

X2Profinet User Manual

Shanghai Sunfull Automation Co., LTD

Singapore Milesgo IIoT Pte Ltd



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1 Preface

1.1 Disclaimer

This user manual belongs to Shanghai Sunfull Automation Technology Co., Ltd. and authorised Licensor all rights, retain all rights. Without the company's written permission, no unit and individual may unauthorized excerpt, copy the content of the book part or all. The contents of this manual may be changed due to product version upgrades or other reasons. This manual is used in conjunction with Sunfull hardware gateway, and we do our best to provide accurate information in this manual.

1.2 Technical Support

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

http://www.bacnetchina.com/english



2 Overview

2.1 Feature

• Functional description:

X2Profinet is a powerful protocol conversion gateway, where X represents different communication protocols from each company, 2 is a homophone of To representing conversion, and Profinet is the final standard protocol supported, which is the S7 protocol. Users can configure according to the communication protocol of the on-site device and convert it to the standard S7 protocol. After running the simulation on the PC without any errors, upload it to the hardware protocol conversion gateway.

• Working principle:

X2Profinet is equivalent to a communication bridge that converts other non-standard communication protocols into the S7 communication protocol, allowing devices that support the S7 protocol (such as Siemens' 300 \ 400 \ 1200 \ 1500 PLCs) to communicate with different devices through a hardware protocol gateway, facilitating system integration.

- Advantage:
 - 1. Easy to Configure and Operation.
 - 2. Support Java Script.
 - 3. Support Chinese and English language to facilitate user operation.
 - 4. Support PC simulation with X2Profinet.
 - Support the User review data and communication status. And download files and X2Profinet software from website.
 - 6. Support different protocol transfer to S7 Protocol.
 - 7. Gateway support analog linear transformation, support function, high and low byte exchange function.



8. Support the user permission management.

2.2 Operation Platform

- Support Win 7/Win8/Win10/ XP/2000/2003
- WEB browser with Google Chrome, IE9 and above, Opera, Safari, and firefox

2.3 Applicable product models

PFN1001-ARM, PFN1002-ARM, PFN2004-ARM, PFN2004-A9. PFN1001-MBus, PFN1002-MBus, PFN1010-MBus, PFN1011-MBus.

2.4 Supported Registered Type and Number

The register types and points supported by the gateway are dynamically al located. PFN1001-ARM, PFN1001-MBus, PFN1010-MBus supports 256 points, PFN1002-ARM, PFN1002-MBus, PFN1011-MBus supports 512 points, PFN2004-ARM supports 1024 points, and PFN12004-A9 supports 2048 points.

2.5 Application Fields

The PFN hardware gateway supports multiple protocol conversions and is used to solve the problem where S7 clients cannot connect to some uncommon control devices. For example, in building automation, there are DDC, PLC, central air conditioning, precision air conditioning, elevators, fire protection, lighting control systems, electricity meters, water meters, etc.



3 Configuration And Operation

X2Profinet is a configuration software running on the PC. It used to configure project, upload the project to the machine hardware gateway. Finally, monitor by hardware gateway. X2Profinet also can be used alone on the PC.

Double click X2Profinet. exe(It is recommended to run as an administrator), open the main interface, as the following figure 3-1.

X2Profinet - D)emo.x2p *											- 0	×
File Edit View	Tools Interface	Web Server G	ateway Help										
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			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
			-										
Date	Time	Event	,										
0 2025-06-27	10:31:11	Open Projec	t 'E:\msq\wx\We0	hat Files\wxid 0xdaq0hh0r6	o12\FileStorage\File	2025-02\X2P	rofinet\Dem	o.x2p'					
0 2025-06-27	10:31:11	Local Web S	erver Listening Po	ort:81									
Ready								N	Ionitor Mode:Loca	PC Total Items:0	Valid Items:4086 su	pport@opcmast	er.com

Figure 3-1 Main interface

Note: the PC configuration software X2Profinet and upload project can be downloaded from

inside the gateway, operation steps, please see the WEB server 4 chapters.



Figure 3-2 Simple operation flow



3.1 New Driver

Click edit to choose "New driver" or click on the toolbar icon I, as following figure 3-1-1. Here as X covers many of the agreement, we choose the Modbus RTU protocol as an example. If you need to understand other protocol configuration, please click "help" menu under "Communication Manual", open the Communication Manual - Ch. PDF.

ett. e	rrofinet - 元标题 -	6											-	U X
	Undo	Ctrl+Z	Berver G	ateway Help ເວເຊີ ita ▶ ■	一交流言									
-	Redo	Ctrl+Y		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Description
	New Driver New Channel New Device	Ctrl+D												
	New Group New Tag													
	Cut Copy Copy Tag Name Paste Delete	Ctrl+X Ctrl+C Ctrl+T Ctrl+V Del												
Date	Batch Modify		ant]										
20	Properties		T工程'E:\n	nsg\wx\WeChat Files\	wxid_0xdaq0hh0r6p12\	FileStorage\File\2025	-02\X2Profine	t\Demo.x2p'						
20	Select All	Ctrl+A	也WEB服务	器的端口为81										

Figure 3-1-1 New Driver

Choose Driver Modbus RTU. As the below Figure 3-1-2.

X2Profinet - D	emo.x2p *												
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Date	Time	Event		-11	-Driver	1100	ms			Cancel			
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0 2023-00-23	14.43.52	Local Web c	erver Eistening Fo	1401		ModbusRT	WClient			Templete			
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						ModbusTC ModbusTC	P_PM5350 P Thyssenkrupp	Elevator					
						ModbusTC	PClient	-					
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-										10.0		1	
Keady										Mo	nitor Mode:Loca	al PC Total Items:0	Valid Items:4086



Figure 3-1-2 choose driver

Edit drive properties. As the below Figure 3-1-3.

	10010 1110011000	1100 001101 001	contrary interio										
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⊡ ∰ Modbus R ⊡ - 3 C1	ru		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descri
		Driver Propertie	es (Channels:1)			×							
		Nome Scan Rate Driver Search List	: Modbuz RTU : 1000 ms : ModbusRTUClient	<u>*</u>	OK Cancel Templete								
Date	Time	Event		e filo de la colho d	-12) 5/- 24	2025 02 220		2-1					
Date 2025-06-25 2025-06-25	14:46:21	Local Web Ser	rver Listening Port	81	prz (nostorage (nos		Tonnet(Denn	U.Y.C.P					

Figure 3-1-3 Driver Properties

Input driver name in the name of the project, the default Scan Rate is 1000 milliseconds. Scan Rate can adjust the frequency of access to all devices. If the time required to access all the devices is greater than the set scan rate, this time is invalid. if the time required to access all the devices is less than the set scan rate, the waiting time needs to reach the set scan rate for the next visit. User can according to the actual situation, change the scan rate.

After finish adding driver, as the below figure 3-1-4.



File Edit Virm	Tools Interfree	Wab Saniar	toway Hol-										
		X Ba In X	N CH Ala	■ 122 102 101									
H Modbus R			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
			-										
Date	Time	Event											
0 2025-06-25	14:46:21	Open Project	'E:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6	p12\FileStorage\File\	2025-02\X2P	rofinet\Dem	o.x2p'					
0 2025-00-25	14.40.21	Local Web Se	iver Listening P	01001									



3.2 New Channel

In the current driver, right click to select "New Channel" or click on the toolbar

As the following figure 3-2-1.

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Modbus RTU	New Changel	1	tem ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
	ivew channel												
	Channel List												
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Date 2025-06-25 2025-06-25	Explore to Project Explore to Software		sg\wx\We0 .istening Po	Chat Files\wxid_0xdaq0hh0r6 prt:81	ip12\FileStorage\File	\2025-02\X2Pi	ofinet\Demo	o.x2p'					
ady								M	Ionitor Mode:Loca	I PC Total Items:0	Valid Items:4086 su	ipport@opcmast	er.com

Figure 3-2-1 New Channel

In the pop up window, according to corresponding set by the driver

communication protocol channel names can be arbitrary naming. As the following

figure 3-2-2.

10 / 59

Add:28 Senang Crescent,#05-11,Bizhub 28,Singapore 416601 Tel: +65 80385403 URL: www.bacnetchina.com

milesgoiiot@gmail.com / sales@opcmaster.com



EN VOD-Gast I	40.87 ×												_	×
N2Profinet - 70	Tool In Co	W.L.C.	11.1										- 0	^
		× web server G	ateway Help	■ 424 LOD 148										
	Modbus RTU Item ID Register Register result				Serial Channel	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
Date 2025-06-25 2025-06-25 2025-06-25	Time 14:46:21 14:46:21	Event Open Projec Local Web S	t 'E:\msg\wx\WeCl erver Listening Po	nat Files\vxid_0xc rt:81	Communication Port: CC Data Bits: 8 Parity: No Response Time	Parameters MI • one • out: 1500	Baud Rate Stop Bits Flow Control	: 9600 : 1 : None	•					
						UK	Lancel				- Dr Tatal Itaano	V/4 F-J Isame 4005		

Figure 3-2-2 Set communication parameters

Since the acquisition terminal is intended to collect data from Modbus slave stations, so the setting of the setting of serial communication parameters should be consistent with the parameters in Modbus Slave.

When communication is normal, response timeout set longer does not affect communication speed. If the response speed of the device is relatively slow, it is recommended to set up a bit longer to avoid communication failure, As the following figure 3-2-3.



T X2Profinet - 无相	示題 *												- 0) ×
File Edit View	Tools Interface	Web Server G	ateway Help											
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Modbus RT	U		Item ID	Register Ty	pe	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
					Serial Channel Channel Name Channel 1				×					
					Communicatio	n Parameters -								
	10]		Port:	COM1 💌] Baud Rat	e: 9600	•					
Date	Time	Event			Data Bits:	8 🗸] Ston Bit	e 1	•					
2025-06-25 2025-06-25	14:46:21 14:46:21	Open Projec Local Web S	t 'E:\msg\wx\We erver Listening P	Chat Files\wxid_0x ort:81	c Parity:	None -	Flow Contro	1: None	-					
					Response Tim	eout: 1500	ns							
						OK	Cance	1	-					
Modbus Slave	- [Mbslav1]												- 0	×
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ID = 1					Connection				×					
40001 = 1	2													
40002 =	0				Port 2	· RTU	C ASCII		OK					
40003 =	0				9600 Baud	-		Ca	ncel					
40005 =	0					- Ignore	Unit ID							
40006 =	0				8 Data bits	<u> </u>	,							
40007 =	0				None Parity	▼ DSR	CTS							
40009 =	0					RTS TO	ggle 1 [ns] RTS dise	ble					
40010 =	0				1 Stop Bit	•	3							
1														
1														
4														
1														

Figure 3-2-3 Channel parameters are consistent

After finish adding the channel, As the following figure 3-2-4.

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File Edit View	Tools Interface	Web Server Ga	ateway Help										
e∰ Modbus R1			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
Date ① 2025-06-25 ① 2025-06-25	Time 14:46:21 14:46:21	Event Open Project Local Web Se	t 'E:\msg\wx\WeQ erver Listening Po	:hat Files\wxid_0xdaq0hh0r6 Int:81	ip12\FileStorage\File	\2025-02\X2P	rofinet\Demo	o.x2p'					
Ready								N	Ionitor Mode:Loca	PC Total Items:0	Valid Items:4086 su	pport@opcmast	er.com



3.3 New Device

In the current Channel, Right-click to choose "New Device", or click on the 12/59



toolbar . As the following figure 3-3-1.

I X2Profinet - 无	c标题 *											- c	×
File Edit View	Tools Interface Web	b Server Ga	ateway Help										
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🖃 🇊 Modbus RT	TÜ		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
Stann	New Device	Ctrl+D											
	Device List												
	Export EXCEL												
-	Cut	Ctrl+X											
	Сору	Ctrl+C											
	Paste	Ctrl+V											
	Delete	Del											
	Properties												
	Templete												
Date	Explore to Project												
0 2025-06-25	Explore to Software	(msg\wx\We	Chat Files\wxid_0xdaq0hh0r6 ort:81	ip12\FileStorage\File	2025-02\X2P	rofinet\Dem	o.x2pʻ					
0 2023 00 23	1444012.1		inter Estering r										
-													
Create a new devi	ice							N	Ionitor Mode:Loca	al PC Total Items:0	Valid Items:4086 su	pport@opcmas	er.com

Figure 3-3-1 New Device

In the pop-up window set device properties , As the following figure 3-3-2.

Name:	Device_1		
Device ID:	1		
Delay Between Polls:	50	m	s
Delay After Write:	50	m	s
Bytes Integer Order:	21	•	
Bytes Integer Order:	4321	•	
4 Bytes Float Order:	4321	•	
-Bulk Transfer	r		
Analaog Ad	jacent Span: 4		
Anala	og Max Span: 32		
Bin	ary Adjacent 4		
Bina	ry Max Span: 64		_

Figure 3-3-2 Device Properties

In order to improve the communication speed, the packet register communication can be realized under the continuous register address. When the $_{13\,/\,59}$



device does not support packet communication, the parameters of the group package should be set to 0. In addition, when the response time of the device is slow, you can set the time interval between the data frame and the frame (that is Delay Between Polls) . The default of Delay Between Polls is 100 microseconds. As the following figure 3-3-3.

2 Bytes Integer Order, 4Bytes Integer Order, and 4 Bytes Float Order means the combination of integer or floating point byte order, the default is 4321. These parameters are used in combination with field devices for data transmission.For example, some meters adjust the sequence of high and low byte in the transmission of data, which will be used at this time. The default parameters are generally used, As the following figure 3-3-3.

Name:	Device_1	
Device ID:	1	
Delay Between Polls:	50	ms
Delay After Write:	50	ms
Bytes Integer Order:	21 💌	
A Bytes Integer Order:	4321 💌	
4 Bytes Float Order:	4321 4312 3421	
-Bulk Transfer	3412	
Analaog Adj	2143 2134 1243	
Analao	1234	
Bina	ry Adjacent 4	
Binar	y Max Span: 64	
	,	

Figure 3-3-3 Byte order

After finish adding the device, As the following figure 3-3-4.



File Edit View	Tools Interface	Web Server Gateway Help										
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⊟ ∰ Modbus R ⊟ 🚰 Channe	TU 1	Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
-												
Date	Time	Event										
0 2025-06-25	14:46:21	Open Project 'E:\msg\wx\'	WeChat Files\wxid 0xdaq0hh0r	6p12\FileStorage\File	\2025-02\X2P	rofinet\Dem	o.x2p'					
1 2025-06-25	14:46:21	Local Web Server Listenin	g Port:81									

Figure 3-3-4 finish adding the device

3.4 New Tag

In the current Channel, Right-click to choose directly add tag (also add group first, and then new tag in the group), or click on the toolbar **1**, As the following figure 3-4-1.

	v Tools Interface Web Server G	iateway Help										
🗅 🖨 🖬 🎯	🍠 🗒 💣 💋 😭 👗 🛍 🛍 🗙	S C4 🐞 🕨	■ 茨翼蒂									
🗉 🗊 Modbus F	RTU	Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
🖻 🝠 Channe	el 1							1				1
- <u>II</u> [New Group											
	New Tag											
	Export EXCEL Import EXCEL											
	Cut Ctrl+X											
	Copy Ctrl+C											
	Paste Ctrl+V											
	Delete Del											
	Properties					<u></u>						
Date	Templete	a)msq\wy\We(hat Files)wyid OydagObbOr6	n12\FileStorage\File	2025-02\ ¥20	rofinet\Dem	o x2n'					
2025-06-25 2025-06-25		ver Listening Po	ort:81	P								
0 2025-06-25	Explore to Project	and the state of the local sector										
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1 2025-06-25	Explore to Project Explore to Software											
1 2025-06-25	Explore to Project Explore to Software											
2025-06-25	Explore to Project Explore to Software											
2025-06-25	Explore to Project Explore to Software											
1 2025-06-25	Explore to Project Explore to Software											
1 2025-06-25	Explore to Project Explore to Software											
0 2025-06-25	Explore to Project Explore to Software											

Figure 3-4-1 New Tag

Or right-click on the right side of the edit box blank space, add a new tag.As the following figure 3-4-2.



