

CP2102 USB-to-Serial Bridge Driver Installation



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1. Overview

We use the **Silicon Labs** [<http://www.silabs.com/>] CP2102 USB-to-UART Bridge Controller in several of our products to provide USB connectivity while communicating via a simple serial protocol. It is the key component of our **Pololu USB-to-serial adapter** [<http://www.pololu.com/catalog/product/391>]:



Pololu USB-to-serial adapter with CP2102

and is also used in our **Orangutan USB Programmer** [<http://www.pololu.com/catalog/product/740>], **USB 16-Servo Controller** [<http://www.pololu.com/catalog/product/390>], and **Orangutan X2** [<http://www.pololu.com/catalog/product/738>]. These CP2102-based products feature a mini-B connector, so you will need a **USB A to mini-B cable** [<http://www.pololu.com/catalog/product/130>] to connect them to one of your computer's USB ports. Once the appropriate drivers are installed for your system, the CP2102 will look like a standard serial port. This document provides you with the necessary drivers along with installation instructions.

Other Pololu products that use the CP2102 [<http://www.pololu.com/catalog/category/36>]

2. Windows Drivers and Installation Instructions

Note: We do not support using our CP2102-based products on Windows 7 because of driver signing requirements. However, if you want to use one of our CP2102-based products on Windows 7, you might be able to get it working by following **these customer-submitted instructions on our forum** [<http://forum.pololu.com/viewtopic.php?f=3&t=2271>].



Note: These drivers only need to be installed once, so if you have previously installed them for one of the Pololu devices pictured at the top of this page, you can skip steps 1-6 and proceed directly to step 7.

Before you connect your Pololu USB-to-Serial adapter to a computer running windows, you must install its drivers by following these steps:

1. Download this driver: **win_cp2102_drivers.zip** [http://www.pololu.com/file/download/win_cp2102_drivers.zip?file_id=0J14] (293k zip)
2. **IMPORTANT:** You must extract the files in *win_cp2102_drivers.zip* into a temporary directory. **DO NOT** attempt to double-click or run any of the files until you have extracted them.
3. Open the temporary directory and run *PololuUSBInstaller.exe*. The “Install Driver” dialog will open.
4. Browse to the directory in which you would like the driver to be installed and click “Install”.
5. In Windows XP, a “Software Installation” dialog will appear twice, warning you that this driver has not been tested by Microsoft and recommending you stop the installation; click “Continue Anyway” both times. If you are running Vista, you will get similar warnings that you can safely ignore.
6. When the installation is complete, a “setup” dialog that says, “Installation Successful” will appear; click “OK”.

Windows Vista 32-bit users: your computer should automatically install the necessary drivers when you connect a Pololu CP2102 device, in which case no further action from you is required.

Windows Vista 64-bit users: you need to disable driver signature enforcement. See the section entitled “Disabling driver signature enforcement” below.

Windows 7 users: Please see the note above.

Windows XP users: you need to follow steps 7-10 for each new device you connect to your computer.

7. Connect the Pololu device to your computer’s USB port. Your computer will detect the new hardware and open the “Found New Hardware Wizard”.
8. Select the automatic software installation option. If it asks whether it can search for the drivers using Live Update, give it permission. If multiple drivers are found, you will be prompted to “select the best match for your hardware” from a list. Select the one for the Pololu USB-to-Serial Adapter.
9. The “Hardware Installation” dialog will appear, warning you that this driver has not been tested by Microsoft and recommending that you stop the installation; click “Continue Anyway”. The installation should then complete; click “Finish”.

10. You will have to repeat steps 8 and 9 again (you have to install one driver for the USB device and another for the serial device). After that, you are ready to use your Pololu CP2102 device!

If you now go to your computer's device manager and expand the "Ports (COM & LPT)" list, you should see "Pololu USB-to-Serial Adapter" as one of the COM ports.

Some software will not allow connection to higher COM port numbers. If you need to change the COM port number assigned to your USB adapter, you can do so using the Windows device manager. Bring up the properties dialog for the "Pololu USB-to-Serial Adapter" COM port and click the "Advanced..." button in the "Port Settings" tab. From this dialog you can change the COM port assigned to your device.

Disabling driver signature enforcement (Windows Vista 64-bit users only)

If you are running the 64-bit version of Windows Vista, you will need to disable driver signature enforcement to use the CP2102 drivers.

The simplest method is when you are booting up windows, press F8 to bring up the Advance Boot Options Menu. Select "Disable Driver Signature Enforcement" and press enter. When windows is done booting, you should be able to use these drivers. You will still get error messages from windows about the drivers having invalid signatures, but you will be able to use the device. You must remember to do this every time you boot up Windows, or else you will not be able to use the drivers for that session.

Another method uses a third party utility.

1. Download the **Driver Signature Enforcement Overrider** [<http://www.ngohq.com/home.php?page=dseo>].
2. Use the utility to Enable Test Mode.
3. Reboot your computer. You should now see the words "Test Mode" written in all four corners of your desktop.
4. Use the utility to sign the following system files:
 - C:\Windows\system32\drivers\slabbus.sys
 - C:\Windows\system32\drivers\slabcm.sys
 - C:\Windows\system32\drivers\slabcmnt.sys
 - C:\Windows\system32\drivers\slabser.sys
 - C:\Windows\system32\drivers\slabwh.sys
 - C:\Windows\system32\drivers\slabwhnt.sys
5. Unplug and replug your device, and it should work.

3. Mac OS X Drivers

We cannot provide technical support for the Macintosh Operating System, but we have Macintosh drivers for the CP2102 USB-to-UART Bridge Controller that other customers have used successfully on both PowerPC- and Intel-based Macs running OS X version 10.3.9 or later. You can download these drivers here: **OSX_cp2102_drivers.dmg** [http://www.pololu.com/file/download/OSX_cp2102_drivers.dmg?file_id=0J16] (723k dmg)

4. Linux Installation

Recent versions of the linux kernel include support for the CP2102 USB-to-UART Bridge Controller as part of the usb-serial driver, so your Pololu CP2102 should work right out of the box. We have verified that the CP2102 works with Ubuntu versions 7.04 and 8.04. If you experience any problems, we recommend you upgrade to the most recent version of your distribution.