

# Serial Gateway User Manual

# Models: SE3012/5011/5041/5044/5144/5244 MG3012/5011/5041/5044/5144/5244

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ShenZhen Comark Technology Co.,Ltd.

http://www.comark.cn

# SZCOMARK ShenZhen Comark Technology Co.,Ltd.

### Serial Server and Gateway User Manual

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### **Revise History:**

Version	Date	Reason
V1.0.0	2017.5	Found document
V1.1.0	2017.9.28	Add SE3012&MG3012
V1 2 0	2019.1.24	Add Serial Gateway to add Modbus NetType,
v1.2.0		mapping, Log display function

### Text agreed on:

In reading this manual, please note the following:

Description: Necessary explanatory information in the process of using a serial gateway

Notice: Matters needing special attention in using serial port gateway

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# 1 RS-232/485/422 Serial Port

This series of serial interfaces provides 5-Pin industrial terminals with 5.08mm spacing. SE3012 MG3012



**RS-485 Serial Port:** 

Pin	Pin Define
1	А
2	В
3	GND
4	
5	

RS-422 Serial Port:

Pin	Pin Define
1	TX+
2	TX-
3	GND
4	RX+
5	RX-



**RS-232** Serial Port:

Pin	Pin Define
1	—
2	RXD
3	TXD
4	
5	GND
6	
7	
8	
9	

SE5011/5041 MG5011/5041:



RS-485 Serial Port:

Pin	Pin Define
1	D+
2	D-
3	GND
4	—
5	

RS-422 Serial Port:

Pin	Pin Define
1	TX+
2	TX-
3	GND
4	RX+
5	RX-

# SE5044/5144/5244 MG5044/5144/5244(TX and RX unused)



**RS-485 Serial Port:** 

Pin	Pin Define
1	D1/3-
2	D1/3+
3	GND
4	D2/4-
5	D2/4+

# **2** Serial Port Configuration

Before making this device configuration, make sure that the necessary software is installed on your computer and that the network is properly configured.

The minimum configuration requirements for a user's computer are as follows:

- Installing the operating system (such as Windows XP/2000, etc.)
- Installing Ethernet Card
- Installing Web browsers (IE6.0 and above)
- Install and start the TCP/IP protocol

# 2.1 Network Visit

Device Default IP address is: 192.168.1.253, subnet mask: 255.255.255.0. When accessing devices through the Web, the IP of the device and computer must be in the same local domain network. You can access the Web configuration interface for a device using a standard Web browser such as Internet Explorer (ie browser). Before you access the device through a Web browser, the device's Ethernet port is connected to your LAN or directly to your PC network.

Step 1: pen IE browser on PC.

- Step 2: Enter the IP address in the address bar of the IE browser, such as "192.168.1.199", press the "enter" key.
- Step 3: Enter the username and password in the pop-up dialog box. (username admin, password 123)



Click OK to enter the device Web configuration interface.

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Config	MAC	00-a1-d3-81-00-10	apply
• <u>System</u> • <u>Serial</u> • <u>mapping</u> • <u>Log display</u>	IP Gateway	192. 168. 1. 253 192. 168. 1. 1	apply
• <u>Management</u>	password		apply

# MAC ADDRESS

The hardware address of the device is made up of 48 specialist (6 bytes),16 binary digits, its uniqueness (not recommended customers to independently modify).

## **IP ADDRESS**

IP address is assigned to the connection in the Internet addresses of the devices on a 32-bit length. IP address is made up of two fields: the network number field (net-ID) and host number field (host-ID). IP addresses by the Defense data network network information center (NIC) for distribution. In order to facilitate the management of IP addresses and IP addresses are divided into five categories. As shown below:

Network Type	Address Range	Available IP Network Range
А	$0.0.0.0 \sim 126.255.255.255$	$1.0.0.0 \sim 126.0.0.0$
В	$128.0.0.0 \sim 191.255.255.255$	128.0.0.0~191.254.0.0
С	192.0.0.0~223.255.255.255	192.0.0.~223.255.254.0
D	224.0.0.0~239.255.255.255	None
Е	$240.0.0.0 \sim 246.255.255.255$	None
Other Address	255.255.255.255	255.255.255.255

Where a, b, and c addresses are unicast (unicast) address of class d addresses for multicast (multicast) address; Class e addresses are reserved for future special uses. Currently used in the IP address belongs to a, b, and c addresses.

IP address in dotted decimal way. Each IP address is represented as 4 decimal integers separated by decimal points, one for each integer bytes, such as 10.110.50.101.

This series devices only support a static IP address, manually set the specified IP address and gateway. Through the IP address can be set by accessing the device's configuration page. Set a new IP address required to log in again.

**Step 1:** In the navigation on the left side, select "system settings."

Step 2: Modify a device's IP address and gateway, the equipment and access device hosts on the same local area network.

**Step 3:** Click "settings" to set the IP address to take effect and prompted to log into the Web interface again. -----End

### **User Password**

This series devices provide only a user name password to modify. This function allows you to modify the password for the current user name.

Step 1: In the navigation on the left side, select "system settings."

**Step 2:** Sets the password for the new user name.

Description:User name cannot be changed (default: admin).

Step 3:Click "settings", set the user name replaced the current user name, need to log in again.

-----End

2

En

RS232

9600

20002

10002

500

192.168.1.183

UDP

# **2.2** Function Menu

A detailed introduction and configuration approach will be made in this chapter.

Config			Nur	n 1		•	]		Enable	Enable		•	]
_		Ser	SerialType RS485 🗸			BaudRate 9600 🗸			]				
• <u>System</u> • Serial		D	)ataBits	; 8		•	]		Parity	NONE		•	]
• <u>serial</u> • mapping StopBits		3 1	1 🔹			NetType		UDP 👻					
• <u>Log display</u>		R	RemoteIp	192.168.1.	183		]		RemotePort	20001			]
• <u>management</u>		Lo	ocalPort	10001			]	1	ByteInterval	500			]
								apply					
	Num	Valid S	-Type	BaudRate	Data	Parity	Stop	Net-Type	RemoteIPadd	ress	R-Port	L-port	Inter
	1	En	RS485	9600	8	NONE	1	UDP	192.168.1	.183	20001	10001	500

NONE

8

1

Value	Value Range	Description
Serial Port	1~4	Select the serial number you want to set.
Baud Rate	110,300,1200, 2400,4800,9600,19200, 38400,57600,115200 default:9600	Set the baud rate for this serial port. The baud rate represents the format of the data bits transmitted per second, a parameter that measures the speed of the communication.
Data Bits	5~8 Default:8	Sets the data bits for this serial port. Data bits refer to the number of bits of actual data in each byte, which is the parameter to measure the actual data bits in the communication.
Stop Bits	1,2 Default:1	Sets the stop bit for this serial port. The stop bit is used to identify the end of a packet data. The stop bit is not only used for packet transmission end flags, but also provides the opportunity for correcting synchronous clocks between computers. The more bits that are used to stop bits, the greater the degree of tolerance for synchronization of different clocks. However, because the stop bits occupy the data space, excessive stop bits will result in a decrease in data transmission speed.
Parity	even, none, odd. Default: none	Sets the parity bit for this serial port. Parity is used to determine whether the received data bits are wrong. For even and odd parity, the serial port sets the parity bit, and a value ensures that the transmitted data has an occasional or odd logical high. For 1 and 0 checksums, it does not really check data, simple value bits logic high or low logic, so that the receiver can know a bit state, determine whether there is noise interference or transmit and receive data is not synchronized. Even: Odd checksum, if the checksum is set to "odd", the number of 1 in the sending data is odd, the check digit is "0"; the parity bit is "1" when the number of 1 in the sending data is even. None: No checksum, when data is sent, if the check digit is set to "none", no check digit is sent, or a checksum is sent. Odd: Parity, if the checksum is set to "odd", the number of sending data is odd, 1, the check digit is "1"; the parity bit is "0" when the number of 1 in the sending data is even.