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m X2Profinet - 升	6标题 *											- 0	×
File Edit View	Tools Interface	e Web Server G	Gateway Help										
	37 🗒 🖀 🚺 🖻	二を喧喧×		▶■ 交貨幣			1						
B Modbus R	TU		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
E 🚰 Channe	1												
Dev	ice_i		-										
			<u> </u>										
Date	Time	Event											
0 2025-06-25	14:46:21	Open Proje	ct 'E:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6	p12\FileStorage\File	\2025-02\X2P	rofinet\Dem	o.x2p'					
2025-06-25	14:46:21	Local Web S	Server Listening P	ort:81									
2025-06-25	15:17:54	DB1 registe	ink S7 Registeri										
0 2023 00 23	13.11.34	Dorregiste	- Humberie										
Peadu								N.	Innites Medail es	al DC Tatal Itaman	Valid Items 4096	an ant O an arrant	

Figure 3-4-2 New Tag

In the pop-up dialog box , Set the parameters of collection and transfer(Modus Server). As the following figure 3-4-3.

Nome: 40001		OK
Description:		Cancel
Data Type: Word (2Byte, 0~65535)	•	
Register Type: 4% (Holding Register)-F6	•	
Register Address: 1		
Mask Value 🗖 Bits:	*	
_ Scale	_	
Enable Setting		

Figure 3-4-3 Tag Properties

Set the tag name, data type, register type and register address of the acquisition end in the tag attribute. The register address of the acquisition end selected in the above figure is 4X0001, and the data type is Word type. Additionally, when the data type is Short, Word, Long or DWord, the data bit values can be taken



according to bytes. For some special data, the linear conversion function can be enabled to achieve linear amplification and reduction of the data.

Note that the initial address of the S7 server register address starts from 0. Click "OK" to complete the addition of the tag, as shown in Figure 3-4-4.

I X2Profinet - 无	标题 *				1 100000					10.00		- 0	×
File Edit View	Tools Interface	Web Server G	Sateway Help										
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🗄 🗊 Modbus R	U New Device		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
⊟- ⊊ Channel	1 ce_1		4 0001	4X(Holding Register)-F6	1	Word		Uncertain		DB1	0	0	
Date 2025-06-25	Time 14:46:21	Event Open Proje	ct 'E:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6p12\	FileStorage\File	2025-02\X2P	rofinet\Dem	o.x2p'					
0 2025-06-25	14:46:21	Local Web	Server Listening P	ort:81									
0 2025-06-25	15:17:54	Succeed to	link S7 Register!										
1 2025-06-25	15:17:54	DB1 registe	er number:2										
0 2025-06-25	15:20:06	Succeed to	link S7 Register!										
			n nonnuon.c										
Create a new devi	ce							Mo	nitor Mode:Loca	al PC Total Items:1	Valid Items:4086 su	pport@opcmast	er.com

Figure 3-4-4 Finish adding a tag

You can continue to add steps one by one, and suggest using the copy and paste of the toolbar. Select a tag to copy, click the copy button in the toolbar, or choose the copy on the right button, or use shortcut key Ctr+C and Ctrl+V, as the following figure $3-4-5_{\circ}$

				Basistas	DataTura	Value	Quality	Timestana	C7 Desister	C7 Address	Undata C	Deserie
E St Channel	1	11tem 1D	4X(Holding Regi	ster)-F6 1	DataType Word	value	Uncertain	Timestamp	DB1	0	0 Opdate C	Descript
Devi	ce_1				Net	/ Tag						
					Sel	et All	Ctrl+A					
					Cut		Ctrl+X					
					Co	y	Ctrl+C					
					Co	y Tag Name	Ctrl+T					
					Pas	ie .	Ctrl+V					
					Del	ete	Del					
					Bat	h Modify						
					Pro	perties			1			
Date	Time	Event										
0 2025-06-25	14:46:21	Open Project 'E:\msg\w	\WeChat Files\wxid_0xdaq0	hh0r6p12\FileStorage\F	ile\2025-02\X2I	rofinet\Demo	.x2p'					
2025-06-25	14:46:21	Local Web Server Listen	ing Port:81									
2025-06-25	15:17:54	DB1 register number:2	(er)									
2025-06-25	15:20:06	Succeed to link S7 Register	ter!									
0 2025-06-25	15:20:06	DB1 register number:2										



Figure 3-4-5 Copy Tag

	37 🗒 🗳 🚺 😭	% ····································	N CA 1991	▶ ■ 次 算 昂						2028			
🖻 🇊 Modbus R	ти		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
⊟ 🚰 Channe	11		40001	4X(Holding Register)-F6	1	Word		Uncertain		DB1	0	0	
Dev	ice_1				New Tag								
					Paste	Ctrl+V							
					Select All	Ctrl+A							
Date	Time	Event	1										
0 2025-06-25	14:46:21	Open Projec	t 'E:\msq\wx\We	Chat Files\wxid 0xdaq0hh0r6p12\	FileStorage\File	2025-02\X2P	ofinet\Dem	o.x2p'					
1 2025-06-25	14:46:21	Local Web S	Server Listening P	Port:81	5.								
0 2025-06-25	15:17:54	Succeed to li	link S7 Register!										
0 2025-06-25	15:17:54	DB1 register	r number:2										
0 2025-06-25	15:20:06	Succeed to li	link S7 Register!										
1 2025-06-25	15:20:06	DB1 register	r number:2										

Figure 3-4-6 Paste Tag

It will automatically add new tags. The parameters of the new tags (such as the addresses of Modbus registers) will be automatically generated accordingly. The settings need to be made based on the actual situation on site, as shown in Figure 3-4-7.

T X2Profinet - 无	标题 *											- 0	×
File Edit View	Tools Interface	Web Server Gate	way Help										
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B- Modbus RT	U		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
🗄 🖪 Channel	1	6	40001	4X(Holding Register)-F6	1	Word		Uncertain		DB1	0	0	
Devie	ce_1	6	40002	4X(Holding Register)-F6	2	Word		Uncertain		DB1	2	0	
		1	40003	4X(Holding Register)-F6	3	Word		Uncertain		DB1	4	0	
		6	40004	4X(Holding Register)-F6	4	Word		Uncertain		DB1	6	0	
		1											
Date	Time	Event											
0 2025-06-25	14:46:21	Open Project 'E	:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6p12\/	FileStorage\File	2025-02\X2P	rofinet\Dem	o.x2p'					
0 2025-06-25	14:46:21	Local Web Serv	ver Listening P	ort:81									
0 2025-06-25	15:17:54	Succeed to link	S7 Register!										
0 2025-06-25	15:17:54	DB1 register nu	umber:2										
0 2025-06-25	15:20:06	Succeed to link	S7 Register!										
0 2025-06-25	15:20:06	DB1 register nu	umber:2										
8 2025-06-25	15:37:48	'Modbus RTU.C	Channel 1.Devi	ce_1.40002'modbus register type	DB1 address a	djust to 2.							
2025-06-25	15:37:49	'Modbus RTU.C	Channel 1.Devi	ce_1.40003'modbus register type	DB1 address a	djust to 4.							
2025-06-25	15:37:51	'Modbus RTU.C	Channel 1.Devi	ce_1.40004'modbus register type	DB1 address a	djust to 6.							



Create a new tag under the newly created device, as the figure 3-4-8.



Name: 00001	ОК
Description:	Cance
Data Type: Boolean	
Register Type: OX(Coil Status)-F5	
Register Address: 1	
Scale	
Scale Enable Setting	

Figure 3-4-8 New tag

Taking Boolean data type as an example, adding a new tag as the figure 3-4-9.

X2Profinet - D	emo.x2p *											- 0	×
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E RTU			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
i⊟-gan c1 			6 ,00001	0X(Coil Status)-F5		Boolean		Uncertain		Q.	0(0.0)	0	
Date 2025-06-25	Time 15:52:58	Event Open Proje	ct 'E:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6p	12\FileStorage\File	\2025-02\X2P	rofinet\Demo	5.x2p'					
0 2025-06-25	15:52:58	Local Web	Server Listening P	ort:81									
0 2025-06-25	15:53:27	Succeed to	link S/ Register!	.1									
2025-06-25	15:53:27	DB1 registe	er number:20										
Ready								Mor	nitor Mode:Loca	PC Total Items:11	Valid Items:4086 su	upport@opcmast	er.com

Figure 3-4-9 Finish adding a tag

It can also be edited in the EXCEL table, and then edit the engineering point by importing excel and exporting excel functions.

Right-click the device to choose "Export Excel", As the figure 3-4-10. Save as xls file.



		🖷 🔝 🗙	N CA 199 1	「「父道昭」		,							
E I RTU			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
⊡- <u>s</u> = C1	1		00001	0X(Coil Status)-F5	1	Boolean		Uncertain		Q	0(0.0)	0	
	New Group												
	New Tag												
	Export EXCEL Import EXCEL												
	Cut	Ctrl+X											
	Paste Delete	Ctrl+V										_	
Date	Properties		1					2					
2025-06- 2025-06-	Templete		'E:\msg\wx\Wel	Chat Files\wxid_0xdaq0hh0r6p1 ort:81	12\FileStorage\File\	2025-02\X2P	ofinet\Demo	o.x2p'					
 2025-06-; 2025-06-; 2025-06-; 2025-06-; 	Explore to Project Explore to Software		nk S7 Register! register number number:20	:1									

Figure 3-4-10 Export EXCEL

Save the completed, open the EXCEL for editing, As the figure 3-4-11.

X2Profinet - D	lemo.x2p *													- 0	×
File Edit View	Tools Interfac	e WebServer Ga	iteway Help												
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		-	Item ID	Reg	ister Type	5	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
id g≇ C1 			00001	0X(Coil Statu:	s)-F5	1	Boolean		Uncertain		Q	0(0.0)	0	
				Export t	o Excel					×					
				保存在(1):		桌面		• 🗢	®						
Date	Time	Event			图库										
 2025-06-25 2025-06-25 2025-06-25 	15:52:58 15:52:58 15:53:27	Open Project Local Web Se Succeed to li	'E:\msg\wx\V erver Listening nk S7 Register		OneDrive -	Personal									
 2025-06-25 2025-06-25 	15:53:27 15:53:27	I(Read-only) DB1 register	register numb number:20		见频										
				文件名(N):	D2.	xls			保存((S)					
				保存类型(T)	Exce	el Files (*.xls) el Files (*.xls) (Files (*.su)			Roji	<u>ا</u>					
					All f	files (*.*)									
Ready										Mo	nitor Mode:Loca	PC Total Items:11	Valid Items:4086	upport@opcmast	er.com

Figure 3-4-11 save the EXCEL

Save the completed, open the EXCEL for editing.



WPS 表格	S D	2.xls			Ψ×	+														1	0 -	
☰ 文件	- 6	26	Q 5	» (Ж	Office	PLUS 插,	、 页面布	局 公式	数据审	词视图	安全	开发工具	云服务	自定义 PDF	工具箱	Q查找命	\$	〇末同が	き 谷 物作	0 29	厚◎	: ^
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		141-151,002,00 [(1999) (1999) (1999) (1999)	1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -						1											
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1 ID	Nam	e	RegType	RegAddre	DataType	S7 Regist	S7 Addres	s Descripti	on	0	K	L	191		0		G.	K	5		0	_ 分析
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After editing the Excel file, As the figure 3-4-12.

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1 10	A B	DeaTure DeaAd	U E	编辑栏	G H	tion	J	ĸ	L	M	N	0	P	Q	R	5	-	分析
2	1 00001	OV(Coil Status) [1	Boolean	1 registeor	Address Descrip	RION												
3	2 00002	0X(Coil Status) 12	Boolean	1	2									-				R
1	3 00002	0X(Coil Status)-12	Boolean	1	4									-				选择
5	4 00004	0X(Coil Status)-14	Boolean	1	6													
6	5 00005	0X(Coil Status)-15	Boolean	1	8												_	
7	6 00006	0X(Coil Status)-16	Boolean	1	10													應性
8	7 00007	0X(Coil Status)-17	Boolean	1	12													
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Back to X2Profinet software, Right-click the device to choose "Import Excel", find the edited Excel file to import. As the following figure 3-4-13.



KIU KIU			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
C1	1		60 0001	0X(Coil Status)-F5	1	Boolean		Uncertain		Q	0(0.0)	0	
· 🛄 💶	New Group												
	New Tag												
	Export EXCEL		-										
	Import EXCEL												
	Cut	Ctrl+X	-										
	Paste	Ctrl+V	-										
	Delete	Del											
Date 2025-06-	Properties		'E:\msq\wx\We0	Chat Files\wxid 0xdaq0hh0r6p	12\FileStorage\File\	2025-02\X2P	rofinet\Dem	p.x2p'					
2025-06-	Templete		erver Listening Pe	ort:81									
2025-06-	Explore to Project		register number	:1									
2025-06-	Explore to Software		number:20										

Figure 3-4-13 Import EXCEL

The import is complete, the following figure 3-4-14.

X2Profinet - D	emo.x2p *											- 0	×
File Edit View	Tools Interface	Web Server	Gateway Help										
0 🖻 🖬 🇊	# 🗒 💣 💋 😭	🔏 🖻 🖻 🗙	n a 10	■ 梁冀芾									
E RTU			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
i⊟-sª C1			00001	0X(Coil Status)-F5	1	Boolean		Uncertain		Q	0(0.0)	0	
- II D1			00002	0X(Coil Status)-F5	2	Boolean		Uncertain		Q	2(0.2)	0	
D2			1 00003	0X(Coil Status)-F5	3	Boolean		Uncertain		Q	4(0.4)	0	
			00004	0X(Coil Status)-F5	4	Boolean		Uncertain		Q	6(0.6)	0	
			00005	0X(Coil Status)-F5	5	Boolean		Uncertain		Q	8(1.0)	0	
			00006	0X(Coil Status)-F5	6	Boolean		Uncertain		Q	10(1.2)	0	
			00007	0X(Coil Status)-F5	7	Boolean		Uncertain		Q	12(1.4)	0	
1													
1													
			· · · · · · · · · · · · · · · · · · ·										
Date	Time	Event											
0 2025-06-25	15:52:58	Open Proje	ct 'E:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6p	12\FileStorage\File	2025-02\X2P	rofinet\Dem	o.x2p'					
0 2025-06-25	15:52:58	Local Web	Server Listening F	ort:81									
0 2025-06-25	15:53:27	Succeed to	link S7 Register!										
0 2025-06-25	15:53:27	I(Read-only	/) register number	n1									
0 2025-06-25	15:53:27	DB1 registe	er number:20										
Ready								Mo	nitor Mode:Loca	PC Iotal Items:17	Valid Items:4086 st	ipport@opcmast	er.com

Figure 3-4-14 Complete the import

3.5 S7 Server

3.5.1 S7 Setting

The default port number for the S7 gateway at the factory is 102. If the user needs to change it, they can click on the Profinet settings, as the figure 3-5-1-1.



L 🗁 🖬 🖽 S	🗯 🛄 (🛛 S7 PL	C Server >	Profinet Setting									
		YMI -DA WebSenice	Sort Register Address	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descript
🖻 🚰 C1	0101		UA(COII SIBIUS)-F3	1	Boolean		Uncertain		Q	0(0.0)	0	1
- III D1	OPCI	UA Server	0X(Coil Status)-F5	2	Boolean		Uncertain		Q	2(0.2)	0	
D 2		00003	0X(Coil Status)-F5	3	Boolean		Uncertain		Q	4(0.4)	0	
		00004	0X(Coil Status)-F5	4	Boolean		Uncertain		Q	6(0.6)	0	
		100005	0X(Coil Status)-F5	5	Boolean		Uncertain		Q	8(1.0)	0	
		1 00006	0X(Coil Status)-F5	6	Boolean		Uncertain		Q	10(1.2)	0	
		00007	0X(Coil Status)-F5	7	Boolean		Uncertain		Q	12(1.4)	0	
		_										
						_						
Date	Time	Event										
2025-06-25	15:52:58	Open Project 'E:\msg\wx\We	Chat Files\wxid_0xdaq0hh0r6p1	2\FileStorage\File	2025-02\X2P	rofinet\Demo	o.x2p'					
2025-06-25	15:52:58	Local Web Server Listening P	ort:81									
2025-06-25	15:53:27	Succeed to link S7 Register!										
2025-06-25	15:53:27	I(Read-only) register number	:1									
2025-06-25	15:53:27	DB1 register number:20										
		3										

Figure 3-5-1-1 Select Profinet Setting

In the popped-up dialog box, set the S7 server settings. The port number is fixed

at 102 and does not need to be changed. As the figure 3-5-1-2.

