MES-5450 : 2*10/100M RJ45 to 4*RS-485/422/232 Serial Server

Size: 133*120*40 mm

Overwiew

MES-5450 is an industrial-grade DIN rail-mounted serial server l, features an IP40 protection level. It is a device that provides immediate networking capability to serial devices, enabling centralized management of dispersed serial devices and hosts via a network. The product supports 1 to 4 channels of RS232/RS422/ RS485 to 2 channels of Fast Ethernet ports, meeting dual IP and dual MAC address/multiple network management or network backup requirements, and can be installed using 35mm rail or wall-mounting methods.

This serial server supports various network protocols such as TCP, UDP, ARP, ICMP, HTTP, DNS, DHCP, SNMP, Telnet, SSH, etc. It has comprehensive management functions including access control, quick configuration, online upgrades, etc. Each serial interface supports 4 TCP or UDP session connections, supporting Modbus TCP, TCP Server, TCP Client, UDP Server, UDP Client, and other multiple working modes. It also supports WEB access. Additionally, the accompanying management configuration tool based on the Windows platform allows for immediate networking of serial devices through simple settings. The network management system interface is user-friendly and operationally convenient, providing a good user experience.

This product adopts a fanless, low-power, wide operating temperature, and wide working voltage design. Through strict testing compliant with industry standards, it can adapt to industrial field environments with rigorous EMC requirements and can be widely used in PLC control and management, building automation, medical healthcare automation systems, measurement instruments, and environmental power monitoring systems, among others.

It can be used in many embedded network control application or products:
➢ Industrial automation production
➢ Security access control: network access control, alarm devices, infrared detection alarms, remote card readers
➢ Smart home devices: smart home gateways, smart sockets, smart switches
➢ Network IO controllers: industrial remote IO input, remote relay control
➢ Building intelligence and energy monitoring
➢ Medical monitoring equipment

Features

- It adopts an ARM9 processor with a main frequency of 300MHz and runs on the Linux OS OpenWrt system.

- It supports 2 channels of 10/100M self-adaptive Ethernet interfaces, providing dual IP and dual MAC addresses to meet the requirements of multiple network management or network backup.

- Ethernet supports 10/100Base-T adaptive Ethernet interfaces; supports auto-negotiation (Auto-Nego Full & half duplex) and automatic crossover detection (MDI/MDIX).

- The serialport supports 300bps to 150000bps line speed non-blocking communication.

- There are two modes for serial data interfaces:
  - Each channel provides one of RS-232/RS485/RS422 interfaces, specified at the factory.
  - Each channel provides all three interfaces of RS-232/RS-485/RS-422, and the interface mode is set through DIP switches.

- It supports Modbus TCP, TCP Server, TCP Client, UDP Server, UDP Client, and other multiple working modes.

- It completes transparent conversion from Modbus-RTU to Modbus-TCP, enabling reading of serial device data via the network.

- Itsupports monitoring of serial port status and parameters, making communication status clear at a glance.

- It supportscommunication across gateways and routers; supports virtual serial port driver access mode and automatic reconnection in case of network interruption.

- Flexible serial data framing settings to meet various packetization requirements of users.

- It supports standard TCP/IP SOCKET application access; TCP supports multiple connections, allowing up to 4 users to simultaneously monitor or manage serial devices.

- Under UDP mode, it supports communication between single or multiple hosts, meeting the needs of multiple users to simultaneously monitor or manage serial devices.

- It supportsvarious configuration forms such as Windows configuration tool, SSH, Telnet, and WEB, and supports SNMP network management.

- It supports local and remote system firmware upgrades.

- It supports wide voltage range: AC/DC power input of 9~55V, with internal isolation and redundant dual power input.

- Thepowersupplysupports overload protection and reverse polarity protection; compliant with industrial EMC level 4 requirements.

- Strong lightning protection function: lightning protection, high-voltage induction resistance, surge protection, etc.; fanless efficient heat dissipation, reducing repair time.

- Aluminumalloyshell, IP40 protection level, able to withstand harsh environments.

- Supportsrail-mountedand wall-mounted installation.

- Wide temperature range: operating temperature -40°C to +85°C.