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Mode	Disabled, Tcpclient, Tcpserver, Udp, ModbusTCP(RTU_MASTER), ModbusTCP(RTU_SLAVE), ModbusTCP(ASCII_MASTER), ModbusTCP(ASCII_SLAVE), Default: Disabled	Set the data to the Ethernet switch and transmit the working mode of the serial port. Tcpclient: In this working mode, the serial port actively connects the remote IP destination ports. With Tcpserver into pairs used. Tcpserver: In this working mode, the serial port listens for the client connection. With Tcpclient into pairs used. The Udp:UDP protocol does not establish a connection to send and receive data only to the destination port of the remote IP when transferring using the UDP protocol. MODBUS TCP(RTU_MASTER): Master communication mode is Modbus TCP, asynchronous serial transmission(RS-422/485),Corresponding communication mode is MODBUS TCP(RTU_SLAVE): Asynchronous serial transmission(RS-422/485),Corresponding communication mode is MODBUS TCP(RTU_SLAVE): Asynchronous serial transmission(RS-422/485),Corresponding communication mode is MODBUS TCP(ASCII_MASTER): Master communication mode is MODBUS TCP(ASCII_MASTER): Master communication mode is MODBUS TCP(ASCII_MASTER): Master communication mode is MODBUS TCP(ASCII_SLAVE): Asynchronous serial transmission(RS-422/485),Corresponding communication mode is MODBUS TCP(ASCII_SLAVE): Asynchronous serial transmission(RS-422/485),Corresponding communication mode is MODBUS ASCII for slave. MODBUS ASCII for slave. MODBUS TCP(ASCII_SLAVE): Asynchronous serial transmission(RS-422/485),Corresponding communication mode is MODBUS ASCII for slave. MODBUS ASCII for master. Slave communication mode is MODBUS ASCII for master. Slave communication mode is Modbus
Local Port Number	1~65534	Set the local port number for this serial port.
RemotePort Number	1~65534	Set this serial port through Ethernet communication remote device destination port number.
RemotePort IP Address	xxx.xxx.xxx.xxX	Sets the IP address of the remote device that this serial port communicates via Ethernet.
Bytes Max Delay	0~999 default:500	Serial to Ethernet data time interval, when the set time interval is reached, data forwarding, you can set the value of 0-999.

# 2.3 Serial Port Work

# > Serial Port Work(Applied to the actual field work mode)

PC port of the host computer connected to the Ethernet port of this series of devices, This series of equipment serial port and the lower computer PLC serial port connected(RS-232/485/422), Implement the transmission of TCP to serial link on the Ethernet link.



> Building a simple configuration environment:





Description: Computer needs to have a serial port, because the computer is RS-232 serial port need to use the RS-485/422 serial port RS-485/422 to RS-232 converter.

Connection Wiring:

According to different serial lines to connect the different line sequence (RS-485 connect the 2 root line A/D+ connect RS-485 transfer RS-232 Converter to the R+, B/D-connector R; RS-422 4-wire TX+/RX+ connect RS-422 to RS-232 converter T+/R+, TX-/RX-Converter T-/R-)

Computer Installation Serial Software:



The software is used as the EXE format directly double-click, as shown in the following illustration.

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😔 USR-TCP232-Test	RS232 to Ethernet	Convert tester			
File(F) Options(O) Help	» (Н)				
COMSettings PortNum COM1 BaudR 115200 DPaity NONE DataB 8 bit StopB 1 bit Open	COM port data receive		Network data receive		NetSettings (1) Protocol TCP Server (2) Local host IP 192.168.0 .102 (3) Local host port 8234 Listening
Recv Options Receive to file Add line return Receive As HEX Receive Pause Save Clear					Recv Options Receive to file Add line return Receive As HEX Receive Pause Save Clear
Send Options Data from file Auto Checksum Auto Clear Input Send As Hex Send Recycle Interval 1000 ms	Jinan USR Technology Co	., Ltd.	http://en.usr.cn		Send Options Data from file Auto Checksum Auto Clear Input Send As Hex Send Recycle Interval 1000 ms
Load <u>Clear</u> I <b>@</b> Ready!	Send: 0	Recv:0 Reset	💓 Ready!	Send: 0	Load Clear Recv:0 Reset

Choose Physical Serial Port

Click the "My Computer" management to appear as shown in the following illustration



Click on the Device Manager and then click the port information to appear in the red box of the computer's serial information

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Select the correct serial number after the single-machine open port appears the following status

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💮 USR-TCP232-Test	RS232 to Ethernet Convert tester		
File(F) Options(O) Help	РЮ		
COMSettings	COM port data receive	Network data receive	NetSettings
PortNum COM3 💌			(1) Protocol
			TCP Server 🗨
Baudh 110200			(2) Local host IP
DPaity NONE 💌			192 168 0 102
DataB 8 bit 💌			
Charp 1 bit 💌			(3) Local host port
эторв разко			J0234
🖲 Close			Listening
Recv Options			Recv Options
🔲 Receive to file			🔽 Receive to file
🗌 Add line return			🗌 Add line return
🔽 Receive As HEX			🔽 Receive As HEX
Receive Pause			Receive Pause
Serre Clear			Sawa Clear
<u>Davenn</u>			<u>bare</u> <u>breat</u>
Send Options			Send Options
🔲 Data from file			🗌 Data from file
🔲 Auto Checksum			🗌 Auto Checksum
🔲 Auto Clear Input			🦳 Auto Clear Input
🔲 Send As Hex			🗌 Send As Hex
🔲 Send Recycle			🗌 Send Recycle
Interval 1000 ms	Jinan USB Technology Co., Ltd.	http://ep.usr.cp	Interval 1000 ms
Lord Class	Send	Send	Lood Cloor
Load Clear			Lodu <u>Crear</u>
💣 Ready!	Send:0 Recv:0 Reset	🛛 💓 Ready! Send: O	Recv:0 Reset

### 2.3.1 TCP Server Mode

Configuring the TCP server mode parameter is shown in the following illustration:

	Num	1	•				Enabl	e Enable			
Seria	alType	RS485	•				BaudRat	e 9600	-		
Dat	aBits	8	•				Parity	NONE	-		
Sto	opBits[	1					NetTyp	e TCP Server	-		
Rem	noteIp[	192.168.	1.253				RemotePor	t 30000			
Loca	alPort	1025					ByteInterva	1 500			
					appl	у					
Num E	Inable	Type	BaudRate	Data	Parity	Stop	NetType	RemoteIP	RPort	Lport	Interval
1 E	lnable	RS485	9600	8	NONE	1	TCP Server	192.168.1.253	30000	1025	500

