Guarantee regulations

1. The company's products since the company authorized distributors to purchase the date, five-year warranty, life-long maintenance. If otherwise agreed, the agreement shall be followed.
2. If the product in the warranty period of quality problems, the company will be free maintenance for customers.
3. Equipment damage caused by improper operation, man-made damage, unauthorized demolition, accidents or disasters, and unauthorized products do not provide free warranty service.

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SZCOMARK®

4-channel RS-485 Serial Port Servers Manual

[Product Overview]

The 4-channel RS-485 serial servers adopt high-strength IP40 protective housing, industrial grade EMC design, support Auto-Negotiation adaptive technology, provide a comprehensive LED status indicator, support redundant wide voltage 12~48V DC power input to increase the reliability of the communication network. It is a series of serial port server independently developed by Shenzhen Comark Technology Co.,Ltd. Provide 4*10/100Base-T (x) RJ45 ports ,0~2*100Base-FX fiber interfaces(default SC interface, FC/ST optional) and 4-channel RS-485 serial ports. It is easy and convenient to centralize the management of decentralized serial devices and hosts through the network., the communication rate support 110~115200bps optional. Built-in Modbus TCP, Modbus RTU and Modbus ASCII protocol make it easy for users to connect Modbus Ethernet devices to Modbus serial devices. Base on industrial installation requirements, DIN35 rail or Wall Mounting installation mode provided. The products adopt excellent network scheme in the industry, -40~85℃ working temperature range, can satisfy all kinds of industrial site requirements, provide convenient serial port communication solutions.

[Performance Feature]

- Conform to IEEE802.3/802.3u standard, store and forward Exchange Mode;
- Provide 4 10/100Base-T (x) RJ45 Ethernet ports, support Auto-Negotiation technology, automatic negotiation work rate (10M/100M) and duplex mode (half duplex/ full duplex), MDI/MDI-X self-adaption,
- Provide 0-2 100Base-FX fiber interfaces, default SC interface, FC/ST optional, up to 120 km transmission;
- Provide 4-channel RS-485 serial ports, provide TCP server, TCP client, UDP and Modbus TCP(RTU) four serial transmission modes, 110~115200bps line speed non-blocking communication;
- Support 4 serial ports' isolation function, isolated voltage 500V AC;
- Conform to TCP, IP, UDP, ModbusTCP, ModbusRTU and TFTP client protocols;
- Support RTU Master mode, maximum support 16 TCP master connections in this mode;
- Support Web management;
- Support serial port settings, can connect two serial devices through network for serial data transmission;
- Support through gateway, cross-routing communication;
- Low-power consumption design;
- Metal housing with IP40 and high level EMC protection
- Support redundant wide voltage 12~48V DC power input;
- -40~85℃ Working temperature range.

[Detailed Specification]

Technology

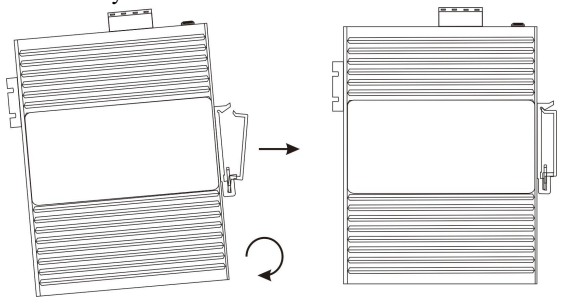
- standard:IEEE802.3,IEEE802.3u

Port

Step 3: Connect the bottom of the DIN rail of the product fittings to the DIN rail (with the

spring support), and then the upper part of the connector is jammed into the DIN rail (the lower part is a little bit, a little harder to keep the device balance stuck in the upper part).

Step 4: After the DIN rail is jammed into the DIN rail connection, check and confirm that the product is securely mounted on the DIN rail.



[Package List]

First use of the serial server, please check the packaging random attachment is complete. the 4-channel RS-485 serial server packing list is as follows:

- 4-channel RS-485 serial port server (with industrial terminals for power supply)
- Manual 1pcs

