

Recovery from bootloop.

Thursday, October 11, 2018



If you bricked your router from a bad firmware flash or upgrading/downgrading to a different custom firmware build, your router probably got stuck in a boot-loop and you can no longer access it with your web-browser.

Good news – you're (probably) in luck and can still get it back to working order.

Tools needed

- R8000 (obviously)
- Stock firmware for the router ([link](#))
- Soldering Iron & Solder
- 18 or 20ga Wire
- USB-TTL COM Port Adapter (available on Amazon for under \$10)
- Stereo headphone jack (optional, more on this later)

You'll need to have a little experience with soldering to accomplish this. If this gives you cause for concern, you should probably stop reading.

Step 1

You'll need to open up the router, remove the screws from the bottom and the back of the router. One will be obscured underneath a label on the bottom.

Locate the jumper J252, it may or may not have pins already soldered in place. This is for serial communications. I know what you're thinking, you can probably wire it straight to a DB-9 COM port and be done. You can't, it uses voltage level shifting and your terminal emulator will just fill the screen with random garbage characters. The USB-TTL cable looks like this:



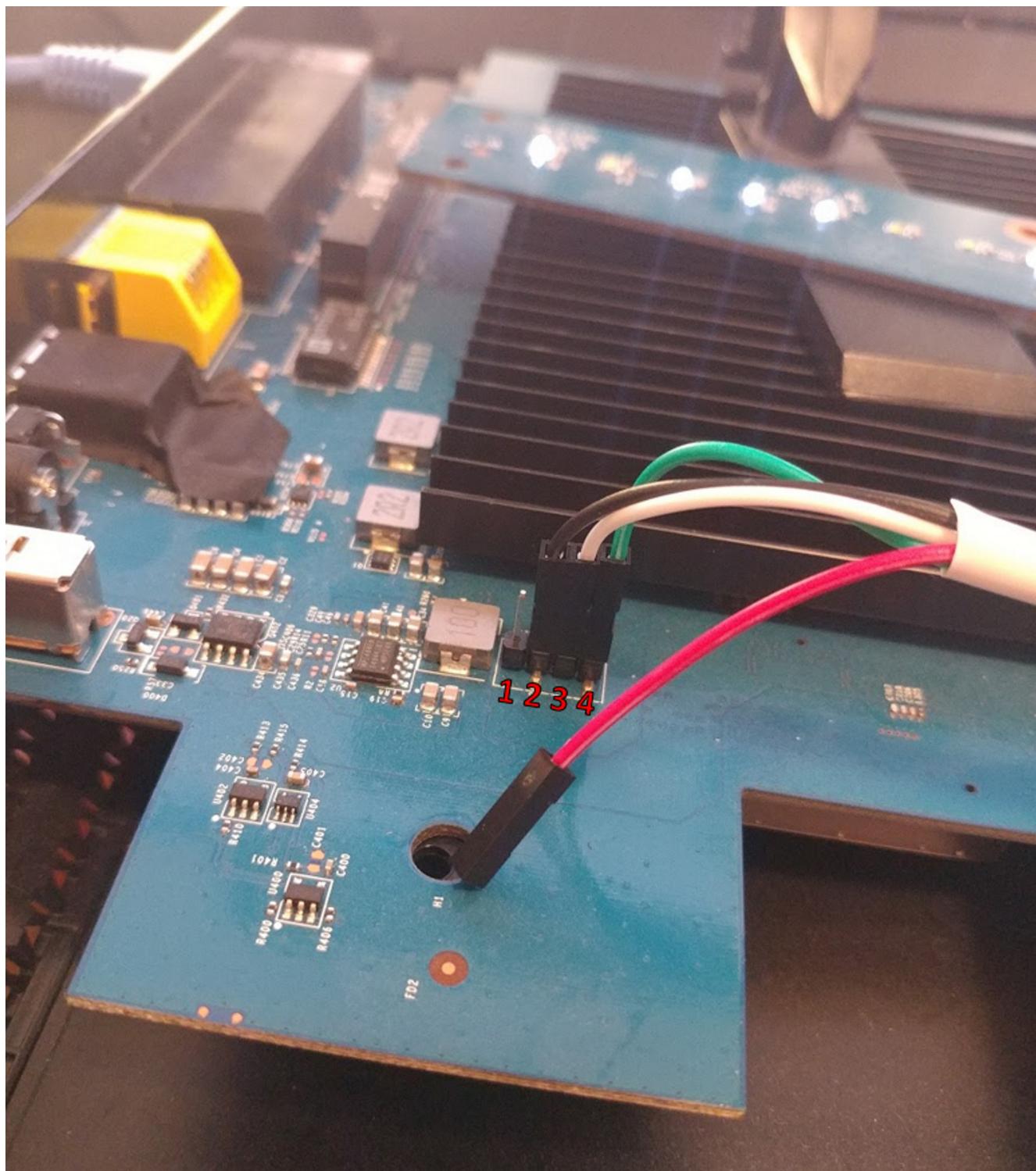
Step 2

Once you've opened up the router and located the pins, you can attach the leads from the USB cable. There are four pins, number 1 being located towards the rear of the board. They are