When a device is a TCP server, only the local port number is configured (For multiple serial devices different serial ports need to set a different local port number)

## **Local Port**

The device as TCP server provides a TCP port software parameter configuration diagram that is connected to other TCP/IP nodes, as follows: (PC Active to connect device so protocol selects TCP Client, IP for device IP192.168.1.253, port number for device local port number1025)

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🔗 USR-ICP232-Test	RS232 to Ethernet Convert tester		
File(F) Options(0) Help	р (Н)		
COMSettings PortNum COM3	COM port data receive	Network data receive	NetSettings (1) Protocol TCP Client
DPaity NONE			(2) Server IP 192.168.1.253
DataB 8 bit			( 2) Server Port 1025
Close			Connect
Recv Uptions			Recv Uptions Receive to file
🧮 Add line return			🦳 Add line return
🔽 Receive As HEX			🔽 Receive As HEX
🦳 Receive Pause			🔲 Receive Pause
<u>Save</u> <u>Clear</u>			Save Clear
Send Options			Send Options
🔲 Data from file			🔲 Data from file
🔲 Auto Checksum			🦳 Auto Checksum
🦳 Auto Clear Input			🔲 Auto Clear Input
🔲 Send As Hex			🔲 Send As Hex
🔽 Send Recycle			Send Recycle
Interval 1000 ms <u>Load</u> <u>Clear</u>	Jinan USR Technology Co., Ltd. Send	http://en.usr.cn	Interval 1000 ms Load Clear
🍯 Ready!	Send:0 Recv:0 Reset	💓 Ready! Send: O	Recv:0 Reset

Click Connect to appear in the next Figure red box will be normal communication.

🔗 USR-TCP232-Test	RS232 to Ethernet Convert tester		
File(F) Options(Q) Help	р (Н)		
COMSettings PortNum COM3  BaudR 9600	COM port data receive	Network data receive	NetSettings (1) Protocol TCP Client
DPaity NONE			(2) Server IP 192,168, 1,252
StopB 1 bit			(2) Server Port 1025
· Close			🔆 Disconnect
Recv Options Receive to file			Recv Options Receive to file
🗖 Add line return			🗌 Add line return
Receive As HEX			Receive As HEX
Save Clear			<u>Save</u> <u>Clear</u>
Send Options			Send Options
🗌 Data from file			Data from file
Auto Checksum			Auto Checksum
Send As Hex			Send As Hex
🔲 Send Recycle		LocalHost 192.168. 1 .110 Port 4261	🔽 Send Recycle
Interval 1000 ms Load Clear	Jinan USR Technology Co., Ltd. Send	http://en.usr.cn Send	Interval 1000 ms Load Clear
💓 Ready!	Send: 0 Recv: 0 Reset	👉 Ready! Send: 0	Recv:0 Reset

In the Send area, select the packets you want to send, as shown in the following illustration.

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Jinan USR Technology Co., Ltd.	Send	http://en.usr.cn	Send
--------------------------------	------	------------------	------

# 2.3.2 TCP Client Mode

Configure the TCP client mode parameters as shown in the following illustration:

	Num	1	-				Enabl	e Enable	-		
Ser	ialType	RS485	•		BaudRate 9600 💌						
D	ataBits	8	•				Parit	y NONE	-		
S	topBits	1	•				NetTyp	e TCP Client			
R	emoteIp	192.168.	1.110				RemotePor	t 30000			
Lo	calPort	1025					ByteInterva	1 500			
					appl	у					
Num	Enable	Туре	BaudRate	Data	Parity	Stop	NetType	RemoteIP	RPort	Lport	Interval
1	Enable	RS485	9600	8	NONE	1	TCP Client	192.168.1.110	30000	1025	500

As a TCP client side, the device proactively connects to TCP/IP network devices on Ethernet, such as PCs. You need to tell the device which network address and TCP port number to connect when the condition meets. When the socket is established, the device will send the data received from the corresponding serial port through the socket, conversely, the data received from the socket will be sent to the corresponding serial port.

For TCP client settings options: Remote port, IP address configuration options are interpreted as follows:

# **Remote Port**

The TCP port number to which the device connects. (For multiple serial devices different serial ports need to set a different remote port number)

## [IP Address]

The IP address or domain name address that the device connects to, both of which correspond to the host address on the Internet.

The software parameter configuration diagram is as follows: (The device actively connects the PC so the protocol selects TCP server, IP for PC 192.168.1.110, port number for the device remote port number 30000)

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💮 USR-ICP232-Iest	RS232 to Ethernet Convert tester		🛛
File(F) Options(Q) Help	) (H)		
Price(P) Options (U) Help COMSettings PortNum COM3 BaudR 9600 DPaity NONE DataB 8 bit StopB 1 bit StopB 1 bit Recv Options	COM port data receive	Network data receive	NetSettings (1) Protocol TCP Server (2) Local host IP 192.168.1.110 (3) Local host pot 30000 Listening Recv Options
<ul> <li>☐ Receive to file</li> <li>☐ Add line return</li> <li>☑ Receive As HEX</li> <li>☐ Receive Pause</li> <li><u>Save</u> Clear</li> </ul>			<ul> <li>☐ Receive to file</li> <li>☐ Add line return</li> <li>☑ Receive As HEX</li> <li>☐ Receive Pause</li> <li>Save Clear</li> </ul>
Send Options Data from file Auto Checksum Auto Clear Input Send As Hex Send Recycle			Send Options Data from file Auto Checksum Auto Clear Input Send As Hex Send Recycle
Interval 1000 ms Load Clear	Jinan USR Technology Co., Ltd. Send	http://en.usr.cn Send	Interval 1000 ms Load Clear
💣 Ready!	Send: 0 Recv: 0 Reset	👉 Ready! Send: O	Recv: 0 Reset

Click Listening to appear in the following picture red box to normal communication.

🔗 USR-TCP232-Test	RS232 to Ethernet Convert teste	r	
File(F) Options(Q) Help	, (H)		
COMSettings PortNum COM3 BaudR 9600	COM port data receive	Network data receive	(1) Protocol TCP Server
DPaity NONE  DataB 8 bit			(2) Local host in (2) Local host port
StopB 1 bit			30000
Recv Options			Recv Options
Receive to file Add line return			Receive to file Add line return
Receive As HEX			Receive As HEX
Save Clear			Save Clear
Send Options			Send Options
Auto Checksum			Auto Checksum
🗌 Auto Clear Input			Auto Clear Input
Send Recycle		Peers: 192.168.1.252:5590 -	Send Recycle
Interval 1000 ms Load Clear	Jinan USR Technology Co., Ltd. Send	http://en.usr.cn Send	Interval 1000 ms Load Clear
🍯 Ready!	Send:0 Recv:0 Res	et 🕼 Ready! Send: O	Recv: 0 Reset

In the Send area, select the packets you want to send, as shown in the following illustration.



