Mport3101R

1 RS232/485 Din-Rail Ethernet Serial Server

- 1xRS232/485 serial port,1x100Mbps Ethernet copper port
- Support serial terminal device networking,which can convert UDP, TCP, Modbus, HTTPD, WebSocket protocols, and support virtual serial ports
- Support conversion between Modbus RTU/ASCII and Modbus TCP protocols, and support Modbus RTU/ASCII Over TCP transparent transmission
- External independent hardware watchdog design to prevent crashes
- Industrial grade DC9-36V power supply and anti reverse connection protection
- Support a wide working temperature range of -40 ℃ to +85 ℃

CE   FC   RoHS   ⚙   IP40

⬙ Product Description

Mport3101R is a din-rail 1* RS232/485 Ethernet serial server, using a 32-bit Arm Cortex-M7 core, with the main frequency up to 400MHz, and an external hardware watchdog design. The power supply, network port, and serial port all have high-level ESD, surge and EFT protection, strong anti-interference ability, and are designed to provide data transmission between serial port and Ethernet for industrial users. This product supports 1xRS232/485 serial port and 1x100Mbps copper port. It integrates the TCP/IP protocol stack internally, making it convenient, flexible, and fast to connect to Ethernet for RS232/485 devices.

This industrial grade Ethernet serial server supports WEB configuration for various network management functions, such as serial/ethernet working mode, DNS, network logs, serial port restart, system management, etc. It supports conversion modes of UDP/UDP Multicast, TCP Client/Server, Modbus RTU Master/Slave, Modbus ASCII Master/Slave, RealCOM_MCP/CCP/MW, Pair Connection Master/Slave, HTTPD Client and WebSocket Client, to convert serial ports to Ethernet or Modbus TCP protocol. In terms of core components, this product adopts an industrial grade quality design scheme, which has many advantages such as wide temperature and pressure, lightning resistance, electromagnetic interference resistance, high reliability, high performance, and suitability for operation in harsh environments. It can be used in industrial monitoring, traffic management, meteorology, water treatment, environmental monitoring, coal mining, petroleum, chemical, new energy and other industries, for remote on-site data collection, remote monitoring, on-site control, etc. It is an essential industrial communication product for the development of industrial Internet of Things.

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⬖ Features and Benefits

- Adopt 32-bit ARM Cortex-M7 core, running at a frequency up to 400MHz

- Serial port supports baud rates ranging from 600bps to 460800bps

- Support UDP/UDP Multicast mode, enabling fast and efficient point-to-point, point-to-multipoint, or multipoint-to-multipoint communication through UDP protocol

- Support TCP Client/Server mode, establishing session connections through TCP protocol. TCP Client supports up to 4 session connections, TCP Server supports up to 8 session connections, and supports RFC2217 instructions to dynamically modify communication parameters such as serial port baud rate

- Support Pair Connection Master/Slave mode, allowing devices to be used in pairs with simple operation

- Support Modbus RTU/ASCII Master/Slave mode, enabling conversion between Modbus TCP and Modbus RTU/ASCII protocols

- Support Modbus slave pre-reading, single port automatic learning up to 32 RTU or 16 ASCII instructions, achieving fast response

- Support RealCOM_ MCP/CCP/MW mode, mapping network to local COM, seamless connection

- Support HTTPD Client mode and can perform GET or POST operations with HTTPD servers

- Support WebSocket Client mode and can communicate bi-directional with WebSocket servers

- Support various subcontracting mechanisms to convert serial port data into Ethernet packets based on data length or time, meeting real-time requirements of different networks

- Support registration and heartbeat packets, enabling connection verification and connection status detection

- Support Modbus virtual IDs, mapping Modbus slave real IDs to virtual IDs for data communication, avoiding duplicate slave IDs

- Support serial communication parameters, working mode, sending and receiving frame statistics

Specification

Software		
Network Protocol	IP, TCP/UDP, ARP, ICMP, DHCP, DNS, HTTP, RFC2217	
IP Obtaining Method	Static IP/DHCP	
Domain Name Resolution	Supported	
User Configuration	Web configuration	
Simple Transparent Transmission	UDP/ UDP Multicast/ TCP Client/ TCP Server/ RealCOM/ Pair Connection	
Modbus	Modbus RTU/ASCII to Modbus TCP	
Serial Packaging Mechanism	The time and length can be set. The default value varies based on the baud rate. Maximum packaging length 1460 bytes	
TCP Server Connection	Single serial port supports up to 8 TCP client connections	
Network Cache	Send: 16Kbyte; Received: 16Kbyte	
Serial Cache	Send: 1.5Kbyte; Received: 1.5Kbyte	
Heartbeat Package	Support TCP Keepalive mechanism and customize heartbeat packet content	
Registration Package	Custom registration package content	
RFC2217	Supported	
HTTPD Client	Supported	
Websocket Client	Supported	
RealCOM	Support working modes such as Maiwe, Moxa and Kanghai	
Average Transmission Delay	<10ms	
Supporting Software	Network management configuration tool, virtual serial port software, MixView, MaxView	
Interface		
100M Copper Port	1x10/100Base-T(X) auto-sensing RJ45ports, support full/half duplex, auto MDI/MDI-X	

