

## Industrial grade 2 Serial interfaces (1\*RS422/485, 1\*RS232, with channel cross and RS232 to RS485 Function) Fiber Modem

### Overview:

The fiber MODEM provide 2 channel of serial data transmitting on fiber, the 1<sup>st</sup> is RS422/485 interface, and the 2<sup>nd</sup> is RS232 interface, with channel cross function which can connect the RS422/485 of channel 1 to the RS232 channel 2 of the 2<sup>nd</sup> device and, also can be converter to convert RS232 to RS485/422.

The product overcame the conflict between traditional serial interface communication distance and communication rate, solved the problem of electromagnet interrupt, ground loop interrupt and lightning damage, improved the reliability, security and confidentiality of data communication, can be widely used in the occasions of industrial control, process control and traffic control, and the departments and system which has special demand on electromagnet interrupt environment, like bank and electricity.



## Features:

- Integrated circuit based on self intellectual copyright;
- Provide at mode 2 channel of serial data, the serial interface 1 support RS485/422( automatically identify these two serial data), the serial interface 2 support RS232, 3 line RS232(TXD,RXD,GND);
- The RS422/485 channel can transmit the asynchronous serial data from 0 to 512kps baud rate adaptive, the RS232 channel can transmit the asynchronous serial data from 0 to 256kbps baud rate adaptive;
- With channel cross function, it can connect the RS485/422 of channel 1 of one device to the RS232 of channel 2 of another device. The three service interface is available for choosing to use, convenient for opening service on site;
- The single device can be used as RS232 to RS422/485 converter;
- The lightning protection of serial interface is up to IEC61000-4-5(8/20 $\mu$ S) differential mode:6KV, impedance(2 $\Omega$ ) ; common mode:6KV , impedance(2 $\Omega$ )standard;
- DC9-55V or AC7-50V wide-range power supply, the power has polarity automatic detect function, there are no need of distinguishing the negative and positive polarity;
- The power support overload protection and reverse connection protection, complying with the requirement of industrial four grade electromagnet compatibility;
- Super lightning protection: anti lighting, anti inductive high voltage and anti surge; high-efficiency heat dissipation without fan, reducing repairing time;
- Provide DIN 35mm railed installation, or wall-mounted installation.

**Parameters:**

Fiber port number : 1	Standard
Fiber : single fiber/dual fiber	EIA/TIA-232 RS-232 (ITU-T V.28)
Fiber port : FC/SC/ST(optional)	EIA/TIA-422 RS-422 (ITU-T V.11)
Wavelength : 850nm/1310nm multi-mode ; 1310nm/1550nm single mode	EIA/TIA-485 RS-485 (ISO/IEC8284)
Transmission distance without relay : 20~120Km	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
Typical transmitting power: SM 1310/1550nm : ≥-9dBm MM 850nm : -18dBm MM 1310nm: -25dBm	RS-232: RXD TXD GND
Receiving sensitivity : -28dBm-- 40dBm	

◆ Electricity and machine feature

Power : AC7V ~ 50V ; DC9-55V ;  
Power consumption : ≤5W  
Outer structure : (L×W×H)

