# RS485 Shield for Arduino

SKU:DFR0259

INTRODUCTION

Arduino RS485 is an industrial standard for long distance, anti-interferrence and reliable communication.   So we create this RS485 Arduino shield, especially designed for the Arduino controller board. It converts UART/Serial protocol to RS485 protocol. This RS485 board allows Arduino access to industrial standard protocol easily.

In contrast to RS-422, which has a single driver circuit which cannot be switched off, RS-485 drivers use three-state logic allowing individual transmitters to be deactivated. This allows RS-485 to implement linear bus topologies using only two wires. The equipment located along a set of RS-485 wires are interchangeably called nodes, stations or devices.

- Integrated a standard RS485 port, a mini RS485 port, RS485 headers

- Provide the welding areas to make full use of the free space. And more importantly, it's convenient for your DIY design.

- Switch between automatic mode and manual transmission mode, which expand the scope of application.

- Besides Tx/Rx interface, there is a switch to block/disable this shield, when Arduino needs to be programmed.

- Gold immersion PCB. Long pins on the back adapt to most Arduino controllers.
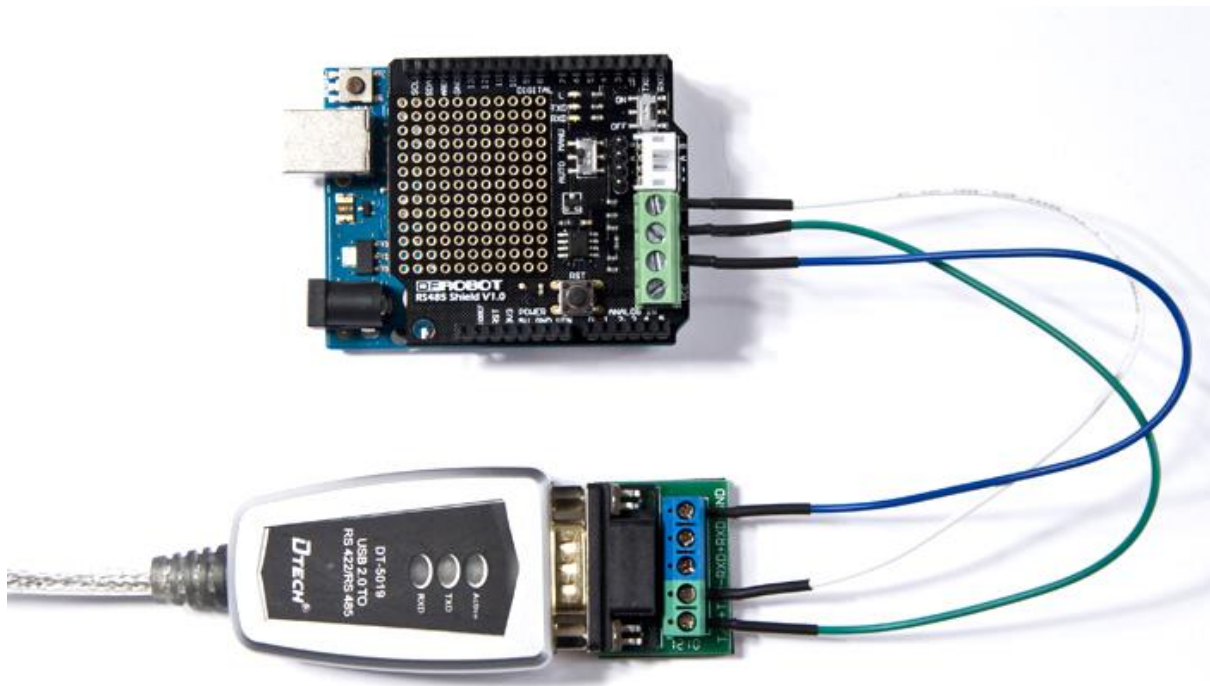
What is RS485?

"RS-485 enables the configuration of inexpensive local networks and multidrop communications links. It offers data transmission speeds of 35 Mbit/s for distandances up to 10 m and 100 kbit/s up to 1200 m. Since it uses a differential balanced line over twisted pair (like RS-422), it can span relatively large distances up to 1,200 m (4,000 ft). A rule of thumb is that the speed in bit/s multiplied by the length in meters should not exceed 108. Thus a 50 meter cable should not signal faster than 2 Mbit/s." From Wiki.

SPECIFICATION

- Power module: +5V

- Module size: 55mmx53mm(2.16"x2.08")

- 16 digital IO port (including a I2C interface)

- 6 analog IO port and power

- Operation and programming mode switch

- Automatic and manual transceiver mode switch (When in manual transceiver mode, the enable end is the 2nd digital IO port)

- Transceiver indicating LED

- Standard RS485 interface, mini RS485 interface and RS485 pins

- Welding area

- Reset switch

- PH2.0 sensor interface for DFRobot RS485 series sensor: URM04 Ultrasonic sensor