Pin	- Pin Func	- Cable Colour	- Cable Func
1	- Not used	- Red	- (3.3v Power)
2	- Ground	- Black	- (Ground)
3	- TX (transmit)	- White	- (RX)
4	- RX (receive)	- Green	- (TX)

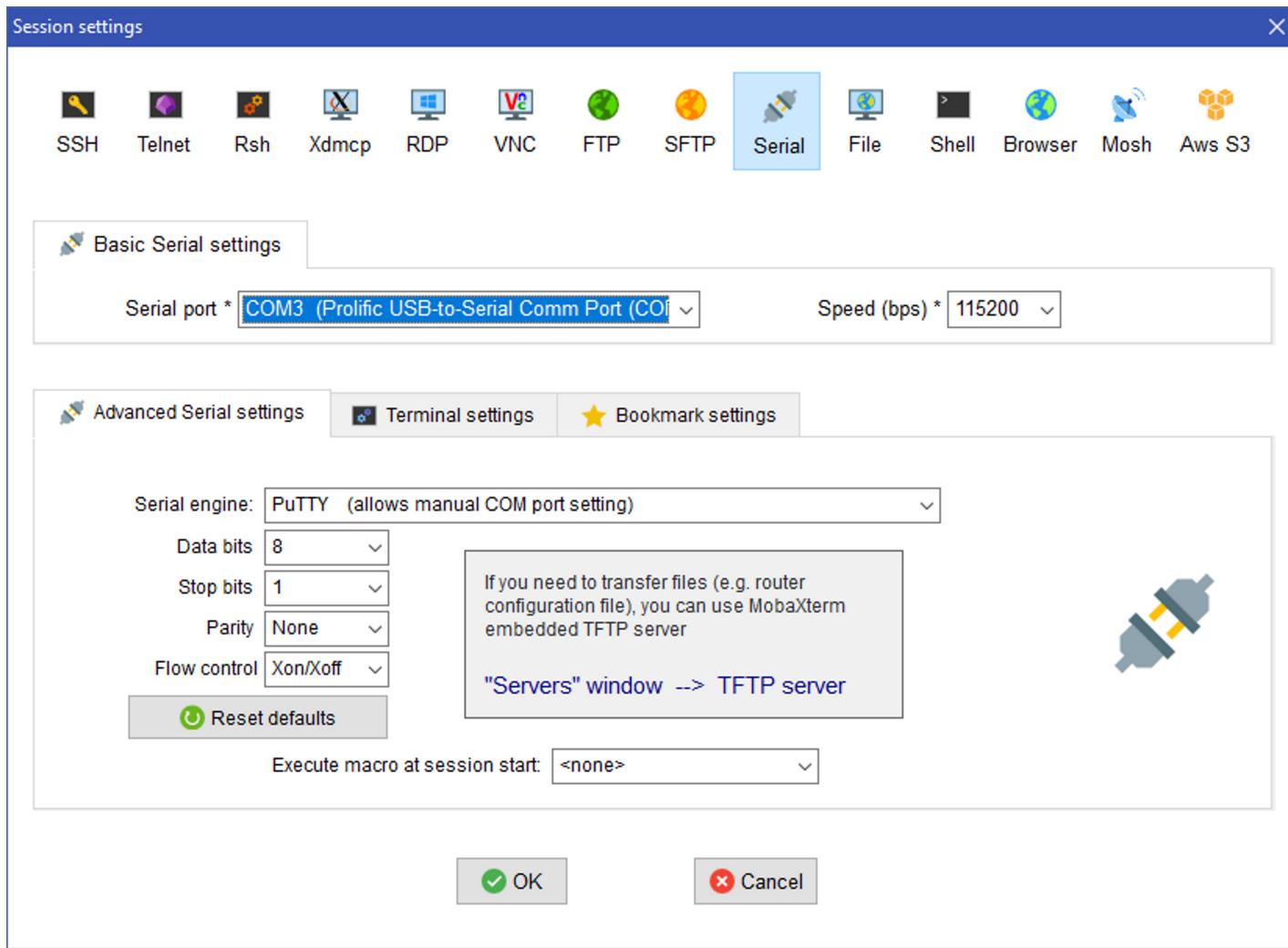
Hopefully your adapter came with a diagram on which color wires do what. One will be labeled 3 volts or 5 volts, do not use this wire. You only need ground, TX and RX.

