



# USB to TTL Serial Cable - Debug / Console Cable for Raspberry Pi

PRODUCT ID: 954



## . Description

The cable is easiest way ever to connect to your microcontroller/Raspberry Pi/WiFi router serial console port. Inside the big USB plug is a USB<->Serial conversion chip and at the end of the 36" cable are four wire - red power, black ground, white RX into USB port, and green TX out of the USB port. The power pin provides the 5V @ 500mA direct from the USB port and the RX/TX pins are 3.3V level for interfacing with the most common 3.3V logic level chipsets.

Because of the separated pin plugs, this cable is ideal for powering and connecting up to the debug/login console on the Raspberry Pi or BeagleBone Black. Connect the pins as shown to power the Pi or BBB and establish the RX/TX link.

Also handy for hacking WiFi routers to install alternate OS's, or nearly any other 3.3V logic serial port. This is easier to use than an FTDI cable in many cases because the wires are separated. Note that we call this a "TTL cable" (since that's what they're called) but technically it's CMOS logic.

**This cable is not good for Arduino re-programming** such as a Boarduino, MENTA, Monochron, etc. because it does not have the DTR/RTS wire necessary for initiating the bootloader reboot sequence. For that we suggest an FTDI cable or FTDI friend.

## . Technical Details

There are four wires: red power, black ground, white RX into USB port, and green TX out of the USB port. The power pin provides the 5V @ 500mA direct from the USB port and the RX/TX pins are 3.3V level for interfacing with the most common 3.3V logic level chipsets.

- If you are running Windows 7/8/10 etc, check this tutorial page with links to drivers for both PL2303 and CP2102 <https://learn.adafruit.com/adafruit-raspberry-pi-lesson-5-using-a-console-cable/software-installation-windows>
- If you are running Mac OS X, check this tutorial page with links to drivers for both PL2303 and CP2102 <https://learn.adafruit.com/adafruit-raspberry-pi-lesson-5-using-a-console-cable/software-installation-mac>
- If you are running Linux, drivers are already included in the kernel, no need to install anything!
- PL2303HX.D datasheet <https://cdn-shop.adafruit.com/datasheets/PL2303HX.pdf>
- PL2303TA datasheet [https://cdn-shop.adafruit.com/datasheets/DS\\_PL2303TA\\_d20120504.pdf](https://cdn-shop.adafruit.com/datasheets/DS_PL2303TA_d20120504.pdf)
- CP210X Serial Communication Guide <http://www.silabs.com/documents/public/application-notes/an197.pdf>
- SiLabs CP210X product pages <http://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers>

### Revision History

- Prior to July 1 2014 this cable would come with a PL2303HX chipset and a black USB body. After July 1, 2014 we changed to a violet body and the PL2303TA chipset. The new 'TA cables are Win8 compatible, and are more reliable especially when dealing with random USB-disconnects.
- **As of Dec. 21, 2016** we will be shipping cables with SiLabs CP2102 chipset instead of Prolific. SiLabs chips seem to have better driver stability, and can handle very high speeds and 'unusual' non-standard baud rates. Other than the driver installation, the cables perform identically.

