Cport3108-485

8-Port RS485 Wall-Mount Serial to Ethernet Converter

- Support data conversion between 8 × RS485 ports and 2 × 10/100 Mbps Ethernet ports.
- Support serial device networking, enabling protocol conversion among TCP, UDP, Modbus RTU/TCP, HTTPD, WebSocket, and MQTT, as well as virtual serial port
- Support serial port data forwarding to realize transparent data transmission between serial ports
- Support standard MQTT protocols to connect devices to cloud platforms and realize data interaction between the cloud and clients
- Support DC 9~36V input with reverse polarity protection
- High-strength metal enclosure with IP30-rated housing protection
- -40℃~+85℃ working temperature range

Product Description

Cport3108-485 is a wall-mount serial-to-Ethernet server, built with a high-performance 32-bit ARM Cortex-M7 core running at up to 400 MHz and equipped with both hardware and software watchdogs.

The device provides 8 × RS485 serial ports and 2 × 10/100 Mbps Ethernet ports, with each serial port operating independently in different working modes and baud rates from 600 bps to 921.6 kbps. With a deeply optimized TCP/IP protocol stack, it allows traditional RS485 devices to easily, flexibly, and quickly connect to Ethernet networks.

The power supply, Ethernet, and serial interfaces are designed with high-level ESD, surge, and EFT protection, providing strong resistance to electromagnetic interference and ensuring stable operation in demanding industrial environments.

This industrial-grade serial server supports web-based and Windows configuration tools, enabling auto discovery, multiple device setup, monitoring, firmware upgrades, and various network management functions. It supports multiple communication and protocol conversion modes, including TCP Server/Client, UDP, UDP Broadcast/Multicast, Modbus RTU Master/Slave, Modbus TCP, HTTPD Client, WebSocket Server/Client, MQTT, virtual COM, and COM Port Redirector, enabling transparent serial-to-Ethernet transmission and Modbus RTU/TCP conversion.

Built with industrial-grade components, Cport3108-485 offers wide temperature and wide voltage operation, strong lightning and EMI protection, high reliability, and superior performance. It is ideal for applications in industrial automation, traffic control, meteorology, water treatment, environmental monitoring, mining, petroleum, chemical, and renewable energy sectors. The product supports remote data acquisition, monitoring, and field control, serving as an essential industrial communication device for the development of the Industrial Internet of Things (IIoT).

Product Features

- Built with a 32-bit ARM Cortex-M7 core, running at up to 400 MHz.
- Serial ports support selectable baud rates ranging from 600 bps to 921.6 kbps.
- Support UDP / UDP Broadcast/Multicast mode for point-to-point, point-to-multipoint, or multipoint-to-multipoint communication via the UDP protocol.
- Support TCP Client/Server mode for session-based communication via TCP. TCP Client supports multiple simultaneous connections, and TCP Server supports multiple concurrent client connections.
- Support Modbus RTU Master mode for polling serial devices and converting data to Modbus TCP.
- Support HTTPD Client mode, allowing GET and POST operations with HTTPD servers.
- Support WebSocket Server/Client mode for bidirectional communication with WebSocket servers.
- Support MQTT protocol for connectivity with cloud platforms.
- Support multiple data packet segmentation mechanisms, converting serial data into Ethernet packets based on data length or time interval to meet various real-time transmission requirements.
- Support registration and heartbeat packets to verify connection validity and detect connection status.
- Support detailed serial communication parameters, operation modes, and transmission statistics for sent and received frames.
- Support local log storage, network storage, and serial port log output for comprehensive operation and debugging management.
- Support virtual COM, COM Port Redirector for Windows.
- Support firmware upgrading via Web Browser and Windows configuration tool.
- Support a keepalive mechanism to quickly detect dead connections and reconnect.
- Support hardware watchdog, automatically restarting the device in case of failure.

