



gearmo[®]

User Manual

RS-232 USB 2.0 Serial Adapter 36"

Model No. USA-FTDI-36

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Summary

- ▶ With rapid development of computer industry, USB is taking the place of various kinds of traditional low speed peripheral interfaces. However, RS-232 interface designs are still used in many of the important facilities under current industrial environment; therefore, converter is used by many users to implement the data transmission from USB of a computer to RS-232 equipments.
- ▶ [USA-FTDI-36](#) is a universal USB/RS-232 interface converter. No external power supply needed. Compatible with USB and RS-232 standards, USA-FTDI-8 is capable to perform the conversion from single-ended USB signal into UART signal of RS-232. DB9 male connectors are used for connection from RS-232 interface. The unique I/O circuit of the internal zero delay auto transceiver contained in the converter controls the data stream direction automatically. The converter is plug-and-play. All these features ensure a universal application on all the existing communication software and hardware interfaces.
- ▶ The data communication rate can be as high as 300-921.6Kbps by the point-to-point communication by [USA-FTDI-36](#) interface. Power indicator light and data traffic indicator light are also available with the converter for malfunction indication. Conversion from USB to RS-232 is supported.

Functions

[USA-FTDI-36](#) interface converter supports the following communication mode:

1. Point-to-point communication mode.

Hardware Installation & Application

Read the user manual carefully before installing the [USA-FTDI-36](#) interface converter. Put the signal cable of the equipment into the USB socket. USB/DB9 male connectors are adopted for input/output interface connection for this product.

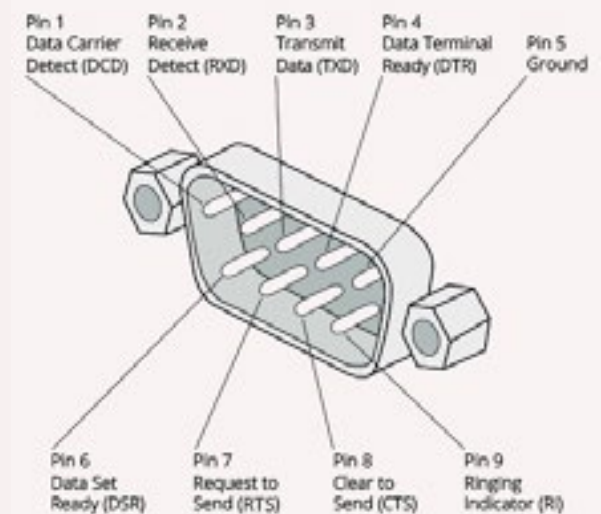
Performance Parameters

1. Standards: Conforming to USB V1.1, 1.0 and 2.0 and EIA RS-232.
2. USB signals: VCC, DATA+, DATA-, GND, FG
3. RS-232 signals: DCD, RXD, TXD, DTR, GND, DSR, RTS, CTS, RI
4. Working mode: Asynchronous point-to-point mode.
5. Direction control: Adoption of automatic data stream control for automatic recognition and control of data transmission direction.
6. Baud rate: 300-921.6Kbps, automatically detection of the transmission rate of the serial interface signal.
7. Transmission Distance: 5 Meters for RS-232 and less than 5 Meters for USB.
8. Interface Protection: +-15KV electrostatic protection.
9. Interface Forms: B interface female connector and DB9 male connector for USB.
10. Signal Indication: 9 indicator lights for Power (PWR), Send (TXD), and Receive (RXD).
11. Transmission media: twisted-pair cable or shielded cable.
12. Dimensions: 914.4mm x 36mm x 16mm
13. Working environment: -40°C to 85°C, relative humidity of 5% to 95%
14. Supports Win98, 2000, 2003, 2008, XP, Vista, 7, 8, CE, Mac, Linux.

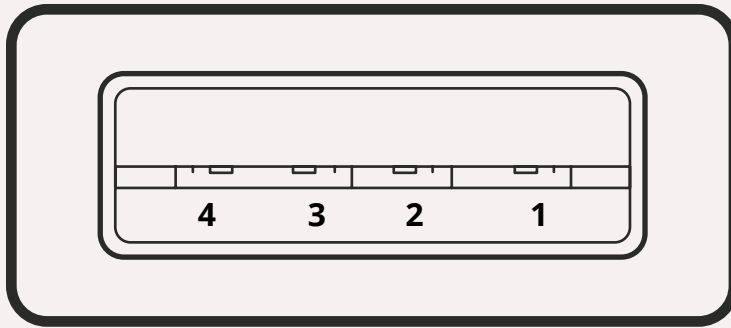
Connector & Signals

1. Pin assignment of RS-232C

DB9M (PIN)	RS-232C
1	Data Carrier Detect (DCD)
2	Receive Data SIN (RXD)
3	Transmit Data SOUT (TXD)
4	Data Terminal Ready (DTR)
5	Signal Ground (GND)
6	Data Set Ready (DSR)
7	Request to Send (RTS)
8	Clear to Send (CTS)
9	Ring Indicator (RI)

