Model: GM-FTDI4X 4-Port RS-232
USB to Serial Adapter Instruction Manual

Contents

Overview

USB interface is gradually replacing the old-fashioned low-speed peripheral interfaces of PC with the continuous development of PC industry. But many vital devices in current industrial environment is still designed using RS-232 interface, so the USB to RS-232 converters are needed to transfer data between PC and RS-232 devices.

Professional 4 Port RS232 USB to Serial Adapter with TX/RX LED – http://www.gearmo.com/

GM-FTDI4X is a universal USB 4 port RS-232 converter which doesn't need external power supply and is compatible with USB and RS-232 standards. It can convert single-end USB signal to RS-232 signal, and it has built-in automatic transmit-receive switch without time delay. The unique I/O circuit can be used to automatically control the direction of data flow so as to make it plug-and-play and applicable to all existing communication software and interface hardware.

GM-FTDI4X supports point-to-point communication with data rate of 300-921600bps. The power indicator and data traffic indicator lights can be used for fault indication. USB to RS-232 conversion is supported.

Main Features

Following communication modes are supported by GM-FTDI4X interface converter:

1) Point-to-point communication mode.

Hardware Installation and Application

Please read this manual thoroughly and connect the USB cable to the USB port of computer before the installation of GM-FTDI4X interface converter. USB/DB9M connectors are adopted for the input/output terminal and twisted cable or screened cable can be used. RS-232 communication mode can be implemented without any configuration and the connection and disassembly are very convenient. The converter uses 9 wires which are DCD, RXD, TXD, DTR, GND, DSR, RTS, CTS, and RI with all signal connections.

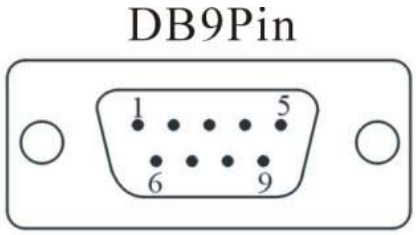
Performance Parameters

1. Standards: Conforming to USB 1.1, 1.0 and 2.0 standards and EIA RS-232 standard.
2. USB signals: VCC, DATA-, DATA+, GND, FG
3. RS-232 signals: DCD, RXD, TXD, DTR, GND, DSR, RTS, CTS, RI
4. Operating mode: Asynchronous mode, point-to-point mode.
5. Data flow control: Automatic data flow control technique is adopted to automatically determine and control the data flow.
6. Baud rate: 300-921,600bps, automatically detecting the data rate.
7. Load capacity: point-to-point communication mode is supported.
8. Communication distance: 5 meters for RS-232 interface and no more than 5 meters for the USB port.
9. Interface protection: surge protection, ±15KV ESD protection.
10. Interface connection: A type male connector at USB side and DB9 male connector at RS-232 side.
11. Signal indication: 2 signal indicators transmit (TXD) receive (RXD) 1 power indicator (POWER.)
12. Transmission media: twisted-pair cable or shielded cable.
13. Cable length: 1500mm
14. Working environment: -40°C to 85°C, relative humidity of 5% to 95%
15. Supports Win98, 2000, 2003, 2008, XP, Vista, 7, 8, CE, Mac, Linux.