Configure UDP mode parameters as shown in the following illustration:

	Num	1					Enab.	le Enable	-		
Seria	lType I	RS485					BaudRa	te 9600			
Dat	aBits	8					Pari	ty NONE	•		
Sto	pBits [	1					NetTy	pe UDP			
Rem	oteIp 1	192.168.1	.110				RemotePo:	rt 30000			
Loca	lPort 1	1025				В	yteInterv	al 500			
					apply						
Num E	Inable	Туре	BaudRate	Data	Parity	Stop	NetType	RemoteIP	RPort	Lport	Interval
1 E	Cnable	RS485	9600	8	NONE	1	UDP	192.168.1.110	30000	1025	500

In UDP working mode, the device is both the server side and the client side. UDP-related configuration options have remote port, IP address. UDP supports peer-to-peer, and configuration is similar to TCP mode. (For multiple serial devices different serial ports need to set a different remote port number)

The software parameter configuration diagram is as follows: (protocol selects UDP, IP for PC IP

192.168.1.110, port number for device remote port number 30000)

🔗 USR-TCP232-Test	RS232 to Ethernet Convert tester		
File(F) Options(Q) Help	р(H)		
COMSettings	COM port data receive	Network data receive	NetSettings
PortNum COM3 💌			(1) Protocol
BaudB 9600 🔻			UDP 🗾
			(2) Local host IP
DPaity NUNE			192.168.1.110
DataB 8 bit 💌			(2) Level hert part
StopB 1 bit 💌			
			100000
🦲 Close			🔘 Connect
Recv Options			Recv Options
Receive to file			🔲 Receive to file
🔲 Add line return			🔽 Add line return
🔽 Receive As HEX			🔽 Receive As HEX
🔲 Receive Pause			🔽 Receive Pause
Save Clear			Save Clear
Send Options			Send Options
🔲 Data from file			🔲 Data from file
🔲 Auto Checksum			🔲 Auto Checksum
🔲 Auto Clear Input			🦳 Auto Clear Input
🗌 Send As Hex			🔲 Send As Hex
🗌 Send Recycle			Send Recycle
Interval 1000 ms	Jinan USR Technology Co., Ltd.	http://en.usr.cn	Interval 1000 ms
Load Clear	Send	Send	Load Clear
🍯 Ready!	Send: 0 Recv: 0 Reset	💓 Ready! Send: 0	Recv: 0 Reset

Click Connect to appear in the next Figure red box will be normal communication.

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🔗 USR-ICP232-Test	RS232 to Ethernet Convert tester		
File(F) Options(0) Help	р (Н)		
File (F) Options (0) Help COMSettings PortNum COM3 BaudR 9600 DPaity NONE DataB 8 bit StopB 1 bit Close Recv Options	€£) COM port data receive	Network data receive	NetSettings (1) Protocol UDP (2) Local host IP 192,168, 1,110 (3) Local host pot 30000 
☐ Receive to file ☐ Add line return ☑ Receive As HEX ☐ Receive Pause Save Clear Send Options			☐ Receive to file ☐ Add line return ☑ Receive As HEX ☑ Receive Pause Save Clear Send Ontions
Data from file Auto Checksum Auto Clear Input Send As Hex Sand Bacycle		RemoteIP: 192,168, 1 ,110 Port: 4261	Data from file Auto Checksum Auto Clear Input Send As Hex Send Recycle
Interval 1000 ms Load Clear	Jinan USR Technology Co., Ltd. Send	http://en.usr.cn Send	Interval 1000 ms Load Clear
Manadaki		Schu. 0	

In the Send area, select the packets you want to send, as shown in the following illustration.

Jinan USR Technology Co., Ltd.	Send	http://en.usr.cn	Send
--------------------------------	------	------------------	------

Notice:RS-485 as half-duplex mode only one serial port to send another serial port can only receive data; RS-232/422 can send both bidirectional for full duplex mode.

### 2.3.4 ModbusTCP(RTU\_MASTER) Mode

PC port of the host computer connected to the Ethernet port of this series of devices, This series of equipment serial port and the lower computer PLC serial port connected(RS-232/485/422), Implement the transmission of Modbus RTU on the Modbus TCP to serial link on the Ethernet link.



# Serial Port Work(For Example)

1:Computer Installation Modbus test software



2:Modbus Functional Verification Test

Configuring Web Serial Parameters

Input device default IP 192.168.1.253 on IE browser, click the serial port configuration page configuration serial parameter: Take serial port RS-485 as example configuration as shown in the following illustration



Nu m	Valid	S-Type	BaudRate	Data	Parity	Stop	Net-Type	RemoteIPaddress	R-Port	L-port	Inter
1	En	RS485	9600	8	NONE	1	ModbusTCP(RTU_MASTER)	192.168.1.110	30000	502	500

3:Run Modbus test software

h

software configuration, parameter configuration is consistent with the Web display. Open

Click Connection, select TCP/IP,IP address write device IP 192.168.1.253,Port write local port number 502. (For multiple serial devices different serial ports need to set a different local port number)

웹 Modbus Poll - Mb	poll1	A 1 4 4 4 1	B >- >	
File Edit Connect	Connection Setun	i idi		
🗅 🖻 🖥 🎒 🗙	Connection Setup			
Mbpoll1	Connection		ОК	
Tx = 13: Err = 13	Modbus TCP/IP	•	Ground	
No connection	Serial Settings		Lancei	
Ali	COM1	· · · · · · · · · · · · · · · · · · ·	Mode	
0	9600 Baud		🔘 RTU  🔿 ASCII	
1			Response Timeout	
2	8 Data bits 🔻		1000 [ms]	
-	Even Parity 🔻		Delau Between Polls	
	1 Stop Bit 👻	Advanced	20 [ms]	
	Remote Modbus Serve	r 		
	192 168 1 253	ame		
	Server Port	Connect Timeout	ID.4	
	502	3000 [ms]		
For Help, press F1.			[192.168.1.253]: 502	th.
Click OK on the co	onnection (red font	no Connection will di	sappear)	
Modbus Poll - Mb	poll1	A 1 1 1 1 1 1 1		
File Edit Connecti	ion Setup Functions	Display View Window	Help	
D 🖻 🖬 🎒 🗙	[[] [토直] 자] 05	5 06 15 16 17 22 23	TC 🖂 🤋 💦	
Mbpoll1				
Tx = 21: Err = 0: I	D = 1: F = 03: SR = 1	1000ms		
Alia	s 00000			•
0	0			
1	0			
2	0		-	
-				
For Help, press F1.			[192.168.1.253]: 502	the last of the la

Open Slave software configuration, parameter configuration is consistent with the Web display.

