain	
	Clear Messages							
	Log Errors Only							
	cl r							
~	Show Frame							
	Frame Display Mode	>						
-	Save Log							
_	Bad Value	>						

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.



 \sim

Trigger

)	Source Tag Name	Target Tag Name	Add Row
-	Modbus.Channel_1.Device_1.Tag_1	Modbus.Channel_1.Device_1.Tag_2	Add Rows
	Modbus.Channel_1.Device_1.Tag_3	Modbus.Channel_1.Device_1.Tag_4	Delete Row
			Delete All
			Transt
			Import

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.

▲ Image: Control of the state of	-					-	×
← C 命 ▲ 不安全 192.168.1.88/index.htm	▲ 不安全 192.168.1.88/index.html#/login ②						 0
	Language English						
	远绕 sunfull	_					
	专注目控 物物互联						
User Login		-					
* Username :	admin v						
* Password:	······ø						
	Login Reset						



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.

) 192.168.1.88/index.html#/app/do × +						-	D	×
\leftarrow C \bigcirc	▲ 不安全 192.168.1.88/index.html#/a	app/download		P	Q	9	ন্ন হ	`	0
退绕 sunfull						Lai	nguage Engl	sh V	G
专注自控 物物互联	Download								
土 Download	Download List	Size	Date Modify(*unknow	wn)					
土 Upload	Project File	×	*						
Ping Option									
称 User Admin	Video	×	×						
र्छ Network									
∀ Firmware									
① Memory									
Communication Tr									
© Timer									
Internal Variable									
目 Tag List									
					Copyrig	ht © 201	1-2023 www.ba	cnetchina.c	om

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.



) 192.168.1.88/index.html#/app/use ×	+						-	D	×
← C ⋒	▲ 不安全 192.168.1.88/index	x.html#/app/user-admin		P	Q	9		∠ే≡		Ø
退绕						La	nguage	English	∨ G	•
sunfull 专注自控 物物互联	User Admin									
는 Download	Add									
土 Upload										
Ping Option	Username	Password	Access							
冬 User Admin	admin		User		м	odify				
Network Network										
∀ Firmware										
① Memory										
🛜 Communication Tr										
ଙ Timer										
Internal Variable										
目 Tag List										
					Copyrig	ht © 20'	11-2023 w	ww.bacnet	china.com	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.



: © ■) 192.168.1.88/index.html#/app/net × +					-		×
\leftarrow C \bigcirc	▲ 不安全 192.168.1.88/index.html#/app/network		P	Q	8	ר≦		-
选统 sunfull					Languag	e English	~ 0	Ð
专注自控 物物互联	Network							
土 Download	Network1(Default)							
土 Upload	* IP Address: 192.168.1.88							
요 Ping Option 용 User Admin	* Subnet Ma: 255.255.255.0							
Ø Network	Default Gatev 192.168.1.1							
☑ Firmware								
① Memory	ок	Reload						
Communication Tr								
ⓒ Timer								
Internal Variable								
Tag List								
				C <mark>opyrig</mark>	ht © 2011-202	3 www.bacne	tchina.coi	m

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.



) 192.168.1.88/index.html#/a	pp/fire × +				-		×
← C A	▲ 不安全 192.168.1	.88/index.html#/app/firmware		Q	9	☆ €		-
返绕 sunfull 专注自控 物物互联	Firmware				Lan	guage English	× 0	÷
스 Download	Name:	X2KNX Build: Jul 2 2024(NXP1002)	h					
土 Upload	Machine Code :	00:0A:3C:0F:39:D7						
Ping Option								
兔 User Admin	Licence Key:	FE070000-8B5217F3-1207E3011603E811C0						
र्छ Network		Reload						
① Memory								
🛜 Communication Tr								
ট Timer								
Internal Variable								
目 Tag List								
				Copyrig	ht © 201	1-2023 www.bacn	etchina.cor	n

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.