X2Profinet - De	emo.x2p *											- 0	×
File Edit View	Tools Interface	Web Server G	ateway Help										
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E 🗊 RTU			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
🖻 🚰 C1			00001	0X(Coil Status)-F5	1	Boolean		Uncertain		Q	0(0.0)	0	
🛄 D1			00002	0X(Coil Status)-F5	2	Boolean		Uncertain		Q	2(0.2)	0	
- 🛄 D2			00003	0X(Coil Status)-F5	3	Boolean		Uncertain		Q	4(0.4)	0	
			00004	0X(Coil Status)-F5	4	Boolean		Uncertain		Q	6(0.6)	0	
			00005	0X(Coil Status)-F5	5	Boolean		Uncertain		Q	8(1.0)	0	
			00006	0X(Coil Status)-F5	6	Boolean		Uncertain		Q	10(1.2)	0	
			D 00007	0X(Coil Status)-F5	7	Boolean		Uncertain		Q	12(1.4)	0	
				P	rofinet Server Sett	ing	×						
Data	Time	Frank			Port:	12	_						
	16.52.50	Event			-			2.1					
2025-06-25	15:52:58	Open Projec	t E:\msg\wx\vve	and Files (wxid_uxdaqunnurop)			em	o.x2p					
2023-00-23	15:52:30	Eucoad to	ink S7 Register	Druoi	OK	Cancel							
0 2025-06-25	15:53:27	I/Read-only)	register number	1									
2025-06-25	15:53:27	DB1 register	number:20										
Ready								Mo	nitor Mode:Local	PC Total Items:17	Valid Items:4086	upport@opcmast	er.com

Figure 3-5-1-2 Parameter setting

3.5.2 Sort Register Setting

"Sort Register Setting" is a function that users can use after completing the point allocation. If the associated S7 server register addresses are disordered and there are possible repetitions, they can simply click "Sort Register Setting" to sort them,

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

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thereby saving the point allocation time, as the figure 3-5-2-1.

CIL C. PA MC	emo.x2p ^	web care of the links									- 0	~
	an merrace	LC Server Gateway Help	Profinet Setting									
∃-man RTU		YNII DA WebGeedee	Cost Desiders Address	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
	V OPC	XIVIL-DA Webservice	Soft Register Address	1	Boolean		Uncertain		0	0(0,0)	0	
- 11 D1	OPC	UA Server	0X(Coil Status)-F5	2	Boolean		Uncertain		0	1(0.1)	0	
mi 1522		00003	0X(Coil Status)-E5	3	Boolean		Uncertain		0	2(0.2)	0	
		00004	0X(Coil Status)-E5	4	Boolean		Uncertain		0	3(0.3)	0	
		00005	0X(Coil Status)-F5	5	Boolean		Uncertain		0	4(0.4)	0	
		00006	0X(Coil Status)-F5	6	Boolean		Uncertain		0	5(0.5)	0	
		00007	0X(Coil Status)-F5	7	Boolean		Uncertain		0	6(0.6)	0	
		200007	origion status) 15		sociean		oncertain		4	0(010)		
Data	Time											
Date	Time 15.52.07	Event						2				
2025-00-25	15:53:27	Succeed to link S7 Register										
2025-06-25	15:53:27	I(Read-only) register numbe	er: I									
2025-00-25	15:53:27	UBL register number/20										
anar or or	4 5 40 40	Interior particulation and										
2025-06-25	16:40:49	'RTU.C1.D1.出水温度设定1'的	S7服务器'DB1'寄存器地址自动调整为	12								
2025-06-25 2025-06-25	16:40:49 16:40:49	"RTU.C1.D1.出水温度设定1'的 "RTU.C1.D1.出水温度设定2'的	S7服务器'DB1'寄存器地址自动调整为 S7服务器'DB1'寄存器地址自动调整为	12 14								
2025-06-25 2025-06-25 2025-06-25	16:40:49 16:40:49 16:40:49	'RTU.C1.D1.出水温度设定1'的 'RTU.C1.D1.出水温度设定2'的 'RTU.C1.D1.出水温度设定2'的 'RTU.C1.D1.出水温度设定3'的	S7服务器'DB1'寄存器地址自动调整为 S7服务器'DB1'寄存器地址自动调整为 S7服务器'DB1'寄存器地址自动调整为 27服务器'DB1'寄存器地址自动调整为	12 14 16								
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Figure 3-5-2-1 Sort Register Setting

3.6 Local PC Monitor

After completing the project configuration, click the menu bar "Tools" to select "Start Monitor" or click the toolbar icon ▶, as shown in figure 3-6-1 below.

🗅 🐸 🔚 🎯	Monitor Mode	> X	🗠 🗠 🦓 🕨	- ■ 交 翼 舘								
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- 🛄 D1			00002	0X(Coil Status)-F5	2	Boolean		Uncertain		Q	2(0.2)	0
	Export EXCEL		00003	0X(Coil Status)-F5	3	Boolean		Uncertain		Q	4(0.4)	0
	Import EXCEL		00004	0X(Coil Status)-F5	4	Boolean		Uncertain		Q	6(0.6)	0
	D 1		00005	0X(Coil Status)-F5	5	Boolean		Uncertain		Q	8(1.0)	0
	Device	>	00006	0X(Coil Status)-F5	6	Boolean		Uncertain		Q	10(1.2)	0
	Tag	>	00007	0X(Coil Status)-F5	7	Boolean		Uncertain		Q	12(1.4)	0



Note: The X2ProfinetRuntime program will only be enabled when using the soft gateway on a PC or during simulation.

Then the X2ProfinetRuntime runtime program will be started. In the local mode, it can only simulate data acquisition but cannot perform data forwarding. As shown in figure 3-6-2.



X2Profinet - Demo.x2p								- 6) ×
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— 🛄 D1					Bad	2025-06-25T	Q	2(0.2)	4
		1			Bad	2025-06-25T	Q	4(0.4)	4
		Build: Oct 24 2024(Unicode) www.opcmaster.com			Bad	2025-06-25T	Q	6(0.6)	4
		1.			Bad	2025-06-25T	Q	8(1.0)	4
		Language: 央语(美国)			Bad	2025-06-25T	Q	10(1.2)	4
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		Project: FileStorage\File\2025-02\X2Profinet\Demo	. x2p						
		Open Web							
1		1							
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Figure 3-6-2 X2Profinet Runtime Main Interface

In the X2ProfinetRunTime program, you can view the operation log and switch the operating language. You can also switch the operating language of X2ProfinetRunTime. Additionally, you can click the "Open Webpage" button to quickly log in to the Web server to view the data. If the IE browser opens a blank page, simply refresh the page, as shown in figure 3-6-3.

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Settting	Log		
n (11)			
Build:	Uct 24 2024(Unicode) www.opcmaster.c	com T	
Language:	英语(美国)	1	
Project:	FileStorage\File\2025-02\X2Profine	t\Demo.x2p	
	Open Web		

Figure 3-6-3 Open Webpage

Return procedure monitoring interface, can see some real time data on the device and the data on the interface is consistent, As the Figure 3-6-4.





X2Profinet - De	mo.x2p											×
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			创出水温度设定5	4X(Holding Register)-F6	6	Word	5	Good	2025-06-25T	DB1	10	1
1			创出水温度设定6	4X(Holding Register)-F6	7	Word	20	Good	2025-06-25T	DB1	12	1
			3出水温度设定7	4X(Holding Register)-F6	8	Word	21	Good	2025-06-25T	DB1	14	1
			📶 出水温度设定8	4X(Holding Register)-F6	9	Word	36	Good	2025-06-25T	DB1	16	1
			创出水温度设定9	4X(Holding Register)-F6	10	Word	23	Good	2025-06-25T	DB1	18	1
							<u> </u>					
Date	Time	Event										
2025-06-25	17:30:48	RTU.C1.D1.(T	X) 01 03 00 00 00 0	A C5 CD								
3 Modbus Slave -	[Mbslav1]										- 0	X
P File Connecti	on Setup Display	View Windo	w Help									x
DADAN												
] - <u>-</u>											
10 = 1												
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40004 = 15 40005 = 88 40006 = 5 40007 = 20 40008 = 21 40009 = 36 40009 = 36												



3.7 Upload the project(Remote Gateway Monitor Mode)

Before uploading project, we must ensure that the monitoring mode is Remote Gateway mode, and the specific mode switching operation is as follows.

- on the menu bar , monitor mode under the tool need to be chosen "Remote Gateway".
- Double click the "Monitor Mode" of the status bar at the bottom of the software can also switch monitoring mode.

After Configuring the project, the project can be uploaded to the hardware gateway to debug by starting monitor.

If the project is modified, it is necessary to upload the project to the gateway for debugging until there is no problem, finally monitor by hardware gateway.

You can see "Monitoring Mode: Gateway 192.168.1.88". This IP is the IP of the current uploaded project. When users forget the IP of the last uploaded project, by opening this project, they can see the IP of the last uploaded project. This function is to help users remember the IP used during the last upload of the project.As the Figure 3-7-1.



the said ficht	Tools Interface	Web Server G	bateway Help									
🗅 🗳 🖬 🗐	# 🗒 🗳 🚮 😭	እଁ 🖻 🖻 🕻	Setting	ð 🗤 🗱								
RTU			Download	gister Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Upda
🖻 🚰 C1			Upload	(Holding Register)-F6	1	Word	12	Uncertain		DB1	0	2
- II D1			Upioad	(Holding Register)-F6	2	Word	11	Uncertain		DB1	2	2
- D2			创出水温度设定2	4X(Holding Register)-F6	3	Word	6	Uncertain		DB1	4	2
			创出水温度设定3	4X(Holding Register)-F6	4	Word	15	Uncertain		DB1	6	2
			📶 出水温度设定4	4X(Holding Register)-F6	5	Word	88	Uncertain		DB1	8	2
			📶 出水温度设定5	4X(Holding Register)-F6	6	Word	5	Uncertain		DB1	10	2
			▲出水温度设定6	4X(Holding Register)-F6	7	Word	20	Uncertain		DB1	12	2
			3日水温度设定7	4X(Holding Register)-F6	8	Word	21	Uncertain		DB1	14	2
			创出水温度设定8	4X(Holding Register)-F6	9	Word	36	Uncertain		DB1	16	2
			📶 出水温度设定9	4X(Holding Register)-F6	10	Word	23	Uncertain		DB1	18	2
Data	Time	Friend										
Date	Time	Event										
Date € 2025-06-25	Time 17:43:49	Event RTU.C1.D1.(TX) 01 03 00 00 00 0/	A C5 CD								
Date ● 2025-06-25 ● 2025-06-25	Time 17:43:49 17:43:49	Event RTU.C1.D1.(RTU.C1.D1.(TX) 01 03 00 00 00 04 RX) 01 03 14 00 0C 0	A C5 CD 0 08 00 06 00 0F 00 58 00 05 1	00 14 00 15 00	24 00 17 18 F	Ŧ					
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Date 2025-06-25 205-06-25 205-06-25 205-06-25 205-06-2	Time 17:43:49 17:43:49 17:43:50 17:43:50 17:43:51 17:43:51 17:43:51 17:43:52	Event RTU.C1.D1.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D1.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(TX) 01 03 00 00 00 00 RX) 01 03 14 00 0C 00 TX) 02 01 00 00 00 07 RX) TX) 01 03 14 00 0C 00 TX) 02 01 00 00 00 07 RX) 01 03 14 00 0C 00 TX) 02 01 00 00 00 07 RX)	A C5 CD 00 80 00 60 00 F00 58 00 05 77D FB A C5 CD 0 08 00 06 00 0F 00 58 00 05 77D FB	00 14 00 15 00 0	24 00 17 18 F 24 00 17 18 F	Ŧ					
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Date @ 2025-06-25 @ 2025-06-25 @ 2025-06-25 @ 2025-06-25 @ 2025-06-25 @ 2025-06-25 @ 2025-06-25 @ 2025-06-25 @ 2025-06-25	Time 17:43:49 17:43:49 17:43:51 17:43:51 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52	Event RTU.C1.D1.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D1.(RTU.C1.D1.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D1.(RTU.C1.D1.(RTU.C1.D1.(TX) 01 03 00 00 00 00 TX) 01 03 14 00 00 00 TX) 02 01 00 00 00 07 TX) 01 03 00 00 00 07 TX) 01 03 00 00 00 00 TX) 01 03 14 00 0C 00 TX) 01 03 00 00 00 07 TX) 01 03 00 00 00 00 TX) 01 03 00 00 00 00	A C5 CD 0 08 00 06 00 0F 00 58 00 05 1 77D F8 A C5 CD 0 08 00 06 00 0F 00 58 00 05 1 7 7D F8 A C5 CD 0 08 00 06 00 0F 00 58 00 05 1	00 14 00 15 00 0 00 14 00 15 00 0 00 14 00 15 00 0	24 00 17 18 F 24 00 17 18 F 24 00 17 18 F	F F					
Date (a) 2025-06-25 (a) 2025-06-25 (b) 2025-06-25 (c) 2025	Time 17:43:49 17:43:49 17:43:49 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52	Event RTU.C1.D1.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D1.(RTU.C1.D1.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(RTU.C1.D2.(TX) 01 03 00 00 00 04 RX) 01 03 14 00 0C 07 RX) 71 03 14 00 0C 07 RX) 71 03 01 00 00 00 07 RX) 71 01 03 00 00 00 07 RX) 71 03 14 00 0C 00	A C5 CD 0 08 00 06 00 0F 00 58 00 05 7 7 D F8 A C5 CD 0 08 00 06 00 0F 00 58 00 05 7 7 D F8 A C5 CD 0 08 00 06 00 0F 00 58 00 05 7 7 D F8	00 14 00 15 00 0	24 00 17 18 F 24 00 17 18 F 24 00 17 18 F	Ŧ					

Figure 3-7-1 Select Gateway Mode

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

😫 ,As the Figure 3-7-2.

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File Edit View	Tools Interface	Web Server O	ateway Help									
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⊟ 🚰 C1			出水温度设定	4X Holding Register)-F6	1	Word	12	Uncertain		DB1	0	2
D1			創出水温度设定1	4X(Holding Register)-F6	2	Word	11	Uncertain		DB1	2	2
- D2			创出水温度设定2	4X(Holding Register)-F6	3	Word	6	Uncertain		DB1	4	2
			创出水温度设定3	4X(Holding Register)-F6	4	Word	15	Uncertain		DB1	6	2
			创出水温度设定4	4X(Holding Register)-F6	5	Word	88	Uncertain		DB1	8	2
			3 出水温度设定5	4X(Holding Register)-F6	6	Word	5	Uncertain		DB1	10	2
			1 大温度设定6	4X(Holding Register)-F6	7	Word	20	Uncertain		DB1	12	2
			1 出水温度设定7	4X(Holding Register)-F6	8	Word	21	Uncertain		DB1	14	2
			📓 出水温度设定8	4X(Holding Register)-F6	9	Word	36	Uncertain		DB1	16	2
			●出水温度设定9	4X(Holding Register)-F6	10	Word	23	Uncertain		DB1	18	2
Date	Time	Event										
2025-06-25	17:43:49	RTUC1D1	TX) 01 03 00 00 00 0	A C5 CD								
2025-06-25	17:43:49	RTUCI D1	RX) 01 03 14 00 0C 0	0.08.00.06.00.0F.00.58.00.05	00 14 00 15 00	24 00 17 18	F					
2025-06-25	17:43:49	RTU.CLD2.	TX) 02 01 00 00 00 0	7 7D FB			6					
2025-06-25	17:43:50	BTU CLD2 ((RX)									
2025-06-25	17:43:51	RTU.C1.D1.(TX) 01 03 00 00 00 0	A C5 CD								
2025-06-25	17:43:51	RTU.C1.D1.(RX) 01 03 14 00 0C 0	0 0B 00 06 00 0F 00 58 00 05	00 14 00 15 00	24 00 17 18	F					
2025-06-25	17:43:51	RTU.C1.D2.0	TX) 02 01 00 00 00 0	7 7D FB								
2025-06-25	17:43:52	RTU.C1.D2.0	(RX)									
2025-06-25	17:43:52	RTU.C1.D1.0	TX) 01 03 00 00 00 0	A C5 CD								
2025-06-25	17:43:52	RTU.C1.D1.(RX) 01 03 14 00 0C 0	0 0B 00 06 00 0F 00 58 00 05	00 14 00 15 00	24 00 17 18 6	F					
@ 2025-06-25	17:43:52	RTU.C1.D2.0	TX) 02 01 00 00 00 0	7 7D FB								
2025-06-25	17:45:02	Failed to ca	ll 'http://192.168.1.88,	'soap' WEB Service!								1
Ready					N	Ionitor Mode	Remote Gat	teWay 192.168.1	.88 Total Items:	17 Valid Items:408	6 support@opcmas	ter.com

Figure 3-7-2 Select Upload project

In the pop up dialog box enter the gateway IP address, click the "Upload", As the Figure 3-7-3.