### Serial Server and Gateway User Manual

COMARKe ShenZhen Comark Te	echnology Co.,Ltd.	Serial Server and Gateway User N
Click Connection, select Se	rial port, serial parameters and the V	Web display consistent, select the RTU ma
File       Edit       Connection       Setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup         Image: Description of the setup       Image: Description of the setup       Image: Description of the setup	Connection Setup Connection Serial Port Serial Settings COM3  9600 Baud Mode 9600 Baud Flow Control None Parity Flow Control DSR CTS R 1 CP/IP Server IP Address	OK Cancel
	127.0.0.1         ✓ Any Address          ● IPv4          □ Ignore Unit ID          ○ IPv6	▼ 502
For Help, press F1.	Pc	ort 1: 9600-8-E-1

# Select the correct communication port

Click OK on the connection (red font no Connection will disappear)

1	M	lodbus Slave - Mbs	slave1	**************************************	23
	File	Edit Connection	n Setup Display	View Window Help	
11111	D	🛎 🖥 🚭 📃 🗎	<u>5 e ? v</u>		
ľ	<b>!!!</b>	Mbslave1			
	ID :	= 1: F = 03			
		٨٢٠٠	00000		
		Allas	00000		
			0		
	2		0		
	Ŀ			<b>•</b>	
ľ					
F	or H	leln press F1		Port 3: 9600-8-N-1	

4:transmit-receive Modbus data

# SZCOMARK ShenZhen Comark Technology Co.,Ltd.

ឃឹ្ម Modbus Poll - Mbpoll1	Modbus Slave - Mbslave1
File Edit Connection Setup Functions Display	File Edit Connection Setup Display View Window Help
🗅 📽 🖬 🎒 🗙 🗂 🗒 🚊 💷 05 06 15 1	
Mbpoll1	Mbslave1
Tx = 406: Err = 0: D = 1: F = 03: SR = 1000ms	ID = 1: F = 03
	Communication Traffic
Communication Traffic	0 Exit Stop Clear Save Copy Log
Exit Stop Clear Save	1 000238-Rx:01 03 00 00 00 0A C5 CD
Rx:257-01 A1 00 00 00 17 01 03 14 0	2 000239-Tx:01 03 14 00 00 00 00 00 00 00 00 00 00 00 00 00
Rx:259-01 A2 00 00 00 17 01 03 14 0	000240 - Rx: 01 03 00 00 00 00 00 00 00 00 00 00 00 00
Tx:260-01 A3 00 00 00 06 01 03 00 0	000242-Rx:01 03 00 00 00 0A C5 CD
Rx:261-01 A3 00 00 00 17 01 03 14 0	000243-Tx:01 03 14 00 00 00 00 00 00 00 00 00 00 00 00 00
Tx:262-01 A4 00 00 00 06 01 03 00 0	000244-Rx:01 03 00 00 0A C5 CD
Rx:263-01 A4 00 00 00 17 01 03 14 0	000245-Tx:01 03 14 00 00 00 00 00 00 00 00 00 00 00 00 00
Tx: 264-01 A5 00 00 00 06 01 03 00 0 Px: 265-01 35 00 00 00 17 01 03 14 0	000246-Rx:01 03 00 00 00 0A C5 CD
Tx:266-01 A6 00 00 00 06 01 03 00 0	
Rx:267-01 A6 00 00 00 17 01 03 14 0	000249-Tx:01 03 14 00 00 00 00 00 00 00 00 00 00 00 00 00
۲. III III III III III III III III III I	· · · · · · · · · · · · · · · · · · ·
For Help, press F1.	For Help, press F1. Port 3: 9600-8-N-1

The error is 0 for the test to pass normally. According to this method, test RS-232/422 serial communication sequentially.

# 2.3.5 ModbusTCP(RTU\_SLAVE) Mode

This series of equipment serial port and the host computer PLC serial port connected (RS-232/485/422), PC port of the lower computer connected to the Ethernet port of this series of devices, Implement the transmission of Modbus RTU on the Modbus TCP to serial link on the Ethernet link.





## 2:Modbus Functional Verification Test

Configuring Web Serial Parameters

Input device default IP 192.168.1.253 on IE browser, click the serial port configuration page configuration serial parameter: Take serial port RS-485 as example configuration as shown in the following illustration

Num	1		▼	Er	nable	Enable			•
SerialType	RS48	5	▼	BaudRate 9600				•	
DataBits	8		▼	Pa	arity	NONE			•
StopBits	1		-	NetType ModbusTCP(RTU_SLAVE			RTU_SLAVE)	•	
RemoteIp	192.	168.1.110		Remote	ePort	30000			
LocalPort	502			ByteInterval 500					
			RTU SLAVE SE	TTING					
	Num ber	Enable	RemoteIp	RemotePort ID(e.g., 5-7)			or	(E)	
	1	Enable 🔻	192.168.1.111	502	1-1				
	2	Disable 🔻	192.168.2.100	10000	100-200			-	
I		I	apply	]					

Num	Valid	S-Type	BaudRate	Data	Parity	Stop	Net-Type	RemoteIPaddress	R-Port	L-port	Inter
1	En	RS485	9600	8	NONE	1	ModbusTCP(RTU_SLAVE)	192.168.1.110	30000	502	500

Remote IP address, remote port, and slave ID for configuring SLAVE, The range of ID can be one or one consecutive value, but cannot be repeated. (For multiple serial devices different serial ports need to set a different remote port number)

## 3:Run Modbus test software



Open software configuration, parameter configuration is consistent with the Web display. Click Connection, select Serial port, serial parameters and the Web display consistent, select the RTU mode.

# SZCOMARK ShenZhen Comark Technology Co.,Ltd.

Bell Madhur Dall Maralla			
10 Modbus Poll - Mbpoll			
File Edit Connection Set	onnections Display View Window H	20	
💬 Mbpoll1	Connection	ОК	
Tx = 988: Err = 167: ID	Serial Port		
No connection	Serial Settings	Lancel	
Alias	USB Serial Port (COM3) -	Mode	
0	9600 Baud 🔹	🖲 RTU 🔘 ASCII	
1		Response Timeout	
2	8 Data bits 🔻	1000 [ms]	•
	None Parity 💌	- Delau Retueen Polle	
	1 Stop Bit	20 [ms]	
	Remote Modbus Server		
	IP Address or Node Name		
	Server Port Connect Timeout		
	502 [3000 [ms]	() IP-4	
		<u>О IPV6</u>	
Ľ			
, For Help, press F1.	[	192.168.1.253]: 502	
Click OK on the connection	on (red font no Connection will disap	pear)	
Modbus Poll - Mbpoll1			_ O X
File Edit Connection Set	tup Functions Display View Window I	telp	
	■ □ □ 05 06 15 16 17 22 23 TC		
Mbpoll1			
Tx = 3: Err = 0: ID = 1: F	= 03: SR = 1000ms		
	00000		
Alias	00000		
0	0		
1	0		
2	0		
For Help, press F1.		Port 3: 9600-8-N-1	the last



Open software configuration, parameter configuration is consistent with the Web display. Click Connection, select TCP/IP,IP address write Slave IP 192.168.1.111,Port write remote port number 502.