	192.168.1.88/index.h	ntml#/app/me × +	-							-		×
\leftarrow C $$	▲ 不安全 192	2.168.1.88/index.htm	l#/app/memory				Q	9		₹_=		Ø
退绕								Lar	nguage	English	∀ G	
sunfull 专注自控 物物互联	Memory											
占 Download	Memory Load :	13%			Disk Load :	12%						
스 Upload	Total Memory:	497.58 MB			Total Flash:	1.91 GB						
Ping Option	Used Memory:	66.40 MB			Used Flash:	212.17 MB						
条 User Admin				Destruction	Delete Des							
Ø Network				Restart Gateway	Delete Proj							
∀ Firmware				Backup Project File	Restore	Project File						
① Memory												
Communication Tr												
© Timer												
Internal Variable												
🗐 Tag List												
							Copyrigh	nt © 201	1-2023 ww	w.bacnet	china.com	

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.



) 192.168.1.88/index.html#/app/int								_	D	×
← C A	▲ 不安全 192.168.1.88/index.html	#/app/interna	al-variabl	e			ର ଓ		€]		Ø
退绕 sunfull							L	anguage	English	√ G	
专注自控 物物互联	Internal Variable										
占 Download	Tag Name	Data Type	Value	Quality	TimeStamp	KNX Group Address	КNХ Тур	be	Descri	ption	
土 Upload	\$.Modbus.Channel_1.Device_1.CommStatus	Boolean	1	good	2025-02- 17T09:14:15	0/1/0	Boolea	n	evice Com Stat	municatio :us	'n
Web Service Ping Option											
へ User Admin											
l Network											
∀ Firmware											
① Memory											
Internal Variable											
🗏 Tag List											
						C	Copyright © 20	011-2023 w	/ww.bacnet	china.com	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.



	192.100.1.88/Index.nunl#/app/										5
	▲ 不安全 │ 192.168.1.88	3/index.html#/	app/runtim	e-data					Q	C2 5	£≡ …
迟统 sunfull 专注自控 物物互联	Tag List									Language Englis	n v G
L Download	✓ Modbus	Modbus /	′Channel_1 /	Device_1					KNY		
土 Upload	 Channel_1 	Tag Name	Register Name	Address	Data Type	Value	Quality	TimeStamp	Group	КNХ Туре	Description
Web Service		Tag_1	4X(Holding Register)-F6	1	Word	11	good	2025-02- 17T09:16:14	0/0/0	2Octet_Unsigned	
원 User Admin		Tag_2	4X(Holding Register)-F6	2	Word	22	good	2025-02- 17T09:16:14	0/0/1	2Octet_Unsigned	
3 Network		Tag_3	4X(Holding Register)-F6	3	Word	33	good	2025-02- 17T09:16:14	0/0/2	2Octet_Unsigned	
7 Firmware		Tag_4	4X(Holding Register)-F6	4	Word	44	good	2025-02- 17T09:16:14	0/0/3	2Octet_Unsigned	
ন Communication Tr		Tag_5	4X(Holding Register)-F6	5	Word	55	good	2025-02- 17T09:16:14	0/0/4	2Octet_Unsigned	
Internal Variable		Tag_6	4X(Holding Register)-F6	6	Word	66	good	2025-02- 17T09:16:14	0/0/5	2Octet_Unsigned	
Tag List		Tag_7	4X(Holding Register)-F6	7	Word	77	good	2025-02- 17T09:16:14	0/0/6	2Octet_Unsigned	
		Tag_8	4X(Holding Register)-F6	8	Word	88	good	2025-02- 17T09:16:14	0/0/7	2Octet_Unsigned	
			DOM: LE					2025.02			