File Edit View										- L	, ×
	Tools Interface	Web Server Gateway Help									
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E RTU		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Upda
Ė- s ≇ C1		🚺 出水温度设定	4X(Holding Register)-F6	1	Word	12	Uncertain		DB1	0	2
- III D1		🕅 出水温度设定1	4X(Holding Register)-F6	2	Word	11	Uncertain		DB1	2	2
11 D2		▲出水温度设定2	4X(Holding Register)-F6	3	Word	6	Uncertain		DB1	4	2
		🚺 出水温度设定3	4X(Holding Register)-F6	4	Word	15	Uncertain		DB1	6	2
		▲ 出水温度设定4	4X(Holding Register)-F6	5	Word	88	Uncertain		DB1	8	2
		▲出水温度设定5	4X(Holding Register)-F6	6	Word	5	Uncertain		DB1	10	2
		▲出水温度设定6	4X(Holding Register)-F6	7	Word	20	Uncertain		DB1	12	2
		🚺 出水温度设定7	4X(Holding Register)-F6	8	Word	21	Uncertain		DB1	14	2
		▲ 出水温度设定 9	AY(Holding Register)-F6	0	Word	26	Uncertain		DB1	16	2
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		1	P Address: 192.168.1.88				Ping				
			1								
		Pro	iect Path: E:\msg\wx\WeChat Fi	les/wwid Orden	hhoven12\Ril.	C+ \7:1	Imland				
		,)	Tes (ward_owdade	dubi opiz (i i i e	storage (rij	oproud				
Date	Time	Event			unor op 12 (1 1 1 4	istorage (rij	oproud				
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Date	Time 17:43:51 17:43:51	Event RTU.C1.D1.(TX) 01 03 00 00 00 00 RTU.C1.D1.(RX) 01 03 14 00 00	A C5 CD 10 0B 00 06 00 0F 00 58 00 05	00 14 00 15 00	24 00 17 18 F	F					_
Date	Time 17:43:51 17:43:51 17:43:51	Event RTU.C1.D1.(TX) 01 03 00 00 00 RTU.C1.D1.(RX) 01 03 14 00 0C (RTU.C1.D2.(TX) 02 01 00 00 00	A C5 CD 00 0B 00 06 00 0F 00 58 00 05 7 7D FB	00 14 00 15 00	24 00 17 18 F	F					_
Date	Time 17:43:51 17:43:51 17:43:51 17:43:51 17:43:52	Event RTU.C1.D1.(TX) 01 03 00 00 00 0 RTU.C1.D1.(RX) 01 03 14 00 0C 0 RTU.C1.D2.(TX) 02 01 00 00 00 0 RTU.C1.D2.(RX)	A C5 CD 10 0B 00 06 00 0F 00 58 00 05 7 7D FB	00 14 00 15 00	24 00 17 18 F	F					
Date	Time 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52	Event RTU.C1.D1.(TX) 01 03 00 00 00 0 RTU.C1.D1.(RX) 01 03 14 00 0C 0 RTU.C1.D2.(TX) 02 01 00 00 00 0 RTU.C1.D2.(RX) RTU.C1.D1.(TX) 01 03 00 00 00 00	A C5 CD 10 0B 00 06 00 0F 00 58 00 05 7 7D FB A C5 CD	00 14 00 15 00	24 00 17 18 F	F					
Date	Time 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52 17:43:52	Event RTU.C1.D1.(TX) 01 03 00 00 00 RTU.C1.D1.(RX) 01 03 14 00 0C RTU.C1.D2.(TX) 02 01 00 00 00 RTU.C1.D2.(RX) RTU.C1.D1.(XX) 01 03 00 00 00 RTU.C1.D1.(XX) 01 03 14 00 0C	A C5 CD 10 08 00 06 00 0F 00 58 00 05 7 7D FB A C5 CD 10 08 00 06 00 0F 00 58 00 05	00 14 00 15 00	24 00 17 18 F 24 00 17 18 F	F					
Date	Time 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52 17:43:52	Event RTU.C1.D1.(TX) 01 03 00 00 00 RTU.C1.D2,(TX) 02 01 00 00 00 RTU.C1.D2,(RX) 01 03 14 00 0C RTU.C1.D2,(RX) RTU.C1.D2,(RX) RTU.C1.D1,(TX) 01 03 00 00 00 RTU.C1.D1,(TX) 01 03 14 00 0C RTU.C1.D2,(TX) 02 01 00 00 00	A C5 CD 10 08 00 06 00 0F 00 58 00 05 7 7D FB A C5 CD 10 08 00 06 00 0F 00 58 00 05 7 7D FB	00 14 00 15 00 00 14 00 15 00	24 00 17 18 F 24 00 17 18 F	F					
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Date € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25	Time 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52	Event RTU.C1.D1.(TX) 01 03 00 00 00 RTU.C1.D1.(RX) 01 03 14 00 0C RTU.C1.D2.(RX) RTU.C1.D2.(RX) RTU.C1.D2.(RX) RTU.C1.D1.(RX) 01 03 14 00 0C RTU.C1.D2.(RX) 01 03 14 00 0C RTU.C1.D2.(RX) 01 03 14 00 0C RTU.C1.D2.(TX) 02 01 00 00 00 Failed to call 'http://192.168.186 Succeed to link \$7 Register!	A C5 CD 10 0B 00 06 00 0F 00 58 00 05 7 7D FB A C5 CD 10 08 00 06 00 0F 00 58 00 05 7 7D FB /soap' WEB Service!	00 14 00 15 00	24 00 17 18 F 24 00 17 18 F	F					
Date € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25 € 2025-06-25	Time 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:53:02	Event RTU.C.1D1(TX) 01 03 00 00 00T RTU.C.1D1(RX) 01 03 14 00 0C RTU.C.1D2(TX) 02 01 00 00 0 RTU.C.1D2(TX) 02 01 00 00 00 RTU.C.1D1(TX) 01 03 00 00 0 RTU.C.1D1(TX) 01 03 00 00 0 RTU.C.1D1(TX) 01 03 14 00 0C RTU.C.1D1(TX) 01 03 14 00 0C Failed to call 'http://1921651.88 Succeed to link S7 Register1 Q register number12	A C5 CD 00 80 00 60 00 F 00 58 00 05 7 7D F8 A C5 CD 10 08 00 60 00 F 00 58 00 05 7 7D F8 57 7D F8	00 14 00 15 00 00 14 00 15 00	24 00 17 18 F 24 00 17 18 F	F					
Date	Time 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:53:02 17:53:02	Event RTU.C1.D1.(TX) 01 03 00 00 00 RTU.C1.D1.(RX) 01 03 14 00 0C 1 RTU.C1.D2.(RX) 01 03 14 00 0C 1 RTU.C1.D2.(RX) RTU.C1.D1.(RX) 01 03 14 00 0C 1 RTU.C1.D1.(RX) 01 03 10 00 00 0 RTU.C1.D1.(RX) 01 03 00 00 00 00 00 00 00 00 00 00 00 00	A C5 CD 10 0B 00 06 00 0F 00 58 00 05 7 7D FB 4 C5 CD 10 0B 00 06 00 0F 00 58 00 05 7 7D FB (soap' WEB Service)	00 14 00 15 00 00 14 00 15 00	24 00 17 18 F 24 00 17 18 F	F F					
Date 2025-06-25	Time 17:43:51 17:43:51 17:43:51 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:43:52 17:53:02 17:53:02 17:53:02 17:53:02	Event RTU.C1.D1.(TX) 01 03 00 00 00 RTU.C1.D1.(RX) 01 03 14 00 0C 0 RTU.C1.D2.(RX) 01 03 14 00 0C 0 RTU.C1.D2.(RX) RTU.C1.D1.(RX) 01 03 10 00 00 RTU.C1.D2.(RX) 01 03 14 00 0C 1 RTU.C1.D2.(TX) 02 01 00 00 00 Failed to call "http://192.168.186 Succeed to link \$7 Register Q register number:12 I(Read-only) register number:12 I(Read-only) register number:20	A C5 CD 10 08 00 06 00 0F 00 58 00 05 7 7D FB A C5 CD 10 08 00 06 00 0F 00 58 00 05 7 7D FB /soap' WEB Service!	00 14 00 15 00	24 00 17 18 F 24 00 17 18 F	F F					

Figure 3-7-3 Upload

After uploading, the pop-up dialog prompt succeed to upload. As the Figure 3-7-4.

If uploading is failed, it will also pop up the failure prompt box.

File Edit View Tools Interface Web Server	Gateway Help	■ 次 輝 辞								2 3558
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- 11 D1	X2Profinet				×	Uncertain		DB1	2	2
- D2	U					Uncertain		DB1	4	2
	0	Uncertain DB1							6	2
	A 1	Succeed to upload			1	Uncertain		DB1	8	2
	A 1	'C:\Users\Administrator\Deskt	op\Untitled.x2m' p	roject!		Uncertain		DB1	10	2
	P				1	Uncertain		DB1	12	2
					1	Uncertain		DB1	14	2
					-	Uncertain		DB1	16	2
	14			确定		Uncertain		DB1	18	2
				Le.						

Figure 3-7-4 Succeed to upload

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

3.8 Gateway Setting

Choose the menu bar under the Gateway Setting, as the following figure 3-8-1.



D 🚅 🔲 🗊 🖈 🗒 🖆 🖓 🛍 🛤 🕄 🕻	Setting	P 100 11								
RTU	Download	gister Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Upd
ia ⊴≇ C1	Unload	(Holding Register)-F6	1	Word	12	Uncertain		DB1	0	2
	uprodu	(Holding Register)-F6	2	Word	11	Uncertain		DB1	2	2
D2	▲出水温度设定2	4X(Holding Register)-F6	3	Word	6	Uncertain		DB1	4	2
_	创出水温度设定3	4X(Holding Register)-F6	4	Word	15	Uncertain		DB1	6	2
	出水温度设定4	4X(Holding Register)-F6	5	Word	88	Uncertain		DB1	8	2
	📓 出水温度设定5	4X(Holding Register)-F6	6	Word	5	Uncertain		DB1	10	2
	3 出水温度设定6	4X(Holding Register)-F6	7	Word	20	Uncertain		DB1	12	2
	▲出水温度设定7	4X(Holding Register)-F6	8	Word	21	Uncertain		DB1	14	2
	🙆 出水温度设定8	4X(Holding Register)-F6	9	Word	36	Uncertain		DB1	16	2
	▲出水温度设定9	4X(Holding Register)-F6	10	Word	23	Uncertain		DB1	18	2
									27 C	

Figure 3-8-1 Gateway Setting

Ethernet Setting: The IP address of the hardware gateway can be changed. The factory default IP address of the gateway is 192.168.1.88, the default subnet mask is 255.255.255.0, and the default gateway is 192.168.1.1.

After setting is completed, click "OK" to proceed. The "Ping" function is used to test whether the current IP address can be successfully pinged. The "Login to Webpage Function" allows you to log in to the WEB server where the gateway is located. As the figure 3-8-2.

Ethernet Setting Time	Firmware System	
Current IP Address:	192.168.1.88	
$_{\Box}$ Use the following	IP address:	
IP Address:	192. 168. 1. 88	-
Subnet Mask:	255. 255. 255. 0	
Default GateWay:	192. 168. 1. 1	
Setti	ng Ping Log	(in Web

Figure 3-8-2 Ethernet Setting



Time: Read the gateway or written to a local PC time.

thernet Setting Time	Firmware	System		
Gateway DateTi	me: 2025-06-2	5 19:19:35	Read	
PC DateTi	me: 2025-06-2	5 19:19:35	Write	
Update Inter	val: 0	Minute		
		確守	間当	☆囲(A)

Figure 3-8-3 Time

Firmware: Click Refresh read gateways firmware information.

Sthernet Settin	ng Time Firmware System
Name:	X2ProfinetBuild: Dec 9 2015 (Unicode)
Machine Code:	0023777A-7A7A-0000-7375-6E66756C6C31
Licence Code:	8E070000-9166ABDA-0F07DE060507D02D00
	Refresh

Figure 3-8-4 Firmware

System: Read Memory Status, Reboot Gateway, Delete Config File and Recover Config File.



thernet Se	tting Time Firmwa	re System		
Memory Lo	ad: 35%			
Total Memo	ry: 29580K			
Vsed Memo	ry: 10280K			
	Read Memory Status	Reboot	GateWay	
	Read Memory Status Delete Config File	Reboot Recover Co	GateWay onfig File	
	Read Memory Status Delete Config File	Reboot Recover Co	GateWay onfig File	

Figure 3-8-5 System

3.9 Download Project

Before uploading project, we must ensure that the monitoring mode is Remote Gateway mode, and the specific mode switching operation is as follows.

- on the menu bar , monitor mode under the tool need to be chosen "Remote Gateway".
- Double click the "Monitor Mode" of the status bar at the bottom of the software can also switch monitoring mode.

Download project is to download the last configuration project from the hardware gateway to PC, and edit the project and view real-time data on the PC to facilitate user debugging. Click on the "Gateway" choose "Download ", user name: admin, password: admin123456. As the Figure 3-9-1.



🗅 🐸 🖬 🗊	🖻 🖪 💣 🚳 🗗	👗 🛍 💼 🕻 Setting	e 🙀 😫									
		Download	gister Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Desc
		Upload										
Date	Time	Event										
 2025-06-26 2025-06-26 	8:50:15 8:50:15	Open Project 'E:\msg\wx\WeChat Local Web Server Listening Ports	Files\wxid_0xdaq0hh0r6p 11	o12\FileStorage\File	\2025-02\X2P	rofinet\Dem	o.x2p'					

Figure 3-9-1 Download Project

In the pop up dialog box enter the gateway IP address, can be downloaded from

X2Profinet - De	emo.x2p											- 0	\times
File Edit View	Tools Interface	Web Server G	ateway Help										
	🚰 🖪 💣 💋 🗳	' % 🖻 🖻 🗙	<mark>6</mark> 10 00	· ■ ※ 🛱 👬									
⊞-∰ RTU			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descr
			-										
			-										
			-										
				Login				×					
							_						
					User Name: admin								
					Password: ********		-						
					1								
					OK	Cancel							
Data	Time	Event	1							-			_
2025-06-26	8:50:15	Open Projec	t 'E:\msa\wx\We	Chat Files\wxid 0xdaq0hh	0r6p12\FileStorage\File	2025-02\X2P	rofinet\Demo	p.x2p'					
1 2025-06-26	8:50:15	Local Web S	erver Listening P	ort:81									

the gateway of the current project, as the figure 3-9-2.

Figure 3-9-2 Login

Users can also through the WEB server log in to the gateway, download the project.

3.10 Software Licence

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.

3.11 Timer Group and Timer

3.11.1 Timer Group

The function of timing group list is to facilitate users to manage points in the same time period, and to place timed points at the same time point in a group, which is convenient for users to view and manage. The timing group list refers to the internal clock of the gateway, so before using the timer function, please calibrate the time of the gateway first.