Important: You're going to swap TX and RX between the cable and the router, so TTL TX goes to Pin 4 (RX) and TTL RX goes to Pin 3 (TX).



Step 3

Once you've wired the TTL cable in place, connect it to the PC and use your favorite terminal program (I prefer Mobaxterm, it's free). Your COM port settings will be 115200 baud, 8,N,1.



Start the session and turn on the router, you should start seeing results immediately. Start pressing CTRL-C repeatedly to interrupt the boot process.

At this point you'll want to make sure your ethernet port has a static IP of 192.168.1.10, subnet mask 255.255.255.0 because the router's DHCP service will not be running.

Once you reach the CFE> prompt, type **tftpd** and press enter. This will start the TFTP daemon. If you're on Windows 7 or later you can use the built-in TFTP command line program (or download your own).

If you're using the DOS command-line program, you should be in the same directory as the firmware you downloaded (link above) and use this command:

tftp -i 192.168.1.1 put R8000-V1.0.3.4_1.1.2.chk

Upload the stock firmware, but make sure you upload in binary mode (thus the -i option above). Once the firmware is uploaded the terminal window will say that it's programming, once that's done the router will reboot and you can access it via your web browser.

From <<https://www.ianthurston.com/tech/bricked-netgear-r8000-recovery/>>

Router Firmware

[R8000-V1.0.3.4_1.1.2.chk](#)

Prolific USB-to-Serial Fix (Official Solution to 'Code 10 error')

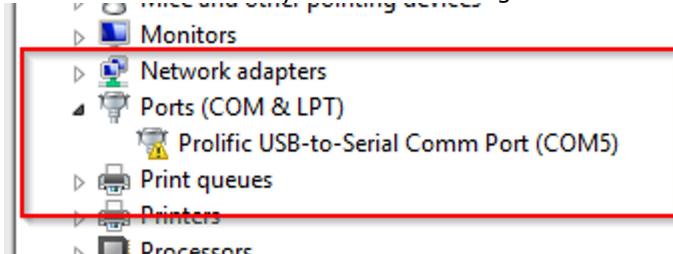
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Purpose of this article is to guide you on how to FIX the "**Prolific USB-to-Serial**" driver issue with common cheap units.

In summary, this article is for: Windows XP, Windows 7, Windows 8, Windows 8.1 and Windows 10. Works on 32/64-bit.

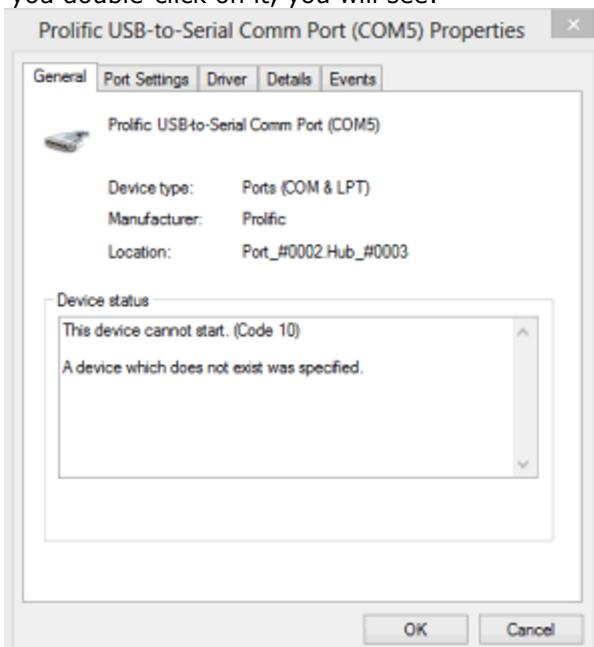
And it addresses issue of: Prolific PL-2303 Driver Fix (VID_067B&PID_2303)

Driver issue will show inside your Device Manager like this:



(Notice in above picture, yellow triangle next to "Prolific USB-to-Serial Comm Port (COM X)". That means correct driver version is not installed.)

And if you double-click on it, you will see:



(Notice in above picture, Code 10 error. This confirms you need to install correct driver file.)

Issue will also may show messages like this:

- "*This Device cannot start (Code 10)*"
- "*No driver installed for this device*"
- "*Device driver was not successfully installed*"

Available forum solutions to this problem are half-baked. Even vendors selling their "USB to Serial" adapters are baffled.

Main cause of this issue is because the device you own contains a counterfeit "Prolific" chip (China clone).

