Cport3101

RS232/485/422 Wall Mounted Ethernet Serial Server

- Support 1xRS232/485/422 serial port to 1x100Mbps Ethernet copper port, meeting various industrial field bus or network requirements
- Support serial terminals networking, can convert UDP, TCP, Modbus, HTTPD, WebSocket protocols, and support virtual serial ports
- Support conversion between Modbus RTU/ASCII and Modbus TCP protocol, and Modbus RTU/ASCII Over TCP transparent transmission
- External independent hardware watchdog design to prevent crashes
- Industrial grade DC9-36V power supply and anti-reverse protection
- High strength metal shell, IP40 protection level, fanless design
- -40 ℃ to+85 ℃ working temperature

Product Description

Cport3101 is a wall mounted 1*RS232/485/422 to Ethernet serial server, using a 32-bit Arm Cortex-M7 core, with a 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, and making industrial communication smoother, more reliable and faster, meeting the customer's continuous innovation needs to improve value-added applications.

This industrial grade Ethernet serial server supports WEB configuration for various network management functions, such as serial/network 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/CS, 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.

Product Features

- Adopting 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-many, or many-to-many 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/CS 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

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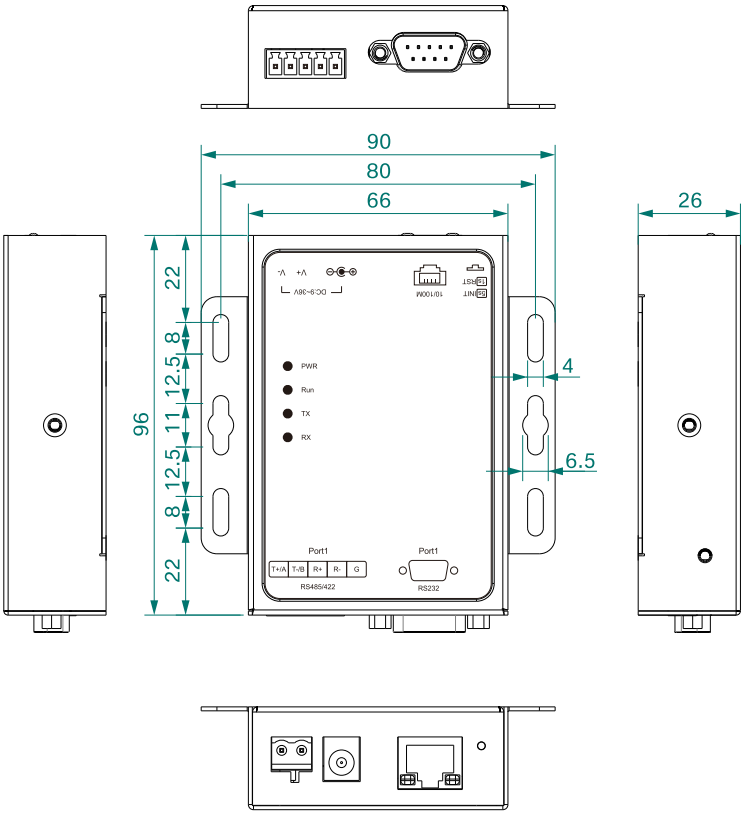
Technical Specifications

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
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 Port 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 COME-STAR, Moxa and Kanghai
Transmission Delay	<10ms (average)
Software Kit	Network management configuration, virtual serial port software
Interface	
100M Copper Port	1x10/100Base-T(X) auto-sensing RJ45 ports, support full/half duplex, auto MDI/MDI-X
Serial Port	Serial port type: 1 RS232/485/422 Connection method: 5.08mm pitch 5-pin terminal block for RS485/422, DB9M for RS232

	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, operation, Ethernet interface speed and connection/activity status, serial port sending and receiving data
Power Supply	
Input Voltage	DC9~36V
Power Consumption	<0.5W@DC12V
Connection	5.08mm pitch 2-pin terminal block or Φ 2.5mm DC round head
Physical Characteristics	
Dimensions	96×90×26 mm (mounting brackets included)
Installations	Wall mount
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 ± 6kV, air discharge ± 8kV IEC 61000-4-5 (Surge): Power supply: common mode ± 4kV, differential mode ± 2kV; RS485/422: common mode ± 4kV, differential mode ± 2kV; Ethernet port: common mode ± 6kV, differential mode ± 2kV IEC 61000-4-4 (EFT): Power supply: ± 4kV; Data port: ± 2kV
Certification	CE, FCC, RoHS

Dimensions

Unit: mm



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Ordering Information

Standard Model	100M Copper Port	RS232/485/422	Input Voltage
Cport3101	1	1	DC9~36V