Specification

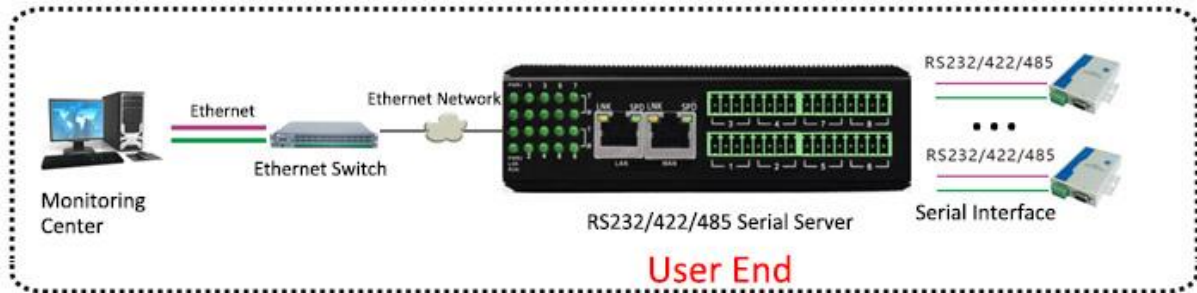| Model	MES-5450
Function	Transmit 4 channels of RS-232/422/485 serial signal over 2 channels of Fast Ethernet, Industrial DIN rail mounting
Business Interfaces	Serial interface: 4*RS-232/422/485
	Ethernet port: 2*FE RJ-45 ports
Operating Environment	Operating temp.: -40~+85°C Storage temp.: -40~+85°C Humidity: 0%~95% (non-condensing)
MTBF	>100,000 hours
Power Supply	Redundant dual power input DC9-55V or AC7-43V Power consumption <5W Overload protection: Supported Reverse polarity protection: Supported Redundancy protection: Supported Connection terminal: 4-pin 5.08 mm pitch plug-in terminal block
Degrees of Protection	IP40
Shell	Aluminum alloy
Weight	0.65Kg/set
Installation Method	Din rail, wall mounting
Dimensions(L*W*H)	133mm * 120mm* 40mm

Ethernet Parameters

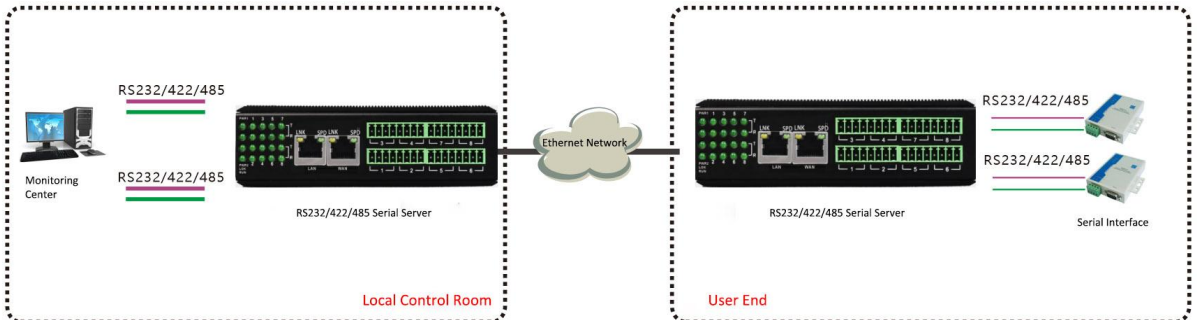| Standards	IEEE 802.3ab IEEE 802.3z
Ports	10/100Base-T (X), self-adaptive RJ 45 ports, full-duplex / half-duplex adaptive working mode, support MDI / MDI-X adaptation
MAC Address Table	4K

Serial Port Parameters

Standards	EIA/TIA-232 RS-232 (ITU-T V.28) EIA/TIA-422 RS-422 (ITU-T V.11) EIA/TIA-485 RS-485 (ISO/IEC8284)
Serial Interface	RS422: TxD+ TxD- RxD+ RxD- GND RS-485 4 wires: TxD+ TxD- RxD+ RxD- GND RS-485 2 wires: A(in accordance to TX+) B((in accordance to TX-) GND RS-232: RXD TXD GND

Application

Application 1: use alone

Application 2: work in pair

Ordering Information

Model	Description
MES-5450	Quad serial to Ethernet media converter, 4 * RS-232/422/485, 2 * 10/100M RJ-45 port, Industrial DIN rail-mounted, Dual power redundancy input, Aluminum alloy shell; Powered by DC9-55V, Operating temperature -40 ~ +85°C, IP40 protection rating