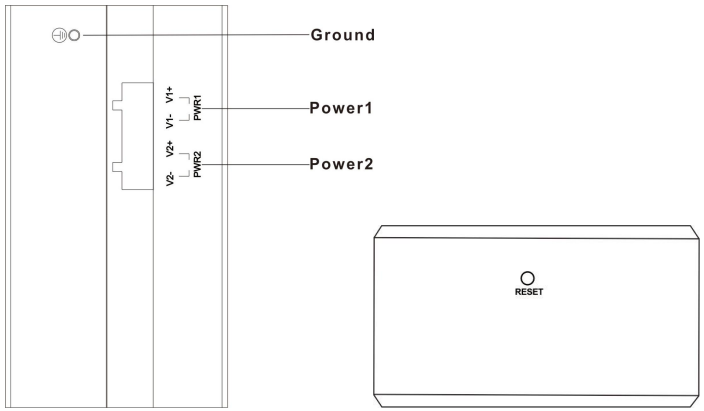
[Pay Attention]

- Please configure DC 12~48V Industrial Standard power supply, typical voltage value is 12V/24V/48V.
- This equipment belongs to the precision communication equipment, please do good equipment grounding work. Equipment grounding is a special grounding screw on the side plate, the installation should use a dedicated grounding wire to ground.
- Please go to http://www.comark.cn/index.php?s=download-13 to download the serial port user manual.

[Product Series List]

Product model	Specifications introducing
SE5044	4-channel RS-485 serial port server,4*10/100Base-T(X) RJ45 ports, 4-channel RS-485 serial ports,-40℃~85℃.
SE5144	4-channel RS-485 serial port server,4*10/100Base-T(X) RJ45 ports,1*100Base-FX fiber interface(default SC interface, FC/ST optional), 4-channel RS-485 serial ports,-40℃~85℃.
SE5244	4-channel RS-485 serial port server,4*10/100Base-T(X) RJ45 ports,2*100Base-FX fiber interfaces(default SC interface, FC/ST optional), 4-channel RS-485 serial ports,-40℃~85℃.

[Grounding and Power Connecting]



- Equipment grounding: Serial network shut down side plates have a grounding screw, this point to connect the grounding line end, the other end of the computer room to reliably access the Earth. Grounding line requires at least 2.5 mm^2, grounding resistance requirements under 5 ohms.
- Power supply and negative pole: the power supply voltage range is DC12~48V, please use 0.75m square meters above high-quality copper wire.
- RESET:Restore the factory settings button, long press more than 5 seconds to restore factory settings.

[Serial Port]

This series of serial interfaces provides 5-bit industrial terminals with 5.08mm spacing.

RS-485 serial port:

Pin	Pin define
1	D+
2	D-
3	GND
4	—
5	—

[DIN Guide Rail Installation]

The use of 35mm standard DIN rail type installation, in most industrial applications is very convenient, its installation steps are as follows:

Step 1: Check if you have the DIN-rail Rail installation tool Accessories (this product has been provided with mounting fittings).

Step 2: Check whether the DIN rail is fixed and strong, and if there is a suitable location for installing this product.

- RJ45 Electric Port: 10/100Base-T (x) rate self detection, full/half duplex mode, MDI/MDI-X self-adaption;
- Fiber interface: 100Base-FX full duplex, default SC interface, FC/ST optional, up to 120 km transmission; Single fiber wavelength: A transmitter wavelength is 1310 nm, receiving wavelength is 1550 nm, B transmitter wavelength is 1550 nm, receiving wavelength is 1310 nm;
- Serial port:RS-485 supports A and B half-duplex working mode; communication rate support 110~115200bps optional, isolated voltage 500V AC; Built-in ModbusTCP and ModbusRTU protocols, supports RTU Master mode, maximum support 16 TCP master connections in this mode.

Exchange Attribute

- 10M Forwarding Speed: 14881pps;
- 100M forwarding speed: 148810pps;
- Transmission mode: Store forward;
- System switching bandwidth: 1.2Gbps;
- Buffer size:1Mbits;
- MAC address table:1K.

Serial Port Attribute

- Standard: RS-485;
- RS-485 signal: D+, D-, GND;
- Check bits: None, Even, ODD;
- Data bits: 5bit, 6bit, 7bit, 8bit;
- Stop bits: 1bit, 2bit;
- Baud rate: 110~115200bps;
- Directional control: RS-485 adopts data flow control technology;
- Load capacity: RS-485 port supports 32 points polling environment (128 points customizable);
- Interface form: RS-485 port adopts 5-bit 5.08mm spacing terminal;
- Interface protection: 4000V surge protection.

Indicator Lamp

- Power indicator: PWR;
- System running indicator: SYS;
- Fiber indicator: FX;
- Serial port data status indicator:COM.

Power

- Redundant wide voltage 12~48V DC power input , typical working voltage 12V/24V/48V, using 4 cores 7.62mm spacing Standard industrial terminals;
- Idle running power: <3.12W@24VDC;
- Full-load power: <3.84W@24VDC.