Click on the "View" item in the menu bar, and in the pop-up dialog box, select "Timer Group" or the shortcut icon "
"
"
", then you can enter the timer group list, as shown in figure 3-11-1-1 below:

B WTU Channel List Device List <thdevice list<="" th=""> <</thdevice>	U 🖼 🖿		Item Update Interval		×	20 B	- * # #									
Device list Device list Delt 0 0 0 Internal Tag JS Script Editor JS Script Editor DElt 4 00 JS Script Editor JS Script Editor JS Script Editor DElt 6 0 Timer Group JS Script Editor JS Script Editor DElt 6 0 Timer Group Timer Group Timer Group DElt 6 0 </th <th>E TRTU</th> <th></th> <th>Channel List</th> <th></th> <th></th> <th>Item ID</th> <th>Register Type</th> <th>Register</th> <th>DataType</th> <th>Value</th> <th>Quality</th> <th>Timestamp</th> <th>S7 Register</th> <th>S7 Address</th> <th>Update C</th> <th>Descr</th>	E TRTU		Channel List			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descr
	🖻 🚰 C		Device List			▲出水温度设定	4X(Holding Register)-F6	1	Word		Uncertain		DB1	0	0	
Internal Tag J.S. Script Editor DB1 4 0 J.S. Script Editor J.S. Script Editor DB1 6 0 Imer Group Timer Group Timer DB1 10 0 Imer Group Trigger Clear Massages 4X(Holding Register)-F6 5 Word Uncertain DB1 10 0 Utblicking Register)-F6 F Word Uncertain DB1 10 0 Utblicking Register)-F6 F Word Uncertain DB1 14 0 Utblicking Register)-F6 7 Word Uncertain DB1 16 0 Utblicking Register)-F6 8 Word Uncertain DB1 16 0 Utblicking Register)-F6 10 Word Uncertain DB1 16 0 Save Log			Device Listan			國出水温度设定1	4X(Holding Register)-F6	2	Word		Uncertain		DB1	2	0	
JS Script Editor JS Script Editor DB1 6 0 Immer Immer DB1 8 0 Timer Timer DB1 10 0 Timer Trigger DB1 10 0 Clear Messages 4X/Holding Register)-F6 7 Word Uncertain DB1 12 0 Ux3Ext0224 4X/Holding Register)-F6 7 Word Uncertain DB1 14 0 Ux3Ext0225 4X/Holding Register)-F6 7 Word Uncertain DB1 14 0 Ux3Ext0226 4X/Holding Register)-F6 9 Word Uncertain DB1 16 0 Ux3Ext0226 4X/Holding Register)-F6 9 Word Uncertain DB1 16 0 Ux3Ext0226 4X/Holding Register)-F6 10 Word Uncertain DB1 16 0 Log Errors Only Save Log Save Log Save Log DB1 18 0 Language Setting Ianguage Setting Ianguage Setting Ianguage			Internal Tag			创出水温度设定2	4X(Holding Register)-F6	3	Word		Uncertain		DB1	4	0	
Immer Group- Timer Utzkääkääkä 4X(Holding Register)-F6 5 Word Uncertain DB1 8 0 Utzkääkääkä 4X(Holding Register)-F6 6 Word Uncertain DB1 12 0 Trigger Trigger Utzkääkääkä 4X(Holding Register)-F6 7 Word Uncertain DB1 14 0 Clear Messages Log Errors Only Status Bas Save Log PM - Malan Register)-F6 9 Word Uncertain DB1 16 0 Makaan Log Save Log Save Log Save Log PM - Malan Register)-F6 9 Word Uncertain DB1 16 0 Makaan Log Save Log Save Log Image Register)-F6 10 Word Uncertain DB1 18 0 Bad Value Save Log Image Register)-F6 10 Word Uncertain DB1 16 0 Language Setting Language Setting Image Register)-F6 10 Word Image Register)-F6 10 Image Register)-F6 10 Image Register)-F6 1			JS Script Editor			出水温度设定3	4X(Holding Register)-F6	4	Word		Uncertain		DB1	6	0	
Imer Uncertain DB1 10 0 Timer Timer DB1 12 0 Trigger Trigger DB1 14 0 Clear Messages 4X(Holding Register)-F6 8 Word Uncertain DB1 14 0 Clear Messages Log Errors Only Show Frame 10 Word Uncertain DB1 16 0 Frame Display Mode Save Log Save Log DB1 18 0 MaxBageSet Million Register)-F6 9 Word Uncertain DB1 18 0 MaxBageSet 4X(Holding Register)-F6 9 Word Uncertain DB1 18 0 MaxBageSet 4X(Holding Register)-F6 9 Word Uncertain DB1 18 0 MaxBageSet 4X(Holding Register)-F6 10 Word Uncertain DB1 14 0 MaxBageSet 4X(Holding Register)-F6 10 Word Uncertain DB1 14 0 MaxBageSet Save Log Save Log						🔝 出水温度设定4	4X(Holding Register)-F6	5	Word		Uncertain		DB1	8	0	
Timer DB1 12 0 Trigger Trigger DB1 14 0 Clear Messages Log Errors Only 9 Word Uncertain DB1 14 0 Clear Messages Log Errors Only 5 Show Frame 10 Word Uncertain DB1 16 0 Show Frame Show Frame Save Log 12 0 10 Word Uncertain DB1 18 0 MaxBagt&223 4X(Holding Register)-F6 9 Word Uncertain DB1 18 0 Show Frame Frame Display Mode >save Log Save Log 10 Word Uncertain DB1 14 0 Bad Value > 10 Word Uncertain DB1 18 0 Varianguage Setting - 10 </td <td></td> <td></td> <td>Timer Group</td> <td></td> <td></td> <td>🚺 出水温度设定5</td> <td>4X(Holding Register)-F6</td> <td>6</td> <td>Word</td> <td></td> <td>Uncertain</td> <td></td> <td>DB1</td> <td>10</td> <td>0</td> <td></td>			Timer Group			🚺 出水温度设定5	4X(Holding Register)-F6	6	Word		Uncertain		DB1	10	0	
Trigger DB1 14 0 Clear Messages Log Errors Only Show Frame Word Uncertain DB1 16 0 Show Frame Saw Log Show Frame Image 2828 4X(Holding Register)-F6 10 Word Uncertain DB1 16 0 Bad Value > Image 2828 4X(Holding Register)-F6 10 Word Uncertain DB1 16 0 Bad Value > Image 2828 4X(Holding Register)-F6 10 Word Uncertain DB1 16 0 Language Setting V Image 2828 4X(Holding Register)-F6 10 Word Image 282 Image			Timer			國出水温度设定6	4X(Holding Register)-F6	7	Word		Uncertain		DB1	12	0	
Trigger DB1 16 0 Clear Messages Log Errors Only Image Setting Image Setting <t< td=""><td></td><td></td><td></td><td></td><td></td><td>國出水温度设定7</td><td>4X(Holding Register)-F6</td><td>8</td><td>Word</td><td></td><td>Uncertain</td><td></td><td>DB1</td><td>14</td><td>0</td><td></td></t<>						國出水温度设定7	4X(Holding Register)-F6	8	Word		Uncertain		DB1	14	0	
Clear Messages Log Errors Only AX(Holding Register)-F6 10 Word Uncertain DB1 18 0 Show Frame Frame Display Mode Save Log. > <td></td> <td></td> <td>Trigger</td> <td></td> <td></td> <td>🔝 出水温度设定8</td> <td>4X(Holding Register)-F6</td> <td>9</td> <td>Word</td> <td></td> <td>Uncertain</td> <td></td> <td>DB1</td> <td>16</td> <td>0</td> <td></td>			Trigger			🔝 出水温度设定8	4X(Holding Register)-F6	9	Word		Uncertain		DB1	16	0	
Clear Messages Clear Messages Clear Messages Clear Messages Lag Errors Only Show Frame Clear Messages Frame Display Mode Save Log Clear Messages Bad Value Save Log Clear Messages Toolbar Status Bar Clear Messages Templete Explore to Software Clear Messages/File/2025-02/X2Profinet/Demo.x2p' P2025-06-26 85015 Open Project * Uning Portigit * Uning			cl			🔝 出水温度设定9	4X(Holding Register)-F6	10	Word		Uncertain		DB1	18	0	
Lag Log Errors Only Show Frame Save Log Bad Value Laguage Setting Toolbar Status Bar Templete Explore to Project Explore to Software Laguage Setting 2 Status Bar Templete Explore to Software Laguage Setting 2 Date Date Laguage Setting 2 Date Date Laguage Setting 2 Date Date Date			Clear Messages													
Show Frame Frame Display Mode Save Log Bad Value Tanguage Setting			Log Errors Only													
Frame Display Mode > Save Log Bad Value Bad Value > Language Setting - V Toolbar - Status Bar - Templete - Explore to Project - Explore to Project - 2025:06-26 8:50:15 Open Project*EinsguwX/WeChat Files/wid_0Xdaq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p'		~	Show Frame													
Save Log Bad Value Bad Value Control Data			Frame Display Mode	>												
Bad Value > Bad Value > Language Setting - Toolbar - Status Bar - Templete - Explore to Software - Explore to Software - 02025-06-26 85015 Open Project Tsiming WorkStat Files/wid_0xdaq0h0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p'			Savelog													
Bad Value > Language Setting > - Toolbar - - Status Bar - Templete - Explore to Project - Explore to Software - 0 2025-06-26 850:15 Open Project*Einsgwwk/WeChat Files/wid_0xdaq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p'			Save Login													
Language Setting - Toolbar - Status Bar Templete Explore to Software 0 2025-06-26 8:50:15 Open Project %Imsg(wk/UeChat Files/wid/0.daq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p'			Bad Value	>												
			Language Setting													
0 Formula 1 Formula 1 Templete Explore to Project Explore to Software 0 2025-06-26 8:50:15 Open Project*Living/wx/WeChat Files/wxid_0xdaq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p*		1	Toolbar													
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Explore to Project Explore to Software Date two cvent 0 2025-06-26 8:50:15 Open Project 15/mg/wx/WeChat Files/uxid_0xdaq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p' 0 2025-06-26 8:50:15 Logal Web Server Listening Port#1			Templete													
Explore to Foget Explore to Software Date Inner 0 2025-06-26 8:50:15 Open Project "Et/msg/wxk/WeChat Files/wxid_0xdaq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p' 0 2025-06-26 8:50:15 Logal Web Server Listening Port#1			Evalore to Project													
Date Lvenk 0 2025-06-26 8:50:15 Open Project 'E1/msg/wx/WeChat Files/wxid_0xdaq0hh0r6p12/FileStorage/File/2025-02/X2Profinet/Demo.x2p' 0 2025-06-26 8:50:15 Logal Web Server Listening Port#1			Explore to Project													
2025-06-26 8:50:15 Open Project 'E\msg\wx\WeChat Files\wxid_0xdaq0hh0r6p12\FileStorage\File\2025-02\X2Profinet\Demo.x2p' 2025-06-26 8:50:15 Local Web Server Listening Port#1	Date		Explore to Software	1.7510	_											
2025-00-20 a.50:15 Upen Friger: Lining (www.exent ines (www.exent ines (www.exent)) 2025-00-26 8:50:15 Local Web Server Listing port:81 Control (Control (Contro) (Control (Control (Control (Control (Control (Control (Control	0 2025 06	26	9-50-15	Open	roiort	'Eilman WoCha	+ Filos)unid OrdagObbOr6p12	EiloStorago) Eilo)	2025 02 220	rofinat\Dom	o v2o'					
	0 2025-06	26	9:50:15	Local V	Joh Ce	anver Listening Port	.01	nestorage (me	LOED OF PIET	connecto enti	U.XLP					
	2025-00	20	0.50.15	Local v	veb se	erver Listennig Ford	01									

Figure 3-11-1-1 Timer Group List Menu Bar

In the pop-up "Timer Group" dialog box, right-click and select "New Timer Group",



as shown in figure 3-11-1-2.

				00.00		
Timer Group	Description					
New	Timer Group					
Dele	te Timer Group					
Mod	lify Timer Group					
	New Dele	Timer Group Description New Timer Group Delete Timer Group Modify Timer Group Modify Timer Group	Timer Group Description New Timer Group Delete Timer Group Modify Timer Group Modify Timer Group	Timer Group Description New Timer Group Delete Timer Group Modify Timer Group Modify Timer Group		

Figure 3-11-1-2 New Timer Group

In the pop-up "Timer Group" dialog box, set the corresponding properties, double

click the tag to complete the add. Note that the selected point must be controlled.

;crip Va	riable External Tag 💌	
ID	Tag Name	Add Row
1	s.Channel_1.Device_1.Tag_1	Add Rows
2	s.Channel_1.Device_1.Tag_2	Delete Row
		Delete All



After clicking "OK", back to the timer group list dialog box, you can see the just



set timer group, as shown in figure 3-11-1-4.

💽 Tin	ner Group List		×	
ID	Timer Group	Description		
1	aa	desc		
÷				

Figure 3-11-1-4 Finish to Set Timer Group

Repeating the above steps, users can add multiple timed group lists according to

actual requirements. Right- click can be edited or deleted on the timing group.

3.11.2 Timer

The timer function is to edit the timer and manage the timer when the timer is grouped. The operation steps are as follows:

Click the "View" menu, and select the "Timer" in the pop-up dialog, as shown in

figure 3-11-2-1.

Item Update Interv	I 🗙	1 in a 🐞 🕨	• 🗏 🛠 🗱 👬									
Channel List Device List		Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
Internal Tag JS Script Editor												
Timer Group Timer												
Trigger												
Clear Messages Log Errors Only Show Frame Frame Display Mod Save Log	• >											
Bad Value	>											
Language Setting												
✓ Toolbar✓ Status Bar												
Templete												



Figure 3-11-2-1 Finish to Set Timer Group

After selecting the timer in the monitor object, the "Timer" dialog box is popped out, with its properties as shown in figure 3-11-2-2.

ID	Timer Name	Timer Group	Monday	
		New Timer		
		Cut Copy Paste Delete		
		Export EXC Import EXC	CEL	
		Modify Tim	ner	

Figure 3-11-2-2 Timer

Right click the blank, select "New Timer" in the pop-up list, open the timer edit window, and its related properties are:

- 1) Timer Group: select the timer group.
- Monday to Sunday: can be single or multiple selections, tick, tick timer is only carried out in time.

Timer Na	ame: 123					
Timer Gro	oup: test		Timer Gro	oup		
Descrip	tion: this time va	lue set 1				
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Monday 🗹	Tuesday 🗹	Wednesday 🗹	Thursday 🗹	Friday 🗹	Saturday 🗹	Sunday [

Figure 3-11-2-3 Timer Group Edit

3) time: range 00: 00: 00-23: 59: 59.

36 / 59

Add:28 Senang Crescent,#05-11,Bizhub 28,Singapore 416601 Tel: +65 80385403 URL: www.bacnetchina.com

milesgoiiot@gmail.com / sales@opcmaster.com



4) value: at the time, the value will set to 1.

)	Time	Value	
	16:17:00	1	
			Add Row
			Add Rows
			Delete Row
			Delete All

3.12 Trigger

The command group function is a new good time sequence for group management. The specific operation steps are as follows: Click the "View" menu, and select the "Trigger" in the pop-up dialog, as shown in figure 3-12-1

L 🗁 🖥		Item Update Interval		XING	ila 🕨	🔳 🕉 🛄 🚹									
⊞ 🗐 RTU		Channel List Device List		Item	D	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
		Internal Tag JS Script Editor													
		Timer Group Timer													
		Trigger													
	~	Clear Messages Log Errors Only Show Frame Frame Display Mode Save Log	>												
		Bad Value	>												
		Language Setting													
	~ ~	Toolbar Status Bar													
		Templete													
		Explore to Project Explore to Software													
Date 2025-06	-26	9:55:47	Open Pro	piect 'E:\msg	wx\WeCha	at Files\wxid 0xdaq0hh0r	6p12\FileStorage\File	2025-02\X2P	ofinet\Demo	o.x2p'		1			
0 2025-06	-26	9:55:47	Local We	b Server Lis	tening Port	:81	op iz (neotorogo (ne	LOLD OL PILL		o melo					

Figure 3-12-1 Select Trigger

After selecting the "Trigger" in the "View", the "Trigger" dialog box is popped out, as shown in figure 3-12-2.

Note: It will set "Source" tag value to "Target" tag value when "Source" value



changed.