# **EM** SzcomARK ShenZhen Comark Technology Co.,Ltd.

Serial Server	and	Gateway	User	Manual
Serial Server	anu	Gattmay	USUI	Manual

Modbus Slave - Mbslave1	
File Edit Connection Setup	Connection Setup
Mbslave1 ID = 1: F = 03	Modbus TCP/IP
No connection	Serial Settings
Alias	USB Serial Port (COM3)
0	9600 Baud   Mode  RTU  ASCII
2	8 Data bits  Flow Control
	None Parity     USR     USR     IST or gale       1 Stop Bit     Image: State of the s
	TCP/IP Server
	IP Address Port 192.168.1.111 ▼ 502
	Any Address  O IPv4
	Ignore Unit ID O IPv6
For Help, press F1.	[192.168.1.111]: 502

Select the correct communication port Click OK on the connection (red font no Connection will disappear)

Modbus Slave - Mbslave1	
File Edit Connection Setup Dis	olay View Window Help
D 🛎 🖬 🚭   🗂   🖳 👜   🤋 🎙	?
Mbslave1	
ID = 1: F = 03	
Alias 000	
2	
For Help, press F1.	[192.168.1.111]: 502

4:transmit-receive Modbus data

<b>CM</b> szcomark ShenZhen Comark Techi	10logy Co.,Ltd.
	(

Modbus Poll - Mbpoll1	Modbus Slave - Mbslave1
File Edit Connection Setup Functions Display	File Edit Connection Setup Display View Window Help
🗅 😂 🖬 🎒 🗙 🗂 🗒 🚊 л.   05 06 15 10	
Evit         Stop         Clear         Save           Rx:2026-01         03         14         00	Moslave1       Log         Communication Traffic       Image: Communication Traffic         Exit       Stop       Clear       Save       Copy       Log         001872-Rx:01       8E       00
For Help, press F1.	For Help, press F1, [192.168.1.111]: 502

The error is 0 for the test to pass normally. According to this method, test RS-232/422 serial communication sequentially.

### 2.3.6 ModbusTCP(ASCII\_MASTER) Mode

PC port of the host computer connected to the Ethernet port of this series of devices, This series of equipment serial port and the lower computer PLC serial port connected(RS-232/485/422), Implement the transmission of Modbus ASCII on the Modbus TCP to serial link on the Ethernet link.





# 2:Modbus Functional Verification Test

Configuring Web Serial Parameters

Input device default IP 192.168.1.253 on IE browser, click the serial port configuration page configuration serial parameter: Take serial port RS-485 as example configuration as shown in the following illustration

Num	1 🗸		Enable	Enable	-
SerialType	RS485 -		BaudRate	9600	-
DataBits	8 🗸		Parity	NONE	•
StopBits	1 -		NetType	ModbusTCP (ASCII_	MASTER 👻
RemoteIp	192.168.1.183		RemotePort	20001	
LocalPort	502		ByteInterval	500	
		apply			

Nu	Vali	S-Typ	BaudRat	Dat	Parit	Sto	Net-Type	RemoteIPaddres	R-Por	L-por	Inte
m	d	e	e	a	y	p		s	t	t	r
1	En	RS485	9600	8	NONE	1	ModbusTCP(ASCII_MASTE R)	192.168.1.183	20001	502	500

# 3:Run Modbus test software



Open software configuration, parameter configuration is consistent with the Web display. Click Connection, select TCP/IP,IP address write device IP 192.168.1.253,Port write local port number 502. (For multiple serial devices different serial ports need to set a different local port number)

월 Modbus Poll - Mi	opoll1	
File Edit Connec	Connection Setup	
Mbpoll1 Tx = 13: Err = 13 No connection Ali 0 1 2	Connection Modbus TCP/IP Serial Settings COM1 9600 Baud 8 Data bits Even Parity 1 Stop Bit Remote Modbus Server IP Address or Node Name	OK Cancel Mode © RTU O ASCII Response Timeout 1000 [ms] Delay Between Polls 20 [ms]
	192.168.1.253       Server Port     Connect Timeout       502     3000	▼ ● IPv4   ● IPv6
For Help, press F1.		[192.168.1.253]: 502

Click OK on the connection (red font no Connection will disappear)

<b>FM</b>	
SZCOMARK ShenZhen Comark Technol	logy Co.,Ltd.

웹 Modbus Poll - Mbpoll1	TAX BUILDED		
File Edit Connection Setur	Functions Display View W	/indow Help	
🗅 📽 🖬 🎒 🗙 🗂 🗒	≜   ⊥   05 06 15 16 17 22	23   TC 🖳 💡 🌾	
Mbpoll1			
Tx = 21: Err = 0: ID = 1: F	= 03: SR = 1000ms		
Alias	00000	<u>^</u>	
0	0		
1	0		
2	0	<b>•</b>	
For Help, press F1.		[192.168.1.253]: 502	L.H.

Modbus Slave

Open Slave software configuration, parameter configuration is consistent with the Web display. Click Connection, select Serial port, serial parameters and the Web display consistent, select the ASCII mode.

Modbus Slave - Mbslave1	
File Edit Connection Setup   Setup Setup Setup   Setup Setup   Mbslave1   ID = 1: F = 03   No connection   Alias   0   1   2   3   4   5	Connection Setup
For Help, press F1.	Port 3: 9600-8-N-1

Select the correct communication port

Click OK on the connection (red font no Connection will disappear)

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### Serial Server and Gateway User Manual

Modbus Slave - Mbsla	avel 👘 📥 🕷					
File Edit Connection	File Edit Connection Setup Display View Window Help					
🗅 🖻 🖥 🎒 🛅 🗏	1 🗴 💡 📢					
Mbslave1						
ID = 1: F = 03						
Alias	00000					
0	0	E				
1	0					
2	0	-				
· · · · ·	-					
For Help, press F1.		Port 3: 9600-8-N-1				

### 4:transmit-receive Modbus data

Modbus Poll - Mbpoll1	🕻 Modbus Slave - Mbslave1 📃 💷 🔀					
<u>File Edit Connection Setup Functions Displ</u>	File Edit Connection Setup Display View Window Help					
🗅 📽 🖬 🎒 🗙 🗂 💆 🎰 🕮 05 06 1						
Mbpoll1	🗒 Mbslave1					
Tx = 77 Err = 0: ID = 1: F = 03: SR = 1000m	ID = 1: F = 03					
Communication Traffic	Communication Traffic					
Exit Stop Clear	Exit Stop Clear Save Copy Log					
Rx:172-00 70 00 00 00 17 01 03	000128-Rx:3A 30 31 30 33 30 30 30 30 30 30 30 41 46 32 0D 0A					
Rx:174-00 71 00 00 00 17 01 03	000130-Rx:3A 30 31 30 33 30 30 30 30 30 30 30 41 46 32 0D 0A					
Rx:175-00 72 00 00 00 06 01 03 Rx:176-00 72 00 00 00 17 01 03	000131-TX:3A 30 31 30 33 31 34 30 30 30 30 30 30 30 30 30 30 30 30 3					
Tx:177-00 73 00 00 00 06 01 03 Rx:178-00 73 00 00 00 17 01 03	000133-Tx:3A 30 31 30 33 31 34 30 30 30 30 30 30 30 30 30 30 30 3 000134-Rx:3A 30 31 30 33 30 30 30 30 30 30 30 41 46 32 0D 0A					
Tx:179-00 74 00 00 00 06 01 03	000135-Tx: 3A 30 31 30 33 31 34 30 30 30 30 30 30 30 30 30 30 30 3					
Rx:180-00 74 00 00 00 17 01 03	000136-Rx:3A 30 31 30 33 30 30 30 30 30 30 30 30 41 46 32 0D 0A 000137-Tx:3A 30 31 30 33 31 34 30 30 30 30 30 30 30 30 30 30 30 3					
Rx:182-00 75 00 00 00 17 01 03	000138-Rx:3A 30 31 30 33 30 30 30 30 30 30 30 41 46 32 0D 0A					
Tx:183-00 76 00 00 00 06 01 03	000139-Tx:3A 30 31 30 33 31 34 30 30 30 30 30 30 30 30 30 30 3 3 3					
KX:104-00 /6 00 00 00 1/ 01 03						
For Help, press F1.	For Help, press F1. Port 3: 9600-8-N-1					

The error is 0 for the test to pass normally. According to this method, test RS-232/422 serial communication sequentially.