Technical Specifications

Software	
Network Protocol	IPv4, TCP, UDP, ARP, ICMP, DHCP, DNS, HTTP, TLS/SSL, NTP, SNMP V1/V2C, MQTT
IP Obtaining Method	Static IP / DHCP
DNS Resolution	Support
User Configuration	Web-based interface, Windows configuration tool, AT commands
Simple Transparent Transmission	UDP / UDP Broadcast/Multicast / TCP Client / TCP Server / HTTPD Client / WebSocket Server / MQTT
Modbus	Modbus RTU to Modbus TCP
Serial Port Data Packaging	Time and length are configurable; the default value varies with the baud rate; maximum packet length is 1460 bytes
TCP Server Connection	Each serial port supports multiple simultaneous TCP client connections
Network Cache	Send: 48 Kbyte; Receive: 48 Kbyte
Serial Port Cache	Dynamic packet cache depending on packet length (e.g., 200 packets for 10-byte packets, 5 packets for 1460-byte packets)
Heartbeat Package	Supports TCP Keepalive mechanism, with customizable heartbeat packet content
Registration Package	Customizable registration package content

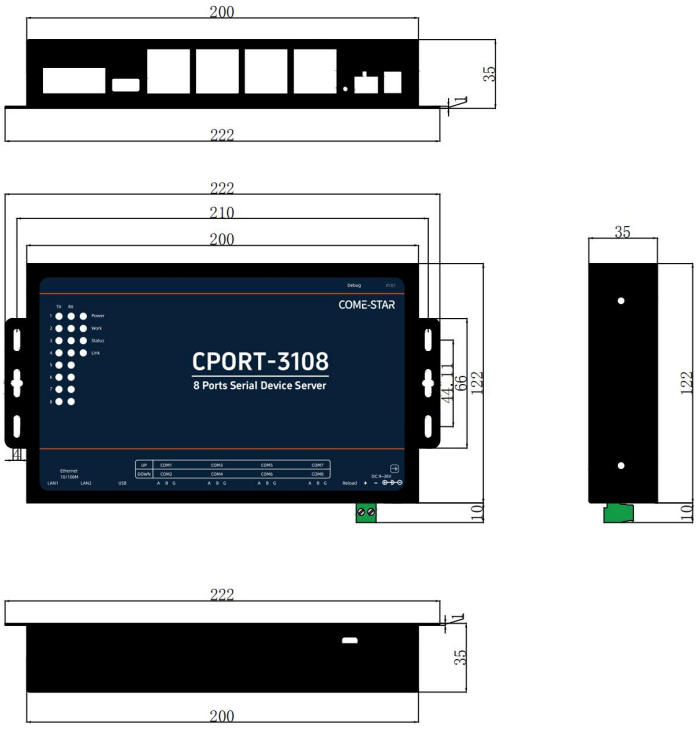
HTTPD Client	Support
WebSocket Client	Support
Virtual COM	Support
MQTT	Support standard MQTT cloud platforms, including AWS IoT, ThingsBoard, Alibaba Cloud, EMQX, Tuya, Cumulocity IoT
Serial to serial data forwarding	Support (Disable, Bidirectional Forwarding, Unidirectional Forwarding, Unidirectional Receiving)
Transmission Delay	<10ms
Supporting Software	Network Management Configuration Tool, Virtual Serial Port Software
Interface	
100M Copper Port	2 × 10/100Base-T(X) RJ45 copper ports, full/half duplex, auto MDI/MDI-X
Serial Port	Serial Port: 8 × RS485 Connector: 5-pin 5.08 mm pitch terminal block Baud Rate: 600 bps to 921.6 kbps Data Bits: 7 or 8 bits Stop Bits: 1 or 2 bits Parity: None, Odd, Even
Button	One-click reboot or factory reset
Status LED	Power, operation, Ethernet port speed/link/activity, serial port TX/RX indicators

Power Supply	
Power Input	DC 9~36V, reverse polarity protection
Connection	DC barrel jack (AC-DC adapter optional) or 2-pin 5.08 mm pitch terminal block
Physical Characteristics	
Dimensions	222 × 122 × 35 mm (including terminals and mounting brackets)
Installations	Wall or optional DIN-Rail mount
IP Code	IP30
Working Environment	
Operating Temp	-40℃~+85℃
Storage Temp	-40℃~+105℃
Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMC	IEC 61000-4-2 (ESD): Level 3 (Contact discharge: ±4 kV, Air discharge: ±8 kV) IEC 61000-4-5 (Surge): Level 3 (Power supply: Common mode ±2 kV, Differential mode ±2 kV RS485/RS422: Common mode ±2 kV, Differential mode ±2 kV Ethernet port: Common mode ±2 kV, Differential mode ±2 kV)

	IEC 61000-4-4 (EFT): Level 3 (Power supply: ±2 kV, Ethernet and serial ports: ±2 kV)

Dimensions

Unit: mm (first angle projection)



Ordering Information

Standard Model	10/100M Copper Port	RS485	Input Voltage
Cport3108-485	2	8	DC 9~36V

Contact Us

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