Varia	able Type: External Tag ~ Source	Target	
D	Tag Name (Source)	Tag Name (Target)	Add Row
1	ModbusTCP.Channel_1.Device_1.R	ModbusTCP.Channel_1.Device_1.Li	Add Rows
2]])	Delete Row
			Delete All
			Import
			Export

Figure 3-12-2 New Trigger



4 WEB Server

Gateway with a WEB server, the default port is fixed for 80. Users can through the browser can log on to the WEB server, in a WEB page can modify hardware gateway IP address, serial interface communication mode, view real-time data, download X2Modbus PC configuration software and engineering documents, etc.

Note: the factory default gateway IP address is 192.168.1.88, the user to change the IP address for the first time, users only need to direct connect a network cable and gateway. Need to set the PC and gateway to the same network segment, and then in the browser input 192.168.1.88 complete gateway IP address changes.

In the pop up window enter the user name and password to login, As the Figure 4-1.

Username: admin

Password: admin123456

← → C ① 不安全 192.168.1.88/login.html				야 ☆ 📀
		选绕 sunfull 专注自控 物物互联		
	User Login		Language ~	
	Username Password	admin		
		Login Reset		

Figure 4-1 Login

4.1 Download

Click "Download", you can download the following files, As the Figure 4-1-1.



选统 sunfull				Language English V G
专注自控 物物互联	Download			
🗄 Download	Download List	Size	Date Modify(*unknown)	
止 Upload	Project File	×	x	
品 Ping Option 永 User Admin	Video	×	×	
ll Network				
♥ Firmware Ø Memory				
 Remory Communication Tr 				
() Timer				
 Internal Variable Tao List 				
				Copyright © 2011-2023 www.bacnetchina.com

Figure 4-1-1 Download

X2Profinet: Configuration Software

X2Cloud: upload the project to the cloud

BACnetSCAN: the tool of Scanning BACnet device

Modbus_Poll: the tool that simulate Modbus master station

Modbus_Slave: the tool that simulate Modbus Slave stationProject Files: the last configuration project that Upload to gateway

4.2 User Admin

Users can manage their landing accounts by adding, modifying, deleting, and so on, as shown in figure 4-2-1 below.



← ∁ (▲ 不安全 192.16	8.1.88/index.html#/app/user-admin			☆) (♀ 点此捜索	Carl Carl Carl Carl Carl Carl Carl Carl
运统 sunfull 专注自控 物物互联	User Admin				Language English V G
土 Download	Add				
土 Upload	Username	Password	Access		
Web Service					
🖳 Ping Option	admin		User	Modify Delete	
泉 User Admin	guest		User	Modify Delete	
Network					
∀ Firmware					
Memory					
🛜 Communication Tr					
Internal Variable					
🗉 Tag List					
				Cop	right © 2011-2023 www.bacnetchina.com

Figure 4-2-1 User Admin

4.3 Network

Click "Network", you can set gateway IP address, as shown in figure 4-3-1 below.

- ◆ Ethernet 1: 172.24.13.88
- Ethernet 2: 192.168.1.88(Communication port)

← ∁ (▲ 不安全 192.16	8.1.88/index.html#/app/network		☆(♀ 点此捜索	¢	InPrivate 🔵 🔸	
远绕 sunfull 专注自控 物物互联	Network			Language Englis	h ∨ G	
 ⊥ Download ⊥ Upload ⊕ Web Service □ Ping Option ℜ User Admin ⑫ Network ⑫ Network ♡ Firmware ⓒ Memory ♡ Communication Tr ⑨ Internal Variable 	Network1 * IP Address: 172.24.13.88 * Subnet Mask: 255.255.255.0 Default Gatewa	Network2(D * IP Address: * Subnet Mask: Default Gateway OK Reload	efault) 192.168.1.88 255.255.255.0 192.168.1.1			
目 Tag List			Соругід	ht © 2011-2023 www.bac	netchina.com	
		41 / 59				



Figure 4-3-1 Network

4.4 Firmware

In this page, user can view the firmware version information, machine code and license key.

选统 sunfull			Language English V G
专注自控 物物互联	Firmware		
는 Download	Name:	X2Profinet May 29 2025(STM2004-ARM)	
占 Upload	Machine Code	C9:5015:00:5070	
💂 Ping Option	Wachine Code.	C0.3C100C30.10	
灸 User Admin	Licence Key:	63070000-7188F460-1207E3011603E8F588	
Network		Reload	
∀ Firmware			
① Memory			
🛜 Communication Tr			
@ Timer			
Internal Variable			
🗏 Tag List			
			Copyright © 2011-2023 www.bacnetchina.com

Figure 4-4-1 Firmware

4.5 Memory



退绕 sunfull				Language English V G
专注自控 物物互联	Memory			
止 Download	Memory Load: 3%	Disk Load:	63%	
土 Upload	Total Memory: 443.78 MB	Total Flash:	171.38 MB	
Ping Option	Used Memory: 17.29 MB	Used Flash:	99.57 MB	
稅 User Admin		Restart Gateway Delete Project File		
Network		Backup Project File Restore Project F	īle	
∀ Firmware				
③ Memory				
Communication Tr				
Imer ©				
Internal Variable				
目 Tag List				
			Copyrigh	t © 2011-2023 www.bacnetchina.com

Figure 4-5-1 Memory

1. check the system memory usage. (this function automatically refreshes the gateway memory information every 5S).

2. Restart Gateway (remote restart the current gateway).

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

4. Backup Project File (can backup the current project to the isolation area).

5. Restore Project File (restore a project that has been backed up by the user).

The project can be backed up to the isolation area, which has 2 advantages.

First, it prevents the wrong operation from uploading the wrong project and can be quickly restored.

Two, it is easy to debug. Once the project is modified, it can be quickly restored.

4.6 Communication Traffic

In addition, the real-time dynamic data frame can be viewed in the web page to facilitate the user to understand the real-time communication state intuitively. Through the analysis of the data frame, the cause of the failure can be found, which brings great convenience to the user.

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Communication Traffic
[2025-06-27T15:06:47] ModbusRTU.Channel_1.Device_1(RX) 01 03 0A 00 0C 00 55 00 D4 00 14 00 0C 04 A0
[2025-06-27115:06:46] ModbusRTU.Channel_1.Device_1.(TX) 01 03 00 00 00 585 C9
[2025-06-27115:06:46] ModbusRTU.Channel_1.Device_1.(RX) 01 03 0A 00 0C 00 55 00 D4 00 14 00 0C 04 A0
[2025-06-27115:06:46] ModbusRTU.Channel_1.Device_1.(TX) 01 03 00 00 00 585 C9
[2025-06-27T15:06:46] ModbusRTU.Channel_1.Device_1.(RX) 01 03 0A 00 0C 00 55 00 D4 00 14 00 0C 04 A0
[2025-06-27T15:06:46] ModbusRTU.Channel_1.Device_1.(TX) 01 03 00 00 00 585 C9
[2025-06-27T15:06:46] ModbusRTU.Channel_1.Device_1.(RX) 01 03 0A 00 0C 00 55 00 D4 00 14 00 0C 04 A0
[2025-06-27T15:06:46] ModbusRTU.Channel_1.Device_1.(TX) 01 03 00 00 00 585 C9
 [2025-06-27T15:06:46] ModbusRTU.Channel_1.Device_1.(RX) 01 03 0A 00 0C 00 55 00 D4 00 14 00 0C 04 A0
[2025-06-27T15:06:46] ModbusRTU.Channel_1.Device_1.(TX) 01 03 00 00 00 05 85 C9
[2025-06-27T15:06:45] ModbusRTU.Channel_1.Device_1.(RX) 01 03 0A 00 0C 00 55 00 D4 00 14 00 0C 04 A0
[2025-06-27T15:06:45] ModbusRTU.Channel_1.Device_1.(TX) 01 03 00 00 05 85 C9

Figure 4-6-1 Communication Traffic

4.7 Internal Variable

You can query the device's off-line status, newly created internal variables, and the system date and time that comes with the system, as shown in figure 4-7-1 below.

选供 sunfull							Language English V G
专注自控 物物互联	Internal Variable						
는 Download	Tag Name	Data Type	Value	Quality	TimeStamp	Data Type	Description
亡 Upload	\$.RTU.C1.D1.CommStatus	Boolean	0	good	2025-06- 26T10:58:06	Boolean	
💂 Ping Option							
宛 User Admin							
Network							
∀ Firmware							
① Memory							
Communication Tr							
© Timer							
Internal Variable							
🗐 Tag List							
						Copyright 《	D 2011-2023 www.bacnetchina.com







4.8 Real-time Data

Check the equipment real-time data on the web, as the Figure 4-8-1.

遇绕 sunfull								Languag	e English V O
专注自控 物物互联	Tag List								
4. Download	- N 1 - 271	ModbusRTU /	Channel_1 / Device_1						
	MIODDUSRIU Channel 1	Tag Name	Register Name	Address	Data Type	Value	Quality	TimeStamp	Description
土 Upload		Temp	4X(Holding Register)- F6	1	Word	12	good	2025-06- 27T15:10:39	Temp,40001 Register
Web Service		-	4X(Holding Register)-					2025-06-	-
Ping Option		Temp1	F6	2	Word	85	good	27T15:10:39	Temp,40002 Register
魯 User Admin		Temp2	4X(Holding Register)- F6	3	Word	212	good	2025-06- 27T15:10:39	Temp,40003 Register
Network		Temn3	4X(Holding Register)-	4	Word	20	pood	2025-06-	Temp 40004 Register
∀ Firmware		i cinpo	F6				9000	27T15:10:39	iemp/recorringional
③ Memory		Temp4	4X(Holding Register)- F6	5	Word	12	good	2025-06- 27T15:10:39	Temp,40005 Register
Internal Variable		Eile C	dbus Slave - Mbslav1 onnection <u>S</u> etup <u>D</u> isplay	<u>V</u> iew <u>W</u> indow	<u>H</u> elp				- U X
🗐 Tag List			86 5 <u>4</u> 8 8	k ?					
		ID -	oslav1 1						
		4000; 4000; 4000;	1 = 12 40023 = 2 = 85 40024 = 3 = 212 40025 = 2 = 20	0 400 0 400 0 400	45 - 0 46 - 0 47 - 0	40067 - 40068 - 40069 -	0 40 0 40 0 40	089 - 0 090 - 0 091 - 0	
		4000	5 = 12 40027 = 11 40028 =	0 400	49 = 0 50 = 0	40071 = 40072 =	0 40 0 40 0 40	093 = 0 094 = 0	
		4000	7 = 98 40029 = 8 = 52 40030 = 9 = 20 40031 =	0 400 0 400 0 400	51 = 0 52 = 0 53 = 0	40073 = 40074 = 40075 =	0 40 0 40 0 40	095 = 0 096 = 0 097 = 0	
		4001	0 = 70 40032 = L = 30 40033 =	0 400	54 = 0 55 = 0	40076 = 40077 =	0 40 0 40	098 = 0 099 = 0	
		4001	2 = 65 40034 = 3 = 36 40035 = 4 = 20 40036 =	0 400	56 = 0 57 = 0 58 = 0	40078 = 40079 = 40080 =	0 40	100 = 0	m
		4001	5 = 39 40037 =	0 400	59 = 0	40081 =	ŏ		

Figure 4-8-1 Real-time data

Click the tag, in the pop-up window user can also write value on a web page, as the Figure 4-3-2.

选供 sunfull									e English V G
专注自控 物物互联	Tag List								
	-	Temp1			×				
占 Download	 ModbusRTU 	* Value:	100			Value	Quality	TimeStamp	Description
L Upload	 Channel_1 			С	ancel	12	good	2025-06- 27T15:10:39	Temp,40001 Register
Ping Option		Temp1	4X(Holding Register)- F6	2	Word	85	good	2025-06- 27T15:10:39	Temp,40002 Register
兔 User Admin		Temp2	4X(Holding Register)- F6	3	Word	212	good	2025-06- 27T15:10:39	Temp,40003 Register
③ Network ③ Firmware		Temp3	4X(Holding Register)- F6	4	Word	20	good	2025-06- 27T15:10:39	Temp,40004 Register
 Memory 		Temp4	4X(Holding Register)- F6	5	Word	12	good	2025-06- 27T15:10:39	Temp.40005 Register
Internal Variable									
🗐 Tag List									





5 Profinet client (Master Station) Access

5.1 Siemens SMART200 access

The S7 gateway can use PUT and GET commands for Ethernet communication when communicating with SMART200 PLC, as shown in the figure 5-1-1.

	Get/Put 向导	-		-		×
□ 小 读取Profine 网关2 (C:\Users' → ② 新增功能 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		操作				
田 📴 程序块	GET	为每	一个要使用的操作包]建名称并添加注释。		
□ □ 符号表	· 仔储器分配		Name	Comment		添加
田 🛄 数据块		1	PUT			
●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●		2	GET		C	
						<u></u>
高速计数器						
PWM /						
文本 見子 ・ ・ ・ ・ ・ ・ ・ ・ ・						
数据日志						
□ □ □ 工具						
□						
田 🕢 通信						
□ 2 比较 □ 2 转换						
田田 计数器		-		r		
□□□□ 泾思运县 □□□□ 整数运算		<u> <</u> <u>+</u>		>	生成	
車 🧰 中断	THE A REAL DRIVE A	1 2 2 4	-			1

Figure 5-1-1 Create a new PUT/GET command

Set the type PUT to write the address data of the local PLC (SMART200) to the remote CPU (S7 gateway), as shown in the figure, write the VB0-VB9 data from SMART200 to the VB0-VB9 of the remote 192.168.1.69 device;



Get/Put 向导		×
 操作 ₩ PIT Ø GET Ø 存储器分配 Components Completion 	PUT 类型 Put ▼ 传送大小 (字节) 0010 ÷ 本地 CPU 和地 CPU Read from: VB0 - VB9 本地地址 VB ▼ 0000 ÷	运程 CPU 近程 IP 192 . 168 . 1 . 69 Write to: VB0 - VB9 远程地址 VB ▼ 0000 ÷
	<u> </u>	生成 取消

Figure 5-1-2 PUT Instruction Definition

Set the GET type to read the remote CPU (S7 gateway) address data to the local PLC (SMART200) address, as shown in the figure, read the VB10-VB20 address data of the remote 192.168.1.69 gateway to the VB10-VB20 address in SMART200;

et/Put 向导	and the second se	
】操作 ☑ PUT ☑ CT ☑ 存储器分配 ☑ Components ☑ Completion	GET 类型 Get ▼ 传送大小(字节) 10011 ÷ 本地 CPU ↓	远程 CPU 远程 IP 192 . 168 . 1 . 69
	Write to: VB10 - VB20 本地地址 VB 0010 ÷	Read from: VB10 - VB20 远程地址 VB _ 0010 ;
	 下一个 >	生成取消



Call the program in the program after the instruction definition is completed.