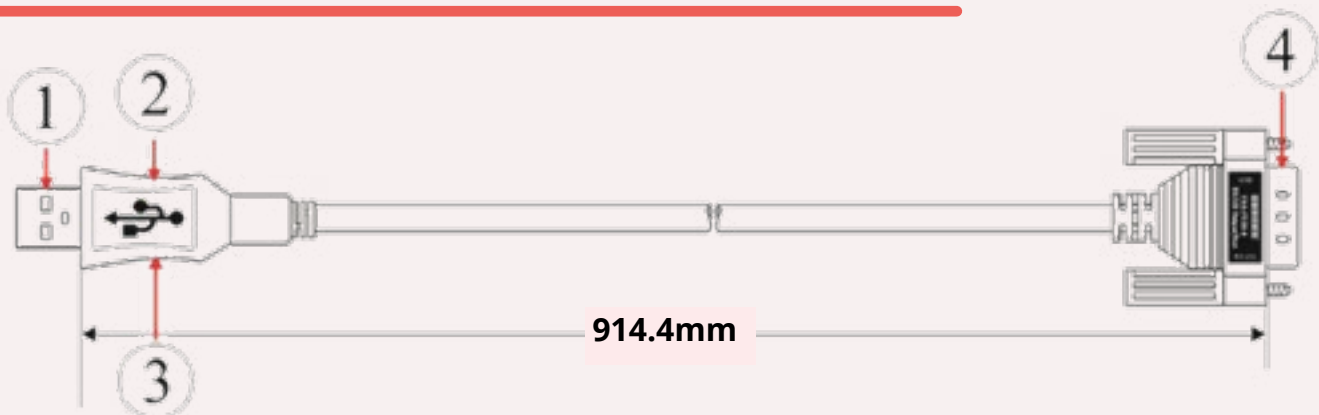


1. USB-A type: USB signal input and pin assignment



1. VCC
2. DATA-(DM)
3. DATA+(DP)
4. GND

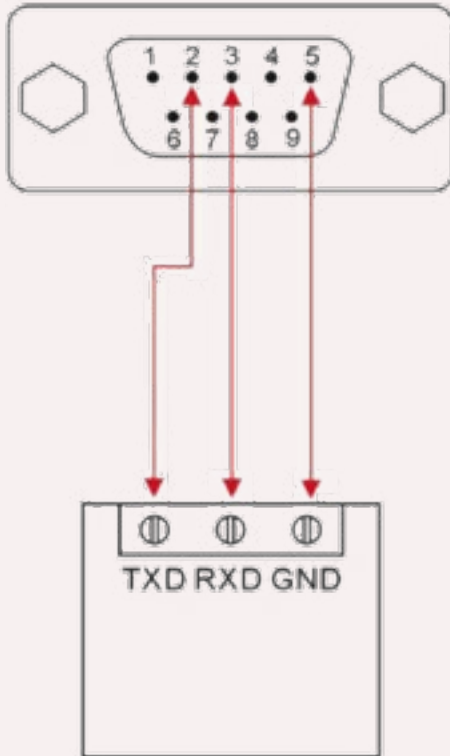
Product Dimension & Connection Diagram



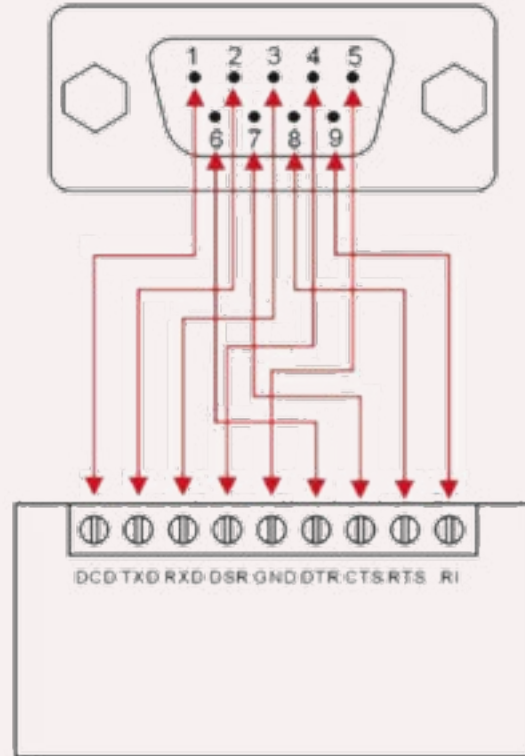
1. Standard USB A-type male connector
2. Fine Shell (Black)
3. MCU adopts the product of British FTDI company
4. Standard DB9 male connector

USB to RS-232 Communication

1. DCD 2, RXD 3, TXD 4, DTR 5, GND 6, DSR 7, RTS 8, CTS 9, RI



RS-232 Device



RS-232 Device

Faults & Troubleshooting

1. Data Communication Failure

- Check the USB cable connection
- Make sure that the RS-232 output interface connection is correct
- Check the power supply
- Check the wire terminal connection
- Check receive indicator and see if it flashes
- Check send indicator and see if it flashes

2. Data missing or incorrect

- Check to see whether the data rate and format at both ends of the communication equipment is consistent.