Figure 4-8-1 Internal Variable

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

← C A ▲ Add 192.168.1.88/index.html#/app/runtime-data Q 2 2 A A Image Call C A Add res Luguage Call Call Address C A Address Fig.1a Address KNX Type Description A Upload • Modbus • Modbus Fig.1a Registed-F6 Word 11 good 2025-02- 000 Zotet.Unsigned Pring Option Address Fig.1a Registed-F6 Word 11 good 2025-02- 000 Zotet.Unsigned Image Pring Option Fig.1a Registed-F6 Word 13 good 2025-02- 000 Zotet.Unsigned Image Pring Option Fig.3 Registed-F6 Word 13 good 2025-02- 000 Zotet.Unsigned Image Pring Option Fig.3 Registed-F6 Word 13 good 2025-02- 000 Zotet.Unsigned Image Pig.1 Registed-F6 Word 14 good 2025-02- 0003 Zotet.Unsigned Image Pig.2 Registed-F6 Word <td< th=""><th></th><th>) 192.168.1.88/index.html#/app/run</th><th>× +</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>2</th><th>- 0</th><th>×</th></td<>) 192.168.1.88/index.html#/app/run	× +								2	- 0	×
L Download * Madbus * Value: 43 * Value: 44 Yalue: 44	\leftarrow C \bigcirc	▲ 不安全 192.168.1.88/in	dex. <mark>ht</mark> ml#/	/app/runtime	-data					Q	2 S	£≡ …	
Image: Service Tag.3 Modbus • Modbus • Modbus • Modbus • Modbus • Modbus • Modbus • Modbus • Modbus • Cancel OK • More Diagona • Cancel OK • Menory • Firmware • Menory • Communication Tr • Internal Variable • Tag.4 #X(Holding A Word 14 good 2025-02- 00/02	退绕									ñ	Language Englis	h ∨ G	
Image: Service Fig. 3 Prig Option Web Service Prig Option Ver Admin Network Firmware Memory Firmy are Internal Variable Internal Variable Tag. 1 Register) F6 1 Word 20 Prig Option Autor Tag. 2 4X(Holding Register) F6 2 Word 22 000 2025-02- 17109-16:14 00/0 20ctet_Unsigned Tag. 2 4X(Holding Register) F6 3 Word 33 good 2025-02- 17109-16:14 00/0 20ctet_Unsigned - Tag. 4 4X(Holding Register) F6 3 Word 33 good 2025-02- 17109-16:14 00/0 20ctet_Unsigned - Tag. 5 4X(Holding Register) F6 5 Word 55 good 2025-02- 17109-16:14 0/0 20ctet_Unsigned - Tag. 6 4X(Holding Register) F6 5 Word 55 good 2025-02- 17109-16:14 0/0 20ctet_Unsigned -	sunfull 专注自控 物物互联	Tag List											
I. Udoad • Modbus • Channel_1 • Channel_1 • Channel_1 • Channel_1 • Channel_1 • Channel_1 • Channel_1 • Channel_1 • Channel_1 • Modbus • Modbus • Modb	FITTELL IN IN THE	Tag_i	3						×				
I Upload • Channel 1 Web Service Image: 1 • Verview Image:	占 Download	▼ Modbus	* Value:	43						KNX			
• Web Service Image: Image	亡 Upload	 Channel_1 					Cancel	ОК	eStamp	Group Address	КNХ Туре	Descriptio	'n