Figure 5-1-4 Call program

文件(F) 编辑(E) 视图(V) 工具 Prof	inet服务器 We	b服务器 网关	帮助(H)	-				_		读取Profin	et网关2.smart - STE	P 7-Micro	WIN SMAR	т	
	1 df 6 f s	炎 陶 配 🗙	iig 🕨 📕	梁冀 部				PLC	调试	IA :	轻助					
🖃 🍘 Simulator	点名	寄存器类型	寄存器地址	数据类型	值	质量数	时间戳	-	1		2. 预览	23 项目 11 台部	2			
🗄 🛃 Channel_1	DB1_0	Const	1	Word	10	Good	2020-C	-		100	〕页面设置	POU STE	开文件夹			
🖻 🛄 D1	DB1_2	Const	2	Word	20	Good	2020-C	▲ 上传	下载	打印		2 数据页 当存4	12.22			
BB1	DB1_4	Const	3	Word	30	Good	2020-C		台关		17(A)	保給	15			
C I	DB1_6	Const	4	Word	40	Good	2020-C					I				
	DB1_8	Const	5	Word	50	Good	2020-C		11	上传,	下载 - 協	插入 - 28 删除 -	5		🎒 🔁 🖌 🖀 🚡	🛗 दि 🖵
u 4	DB1_10	Random	6	Word	11	Good	2020-C	4	MAIN ×							
	DB1_12	Random	7	Word	81	Good	2020-C	1 段	玄注 释							
	DB1_14	Random	8	Word	13	Good	2020-C	- 1 12	THE PARTY AND							
	DB1_16	Random	9	Word	31	Good	2020-C	1 在	予权:汪祥		1.72	145.0				
	DB1_18	Random	10	Word	23	Good	2020-C	A	ways_On=	ON		NET_EXE				
	DB1_20	Random	11	Word	94	Good	2020-C					EN				
											+1-	MW10 M11.0 2#	1			
								₩态图表					φ×	变量表		
								<u> </u>	- •		/ 🔒 🚡 🕯	🖞 🕅 🖂 🖘 🗧 🗧 🗧	-	3-216		
								地	址	格式	当前值	新值	×	地址	符号	変重
								1 V	/0	无符号	10			1		TEN
								2 V	/2	无符号	20			2		TEN
								3 V	/4	无符号	30		-	3		TEN
								4 V.	/6	无符号	40			4		TEM
								5 🗸	/8	无符号	50					
								6 V	/10	无符号	31					
								7 V	/12	无符号	75	18				
								8 V	/14	无符号	93		_			
								9 V	/16	无符号	6					
								10 \	/18	天符号	36	1				
								4		m			F			
	•						÷	- 14 4 5	H DB1	<u> </u>	康 4 /			•	m	
日期时间	事件						*	(二) 符号:	:	あ図表	数据块			1 变量表	🔁 輸出窗口	
							, *	INS		192.168.1.	0 (CPU ST20)	RUN				100%

Figure 5-1-5 Program execution result

5.2 Siemens 1200 access

When communicating with 1200PLC, S7 gateway can use PUT and GET commands for Ethernet communication, configure PLC addresses, and ensure that each group of PLC addresses is in the same network segment and has different IP addresses. And click the 'Add New Subnet' button to add a subnet to the PLC.



常規 10 3	建	系统常数	文本				
常规 PROFINET接口	^	以太网地址 _					
常规 以太岡地址 时间同步 操作模式	=	接口连接到		子网:	PN/IE_1		•
▶ 高级选项 Web 服务器		IP协议				J:	
硬件标识付 DI 6/DQ 4 常规	•				● 在项目中设置 IP 地:	tu:	
 ▶ 数字里输入 ▶ 数字里输出 					□P 地址: 子网掩码:	192.168.1.30 255.255.255.0	
00 地址 硬件标识符 AI 2	~				▶ 使用路田器 路由器地址:	0.0.0.0	
	>				○ 在设备中直接设定।	IP地址。	

Figure 5-2-1 Set IP to add subnet

Enable remote access permission and run using PUT/GET communication

access.

常规	10 变量	系统	常数	文本						
 硬计分式 原冲动环 6000000000000000000000000000000000000	识符 ▲ 器 (HSC) 器 (PT 器 (PT 器 言 冒 目 目 目 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	连接· 注接·	机制		☑ 允许从远	程伙伴(PLC、	HMI V OPC	、)使用 PUTIC	ET通信访	ĵē]

Figure 5-2-2 Enable remote access permission

Add S7 connection in hardware configuration. Switch to the network view, click on 'Connect', select 'S7 Connection', then right-click on the PLC and click on 'Add New Connection'. Click Add in the pop-up Create New Connection window. Then



click to close.

				🦉 拓扑视	图 💧 网络视图	11 设备视图
网络概览	连接 │ Ⅰ0 通信 │ \	PN				
₩ 本地连接名	你 本地站点	本地 ID (十 伙伴 ID (十 伙伴		连接类型		
	PLC_1 (0)	PU 1211C 100 🔳 📳 📳	知	▼ S7 连接		
连接_1 [S7 连接]				◎ 属性	生 13.信息 12	诊断 🛛 🖬
规 10 变量	系统常数 文本					
"规	告担					
地 ID	市城					
妹连接鹰性 抗洋细信自	连接					
	名称:	S7_连接_1				
	连接路径					
				DU AK		
		4.1g		1/1+		
	1			2		
	•					
	就占:	PLC 1 [CPU 1211C AC/DC/Blv]		未知		
	接口:	PLC 1, PROFINET接口 1[X1 : PN(LAN)]		未知		
	接口类型:	以太网		以太网		
	子网:	PN/IE_1				
	Like Like	192 168 1 30		192 168 1 69		
	地址:					

Figure 5-2-3 Create a new S7 connection

Establish a DB block. For example, we want to read the data from DB1 of the

target PLC into DB1 of the local PLC and create a DB block in the local PLC.

Ma Siemens - C:\Users\Administrator\Docu	men	sAut	oma	tion\1200读以Pro	tinet游天11200家联P	olinei游头	-					
项目(P) 编辑(E) 视图(V) 插入(I) 在线(O)	选项	(N)	工具	1) 窗口(W) 帮助	ђ(Н)							
📑 🔄 🔚 保存项目 🚢 👗 🔳 🗎 🗶 🛒) ± (2#±	01		▶ 转至在线 🖉 转至离	线 🚮? 📙		▲ <在项目	中搜索>	iii 👘		
项目树 🔳 🗸	12	00读	取Pi	ofinet网关 > P	LC_1 [CPU 1211C AC/	DC/Rly] ▸	程序块 > p	rofinet [DB1]				
J.A.												
	100	e Ese	1	▶ 至 5 保持	寺实际值 🔐 快照 🛤	下門,将快	照值夏制到起始	1值中 🕾 🕾	将起始值加载	为实际值	W, U,	
		profi	inet									
🛛 🔻 🚹 1200读取Profinet网关 🛛 🧖	<u>\</u>	4	S称		数据类型	偏移重	起始值	保持	可从 HMI/	从 H	在 HMI	设定值
👔 🌁 添加新设备	1	-	• St	atic								
晶 设备和网络	2		-	PUT	Array[04] of Int	0.0						
PLC_1 [CPU 1211C AC/DC/Rly]	З	-	1	PUT[0]	Int	0.0	10			 Image: A start of the start of		
1 设备组态	4	-		PUT[1]	Int	2.0	20			 Image: A start of the start of	Image: A start and a start	
见 在线和诊断	5	-	1.	PUT[2]	Int	4.0	30			 Image: A start of the start of		
▼ 🔜 程序块	6	-		PUT[3]	Int	6.0	40		~	 Image: A start of the start of	Image: A start and a start	
📑 添加新块	7	-		PUT[4]	Int	8.0	50		~	 Image: A start of the start of	Image: A start and a start	
🖀 Main [OB1]	8		•	GET	Array[04] of Int	10.0						
🗧 profinet [DB1]	9	-		GET[0]	Int	10.0	0			 Image: A start of the start of	Image: A start and a start	
▼ 🐷 系统块	10	-		GET[1]	Int	12.0	0		×	 Image: A start of the start of		
▼ 🐷 程序资源	11	-	1	GET[2]	Int	14.0	0			 Image: A start of the start of	Image: A start and a start	
GET_DB [DB2]	12	-		GET[3]	Int	16.0	0		¥	 Image: A start of the start of	Image: A start and a start	
PUT_DB [DB3]	13	-	-	GET[4]	Int	18.0	0		Image: A start and a start			
 Image: Second se										1		
▶ 📾 外部源文件												
▶ 🛺 PLC 变量												
▶ 📴 PLC 数据类型												

Figure 5-2-4 Establish a DB block

Then select the DB block, right-click on the properties, and turn off optimized block access in the properties tab.



profinet [DB1]	<
常规 信息 时间戳 编译 保护 属性 下载但不重新初始化	属性 仅存储在装载内存中 在设备中写保护数据块 优化的块访问
	<u>确定</u> 取消

Figure 5-2-5 Cancel optimization block access

Add program segment GET instruction.





Add program segment PUT instruction.





Figure 5-2-7 PUT instruction

Screenshot of data communication status:

文件(F) 编辑(E) 视图(V)	工具 Profin	et服务器 Web服	务器 网关 帮	助(H)		项目(P) 编辑(E) 视图(V) 插入(I) 在线(O) 途项(N) ・ Totally Integrated Automation
	📽 🗗 🖆 🕅	□ 暭 ◎ × 翁		LOAD 1		📑 💁 🖬 保存项目 🚢 🔏 🧃 🛅 🗙 🍤 ± 🍋 📜 🖬 🛄 🖬 🔛 🚺 🗐 🖓 🔭 PORTA
🖃 🏢 Simulator	点名	寄存器类型	寄存器地址	数据类型	值	项目树 II ◀C_1 [CPU 1211C AC/DC/Rly] → 程序块 → profinet [DB1] _ II = II = X
🗄 🚰 Channel_1	ØDB1_0	Const	1	Word	10	20.42
🖻 🛄 D1	DB1_2	Const	2	Word	20	秋田
DB1	DB1_4	Const	3	Word	30	
- C I	DB1_6	Const	4	Word	40	profinet
- C O	DB1_8	Const	5	Word	50	
	DB1_10	Random	6	Word	88	第 法加新设备
	DB1_12	Random	7	Word	29	2 → 设备和网络 2 PUT 0.0
	DB1_14	Random	8	Word	9	▼ RC 1 [CPU 1211C AC/DC/ ▼ ● 3
	DB1_16	Random	9	Word	38	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	DB1_18	Random	10	Word	2	0 Addition 5 00 8 PUT71 40 30 30
	DB1_20	Random	11	Word	41	
						• 四相序按滞 [1] • GE [[2] 14.0 0 53
	-					
						3 PUI_DB [DB3] 13 GET[4] 18.0 0 3
						▶ 圖 外部源文件
	-					▶ La PLC 数据类型
						▶ 編 监控与强制表

Figure 5-2-8 Data communication situation

5.3 WinCC access

When communicating with WinCC, the S7 gateway can use the TCP/IP driver in

SIMATIC S7 Protocol Suite for Ethernet communication. Before communication, the

PG/PC interface of the computer needs to be set up:



SGO

Figure 5-3-1 Add TCPIP access point to PG/PC interface

, 的使用的接口分配参数(P):	
Intel (R) Ethernet Connection (3) I	属性(R)
on (3) I218-LM. ISO.	诊断 (0)
op (3) 1218-LM TCPTP 1	(目前)(22)
on (3) 1218-LM. TCPIP. Auto. 1 🔇	夏前(1)
.50.1	删除(L)
为带有 TCP/IP 协议(RPC-1006) 9 MDIS CP 参数分配,从而获取工 L以太网访问)	

Figure 5-3-2 The network card bound to TCPIP access point is a local Auto network card

In the WinCC software SIMATIC S7 Protocol Suite, the TCP/IP driver SIMATIC

S7 needs to uncheck the option to use PLC, as shown in the following figure:



を量管理 《	● 变量 [TCP/IP]
	系统参数 - TCP/IP
□····································	SIMATIC S7 单位
- MPI - PROFIBUS	周期管理 ■通过 PLC ■ 更改驱动的传输
Slot PLC	设备状态监控 ☑ 激活 (A) 60 间隙 (I) 30 超时间隙 (I)
PROFIBUS (II) Industrial Ethernet (II) Named Connections Soft PLC	CPV 停机监控 2 激活 (B)
國 结构变量	在 AS 中通道使用了周期读服务。
	福定 取消 帮助

Figure 5-3-3 Uncheck the option to use PLC

The logical device name in TCPIP unit parameters needs to be selected as the

network card defined by the computer PG/PC interface.

IMA ji	.TIC S7 単位 5.择逻辑设备名称	
	CP 类型/总线配置文 TCP/IP	
	逻辑设备名称(0): 1000	•
	☑ 自动设置 (A)	
1	▶业处理 ■ 写 (带优先权) (¥)	
箱	心新的设备名称或从列表中选择被请求的设备。	

Figure 5-3-4 Access point for selecting and setting logical device names



变量管理	舅 变量 [192.168.1.68]
 ● ● 交星管理 ● ● 内部变量 ● ● NPI ● PROFIBUS ● Industrial Ethernet ● Slot PLC ● TCP/IP ● 192.168.1.68 ● PROFIBUS (II) ● Industrial Ethernet (II) ● Named Connections ● Soft PLC ● Soft PLC ● Soft PLC 	连接参数 - TCP/IP X 连接 S7 网络他姐 IP 地址 (I): 192.168.1.68 机架号 (B): 0 插槽号 (I): 0 适法/接收原始数据块 (Y) 连接资源 (C): 02 輸入自动化系統的 IP 地址。 預定 取消

Figure 5-3-5 Fill in the gateway IP address

After completing the configuration, edit the data point configuration of WinCC,

view the comparison of data, or view real-time values in the variable table.

点名	寄存器类型	寄存器地址	数据类型	值	质量戳	时间戳	Profinet寄存器类型	Profinet寄存器地址
DB1_0	Const	1	Word	100	Good	2020-05-18T	DB1	0
DB1_2	Const	2	Word	200	Good	2020-05-18T	DB1	2
DB1_4	Const	3	Word	300	Good	2020-05-18T	DB1	4
DB1_6	Const	4	Word	400	Good	2020-05-18T	DB1	6
DB1_8	Const	5	Word	500	Good	2020-05-18T	DB1	8
DB1_10	Random	6	Word	46	Good	2020-05-18T	DB1	10
DB1_12	Random	7	Word	44	Good	2020-05-18T	DB1	12
DB1_14	Random	8	Word	96	Good	2020-05-18T	DB1	14
DB1_16	Random	9	Word	35	Good	2020-05-18T	DB1	16
DB1_18	Random	10	Word	93	Good	2020-05-18T	DB1	18



