

USB2SER (#28024)

FTDI FT232RQ USB to Serial Development Tool

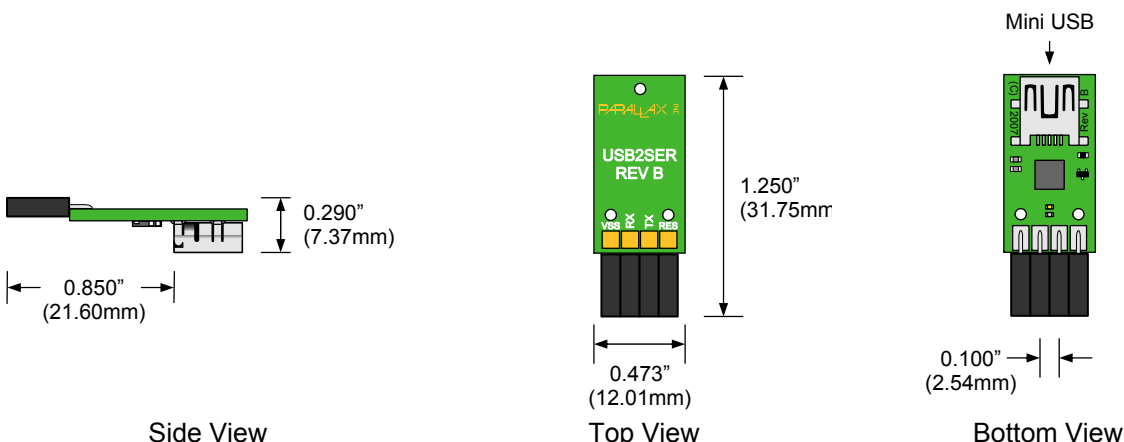
The USB2SER provides an easy way to interface a PC to a microcontroller. It bridges the PC's USB port to logic-level RX and TX signals that can connect directly to a microcontroller's I/O pins. To the PC, the USB2SER appears as a virtual COM port. To the microcontroller, the USB2SER appears as a true 5 V serial connection consisting of a RX signal, a TX signal, and a low-pulsing RESET signal controlled by 'DTR'. This product will require a USB A to Mini B cable to be able to connect to a PC. This part can be purchased from www.parallax.com, part #805-00006.

Features

- Powered via the USB cable, no external supply required
- 4-pin SIP female .1" spacing connector to microcontroller circuit
- Red and blue LEDs indicate TX and RX activity
- Supports standard baud rates and custom rates, 300 baud to 3 Mbaud

Key Specifications

- Power requirements: 5 VDC, up to 90 mA, from USB connection
- Communication: Full speed USB, full duplex 5 V non-inverted TTL serial from 300 baud to 3 Mbaud
- Operating Temperature: -40 to +85°C
- Module Dimensions given in the diagrams below



Device Connection

FTDI Virtual Com Port USB Drivers Required

Before connecting the USB2SER tool to your computer, install the correct FTDI VCP USB drivers for your operating system. A driver installer for Windows 2K/XP/Vista is available from a home page link at www.parallax.com. It is also bundled into the newest versions of the Parallax's BASIC Stamp Editor, Propeller Tool, and SX-Key Editor software. To obtain FTDI VCP USB drivers for other operating systems, visit www.ftdichip.com.

Check Polarity

Be sure to verify the correct polarity before connecting the USB2SER to another board by matching the connection names located above the connector.

Programming a BASIC Stamp from a USB Port

The USB2SER is not able to program BASIC Stamps. BASIC Stamp modules require an inverted signal. If you need to program a BASIC Stamp, use the Parallax USB to Serial (RS-232) Adapter (#28030).

Bill of Materials

You can build your own USB2SER adapter from the Bill of Materials and schematic shown below.

Description	Quantity
FT232RQ Chip	1
2N3904 transistor	1
Red LED	1
Blue LED	1
4.7 μ F capacitor	1
0.1 μ F capacitor	1
10 nF capacitor	1
150 Ω resistor	4
33 k Ω resistor	1
USB mini B connector	1
4 pin SIP socket	1

Module Schematic