Pring Option Tag.2 4X(Holding Register)-F6 2 Word 22 good 17T09:16:14 0/0/1 2Octet_Unsigned Network Tag.3 4X(Holding Register)-F6 3 Word 33 good 2025-02- 17T09:16:14 0/0/2 2Octet_Unsigned Firmware Tag.4 4X(Holding Register)-F6 4 Word 44 good 2025-02- 17T09:16:14 0/0/2 2Octet_Unsigned Memory Tag.4 4X(Holding Register)-F6 4 Word 44 good 2025-02- 17T09:16:14 0/0/2 2Octet_Unsigned Memory Tag.4 4X(Holding Register)-F6 4 Word 55 good 2025-02- 17T09:16:14 0/0/2 2Octet_Unsigned Internal Variable Tag.5 4X(Holding Register)-F6 5 Word 55 good 2025-02- 17T09:16:14 0/0/2 2Octet_Unsigned Itag List Tag.6 4X(Holding Register)-F6 6 Word 66 good 2025-02- 17T09:16:14 0/0/5 2Octet_Unsigned Itag List Tag.1 4X(Holding Register)-F6 6 Word 77 good	Web Service		Tag_1	Register)-F6	1	Word	11	good		0/0/0	2Octet_Unsigned		
2: User Admin File Register)+Fo 1: User File Register) 1: User File Re	Ping Option		Tag_2	4X(Holding	2	Word	22	good	2025-02-	0/0/1	2Octet_Unsigned		
Image: Sector Structure Image: Sector Structure <td>원 User Admin 회 Network</td> <td></td> <td></td> <td>4X(Holding</td> <td>2</td> <td>Mond</td> <td>22</td> <td></td> <td>2025-02-</td> <td>0/0/2</td> <td>20 4 4 11 - 1</td> <td></td> <td></td>	원 User Admin 회 Network			4X(Holding	2	Mond	22		2025-02-	0/0/2	20 4 4 11 - 1		
Image: Communication Tr Tag.4 4X(Holding Register)-F6 4 word 44 good 2025-02- 17709:16:14 0/0/3 2Octet_Unsigned Image: Communication Tr Tag.4 4X(Holding Register)-F6 5 Word 55 good 2025-02- 17709:16:14 0/0/4 2Octet_Unsigned Image: Internal Variable Tag.6 4X(Holding Register)-F6 6 Word 66 good 2025-02- 17709:16:14 0/0/5 2Octet_Unsigned Image: Ima	⊽ Firmware		lag_3	Register)-F6	3	word	33	good	17T09:16:14	0/0/2	2Octet_Unsigned		
Image: Communication Tr Tag.5 4X(Holding Register)-F6 5 word 55 good 2025-02- 1709:16:14 0/0/4 2Octet_Unsigned Image: Internal Variable Tag.6 4X(Holding Register)-F6 6 word 66 good 2025-02- 1709:16:14 0/0/4 2Octet_Unsigned Image: Internal Variable Tag.6 4X(Holding Register)-F6 6 word 66 good 2025-02- 1709:16:14 0/0/5 2Octet_Unsigned Image: Ima	 Memory 		Tag_4	4X(Holding Register)-F6	4	Word	44	good	2025-02- 17T09:16:14	0/0/3	2Octet_Unsigned		
Internal Variable Tag_6 4X(Holding Register)-F6 6 word 66 good 2025-02- 0/0/5 2Octet_Unsigned I Tag List Tag_7 4X(Holding Register)-F6 7 Word 77 good 2025-02- 0/0/5 2Octet_Unsigned Tag_8 4X(Holding Register)-F6 8 Word 88 good 2025-02- 0/0/5 2Octet_Unsigned Tag_8 4X(Holding Register)-F6 8 Word 88 good 2025-02- 0/0/7 2Octet_Unsigned	Communication Tr		Tag_5	4X(Holding Register)-F6	5	Word	55	good	2025-02- 17T09:16:14	0/0/4	2Octet_Unsigned		
E Tag List Tag_7 4X(Holding Register)-F6 7 Word 77 good 2025-02- 17T09:16:14 0/0/6 2Octet_Unsigned Tag8 4X(Holding Register)-F6 8 Word 88 good 2025-02- 17T09:16:14 0/0/7 2Octet_Unsigned	Internal Variable		Tag_6	4X(Holding Register)-F6	6	Word	66	good	2025-02- 17T09:16:14	0/0/5	2Octet_Unsigned		
Tag_8 4X(Holding Register)-F6 8 Word 88 good 2025-02- 17T09:16:14	Tag List		Tag_7	4X(Holding Register)-F6	7	Word	77	good	2025-02- 17T09:16:14	0/0/6	2Octet_Unsigned		
			Tag_8	4X(Holding Register)-F6	8	Word	88	good	2025-02- 17T09:16:14	0/0/7	2Octet_Unsigned		

