Mport3101R

1 RS232/485 Din-Rail Ethernet Serial Server



- 1* RS232/485 serial port,1* 100Mbps Ethernet copper RJ45 port
- Support serial terminal device networking, can convert UDP, TCP, Modbus, HTTPD, WebSocket, MQTT and other protocols, and support virtual serial port;
- Support conversion between Modbus RTU/ASCII and Modbus TCP protocols, and support Modbus RTU/ASCII Over TCP transparent transmission
- Supports standard MQTT protocol, can connect to Alibaba Cloud, OneNet, Tencent Cloud, Huawei Cloud, Maiwei Cloud or other cloud platforms, and realize the interconnection of everything between end and cloud
- 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 ℃

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 1xRS232/485/422 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 RS232/485/422 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.

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

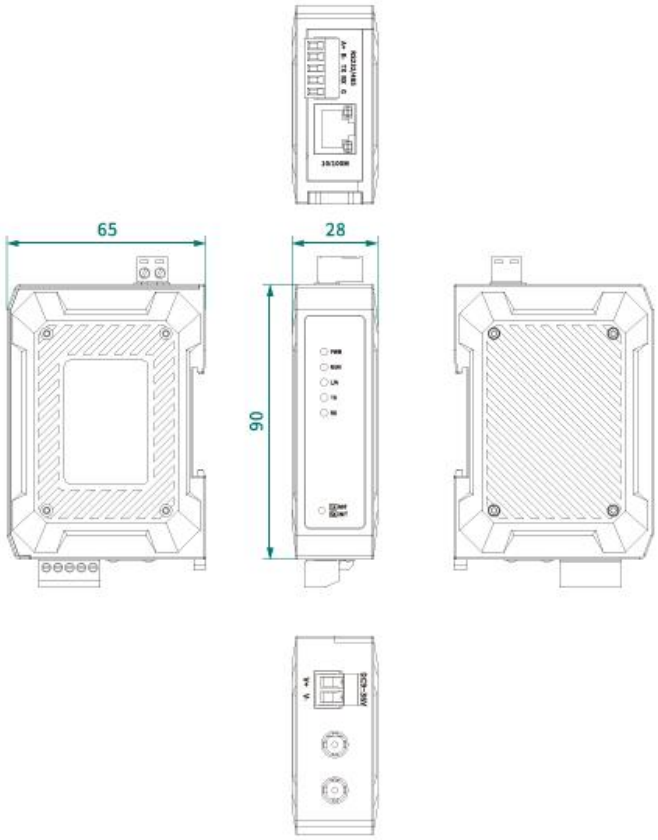
Software	
Network Protocol	IP, TCP/UDP, ARP, ICMP, DHCP, DNS, HTTP, RFC2217
IP Obtaining Method	Static IP/DHCP
Domain Name Resolution	Support
User Configuration	Web configuration
Simple Transparent Transmission	UDP/ UDP Multicast/ TCP Client/ TCP Server/ RealCOM/ Pair Connection
Modbus	Modbus RTU/ASCII 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 Maisvch, 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	90×28×65mm (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

Dimensions

Unit: mm



Ordering Information

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

Contact Us

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