Mechanical Features

- Dimension(W×H×D): 60.2mm×138.5mm×109mm;
- Net weight: 600g;

- Housing: Metal, IP40 protection;
- Installation: Wall mounting or DIN rail mounting.

Work Environment

- Working temperature:-40 ℃~85 ℃;
- Storage temperature:-40 ℃~85 ℃;
- Relative Humidity: 5%~95% (without condensation).

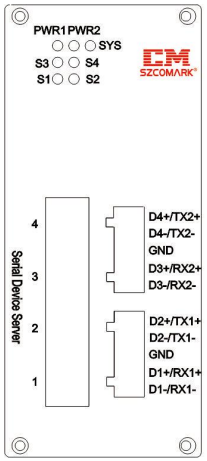
Guarantee

- Warranty Period: 5 years.

[Up to Standard]

- IEC61000-4-2(ESD): ±8KV contact discharge, ± 15KV air discharge
- IEC61000-4-3(RS): 10V/M(80-1000MHZ)
- IEC61000-4-4(EFT): Power ±4KV, Ethernet&Serial Data Cable ±2KV
- IEC61000-4-5(Surge): Power ±4KV CM/ ±2KV DM, Ethernet&Serial Data Cable±4KV CM
- IEC61000-4-6(RF transmit):3V(10KHZ-150KHZ)，10V(150KHZ-80MHZ)
- IEC61000-4-16(common mode transmit):30V COUNT 300V,1S
- IEC60068-2-6(vibrate)
- IEC60068-2-27(lash)
- IEC60068-2-32(freedom drop)
- IEC61000-6-2(general industrial standard)

[Product Appearance]



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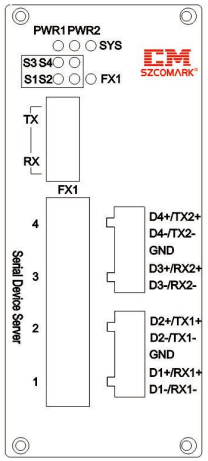
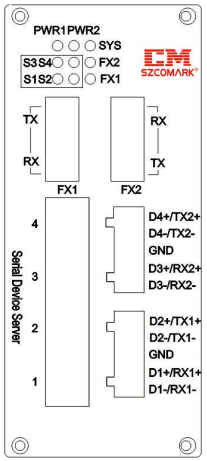


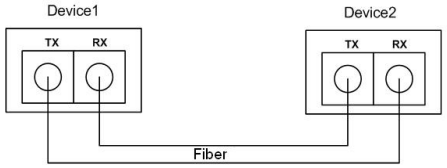
SE5144



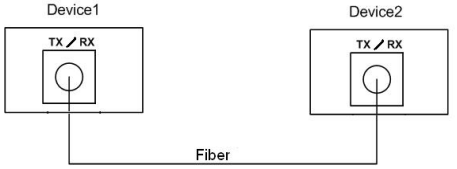
SE5244

[Fiber Connection]

Dual fiber optical modules (dual equipment) as shown in the following figure, fibers must cross connect, that is, the apex RX from TX to end, this end of TX RX to end.



Single fiber optical modules (equipment) as shown in the following figure, single fiber completes the incoming and outgoing signals. Note that single-fiber optical modules are 2 different wavelengths are used for data received and sent, paired with the light modules, transceiver wavelengths is just the opposite. (Device1 to send single-mode 1310nm wavelength, and receiving wavelength 1550nm single mode type A machines; Device2 receiving single-mode 1310nm wavelength, wavelength 1550nm single mode type B is sent)



[LED Indicator Lamp]

LED	Status	Description
PWR1~2	off	The power supply is not connected or faulted.
	on	Power supply normal.
SYS	off	The power supply is not connected or faulted.
	on	System faulted.
	Blinking	System is running.
S1~4	off	The power supply is not connected or the serial port does not accept the packet.
	on	The serial port receives the packet.
FX1~2	off	Optical fiber connection or fault-free.
	on	Optical fiber link is normal.
	Blinking	Fiber links correctly, and data is being transmitted.
Each RJ45 port has two LEDs, the yellow light is not used, the green light is the port link status indicator.		
10M/100M (Green led)	off	RJ45 port does not establish a valid network connection.
	on	RJ45 The port has established a valid network connection.
	Blinking	RJ45 The port has established a valid network connection and data is being transmitted.