

# USB2RS485-C User Manual



## 1. General Description:

USB2RS485-C is a plug and play and bi-directional port powered USB to RS485 converter which realizes long-distance communication between your PC/SBC/Raspberry Pi and other devices stably through RS485 Bus connection.

It's very easy to use, just like control a serial port on all systems. Compatible with all ready-made serial port tools.

On-board isolated RS485 Transceiver, has a standby bus failure protection function to ensure that the receiver output is high when the receiver input is open, short, or when the bus is idle. Compliant with TIA/EIA-485A EN62368 and AEC-Q100 standards.

Features Bus fail-safe and Bus driver short circuit protection. The transceiver has an exceptionally high input impedance, which places only 1/8 of the standard load on a shared bus and up to 256 transceivers and it can also be mixed with the standard RS485 transceiver with 32 unit loads (cumulative receiver load cannot exceed 32 units).

With small size and convenient operation, It's a cost-effective solution that are safe and reliable for all your data-conversion / device-protection applications for any experienced engineer interfacing to expensive industrial equipment yet simple enough for home use by an amateur hobbyist.

## 2. Features

1. [High compatibility] Support Windows XP/7/8/10, Mac OS, Linux 3.2 greater, Ubuntu 11.10 greater and Android system.
2. [Plug and Play USB Device] USB 2.0 full speed compatible. Support wider RS485 data transfer rates, From 300 bps to 1Mbps.
3. [Excellent Chipset] On board FTDI FT230X and semi-duplex enhanced RS485 isolated transceiver TD541S485H.
4. [Industrial Design] isolated power supply and isolation signal design, Provides Bus-Pin ESD protection up to 15kV(HBM) and greater than 25kV/us CMTI.

5. [Flexible] 120 Ohm resistor jumper selectable. designed by 1/8 unit load, support up to 256 nodes on a bus.

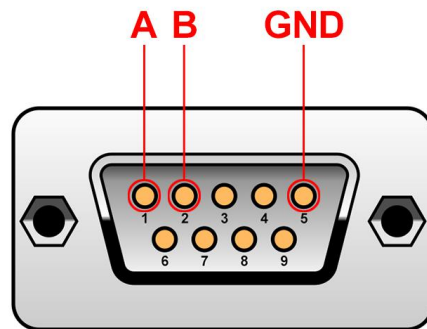
### 3. Technical Specification

|                        |                                    |
|------------------------|------------------------------------|
| <b>Connector</b>       |                                    |
| RS485                  | D-SUB, 9 pins                      |
| USB                    | USB 2.0 Full-Speed, Micro USB      |
| <b>RS485 Features</b>  |                                    |
| Data Rate              | From 300 bps to 1M bps             |
| Bus-Pin ESD protection | 15kV(HBM)                          |
| Nodes                  | support up to 256 nodes on a bus   |
| Termination            | 120 Ohm resistor selectable jumper |
| <b>Other</b>           |                                    |
| Work Temperature       | -40° ~ 85°                         |
| Relative humidity      | 15-90%, not condensing             |
| PCBA Size (L * W * H)  | 56.50mm * 31.20mm * 14.20mm        |
| Weight                 | 15.5 g                             |

## 4. Hardware Description

### 4.1 RS485 Connector Pinout

#### RS485 CONNECTOR PINOUT



| Pin | Description |
|-----|-------------|
| 1   | Signal A    |
| 2   | Signal B    |
| 3   | NC          |
| 4   | NC          |
| 5   | GND         |
| 6   | NC          |
| 7   | NC          |
| 8   | NC          |
| 9   | NC          |

## 4.2 120 Ohm Resistor Setting.

Fit the jumper to enable to enable the 120 ohm resistor



## 5. Driver Install

Royalty free VIRTUAL COM PORT (VCP) DRIVERS for:

**Windows 10 32,64 bit**  
**Windows 8/8.1 32,64-bit**  
**Windows 7 32, 64-bit**  
**Windows Vista and Vista 64-bit**  
**Windows XP and XP 64-bit**  
**Server 2003, XP and Server 2008/2012**  
**Windows XP Embedded**  
**Windows CE 4.2-5.2, 6.0, 7.0, 2013**  
**Mac OS-X**  
**Linux 3.2 and greater**  
**Android**

The drivers listed above are all available to download for free from FTDI website (<https://ftdichip.com/drivers/vcp-drivers/>).

Various 3rd party drivers are also available for other operating systems - see FTDI website ([www.ftdichip.com](http://www.ftdichip.com)) for details.

For driver installation, please refer to <http://www.ftdichip.com/Documents/InstallGuides.htm>

## 6. User Manual Version Descriptions

| Version  | Description | Date       | E-mail   |
|----------|-------------|------------|--|
| V1.0.0.0 |             | 2022.03.20 | <a href="mailto:support@inno-maker.com">support@inno-maker.com</a><br><a href="mailto:sales@inno-maker.com">sales@inno-maker.com</a> |
|          |             |            |  |
|          |             |            |  |
|          |             |            |  |

If you have any suggestions, ideas, codes and tools please feel free to email to me. I will update the user manual and record your name and E-mail in list. Look forward to your letter and kindly share.