## ☑ Specification

Serial Port	Serial port type: 1 RS232/485 Connection method: 5.08mm pitch 5-pin terminal block Baud rate: 600bps~460800bps Data bits: 7bit, 8bit Stop bit: 1 bit, 2 bit Check bits: None, Odd, Even
Button	One-click restart or factory reset
Status LED	Power indicator Operation indicator Ethernet interface speed and connection/activity status indicator Serial port sending and receiving data indicator

Power Supply

Input Voltage	DC9~36V
Power Consumption	＜0.8W@DC12V
Connection	5.08mm pitch 2-pin terminal block

Physical Characteristics

Dimensions	87.5×36.5×58.7mm (Din-rail mounting clip excluded)
Installations	35mm standard Din-rail mounting
IP Code	IP40

Working Environment

Operating Temp	-40℃~+85℃
Storage Temp	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)

Industry Standard

EMC	IEC 61000-4-2 (ESD): Contact discharge ±4kV, air discharge ±4kV IEC 61000-4-5 (Surge): Power supply: Differential mode ±2kV RS485: Differential mode ±2kV Ethernet port: differential mode ±2kV IEC 61000-4-4 (EFT): Power supply: ±0.5kV Data port: ±0.5kV

Specification

Certification	CE, FCC, RoHS

Dimensions

Unit: mm

58.7

36.5

87.5
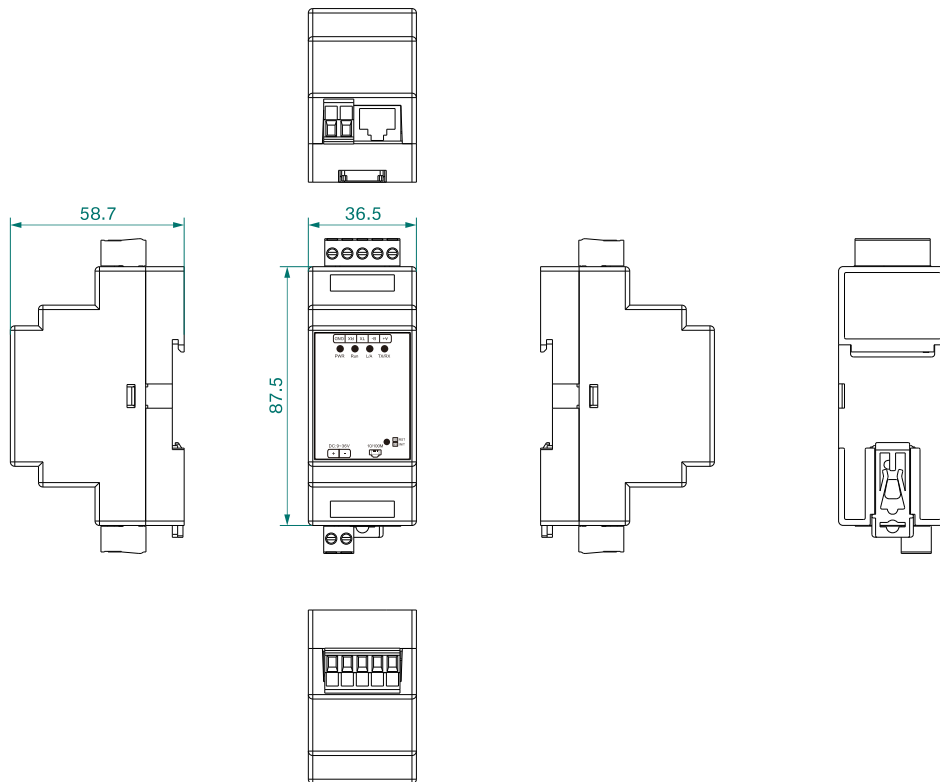
🛒 Ordering Information

Standard Model	100M Copper Port	RS232/485	Input Voltage
Mport3101R	1	1	DC9~36V

📞 Contact Us

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