

TS-RS232DR-ETH

Industrial din-railed single channel serial server



Overview:

This industrial din-railed serial server is IP40 protection grade, can realize integrated management of serial device and host through network. This product support the conversion from 1 channels of RS232/422/485 to 1 channels of FE, to meet the demand of network backup, which can adopts 35mm din-railed and wall-mounted installation.

The serial server supports various network protocols,like TCP, UDP, ARP, ICMP, HTTP, DNS, DHCP, SNMP, with perfect management function, supporting visiting control, fast configuration and online update and so on. Each serial port supports 4 channels of TCP or UDP session connection. It supports various work modes of Modbus TCP, TCP Server, TCP Client, UDP Server and UDP Client, supports WEB visiting method. More, it will provide management configuration tool base on windows platform, to realize network connection of serial device by simple setting. The kind design interface of management system, is easy for operation and bring a good experience for users. Hardware adopted no-fan, low power consumption and wide temperature and wide voltage design, passed the strict test of industry standard , can adapt the industrial site environment which has harsh demand on EMC. The product can be widely used in PLC control and management, building self-control, healthcare automation system, measuring instrument and environment power monitoring system and so on.

2 Product picture



3 Feature characters

- Adopts ARM Cortex -M4 , main frequency of 192MHz processor ;
- Support 1 channel of FE, which supporting 10/100Base-T(X) self-adaptive, support Auto-Nego Full&half duplex, support auto-MDI/MDIX;
- support 1 RS232/422/485 port at the same time , support 300bps-921600bps line speed non-blocking serial data communication , support automatic scanning and matching baud rate, support customizing baud rate;
- Serial data interface complies with related standard of RS-232/RS-485/RS-485 , there are three of RS232, RS485 and RS422 interfaces, which of bus method can be set by dialing number;
- Serial port can be optic port, which can be SM 1310nm, MM 1310nm , MM 850nm , and the fiber port can ST/FC/SC;
- Support various work modes like Modbus TCP , TCP Server, TCP Client, UDP Server, UDP Client, etc.;
- Can realize transparent conversion from Modbus-RTU to Modbus-TCP to read serial data of device by network;
- Support monitoring of serial port status and serial data parameters ;
- Support communication through gateway and router, support virtual serial port drive visiting mode and auto-recovery connection function when network interrupted;
- Flexible serial data framing setting, meets different packing demands;
- Support standard TCP/IP SOCKET application program visiting, TCP supporting multi-connection , meeting the demand of 4 users monitoring and manage serial device at most;
- Under the UDP mode, supporting single machine or multi machine communication, to meet various users to monitor and manage serial device;
- Support Windows configuration tool, serial port and WEB and other configuration methods, support SNMP
- Support system firmware update of the local and remote end ;
- When it is DC powered on (5.08mm access terminal) :

- Support DC9-55V or AC7-50V wide range power supply , power with polarity automatic detect function, no need to distinguish the positive and negative pole when installation Support internal isolation, redundant dual power input, reverse connection protection When it is AC powered on (AC cross style socket) :
- Support AC 85-265V or DC110-300V wide range input
- Power supporting overload protection; comply with the requirements of industrial four grade electromagnetic compatibility; super anti lightning function: anti lightning, anti inductive high voltage, anti surge,etc.
- Efficient heat dissipation, reducing repair time;
- Anode oxidation aluminum alloy shell, IP40 protection grade, can withstand the test of harsh environments;
- Din-railed or wall-mounted installation;
- Wide temperature: working temperature $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$;
- All model passed the 100% baking test.

4 Technical parameter

◆ 10/100M Ethernet interface

Protocol : comply with IEEE 802.3ab , IEEE 802.3z

Rate : 10/100M self-adaptive, full/half duplex self-adaptive

MAC address table : 4096 MAC addresses

Physical port : RJ45 port, support Auto-MDIX

◆ Serial data interface

Standard

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:

RS-422: TxD+ TxD- RxD+ RxD- GND

RS-485 4 wires: TxD+ TxD- RxD+ RxD- GND

RS-485 2 wires: A(corresponding to TX+) B(corresponding to TX-) GND

RS-232:

Access terminal : RXD TXD GND

DB9(male) : RXD TXD GND , CTS , RTS

◆ **Environmental indicators**

Working temperature : -40□—+85□

Storage temperature : -40□—+85□

Working humidity : 0%—95% (no condensation)

MTBF : > 100,000 hours

5 Technical specification

Product model	TS-SR232DR-ETH
Product function description	Transmit 1 channel of RS232/422/485 serial data on the Ethernet
Business port description	1 RS232/422/485serial data access terminal port,1 DB9 male socket, 1 FE electric port
Power	<p>DC power :</p> <p>Redundant dual power input DC9-70V or AC7-50V, power consumption<5W</p> <p>Overload protection : support ; reverse connection protection : support ; redundant protection: support</p> <p>Access terminal:4-core 5.08mm space plug-in terminal</p> <p>AC inside power :</p> <p>AC~85-265V or DC110-300V wide range input, power consumption<5W</p> <p>Overload protection:support</p> <p>Access port : cross style AC socket</p>
Product size	(110mm(L) x 86mm(W) x 40.5mm(H) installation way: din-railed installation, wall-mounted installation
Weight	0.495Kg/piece

6 Interface definition

	1 RS485-A ; RS422-TX+
	2 RS485-B ; RS422-TX-
	3 RS422-RX+
	5 485-422 GND
	6 RSRS232 TXD (OUT)
	7 RS232 RXD (IN)
	8 RS232 GND



DB9 is DTE mode, it multiplexed with access terminal, they can not be used at the same time.

DB9 pin order	Name	I/O feature	Description
1	Backup		
2	RxD	I	Receive data
3	TxD	O	Transmit data
4	Backup		
5	GND		GND
6	Backup		
7	RTS	O	Demand sending
8	CTS	I	Clear sending
9	Backup		

6 Indicator lights definition

Name	Color	Status	Description
PWR1	Green	On	The 1 st channel of power is connected
PWR1	Green	On	The 1 st channel of power is connected
TxD	Green	Flash	There is serial data transmitting
RxD	Green	Flash	There is serial data receiving
LNK(on port) RJ45	Green	On/flash	Ethernet is linked/there is data transmitting and receiving
LOK(on port) RJ45	Green	On	Serial data network protocol is linked
6	Backup		
7	RTS	O	Demand sending
8	CTS	I	Clear sending
9	Backup		

7 DIP switch definition

The factory reset setting switch of device is the 4th pin of multi-channel switch.



Factory reset: dial up the 4th pin before the device is powered on, and then dial down the dial after power on, the device will power off and restart, and the running indicator light will flash again.

Serial module type change:

DIP1, DIP2	ON , ON	RS485 (2W)
	ON , OFF	RS422 (4W)
	OFF , ON	RS422 (4W)
	OFF , OFF	RS232