

4-channel RS-485 Serial Gateways



- 4*10/100BASE-T(X) RJ45 ports, rate self-detection, full/half duplex mode, MDI/MDI-X self-adaption;
- 0~2*100Base fiber interfaces, default SC interface, FC/ST optional, up to 120 km transmission;
- 4*RS-485 ports, 110~115200bps line speed non-blocking communication;
- Support 4 serial ports' isolation function, isolated voltage 500V AC;
- Support redundant wide voltage 12~48V DC power input;
- Conform to ModbusTCP, ModbusRTU, ModbusASCII, IP and ARP protocols;
- Support RTU Master、ASCII Master mode, maximum support 16 TCP master connections in this mode;
- Support RTU Slave、ASCII Slave mode, maximum support 32 TCP slave connections in this mode;
- Support Slave ID mapping function, maximum support 32 mappings;
- High strength IP40 housing and industrial grade EMC design;
- Support DIN rail Mounting or Wall Mounting installation;
- Working temperature range: -40~85 °C , to meet the requirements of various industrial sites.

Product Overview

The 4-channel RS-485 serial gateways 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 gateways 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 °C working temperature range, can satisfy all kinds of industrial site requirements, provide convenient serial port communication solutions.

Features

- Conform to IEEE802.3/802.3u standard, store and forward Exchange Mode;
- Provide 4 10/100Base-T (x) RJ45 Ethernet interfaces, 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, ModbusTCP (RTU_MASTER) 、ModbusTCP (RTU_SLAVE)、ModbusTCP (ASCII_MASTER) and ModbusTCP (ASCII_SLAVE) seven serial transmission modes, 110~115200bps line speed non-blocking communication;
- Support Slave ID mapping function, maximum support 32 mappings;
- Support 4 serial ports' isolation function, isolated voltage 500V AC;
- Conform to TCP, IP, UDP, ModbusTCP, ModbusRTU, ModbusASCII, ARP, ICMP, HTTP, and TFTP client protocols;
- Support RTU Master、ASCII Master mode, maximum support 16 TCP master connections in this mode;
- Support RTU Slave、ASCII Slave mode, maximum support 32 TCP slave 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 °C working temperature range.

Specification

Technical Standard

- Protocol: IEEE802.3, IEEE802.3u

Port

- RJ45 port: 10/100BASE-T(X) Auto-Negotiation speed, full/half duplex mode and 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 1310nm, receiving wavelength is 1550nm, B transmitter wavelength is 1550nm, receiving wavelength is 1310nm;
- Serial port:RS-485 supports A and B half-duplex working mode; communication rate support 110~115200bps optional, isolated voltage 500V AC; Built-in Modbus TCP and Modbus RTU and Modbus ASCII protocols, support RTU Master、ASCII Master mode, maximum support 16 TCP master connections in this mode, support RTU Slave、ASCII Slave mode, maximum support 32 TCP slave connections in this mode; support Slave ID mapping function, maximum support 32 mappings; communication rate support 110~115200bps optional.

Exchange Property

- 10M forwarding speed:14881pps;
- 100M forwarding speed:148810pps;
- Transmission way: store and 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 auto 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 Supply

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

Mechanical Properties

- Dimension(W×H×D): 60.2mm×138.5mm×109mm;
- Net weight: 600g;
- Housing: Metal, IP40 protection;
- Installation: Wall mounting or DIN rail mounting.

Operating Environment

- Working temperature:-40℃~85℃;
- Storage temperature: -40℃~ 85℃;
- Relative humidity: 5% ~ 95% (no condensation) .

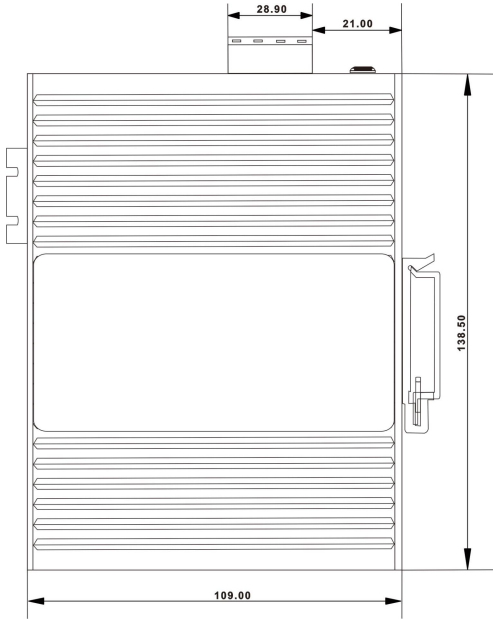
Warranty

- Warranty: 5 years.

