



USB to RS485 422 serial cable

Please read the product manual carefully before using the product

USB 2.0 to RS485/422 Serial Cable

I. Overview

With the continuous development of the PC industry, the USB interface is gradually replacing various low-speed peripheral interfaces of old PCs. However, many important devices in the current industrial environment still use RS485/RS422 interface design. Therefore, many users use USB to RS485/RS422 converters to realize data transmission between PC and RS485/RS422 devices.

This universal USB2.0 TO RS485/RS422 converter does not require an external power supply and is compatible with USB2.0, RS485, and RS422 standards. It can convert single-ended USB signals into balanced differential RS485 or RS422 signals, providing 350W surge protection power per line, as well as surge voltages generated on the line for various reasons. The extremely small inter-electrode capacitance ensures high-speed transmission of the RS485/RS422 interface. The RS485 and RS422 ends are connected through a DB9 male connector. The converter has zero-delay automatic transceiver conversion inside, and a unique I/O circuit automatically controls the direction of the data flow without any handshake signals (such as RTS, DTR, etc.) and no jumper line settings are required to achieve full-duplex (RS422) and half-duplex (RS485) mode conversion, plug and play. Ensure that it is suitable for all existing communication software and interface hardware.

USB to RS485/422 interface converter can provide reliable connection for point-to-point and point-to-multipoint communication. Each point-to-multipoint converter can allow the connection of 256 RS485 interface devices, with a data communication rate of 300-3000000bps. It has a power indicator and a data flow indicator to indicate fault conditions. The supported communication methods include USB2.0 to RS485 and USB2.0 to RS422 conversion.

II. Main functions

The USB to RS485/422 interface converter supports the following four communication methods:

1. Point-to-point/four-wire full-duplex.
2. Point-to-multipoint/four-wire full-duplex.
3. Point-to-point/two-wire half-duplex.
4. Point-to-multipoint/two-wire half-duplex.

III. Hardware Installation and Application

Please read the product manual carefully before installing the USB to RS485/422 interface converter. Connect the communication cable provided with the product to the USB interface. This product uses USB/DB9 and universal connectors as input and output interfaces. It can automatically realize RS485 or RS422 communication without jumper settings. Twisted pair or shielded wire can be used. It is very convenient to connect and disassemble. Point-to-point, point-to-multipoint, full-duplex communication connects four wires T/R+, T/R-, RXD+, RXD-, point-to-point, point-to-multipoint, half-duplex communication connects two wires T/R+, T/R-.

IV. Performance parameters

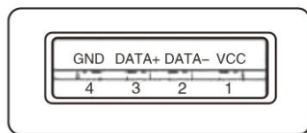
1. Full-speed USB device interface, compatible with USB V2.0/V1.1.
2. USB signal: VCC, DATA+, DATA-, GND.
3. RS422 signal: T/R+, T/R-, RXD+, RXD-, GND.
4. RS485 signal: T/R+, T/R-, GND.
5. RS485 supports baud rate of 300-3000000bps, automatically detects serial port signal rate.
6. Load capacity: Support point to multipoint, each converter can allow 256 RS485 interface devices to be connected.
7. Transmission distance: 1200 meters for RS485/RS422 end, no more than 5 meters for USB cable.
8. Circuit integration ESD protection: $\pm 20\text{KV}$ IEC1000-4-2 air gap discharge, $\pm 15\text{KV}$ IEC1000-4-2 contact discharge.
9. RS485/RS422 surge protection: 350W.
10. Operating environment: -25°C to 70°C , relative humidity 5% to 95%.
11. Support Windows/Linux/MAC operating systems.

V. Connectors and signals

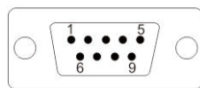
DB9 pin RS422 RS485 output signal and wiring pin assignment			
DB9 pin	Output signal	RS422 full-duplex wiring	RS485 half-duplex wiring
1	T/R+	TXD(A+)	RS485(A+)
2	T/R-	TXD(B-)	RS485(B-)
3	RXD+	RXD(A+)	N/A
4	RXD-	RXD(B-)	N/A
5	GND	GND	GND

VI. Connection diagram

USB signal input and pin distributor

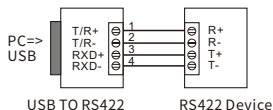


DB9 type

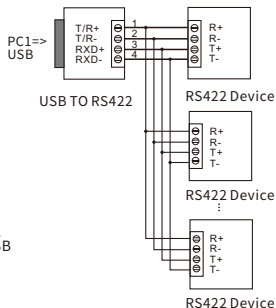


► USB to RS422 Conversion

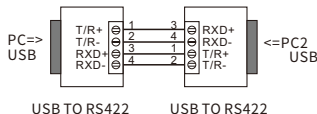
1. RS422 point-to-point/four-wire full-duplex communication.



2. RS422 point to multipoint/four-wire full-duplex communication.

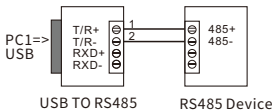


3. RS422 converter full duplex communication.

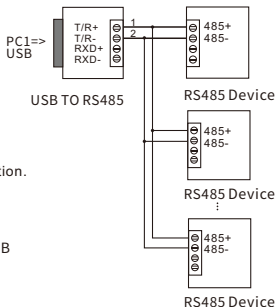


► USB to RS485 Conversion

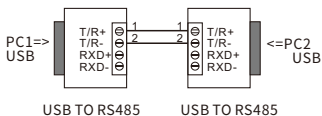
1. RS485 point-to-point/two-wire half-duplex communication.



2. RS485 point to multipoint/two-line full-duplex communication.



3. RS485 converter half-duplex communication.



VI. Scan the QR code to download the driver



Scan the QR code with your browser to download the driver.

Product Warranty Card

Customer Information

Model:	
Date of purchase:	
User telephone:	
User address:	
Distributor:	
Agency address:	
User telephone:	Dealer stamp valid

Intenance Records

Repair times	Date	Fault	Treatment measures	Repair work NO.

Electronic products are guaranteed for one year, and other products are guaranteed for two years. Damage caused by human factors or product burnout caused by improper operation is not included in the scope of warranty.