# 2.3.5 ModbusTCP(ASCII\_SLAVE) Mode

This series of equipment serial port and the host computer PLC serial port connected(RS-232/485/422), PC port of the lower computer connected to the Ethernet port of this series of devices, Implement the transmission of Modbus ASCII on the Modbus TCP to serial link on the Ethernet link.



Unzip Slave.rar and install Slave software

2:Modbus Functional Verification Test

Configuring Web Serial Parameters

Input device default IP 192.168.1.253 on IE browser, click the serial port configuration page configuration serial parameter: Take serial port RS-485 as example configuration as shown in the following illustration

zcomark ShenZhen Coma	rk Te	echnology (	Co.,Ltd.		Serial	Serve	er and	Gateway	v User N	Manual
Num	1		•		Er	nable	Enable	e		•
SerialType	RS48	5	•		Baud	:Rate	9600			•
DataBits	8		•		Pa	mity	NONE			•
StopBits	1		•		Net	tType	Modbus	STCP (ASCII	_SLAVE)	-
RemoteIp	192.	168.1.183			Remote	ePort	20001			
LocalPort	502				ByteInte	erval	500			
			RI	FU SLAVE SET	TING					
	Num ber	Enable	RemoteIp		RemotePort	ID(e. 5-7)	g.,3	or	(Ē)	
	1	Enable 👻	192.168.1	. 111	502	1-1				
	2	Disable 🔻	192.168.1	1.1	503	1-1		]		
i		( )	[	apply	1				Ŧ	

Num	Valid	S-Type	BaudRate	Data	Parity	Stop	Net-Type	RemoteIPaddress	R-Port	L-port	Inter
1	En	RS485	9600	8	NONE	1	ModbusTCP(ASCII_SLAVE)	192.168.1.183	20001	502	500

Remote IP address, remote port, and slave ID for configuring SLAVE, The range of ID can be one or one consecutive value, but cannot be repeated. (For multiple serial devices different serial ports need to set a different remote port number)

3:Run Modbus test software



\_

Open Modbus Poll software configuration, parameter configuration is consistent with the Web display. Click Connection, select Serial port, serial parameters and the Web display consistent, select the ASCII mode.

File       Edit       Connection         Image: Design of the second secon	Europerions Display View Win Connection Setup Connection Serial Port Serial Settings USB Serial Port (COM3) 9600 Baud ▼ 8 Data bits ▼ None Parity ▼ 1 Stop Bit ▼ Ad	Accel Helo
For Help, press F1	IP Address or Node Name          IP2.168.1.253         Server Port       Connect Tim         502       3000	ieout © IPv4 [ms] 0 IPv6

Click OK on the connection (red font no Connection will disappear)

# **EM** szcomark ShenZhen Comark Technology Co.,Ltd. Serial Server and Gateway User Manual - O X 월 Modbus Poll - Mbpoll1 File Edit Connection Setup Functions Display View Window Help 🗅 🚅 🖶 🎒 🗙 🛅 🗒 🚊 🕮 05 06 15 16 17 22 23 TC 🖳 🤋 💖 🔛 Mbpoll1 Tx = 3: Err = 0: ID = 1: F = 03: SR = 1000ms Alias 00000 . 0 1 0 2 0 For Help, press F1. Port 3: 9600-8-N-1 Modbus Slave

Open Slave software configuration, parameter configuration is consistent with the Web display. Click Connection, select TCP/IP,IP address write Slave IP 192.168.1.111,Port write remote port number 502.

Modbus Slave - Mbslave1	
File       Edit       Connection       Setup         Image: Connection       Image: Connection       Image: Connection         Image: Connection       Alias       Image: Connection         Image: Alias       Image: Connection       Image: Connection	Connection Setup
For Help, press F1.	[192.168.1.111]: 502

Select the correct communication port

Click OK on the connection (red font no Connection will disappear)

#### **EM** szcomark ShenZhen Comark Technology Co.,Ltd.

Modbus Slave - Mb	slave1		Aatto	ALCORDON.	Autor	Autom	X
File Edit Connection	n Setup Display	View Window	Help				
🗅 🖻 🖬 🎒 🛅	🗏 👜 🤋 📢 👘						
Mbslave1							
ID = 1: F = 03					=		
					_		
Alias	00000						
0	0			=			
1	0						
2	0						
	_			•			
For Help, press F1.				[192.168.	1.111]: 502		

### 4:transmit-receive Modbus data

웹 Modbus Poll - Mbpoll1	🖁 Modbus Slave - Mbslave1
<u>File Edit Connection Setup Functions Displ</u>	file Edit Connection Setup Display View Window Help
🗅 📽 🖬 🎒 🗙 🗂 🗒 🏛 💷 🕮 105 06 1	
Mbpoll1	🛱 Mbslave1
Tx = 30 <mark>: Err = 0:</mark> ID = 1: F = 03: SR = 1000m	ID = 1: F = 03
Communication Traffic	Communication Traffic
Exit Stop Clear Sa	Exit Stop Clear Save Copy Log
Rx:303-3A 30 31 30 33 31 34 30 3 Tx:304-3A 30 31 30 33 30 30 30 3	000236-Rx:00 44 00 00 00 66 01 03 00 00 00 0A
Rx:305-3A 30 31 30 33 31 34 30 3	000239-Rx:00 45 00 00 00 06 01 03 00 00 00 00 00 00 00 00 00 00 00 00
Rx:307-3A 30 31 30 33 31 34 30 3	000239-Tx:00 45 00 00 00 17 01 03 14 00 00 00 00 00 00 00 00 0 0 000240-Rx:00 46 00 00 00 06 01 03 00 00 00 0A
Tx:308-3A 30 31 30 33 30 30 30 3 Rx:309-3A 30 31 30 33 31 34 30 3	000241-Tx:00 46 00 00 00 17 01 03 14 00 00 00 00 00 00 00 00 00 0 000242-Rx:00 47 00 00 00 66 01 03 00 00 00 0A
Tx:310-3A 30 31 30 33 30 30 30 3 Rx:311-3A 30 31 30 33 31 34 30 3	000243-Tx:00 47 00 00 00 17 01 03 14 00 00 00 00 00 00 00 00 0
Tx:312-3A 30 31 30 33 30 30 30 3 Px:212-3A 20 21 20 22 21 24 20 2	000245-Tx:00 48 00 00 00 17 01 03 14 00 00 00 00 00 00 00 00 00 0
Tx:314-3A 30 31 30 33 31 34 30 3	000246-Rx:00 49 00 00 00 00 01 03 00 00 00 0A 000247-Tx:00 49 00 00 00 17 01 03 14 00 00 00 00 00 00 00 00 00 0
Hx:315-3A 30 31 30 33 31 34 30 3 ∢	
For Help, press F1.	or Help, press F1. [192.168.1.111]: 502

The error is 0 for the test to pass normally. According to this method, test RS-232/422 serial communication sequentially.

