

# USB2SER (#28024)

## FTDI FT232RQ USB to Serial Development Tool

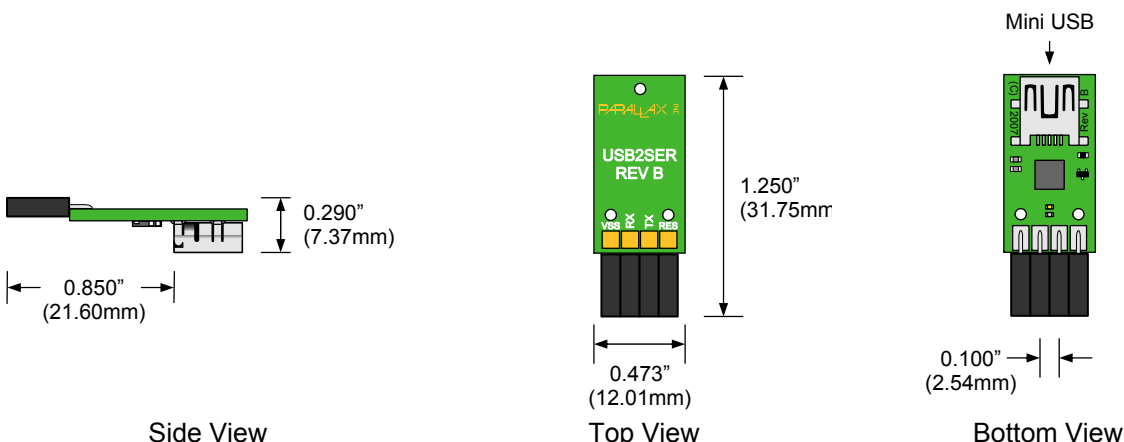
The USB2SER provides an easy way to interface a PC to a microcontroller. It bridges the PC's USB port to logic-level RX and TX signals that can connect directly to a microcontroller's I/O pins. To the PC, the USB2SER appears as a virtual COM port. To the microcontroller, the USB2SER appears as a true 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](http://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](http://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](http://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

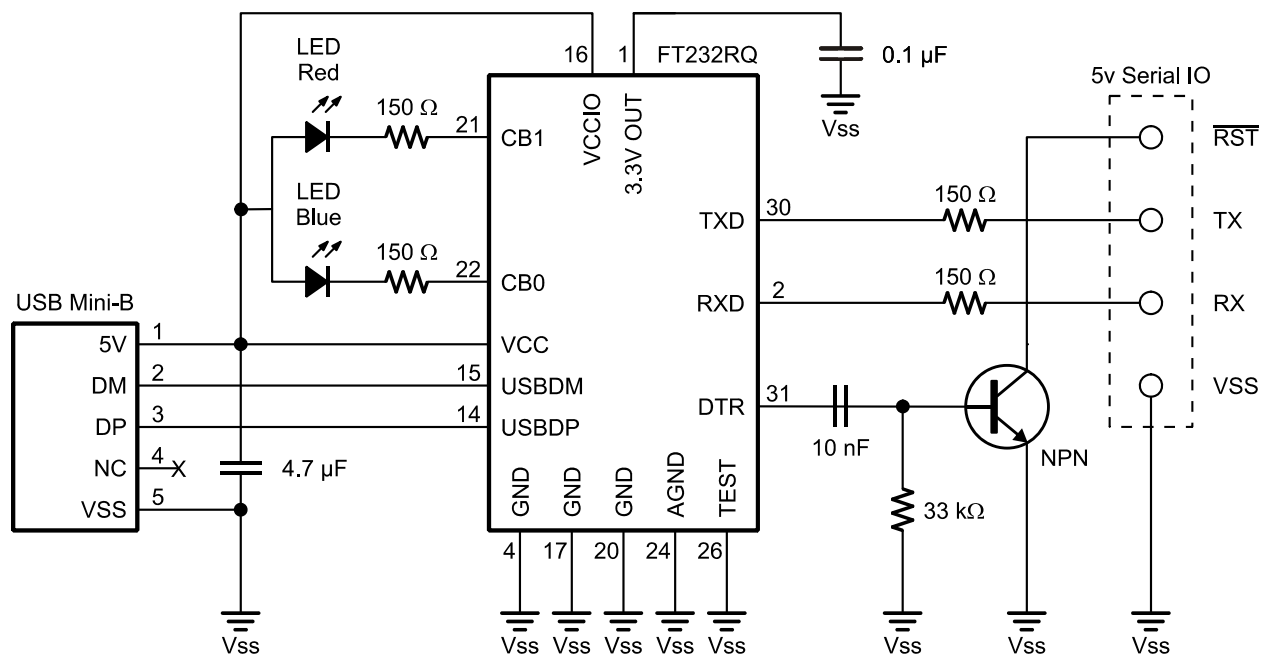
The USB2SER is not able to program BASIC Stamps. BASIC Stamp modules require an inverted signal. If you need to program a BASIC Stamp, use the Parallax USB to Serial (RS-232) Adapter (#28030).

## 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 $\mu$ F capacitor  | 1        |
| 0.1 $\mu$ F capacitor  | 1        |
| 10 nF capacitor        | 1        |
| 150 $\Omega$ resistor  | 4        |
| 33 k $\Omega$ resistor | 1        |
| USB mini B connector   | 1        |
| 4 pin SIP socket       | 1        |

## Module Schematic



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Parallax:](#)

[28024](#)