Connector and Signals

1) Pin assignment of RS-232C

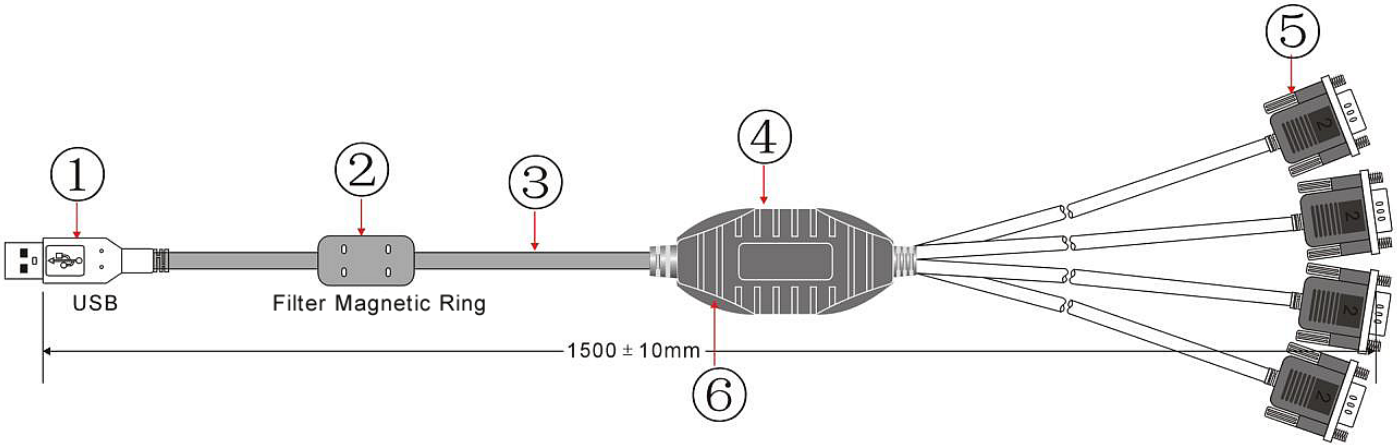
DB9M (PIN)	RS-232C
1	Protective Earth
2	Receive Data SIN (RXD)
3	Transmit Data SOUT (TXD)
4	Data Terminal Ready DTR
5	Signal Ground GND
6	Data Set Ready DSR
7	Request to Send RTS
8	Clear to Send CTS
9	Ring Indicator RI



2) USB-A type: USB signal input and pin assignment

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

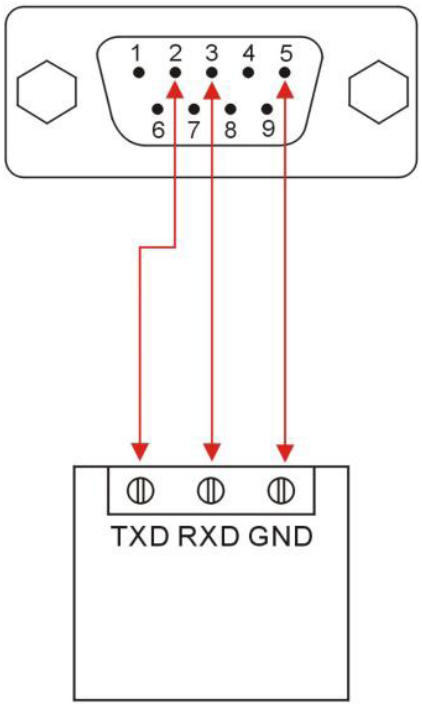
Product Dimension and Connection Diagram



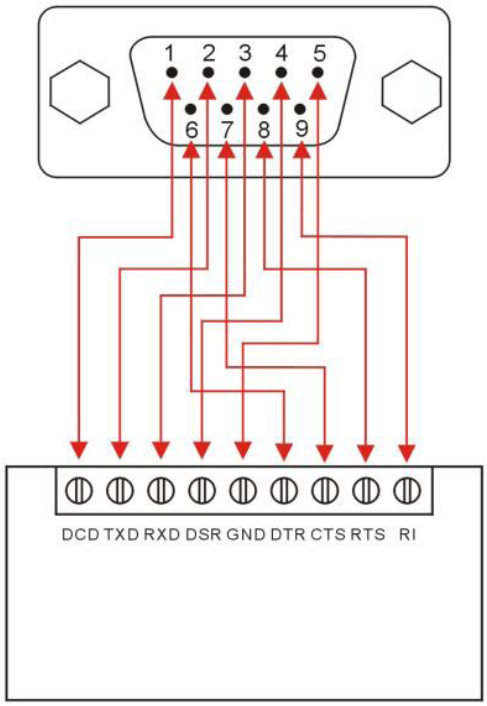
1. Standard USB A-type male connector
2. Filter magnetic ring
3. Screened black standard USB 2.0 cable
4. Aesthetic shell (black)
5. Standard DB9 male connector
6. Master chip of FTDI company in England

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 and Trouble-Shooting

1. Data Communication Failure
    a. Check the USB cable connection
    b. Check the RS-232 connection
    c. Check the power supply
    d. Check terminal connection
    e. Check receive indicator and see if it flashes
    f. Check send indicator and see if it flashes
2. Data loss or error
    a. Check consistency between data communication device rate and format