RS232 TO RS485 User Manual

Introduction

This is a RS232 vs RS485 asynchronous bidirectional convertor, which features electromagnet isolation. The internal TVS bidirectional transient suppression diode and detonator to protect the device from unstable working.

Content

About product

Features

- Compatible with RS232/RS485 standard, it can convert RS232 signal to balanced difference RS485 signal.
- Stable transmitting rate, supports baudrate 300~115200bps
- Integrate unibody power supply isolation, stable isolated voltage is provided, need no extra power supply for the isolated terminal
- Onboard unibody magnetical isolation, allows signal isolation, high reliability, strong anti-interference, low power consumption
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- Onboard 120R terminal resistor, it is switchable for easy using.
- DC-005 power interface supports 6V~36V wide-range DC voltage for different applications
- 3 LESs for indicating the power and transceiver status.
- Aluminium alloy enclosure the with sand blasting and anodic oxidation, solid and durable.

Specification

- Product type: Electromagnetic isolation RS232 to RS485 asynchronous bidirectional convertor
- Baud rate: 300~115200bps
- Device interface: standard RS232/RS485
- RS232 interface:
  - Connector: DB9 male
  - Transmitting range: about 15 meters
  - Transmitting type: Point-to-Point
- RS485 interface:
  - Connector: DIP connector + RJ45 port
  - Direction control: Hardware auto-controlling
  - Interface protection: 600W lightning protection, over-current and 15KV ESD protection
  - Terminal resistor: 120R, switchable
  - Transmitting range: about 1200 meters
  - Transmitting type: Point-to-Omnipoint (Support up to 32 points, Relay is recommend if you use more than 16 points)
- Indicators:

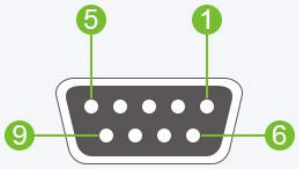
- PWR : Power indicator, turns red when power supply is connected
- TXD: Transmit indicator, turns green when data is transmitted from RS232 port.
- RXD: Receive indictor, turns blue when data is received by RS232 port

- Environment:
  - Temperature: -15℃~70℃
  - Humidity: 5%RH~95%RH

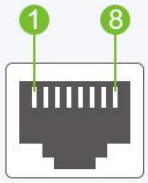
Note: The switch on board is used to enable/disable the 120R terminal resistor. The terminal resistor is recommend for the Start and End devices.

Interfaces

Pinout of Interfaces



RS232 PINOUT

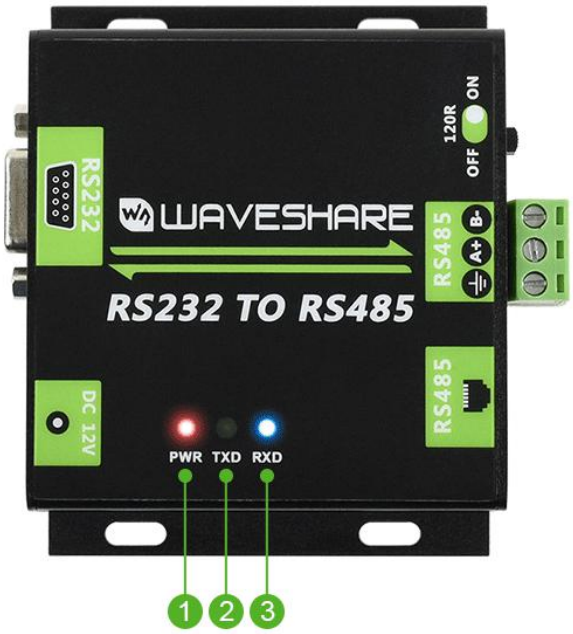


RS485 PINOUT

RS232 PINOUT DEFINITION	
DB9 Female	RS232 PIN
2	TXD
3	RXD
5	GND
1,4,6,7,8,9	N/C

RS485 PINOUT DEFINITION	
RJ45	RS485 PIN
1	RS485 (A+)
2	RS485 (B-)
3,6	N/C
4,5,7,8	GND

Indicators

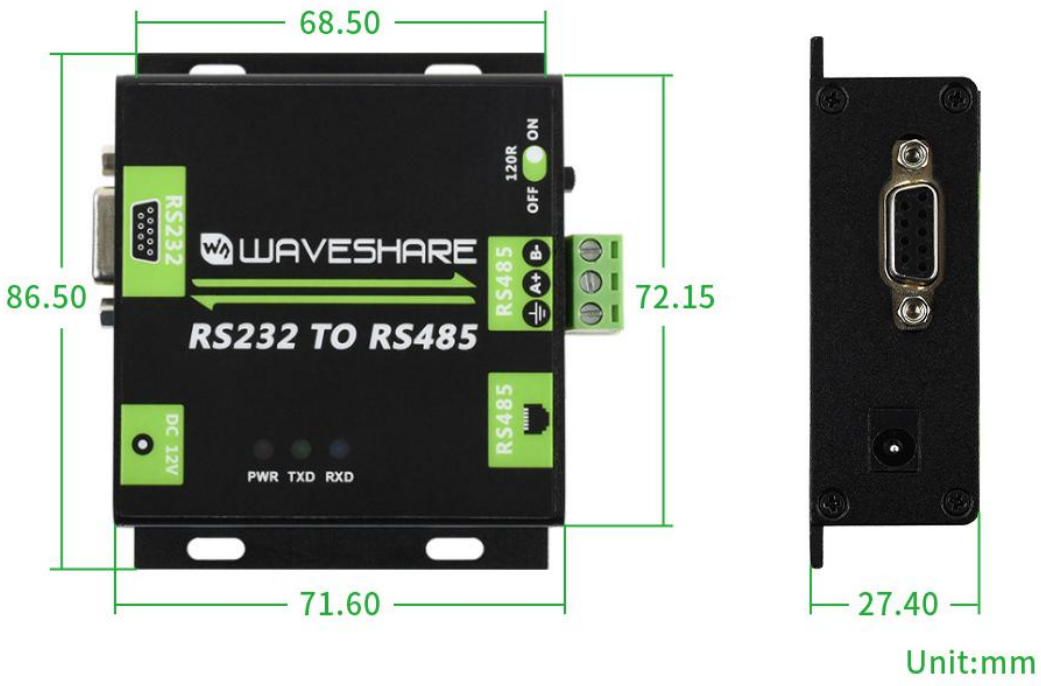


1 **PWR:** Light up Red
Power Connected

2 **TXD:** Blinking Green
Data Transmitting

3 **RXD:** Blinking Blue
Data Receiving

Dimensions



Hardware testing

Preparation

Environment： Windows PC

Devices required：

- RS232 TO RS485
- USB TO RS485
- Host PC (if your PC does not has RS232 port, you can purchase an USB to RS232 cable (mal port) separately)

Hardware connection

Connect the RS232 port of RS232 TO RS485 to PC by extend cable or USB to RS232 cable. Connect the RS485 port of RS232 TO RS485 to the ES485 port of USB TO RS485. Connect the USB port of USB TO RS485 to PC for loopback testing as figure below.

Open two SSCOM software on host PC. Select the correct serial port and set their baud rate to the same, check the SendEvery option. Then you can test if the devices can transmit and receive normally.