Figure 4-7-2 Write Value

Click KNX of the menu, select the KNX IP Server, as the below figure 5-1 $_{\circ}$

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D 🗳 🔒 🍘	Sa 📰 (KNX	IP Server		• 11	* 🙀 🗱				
⊞ ∰ E_Linker_E	CWG485 Sort I	(NX Group Add XML-DA WebSer JA Server	vice		Register Type	Register	DataType	Value	Quality
Date	Time 16:06:31	Event 打开工程'E:\r	nsg\						

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.

	Port: 3671 KNX Address: 3.1.0	
En	ble Routing: 🔽 MultiCast IP: 💈 : Monitoring: 🔽	24. 0. 23. 12
ldition	AL Address List	Add Row
טון	A 5 6 2 6 9 7 10 6 6 6 6 7	The second second
2	8.1.11	Add Rows
2	8.1.11 8.1.12	Add Rows Delete Roy

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.



≣ ETS5™ ETS		- = ×
Overview Bus Ca	talogs Settings	KNX
- Connections Interfaces Options	Current Interface <no interface="" selected=""></no>	
- Monitor Group Monitor	▲ 新连接 224.0.23.12:3671 ▲ Discovered Interfaces	
Bus Monitor - Diagnostics	Intel(R) Ethernet Connection (10) I219-V 224.0.23.12 90:2E:16:29:7D:08 4 8.1.0 SunFull KNX Server 192.168.1.88:3671 00:0A:3C:0F:39:D7	
Unload Device Device Info Individual Addresses Programming Mode Individual Address Check Line Scan		



Group monitoring can monitor both multicast addresses and IP addresses.

ETS5™ - demo ETS <u>E</u> dit Workplace <u>C</u> om	missioning	<u>D</u> iagnostics	Apps \	Wi <u>n</u> dow									_	0 ×
💊 Close Project 🧳 Undo	🐴 Redo	Repo	orts	Workplace •	₩ Х2К	NX - test.x2k								
Diagnostics -					<u>File E</u> o	dit <u>V</u> iew <u>T</u> ool	s Interface	Web Serv	er Gateway	Help	1			
- Monitor	Poac	Device Ir	ofo			lodhus		8 In I	DataTurne	Value	· · · · · · · · · · · · · · · · · · ·	Timestamp	KNX Gro	KNX Data
~	Neac	a Device II	0.1.0			g Channel_1	Status)-F5	1	Boolean	1	Good	2025-02-17T	0/0/0	Boolean
Group Monitor	Individ	dual address	8.1.0		1	Device_1	Status)-F5	2	Boolean	0	Good	2025-02-17T	0/0/1	Boolean
Bus Monitor	✓ Re	ead group co	mmunicat	tion part			Status)-F5	3	Boolean	0	Good	2025-02-17T	0/0/2	Boolean
	-						Status)-F5	4	Boolean	1	Good	2025-02-17T	0/0/3	Boolean
 Diagnostics 							Status)-F5	5	Boolean	0	Good	2025-02-171	0/0/4	Boolean
							Status)-F5	7	Boolean	0	Good	2023-02-171	0/0/5	Boolean
Device Info							Status)-F5	8	Boolean	1	Good	2025-02-171	0/0/7	Boolean
	1						Status)-F5	9	Boolean	0	Good	2023-02-171	0/0/8	Boolean
Diagnostics 🔻							Status)-F5	10	Boolean	1	Good	2025-02-17T	0/0/9	Boolean
- Monitor	► Start	📕 Stop 🔏	👂 Clear	🚺 🚺 Open	d									
Group Monitor	Group Add	ress 0/0	/7	Data p	pii		<							
Bus Monitor	Last receive	ed value \$01	On	Value	Ready	Monitor Mo	de:Remote (ateWay 19	2.168.1.88	otal Items:10	Valid Items:51	2 www.bacnetchi	na.com 15921	075170 supp
- Diagnostics	Service	Flags	Prio	Source Add	Source Nam	e Destination D	estination Nar	Rout Type	DPT	Info				
	bus		Low	8.1.10 -		0/0/7 -		6 Group	/alueW 1.00	1 switch \$01 Or	ı			
Device Info	bus		Low	8.1.10 -		0/0/7 -		6 Group\	/alueW 1.00	1 switch \$00 O	ff	G	enerate statistics	
 Individual Addresses 	bus		Low	8.1.10 -		0/0/7 -		6 Group\	/alueW 1.00	1 switch \$01 Or	1	🔎 Find and	Replace	
Programming Mode					_							Workspace	ces	
Individual Address Check												🕗 Todo Iten	ns	
Line Scan	Line Scan											> Pending Operations		
	🥝 SunFull I	KNX Server	Curre	nt project: dem	0	▼ Message	count: 3					🖍 Undo His	tory	
USB Interface (MDRC)	▲ 1.1 新建支	支銭										Last used work	space	CAPS