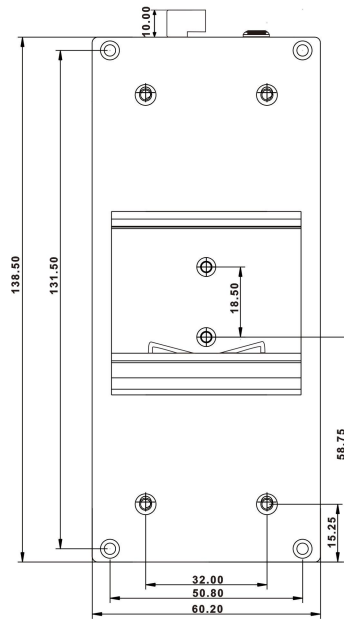
Standards and Certifications

- IEC61000-4-2(ESD):±8KV Contact, ±15KV Air (150KHZ-80MHZ)
- 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(CS):3V (10KHZ-150KHZ), 10V
- IEC61000-4-16(MS):30V COUNT 300V, 1S
- IEC60068-2-6(Vibration)
- IEC60068-2-27(Shock)
- IEC60068-2-32(Free Fall)
- IEC61000-6-2(General Industrial Standard)

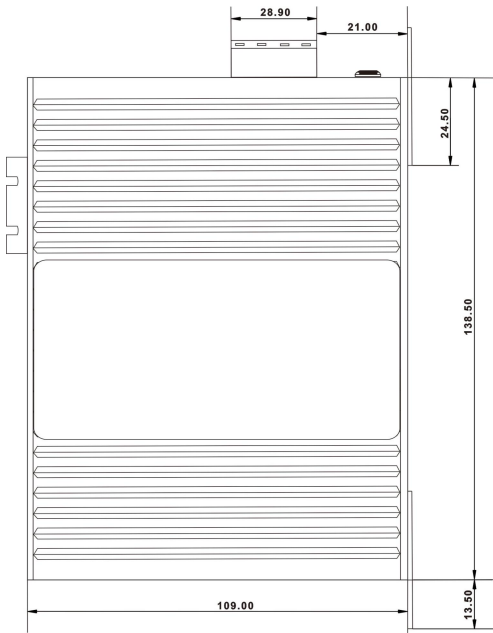
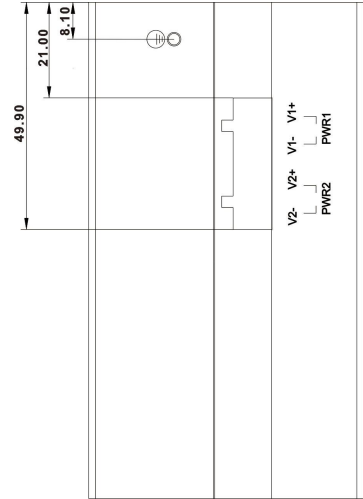
Dimensions(mm)



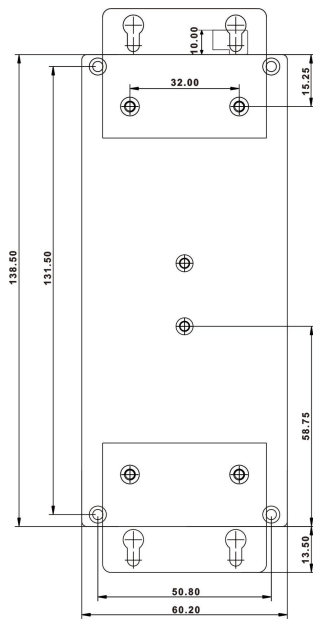
DIN-Rail



DIN-Rail



Wall Mounting



Wall Mounting

Models

Model	Description
MG5044	4-channel RS-485 serial port gateway,4*10/100Base-T(X) RJ45 ports, 4-channel RS-485 serial ports,-40 °C ~85°C.
MG5144	4-channel RS-485 serial port gateway,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°C~85°C.
MG5244	4-channel RS-485 serial port gateway,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°C~85°C.

Package List

- 4-channel RS-485 Serial Gateway(with industrial terminals for power supply)
- Product Manual