



Pololu USB-to-Serial Adapter

The Pololu USB-to-serial adapter is great for connecting microcontroller projects to a personal computer. The adapter uses 3.3 V signal levels so you can connect it directly to any microcontroller running at up to 5 V without the hassle of an RS-232-to-TTL level converter. The tiny unit is only 1.0" x 0.65" including its mini-B connector, and the simple layout of the ground, transmit, and receive lines allows for easy mounting that takes up as little as four breadboard rows.

The USB adapter's drivers make it look like a standard serial port to the operating system, allowing you to connect to all of your existing software, such as servo controller interface programs, through a USB port. The adapter is compatible with USB 2.0 standards and allows baud rates of up to 921.6 kbps. Drivers are available for Windows XP, Windows Vista, Windows 7, Windows 8, Linux, and Mac OS X.

With the trend toward removing serial ports from new computers, the Pololu USB-to-serial adapter provides one of the most economical, small, and simple solutions to the common problem of interfacing small projects to PCs.



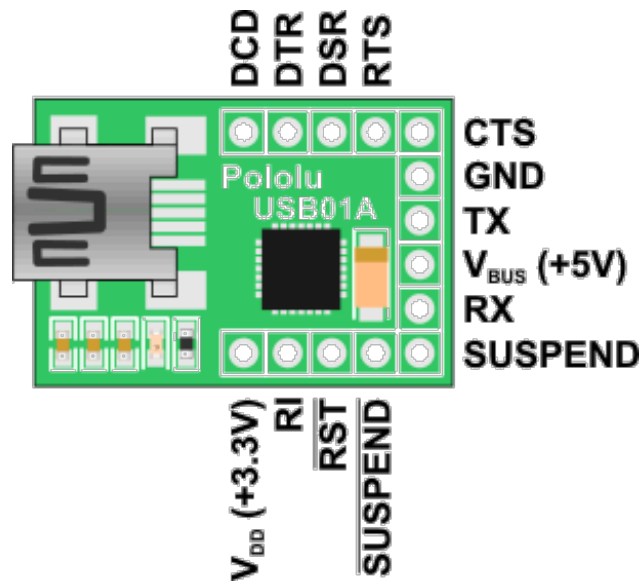
Note: This product does not include printed documentation or software discs. The Pololu USB-to-serial adapter requires software drivers to operate; please see the resources tab for more information. This product requires a USB A to mini-B cable (not included) to connect to a computer.

For a similar, newer adapter with a USB Micro-B connector, please see the CP2104 USB-to-Serial Adapter Carrier.

Device specifications

- **PCB size: 1.0" x 0.65" including connector**
- **USB standard: USB 2.0 (full speed)**
- **Connector: USB mini-B**
- **Data I/O voltage levels: 3.3 V (5 V tolerant)**
- **Maximum data rate: 921.6 kbps**
- **Supply current: 25 mA**

Module pinout



Pin	Type	Function
DCD	In	"Data carrier detect" control input (active low)
DTR	Out	"Data terminal ready" control output (active low)(often used with DSR)
DSR	In	"Data set ready" control input (active low)(often used with DTR)
RTS	Out	"Ready to send" control output(often used with CTS)
CTS	In	"Clear to send" control input(often used with RTS)
GND	Power	Ground
TX	Out	Asynchronous serial data transmit (idle high)
VBUS	Power	USB bus voltage (+5V)
RX	In	Asynchronous serial data receive
SUSPEND	Out	Driven high when in USB suspend state
$\overline{\text{SUSPEND}}$	Out	Driven low when in USB suspend state
$\overline{\text{RST}}$	In	Device reset

RI	In	"Ring indicator" control input (active low)
VDD	Power	3.3 V voltage regulator output

Typical connection

To connect a serial device to your computer's USB port, you will most likely only need to use the GND, TX, and RX lines. The TX and RX lines use 3.3-volt levels, but the USB adapter input lines will tolerate up to 5.5 volts. Therefore, a direct connection to a microcontroller's I/O lines is usually possible.

For some programs, it will be necessary to connect the handshaking lines (RTS, CTS, etc.) if the software does not establish a connection without those lines. In general, the handshaking lines can be left disconnected, used for their intended purpose, or used as additional I/O lines to the computer.

[Documentation on producer website.](#)