Figure 5-3-6 Comparison of configuration data and gateway data in WinCC



日日 名称 值 数据类型 代成 估式 指数 9 地址 7 ● ⑦ 節交通 1 081_0 100 元行号的16 2 WordToUnsigned, 192,168.1.68 081,08W0 082,08W0 1 108,08W0 108,02W0 108,08W0 108	变量管理	≪	/IP]				查找	• م	🮯 属性 - 变量
予約部定置 1 DB1_0 100 元行号的 16 位值 2 WordToUnsegnedh 192.168.1.68 DB1_DBW2 対象条型 1 SIMATIC S7 Protocol Suite 2 081.2 200 元行号的 16 位值 2 WordToUnsegnedh 192.168.1.68 DB1_DBW2 対象条型 対象 対象を 対象 ジョン ジョン<		名称	值	数据类型	长度	格式调整 连接	组	地址 ^	日 选择
IMARTC 37 Protocol Suite 2 00 先行号的 16 位值 2 Word7unsgeneh 192.168.1.68 D01.08W2 1 別数条件。 PROFIBUS 4 001.4 300 无行号的 16 位值 2 Word7unsgeneh 192.168.1.68 D01.08W2 日 常数件 PROFIBUS 5 001.0 35 无行号的 16 位值 2 Word7unsgeneh 192.168.1.68 D01.08W2 日 常数件 I Idustrial Ethernet 5 001.1 35 无行号的 16 位值 2 Word7unsgeneh 192.168.1.68 D01.08W2 10 <t< td=""><td>□ 😚 内部变量</td><td>1 DB1_0</td><td>100</td><td>无符号的 16 位值</td><td>2</td><td>WordToUnsignedV 192.168.1.68</td><td></td><td>DB1,DBW0</td><td>对象类型 3</td></t<>	□ 😚 内部变量	1 DB1_0	100	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW0	对象类型 3
M MR 3 DB1_4 300 先行号的 16 位值 2 WordFoldsgeedt 192.168.1.66 DB1_DBW 5 6 88 In MortBuss 5 DB1_6 600 无行号的 16 位值 2 WordFoldsgeedt 192.168.1.66 DB1_DBW 5 B B SR B SR B DB1_DBW 5 B B SR B SR B DB1_DBW 5 B DB1_DBW 5 B B SR B DB1_DBW 5 B B S S S S S S S	- I SIMATIC S7 Protocol Suite	2 DB1_2	200	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW2	对象名称(
PROFBUS 1	- II MPI	3 DB1_4	300	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW4	日常規
1 Industrial Ethernet 5 DB1_20 500 先行号的16位值 2 WordToUnsignedh 192168.1.66 DB1_2048 B <th< td=""><td></td><td>4 DB1_6</td><td>400</td><td>无符号的 16 位值</td><td>2</td><td>WordToUnsignedV 192.168.1.68</td><td></td><td>DB1,DBW6</td><td>名称</td></th<>		4 DB1_6	400	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW6	名称
● Bell 20 ● Dell 22 3 元行号的 16 位值 2 WordToUnsegnedh 192.168.1.66 DB1.D8V12 問題 認知 問題 問題 認知 NordToUnsegnedh 192.168.1.68 DB1.D8V12 Named Concetions DEL 20 NordToUnsegnedh 192.168.1.68 DEL 20 <	- II Industrial Ethernet	5 DB1_8	500	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW8	ID III III III III III
第 100 / 100	Slot PLC	6 DB1_10	35	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW10	数据类型
19 1	П П ТСРЛР	7 DB1_12	3	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW12	大阪
PROFINUS IPROFILUS (D) - Undustrial Ethernet	192 168 1 68	8 DB1_14	6	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW14	AC JC PP
10 10 08 18 24 元行音句15位值 2 WordToUnsignedx 192166.1.66 DB1,DBW18 0 2 2 WordToUnsignedx 192166.1.66 DD1,DBW18 0 2 2 WordToUnsignedx 192166.1.66 DD1,DBW18 0 2 2 2 WordToUnsignedx 192166.1.66 Q0.0 0 2 2 WordToUnsignedx 192166.1.66 Q0.0 0 2 2 2 WordToUnsignedx 192166.1.66 Q0.0 0 2 2 2 2 2 0 10 12 12 10 12 10 12 10 12 10 12 10 12 10 12 10 1		9 DB1_16	14	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW16	Hotel
Modula Luenet (0) 11 (000 1 二堆積安量 1 192.166.1.66 Q0.0 日 Named Connections 12 (01 0 二堆積安量 1 192.166.1.66 Q0.1 1 回知:161.66 Q0.1 1 1 122.166.1.66 Q0.2 1 1 122.166.1.66 Q0.3 1 <	Industrial Ethernet (II)	10 DB1_18	24	无符号的 16 位值	2	WordToUnsignedV 192.168.1.68		DB1,DBW18	AS 容量名称
Manual Connections 12 Q01 0 二进制安量 1 192.165.1.66 Q0.1 通貨所方 1 002 1 二进制安量 1 192.165.1.66 Q0.2 直通所方 1 103 0 二进制安量 1 192.165.1.66 Q0.3 1 直通所方 15 Q04 1 二进制安量 1 192.165.1.66 Q0.4 1 1 192.165.1.66 Q0.4 1	I Newed Conserver	11 Q00	1	二进制变量	1	192.168.1.68		Q0.0	日分配
13 002 1 二規制受量 1 192.166.1.66 00.2 ● 14 003 0 二批制改量 1 192.166.1.66 00.3 ● 15 004 1 二批制改量 1 192.166.1.66 00.4 ● 16 005 0 二批制改量 1 192.166.1.66 00.5 ● 17 006 1 二批制改量 1 192.166.1.66 00.5 ● 18 007 0 二批制改量 1 192.166.1.66 00.5 ● 19 006 1 二批制改量 1 192.166.1.66 00.5 ● 19 007 0 二批制改量 1 192.166.1.66 00.5 ● 19 007 0 二批制改量 1 192.166.1.66 00.6 ● 19 007 0 二批制改量 1 192.166.1.66 00.7 ● 10 00 500 ● ● ● ● 10 00 500 ● ● ● ● 11 192.166.1.66 0.6 0.6 ● ● ● 10 00 500 ● ● ● ● 11 192.166.1.66 0.6 ● ● ● ● 11 192.166.1.66 0.6 ● ● ● ● 11 192.166.1.66 0.6	I C-6 DLC	12 Q01	0	二进制变量	1	192.168.1.68		Q0.1	通讯驱动程序
14 (003 0 二进務受量 1 192.168.1.66 00.3 1	Soft PLC	13 Q02	1	二进制变量	1	192.168.1.68		Q0.2	通道单元
15 Q04 1 二进制交量 1 192.166.1.66 Q0.4 1 16 Q05 0 二进制交量 1 192.166.1.66 Q0.5 1 17 Q06 1 二进制交量 1 192.166.1.66 Q0.6 1 18 Q07 0 二进制交量 1 192.166.1.66 Q0.6 1 18 Q07 0 二进制交量 1 192.166.1.66 Q0.6 1 19 Q07 0 二进制交量 1 192.166.1.66 Q0.7 0 10 0 0.07 0 二进制交量 1 192.166.1.66 Q0.7 0 18 Q07 0 二进制交量 1 192.166.1.66 Q0.7 0 6.6 18 Q07 0 二进制交量 1 192.166.1.66 Q0.7 0 6.6 19 Q06 10 500 500 500 6.6 500 1 35 3 8 14 24 1 1 1 19 R#40 1 24 1 1 1 1 10 R#40 1 1 1 1 1 1 1 10 R#40 1 1 1 1 1 1 1	1233 1314 定度	14 Q03	0	二进制变量	1	192.168.1.68		Q0.3	连接
16 Q05 0 二进制安置 1 192.163.1.66 Q0.5 日 株特保定 17 Q06 1 二进制安置 1 192.163.1.66 Q0.6 18 Q07 0 二进制安置 1 192.163.1.68 Q0.7 // WinCC-运行系统・ 200 300 400 500 500 35 3 6 14 24 水母迎水 35 3 6 14 24		15 Q04	1	二进制变量	1	192.168.1.68		Q0.4	组
17 Q06 1 二进制交量 1 192.165.1.66 Q0.6 採性标志 10 Q07 0 二进制交量 1 192.165.1.66 Q0.7 36 街面風小 200 300 400 500 500 100 100 500 35 3 6 14 24 100 100 100 資素総策 200 300 400 500 100 100 100 35 3 6 14 24 100 100 100 資素総策 14 24 100 100 100 100 100		16 Q05	0	二进制变量	1	192.168.1.68		Q0.5	□ 线性标定
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		18 Q07	0	二进制变量	1	192.168.1.68		Q0.7	AS 值范围从
Control (100) 100 100 100 100 100 100 100 100 100	1 115 00 1								AS 值范围到
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Figure 5-3-7 View values in the variable table

5.4 KeepServer access

The transferred S7 protocol can support any Profinet client (master) software to access our S7 server (slave), as shown in Figure 5-4-1.

文件(F) 编辑(E) 视图(V) 工具 Pro	finet服务器 W	eb服务器 网关	帮助(H)						
D 📽 🖬 🍘 🕫 🖪	l 📽 🚳 🖻	X 🖻 🖻 🗙	iig 🕨 📕	や算話						
∃-∰ a	点名	寄存器类型	寄存器地址	数据类型	值	质量戳	时间戳	Profinet寄存器类型	Profinet寄存器地址	更新次
🖻 🟪 Channel_1	Tag_1	Sine	1	Boolean	0	Good	2020-03	DB2(Read-only)	8	5
Device_1	Tag_2	Sine	2	Boolean	0	Good	2020-03	Q	10(1.2)	5
	# T 2	Cine	2	Boolean	0	Good	2020-03	I(Read-only)	12(1.4)	5
	lag_3	Sine	5	boolean	0	0000		I(Itead only)	TT (T1-4)	2
립 OPC Quick Client - 元 ille Edit View Tool	Mag_3 Tag_4 标题 * s Help	Sine	4	Boolean	0	Good	2020-03	DB1		5
G OPC Quick Client - 元 File Edit View Tool) 译 日 虚 電 電 電	Mag_3 Mag_4 标题 * s Help G 从 国		4	Boolean	0	Good	2020-03	DB1	14	5
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OPC Quick Client - 元 ile Edit View Tool) 2 日 1 世 2 世 3 世 3 世 3 世 - 1 世 5 Hepware. KEPServerE - 1 1 Satisfield	Tag_3 Tag_4 标题* s Help 企 よ 国 X V5	Sine Sine Kem ID Channel 1.De	4 evice1Rack	Boolean	0 Data T Byte	Good ype Value	2020-03	Timestamp 13:31:08:804	14 Quality Good	5 22 Upda 1
OPC Quick Client - 元 ile Edit View Tool Color	Tag_3 Tag_4 标题 * s Help C L L L L L L L L L L L L L L L L L L L	Sine Sine Kem ID Channel 1.De	4 evice1Rack	Boolean	0 Data T Byte Byte	Good ype Value 0 1	2020-03	Timestamp 13:31:08.804 13:31:08.804	14 Quality Good Good	5 5 Upda 1 1
OPC Quick Client - 7 ile Edit View Tool Control Control Cont	★ Help 「日本 大田 本 本 本 本 日 中 一 大 田 一 本 日 中 一 二 日 中 一 二 日 中 一 二 日 中 一 二 日 一 一 二 一 二 一 一 一 一 一 一 一 一 一 一 一 一 一	Sine Sine Kem ID Channel 1.De C	4 vvice1Rack vvice1Slot vvice1Slot vvice1.DB1_14	Boolean	0 Data T Byte Byte Word	Good Good Value 0 1 0	2020-03	Timestamp 13:31:08:804 13:31:08:804 13:31:52:412	Quality Good Good Good	5 5 Upda 1 1 9
OPC Quick Client - 7 ile Edit View Tool E I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	minag_3 mag_4 示記 * s Help ご 人 哈 X V5 x V5 ccs n ccel 1Statistics	Sine Sine Let ID Channel1.De C	4 avice1Rack vice1Slot vice1.DB1_14 vice1.DB2_8 vice1.14	Boolean	0 Data T Byte Byte Word Word	good Good 0 1 0 0	2020-03	Tmestamp 13:31:08:804 13:31:08:804 13:31:52:412 13:31:52:412	Quality Good Good Good Good	5 5 Updat 1 1 9 9

Figure 5-4-1 Profinet 客户端访问



6 JS Script Editor

Hardware gateway also has JS script editor. Users can achieve some logic control by editing script language. There are some common functions in the script editor. The user can select some functions to edit the language. After the editor is complete, click "Syntax Check", and the syntax will be checked automatically. If there are any grammatical errors, it will prompt which specific line of grammar has problems.

6.1 Operation steps

Click the menu bar view to select the JS script editor, or click the toolbar to open the script editor, as shown in figure 6-1-1.

X2Profit	net -	Demo.x2p	N-1-0											- 0	ı x
	view	Item Update Interval		X	nateway Help	1 交 巽 部									
		Channel List			Item ID	Register Type	Register	DataType	Value	Quality	Timestamp	S7 Register	S7 Address	Update C	Descrip
😑 🚰 C		Device List			出水温度设定	4X(Holding Register)-F6	1	Word	12	Uncertain		DB1	0	6	
<u>m</u>		Device List			创出水温度设定1	4X(Holding Register)-F6	2	Word	15	Uncertain		DB1	2	6	
-		Internal Tag			创出水温度设定2	4X(Holding Register)-F6	3	Word	20	Uncertain		DB1	4	6	
	L D	IC Covint Editor			创出水温度设定3	4X(Holding Register)-F6	4	Word	65	Uncertain		DB1	6	6	
		33 Script Editor			创出水温度设定4	4X(Holding Register)-F6	5	Word	98	Uncertain		DB1	8	6	
		Timer Group			▲出水温度设定5	4X(Holding Register)-F6	6	Word	95	Uncertain		DB1	10	6	
		Timor			创出水温度设定6	4X(Holding Register)-F6	7	Word	84	Uncertain		DB1	12	6	
		Timer			创出水温度设定7	4X(Holding Register)-F6	8	Word	78	Uncertain		DB1	14	6	
		Trigger			MH水温度设定8	4X(Holding Register)-F6	9	Word	45	Uncertain		DB1	16	6	
					11水温度设定9	4X(Holding Register)-F6	10	Word	23	Uncertain		DB1	18	6	
		Clear Messages													
		Log Errors Only			-										
		Chaus Farmer													
	~	Show Frame													
		Frame Display Mode		>	-										
		Save Log													
		Bad Value		>											
		Language Setting													
	~	Toolbar													
	~	Status Bar													
		Templete													
		Explore to Project													
Date		Explore to Software													
2025.06	26	10,59,14	PTI	C1 D1 /	PX) 01 02 14 00 0C 0	0.05.00.14.00.41.00.63.00.55	00 54 00 45 00	20.00 17.99.0	10						
2025-00	26	10.50.14	PTI	C1 D1 (TV) 01 02 00 00 00 0	CS CD	00 34 00 42 00	20 00 17 00 0							
2025-00	26	10.50.15	PTI	C1 D1 (PX) 01 03 00 00 00 0	0.05.00 14.00 41.00 63.00 55	00 54 00 45 00	20 00 17 99 0	D						
2025-00	20	10:56:15	DTU	C1.D1.(KA) 01 03 14 00 0C 0	0 0F 00 14 00 41 00 62 00 3F	00 54 00 46 00	20 00 17 66 0	JU						
2020-00	26	10:50:10	DT	C1.D1.(RX) 01 03 00 00 00 00 0	0 05 00 14 00 41 00 52 00 55	00 54 00 45 00	20 00 17 00 /	10						
2023-06	20	10:58:10	RIU	C1.D1.(TA) 01 03 14 00 0C 0	0 0F 00 14 00 41 00 02 00 5F	00 J4 00 4E 00	20 00 17 88 0	JU .						
2025-06	20	10:58:18	RIU	C1.D1.(TX) 01 03 00 00 00 0				10						
2025-06	-20	10:58:18	RIC	.01.01.(KX) UT US 14 00 0C 0	0 0F 00 14 00 41 00 62 00 5F	00 54 00 4E 00	20 00 17 88 0	0						

Figure 6-1-1 Open JS Script editor

Right click on the script editor to choose "New JS Script", as shown in figure 5-1-2.



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- III D1		6	出水温度设定1	4X(He	olding Register)-	-F6 2		Word	15	Uncertain		DB1	2	6	
		6	出水温度设定2	4X(Ho	olding Register)-	-F6 3		Word	20	Uncertain		DB1	4	6	
		6	出水温度设定3	4X(He	olding Register)-	-F6 4		Word	65	Uncertain		DB1	6	6	
		6	出水温度设定4	4X(He	olding Register)-	-F6 5		Word	98	Uncertain		DB1	8	6	
		6	出水温度设定5	4X(Ho	olding Register)-	-F6 6		Word	95	Uncertain		DB1	10	6	
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				-											
Date	Time	Event													
2025-06-26	10:58:14	RTU.C1.D1.(RX)	01 03 14 00 0C 0	00 F 00	4 00 41 00 62 0	00 5F 00 54 00	0 4E 00 2	D 00 17 88	DD						
@ 2025-06-26	10:58:15	RTU.C1.D1.(TX)	01 03 00 00 00 0	A C5 CD											
2025-06-26	10:58:15	RTU.C1.D1.(RX)	01 03 14 00 0C 0	00 OF 00	4 00 41 00 62 0	00 5F 00 54 00	0 4E 00 2	D 00 17 88	DD						
2025-06-26	10:58:16	RTU.C1.D1.(TX)	01 03 00 00 00 0	A C5 CD											
2025-06-26	10:58:16	RTU.C1.D1.(RX)	01 03 14 00 OC 0	00 F 00	4 00 41 00 62 0	0 5F 00 54 00	0 4E 00 2	D 00 17 88	DD						
2025-06-26	10:58:18	RTU.C1.D1.(TX)	01 03 00 00 00 0	A C5 CD											1
2025-06-26	10:58:18	RTU.C1.D1.(RX)	01 03 14 00 0C 0	00 OF 00	4 00 41 00 62 0	00 5F 00 54 00	0 4E 00 2	D 00 17 88	DD						1
	The second CD								111212					-	

Figure 6-1-2 New JS Script

Open to see JS editing script, as shown in figure 6-1-3 below.

xecute 1	ype: Cycle	💌 Execute	Cycle(ms):	1000	5		Cance
if	else	else if	switch	for	while	var	
>	<		<=	==		8.8	
1	&	>>>	<<	•	~	=	
+	?	*	1	11		""	
KeyBoard	Fur	action In	nternal Tag	External	Tag Synt	ax Check	
1		1	2	3		4	
	1.000						

Figure 6-1-3 JS Script Editor

For detailed operation steps, please refer to the JavaScriptEditor-Ch.pdf manual in the Help folder of the software.



7 Common Problems

7.1 Hint " Failed to call 'http://192.168.1.88/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://192.168.1.88/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 X2ProfinetRuntime 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".