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

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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.

		Item Update Interval		Xna	ila 🕨 🔳	🗙 👯 🚦				
🗆 🗊 Mod		Channel List		DataType	Value	Quality	Timestamp	KNX Gro	KNX DataType	Update C.
🖻 🚰 C		Device List		Boolean	1	Uncertain		0/0/0	Boolean	7
				Boolean	0	Uncertain		0/0/1	Boolean	6
		Internal Tag		Boolean	0	Uncertain		0/0/2	Boolean	6
		JS Script Editor		Boolean	1	Uncertain		0/0/3	Boolean	7
		_		Boolean	0	Uncertain		0/0/4	Boolean	6
		Timer Group		Boolean	0	Uncertain		0/0/5	Boolean	6
		Timer		Boolean	1	Uncertain		0/0/6	Boolean	7
		Trianan		Boolean	1	Uncertain		0/0/7	Boolean	15
		ingger		Boolean	0	Uncertain		0/0/8	Boolean	6
		Clear Messages		Boolean	1	Uncertain		0/0/9	Boolean	7
		Log Errors Only								
	~	Show Frame								
	-	France Direla Made								
		Frame Display Mode	'							2
		Save Log								
Date		Bad Value	>							^
				is.Channel_1.0	Device_1.(RX)	07 6E 00 00 0	0 05 01 01 02 C9	02		
		Language Setting		is.Channel_1.	Device_1.(TX)	07 6F 00 00 00	0 06 01 01 00 00	A0 00		
2025/2/		Teelbar		is.Channel_1.	Device_1.(RX)	07 6F 00 00 0	0 05 01 01 02 C9	02		
2025/2/	~	Toolbar		is.Channel_1.	Device_1.(TX) (07 70 00 00 0	0 06 01 01 00 00	A0 00		
2025/2/	~	Status Bar	is.Channel_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.



	JS Script	Description	Execute Cycle/Tag Name/Time
		New JS Script	
		Delete JS Script	
		Modify JS Script	
<			

Figure 6-1-2: Creating a JS Script

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

🔳 Java	aScript						
	Name: JS1	Des	cription:				OK.
Execut	e Type: Cycle	▼ Exe	cute Cycle(m	s): 1000	5		Cancel
if	else	else if	switch	for	while	var	
>	<	>=	<=	=		<u> 8:8:</u>	
	&	>>	<<			=	
+	?	*	1	11	;		
KeyBo	ard Funct	tion	nternal Tag	External T	ag Synt	tax Check	
1	1		2	3		4	
<						>	

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".