The counterfeit chip use the same *Vendor ID (VID_067B)* and *Product ID (PID_2303)* - as the authentic Prolific chips.

To solve this intellectual infringement - original Prolific company modified their newest drivers to *render the counterfeit adapters unusable*. Unfortunately this decision also renders all earlier adapters inoperative.

The Prolific 64-bit drivers that Microsoft supplies via Windows Update, *Versions 3.4.67.325*,

3.4.25.218, 2.1.51.238 and 3.4.62.293 - will **not** work with most adapters and therefore shows the generic "Code 10" error.

Or you may get no error at all, but your device will still not work.

If your adapter was working prior to going to Windows Update, you can "roll back" to the previous installed driver and all will be well once again.

However if you didn't have a previous driver installed that worked - you'll have to go through the process of removing any PL-2303 driver installation programs, the actual driver files, and the information (.INF) file, BEFORE you are able to successfully install the correct driver.

(What worsens this issue is that there are many "*Prolific Driver Removal Tools*" that do not work properly.)

And Windows 8, 8.1 and Window 10 are **set by default to automatically update your drivers without your permission** or even notifying you of the update.

So no matter how many times you remove the driver files and reboot - the next time you insert the *USB-To-Serial* adapter, Windows installs the newest non-working version again.

Only 64-bit driver I have ever found that works with all the "Prolific" adapters is *Version 3.3.2.102*.

Below installer program will remove all of the incompatible drivers — make a change so that

Windows can never update the driver without your approval — and install the *Version 3.3.2.102* compatible drivers.

Windows 64-bit Fix:

- All Windows 64-bit operating systems including Windows 10
- Prolific USB to Serial Adapter .
- Device using PL-2303 H/HXA/HX/X version chips
- Driver Version: 3.3.2.102
- Driver Date: 09/29/08
- Supported device ID and product strings: . VID_067B&PID_2303 for "Prolific USB-to-Serial Comm Port"

Steps:

1. Download and save the "*PL2303_64bit_Installer.exe*" by clicking [here](#).
2. Unplug all USB-To-Serial adapters from your computer - and double-click on "*PL2303_64bit_Installer.exe*"
3. When it prompts you, plug in one (1) of your USB-To-Serial adapters and click "Continue".
4. Reboot your computer. That's it!

Troubleshooting:

You must follow every step in the process in exact order.

1. If you still receive an error after running the *PL-2303_64bit_Installer.exe* and your device is plugged in - go to **Windows Device Manager**.

- **Windows Vista/7/8/10:** Control Panel » System » Device Manager
- **Windows XP:** Control Panel » System » "Hardware" tab » Device Manager

2. Scroll down to *Ports (Com & LPT)* and double-click on "Prolific USB-to-Serial Comm Port (COM#)".
3. In the Properties Window, Click on "Driver".

The "Driver Version" must say "**3.3.2.102**" dated **09/24/08**.

If not, then the correct driver is not installed.

Unplug the USB-To-Serial adapter and run the "*PL2303_64bit_Installer.exe*" again - following the directions precisely until the correct driver appears.

[Prolific 64 Bit Driver](#)

Windows 32-bit Fix:

- All Windows 32-bit operating systems from XP up

- Prolific USB to Serial Adapter .
- Device using PL-2303 H/HXA/HX/X version chips
- Driver Version: 2.0.2.8
- Driver Date: 11/20/07
- Supported device ID and product strings: . VID_067B&PID_2303 for "Prolific USB-to-Serial Comm Port"

Steps:

1. Download and Save the "PL-2303_Driver_Installer.exe" by clicking [here](#).
2. Run the installer program. If it offers a choice to remove the driver, then select to remove the current "bad" driver.

Then run the installer again to install the correct driver.

Troubleshooting:

1. If you still receive an error after running the *PL-2303_Driver_Installer.exe* and your device is plugged in, go to the Windows Device Manager.
 - **Windows Vista/7/8/10:** Control Panel » System » Device Manager
 - **Windows XP:** Control Panel » System » "Hardware" tab » Device Manager
2. Scroll down to *Ports (Com & LPT)* and double-click on "Prolific USB-to-Serial Comm Port (COM#)".
3. In the Properties Window, Click on "Driver".

The "Driver Version" must say "**2.0.2.8**" dated **11/20/07**.

If not, then the correct driver is not installed. Unplug the USB-To-Serial adapter and run the "PL2303_Driver_Installer.exe" again, following the directions until correct driver appears in Device Manager.

[Prolific 32 Bit Installer](#)

From <<http://www.totalcardiagnostics.com/support/Knowledgebase/Article/View/92/20/prolific-usb-to-serial-fix-official-solution-to-code-10-error>>