## 2.4 Mapping

The mapping function is used to realize the mismatch between the slave address and the slave address issued by the master station, which requires the serial port gateway to remap the slave station ID and realize the normal communication between the master station and the slave station Modbus data. This function is supported only by serial gateway products, and the mode of serial port must work in ModbusTCP(RTU\_MASTER) or ModbusTCP(ASCII\_MASTER).

# 2.4.1 Function Menu

A detailed introduction and configuration approach will be made in this chapter.

# SZCOMARK ShenZhen Comark Technology Co.,Ltd.

# Config

<u>System</u> <u>Serial</u>			Serial N	). 1			•			Enable	Disable		•
mapping			Data ty	coil status	i		•			Size	e		
<u>Log display</u> Management		1	CP Slave 3	ID					T	CP Addres:	3		
			Slave 3	ID						Address	5		
						app	ly						
	Index	serial NO.	Enable	Data type	TCP	Slave	ID	TCP	Address	Slave ID	Address	Size	Delete
	1	1	Enabled	COIL STATUS	1			10		1	10	1	Delete

Value	Value Range	Description				
Serial NO.	1~2	Select the serial number you want to set.				
Enable	Enable, Disable	Set up the mappings' enabling and disabling. When the disable function is selected, the current mapping table item will be deactivated, and the modbus will communicate with the non-mapped function in this state.				
Data type	READ COIL STATUS, INPUT STATUS, HOLDING REGISTER, INPUT REGISTER	Function codes descriptions: READ COIL STATUS for COIL(0x01), INPUT STATUS for Discrete Input(0x02), HOLDING REGISTER for Holding Registers(0x03), INPUT REGISTER for Input Registers(0x04)				
Size	1~65535	Sets the Size for the max quantity of TCP Address and Address. The sum of Size and TCP Address, or the sum of Size and Address, should be less than 65535.				
TCP Slave ID	1~247	Sets the TCP Slave ID for Modbus Master ID.				
TCP Address 0~65535		Sets the TCP Address for starting address of Modbus Master Code. The sum of Size and TCP Address, or the sum of Size and Address, should be less than 65535.				
Slave ID	1~247	Sets the TCP Slave ID for Modbus Slave ID.				
Address	0~65535	Sets the Address for starting address of Modbus Slave Code. The sum of Size and TCP Address, or the sum of Size and Address, should be less than 65535.				

### 2.4.2 Mapping Application

The mapping function is used to solve the problem that the modbus master station ID and the address are not the same as the modbus slave station ID and address, and can also realize the normal communication between the master station and the slave station. $\circ$ 

Configuring the mapping parameter is shown in the following illustration:

## Config

<u>System</u> Serial			Serial N	0. 1		•			Enable	Disable		•
mapping			Data ty	pe COIL STATUS	5	-			Size			
<u>Nanagement</u>			TCP Slave	ID				T	CP Address			
			Slave	ID					Address			
						apply						
	Index	serial NO	. Enable	Data type	TCP	Slave ID	TCP	Address	Slave ID	Address	Size	Delete
	1	1	Enabled	COIL STATUS	1		10		100	100	100	Delete

As shown above, configure the read coil with a master station ID of 1, a starting address of 10 to 110, and a map to a slave station ID of 100 and a starting address of 100 to 200.

## [Delete]

If you need to delete the mapping entry, you can choose to click "Delete".

Notice: The maximum mapping items per serial port are 32.

# 2.5 Log display

# Config

• <u>System</u> • <u>Serial</u> • <u>mapping</u> • Log display	Number	Туре	Time	Log details
	1	M_Poll_Tx	13:35:35	3a 30 31 30 33 30 30 30 30 30 30 30 30 41 46 32 0d 0a
<ul> <li><u>Management</u></li> </ul>	2	M_Slave_Rx	13:35:35	18 c1 00 00 00 06 01 03 00 00 00 0a
	3	M_Slave_Tx	13:35:35	18 c1 00 00 00 17 01 03 14 00 00 00 00 00 00 00 00 00 00 00 00 00
	4	M_Poll_Rx	13:35:35	3a         30         31         30         31         34         30<
		Show	Close	Reset

Log display function is used to start debugging phase, when master-slave data transfer, it is used to analyze the correctness of receiving or sending Modbus messages by serial gateway.

<b>Button Value</b>	Value Range	Description
Show	-	Enable log display function, log display maximum support for 120 records.
Close	-	Close log display function.
Reset	-	Reset log record.

# 2.6 Manage Settings

# Config

• <u>System</u>	Update Firmwar	e			
• <u>Serial</u>	Server Ip		Firmware name		Update
<ul> <li><u>mapping</u></li> <li>Log display</li> </ul>					
<ul> <li>Management</li> </ul>					
	save	save&reboot	reboot	factory	

### Remote Upgrade

This series provides remote firmware upgrade operation using TFTP (Trivial File Transfer Protocol, trivial file transfer protocol) upgrade, TFTP does not require authentication in the connection process control applies does not require complex interaction between a client and server environment. By TFTP firmware upgrade function you can update your device software. Before you upgrade your device software, please make sure that the device is properly connected with the TFTP server.

Step 1: Open the attached "tftpd32.exe".



**Step 2:**Sets the IP address of the TFTP server in the TFTP and Firmware stored paths. If the TFTP server IP address is "192.168.1.1", the firmware "rtthread-LPC.bin.CRC" stored in the TFTP server "D:\tftpd32.280".





In the TFTP settings shown in the following figure.

🏘 Tftpd32 by Ph. Jounin	
Current Directory D:\tftpd32.280 Server interfaces 192.168.1.1	Browse Show Dir
Clear Copy Current Action Listening on port 69	
About Settings	Help

Step 1: In the navigation on the left side, select "manage settings" and enter the TFTP firmware upgrade page.

**Step 2:** Sets the IP address of the TFTP server and the name of the upgrade software.

**Step 3:** Click the "upgrade", a software upgrade.

Description:Upgrade may take several minutes, do not disconnect the power during the upgrade process, or other settings. **Step 4:**System automatically reboot after the upgrade is complete.

Management Sets The Button Description

Button Value	Value Range	Description
save		Save the configuration data for the current user (power
		failure invalid configuration information).
save&reboot	-	Save the current configuration data and restart the
		device by the user.
reboot	-	Do not save the current configuration data to restart the
		device by the user.
factory	-	Restore serial port data all data from the system to the
		factory settings.

# **3** Maintenance and Service

From the date of product shipment, the company offers a five year product warranty. According to the product specification, during the warranty period, if no fault in the product or feature fails, the company will be free for the user to repair or replace the product. But the promise was not covered due to improper use, accidents, natural disasters, incorrect operation or damage caused by incorrect installation.

In order to ensure that consumers benefit from the company's management-series serial server products, can get help and problem solving in the following ways:

Internet service. Technical support service Product repair or replacement

# **3.1** Internet service

Through the company's Web site can get more useful information and tips. Website: http://www.comark.cn

# **3.2** Technical support service

Users who use the company's products, you can call our technical support Office, the company has a professional technical engineers to answer your questions and help you the first time you experience the product, or use. Free service hotline: 86-755-26055466.

# **3.3** Product repair or replacement

Product repair, replacement or refund, should confirm the company's technical staff first, then contact the sales staff and get treatment. Above should be dealt with according to the procedures, consultation with the company's technical personnel and sales personnel to complete the repair, replacement or return of the product.