**Environment Adam module:**

Working temperature : -40°C—+85°C  
Storage temperature : -40°C—+85°C

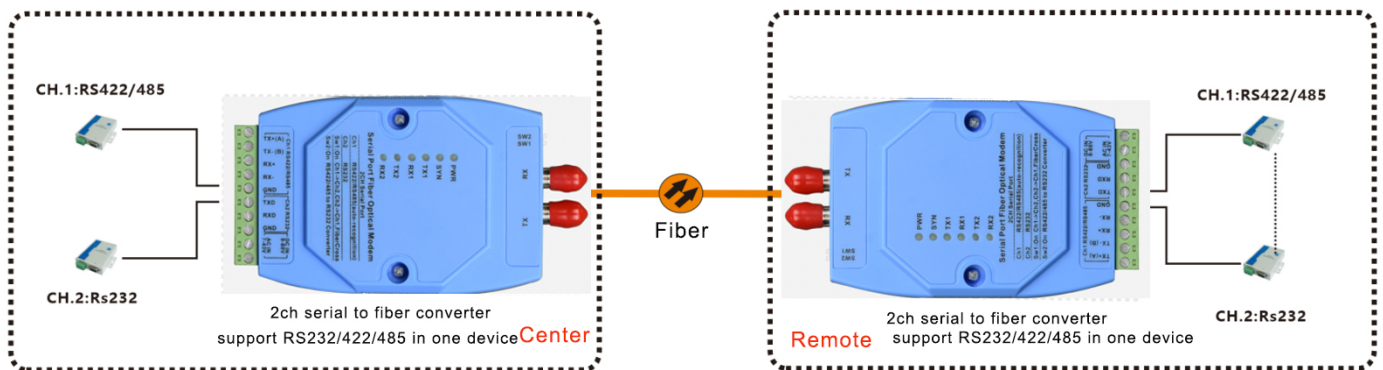
**Specifications:**

Model	<b>TS-RS232DR-40AD</b>
Service description	transmitting 1 channel of RS422/485 serial data and 1 channel of RS232 serial data on fiber simultaneously
Service port description	1 fiber port, 1 RS422/485 port, 1 RS232 serial port
Power	AC7V ~ 50V ; DC9-55V ;

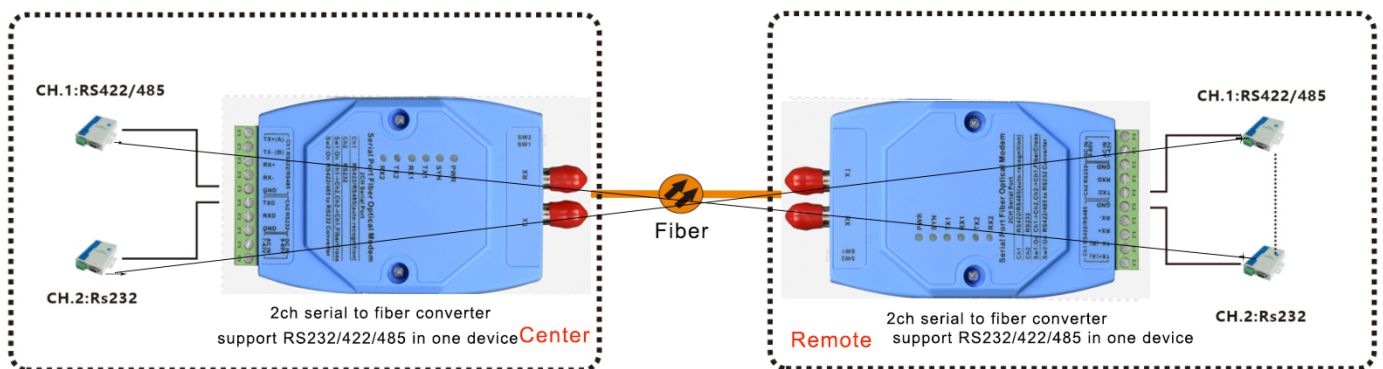
Size	(L*W*H) 72*125*26mm Adam module
Weight	0.15Kg/piece

### Application:

**Case one: normal application, used as 2 channel of serial port fiber modem,**  
**The 1<sup>st</sup> channel is RS422/485, the 2<sup>nd</sup> channel is RS232.**



**Case two: DIP1=ON, channel cross, the RS422/485 of channel 1 of one device is connected to the RS232 of channel 2 of another device; the RS232 of channel 2 of device is connected to the RS422/485 of channel 1 of another device.**



Case three: DIP2=ON, used as converter, the RS422/485 of channel 1 is connected to the RS232 of the channel 2.

