

#### **Installing the PIM-U Device Drivers**

The PulseWorx PIM-U connects to the computer with a USB cable. When doing so the device driver creates a virtual serial port that UPStart uses to send and receive commands from the PIM-U. In many cases the device driver either automatically installs or is already installed. This app note will help you determine if the needed driver is installed correctly and what actions to take if it isn't.

Before you get started you will need to know what version of Windows you are using and how to open the Windows Device Manager in the Control Panel.

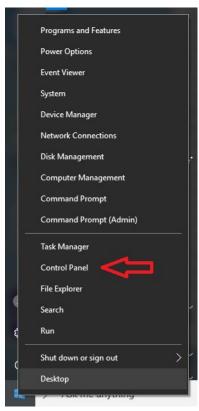


To open the Control Panel look in the computer screen lower left corner. If you see the Windows logo in a bubble you are using Windows 7. Click on it and select *Control Panel* from the menu.









If you see in the lower left corner of the screen a Windows logo in a square box you are using Windows 10. Right-click on the Windows logo and select *Control Panel* from the menu.



If you are using Windows 8, you are probably seeing the display with all the tiles. One of those is for the Desktop. Click on that tile to open the desktop view and then right click on the Windows logo and select *Control Panel*.

If you are using an older version of Windows – Vista or XP – then you must already know how to open the control panel since you have had that computer for quite a while!



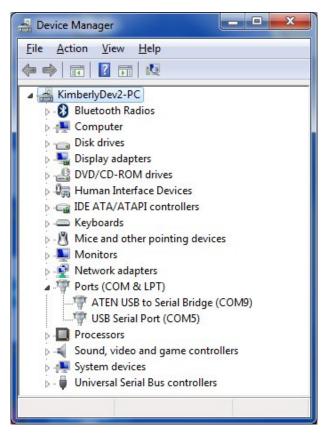




One you have the Windows Control Panel open, there is an icon for "System". If you click on that icon, then in the displayed info it shows the Windows Edition. Also in the Control Panel is the Windows Device Manager which you will open and use as explained later in this note.

**Note**: Most of the screen images in this note are from a Windows 10 machine but the same ideas apply to Windows 7 and Windows 8.

The first step is to plug the PIM-U into a wall outlet and then connect it to the computer with the USB Cable. If the device driver is already installed or Windows installs it automatically you can go ahead and start UPStart. Then on the UPStart Interface select dialog, you can choose the port that the device driver has created, usually COM3, COM4, or some higher number. If no ports are listed in UPStart, or you are unsure what port to choose from those listed, open the Windows Device Manager from the Control Panel and see what ports are available.

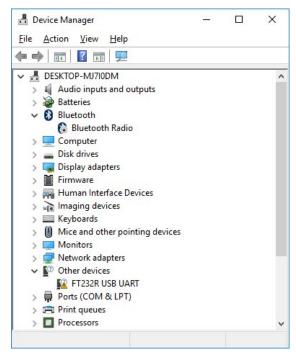


As an example, in this system the PIM-U device driver created a virtial COM5 port. You know it's that one as it's listed as "USB Serial Port". You don't have to configure the port to set its baud rate or other communication parameters as UPStart takes care of that.









If you don't see the port listed, then the device driver probably isn't installed. In the screen image to the left the PIM-U without the device driver installed shows up under "Other devices" and is listed as "FT232R USB UART".

To get the correct driver installed, right click on the "FT232R USB UART" and select "Update Driver Software" from the popup menu.

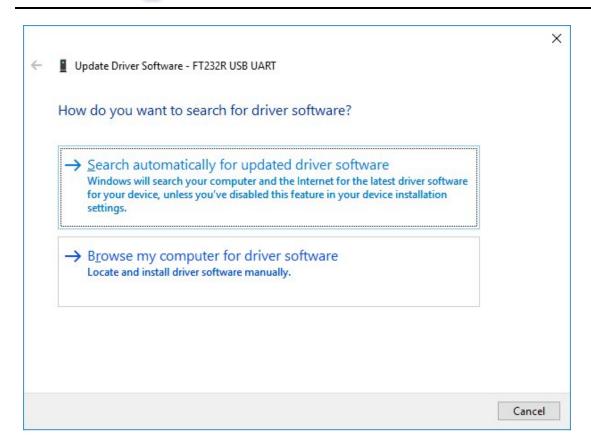


Windows starts the process by asking from where you want to get the device driver.









The <u>best</u> choice to make is to let Windows search. This is what you should always do if your computer is connected to the internet.







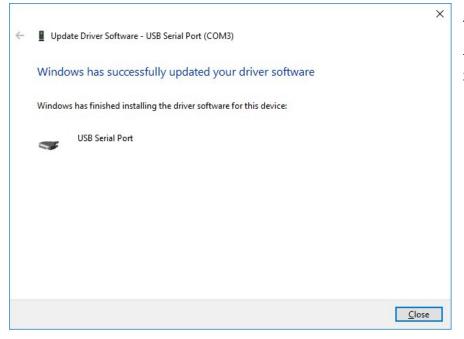
**Important Note**: Sometimes it can take a while (10 to 15 minutes) for Windows to find the driver, download, and install it. Just be prepared to wait.

When completed it shows what it did. Note carefully what it says – you are looking for "USB Serial Port" and not, as it shows in the image below, "USB Serial Convertor" (why Windows sometimes does this isn't clear).



If this happens, then after closing this dialog you may see in the Device Manager the PIM-U remains under "other devices". If that happens, just begin the process again by a right-click on the device and select "Update Driver Software" again. It usually is quicker the second time.

As you can see on this Windows 10 machine that is what happened.



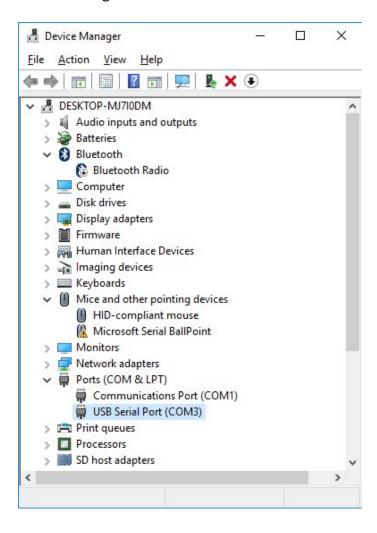
After the second "Update" all the needed drivers were installed. We know this because this time it shows "USB Serial Port".







Once you are at this point the driver will have created the virtual serial port and you are then ready to identify it to UPStart and then you can work with your PIM-U. You know what port to choose in UPStart because the Device Manager now shows it listed under "Ports". In this example the driver created COM3.









#### What to do if automatic driver install doesn't work

If your computer isn't connected to the internet or if Windows searching can't seem to find the device driver, then you must help the process along. Here are the two links you need.

#### http://www.ftdichip.com/Drivers/VCP.htm

The device drivers come from a company called FTDI and the above link takes you to where you can download an installer for the device driver for your version of Windows.

#### http://www.ftdichip.com/Support/Documents/InstallGuides.htm

Rather than provide instructions on how to proceed in this app note, FTDI has instructions for each supported version of Windows. The instructions are version specific and include excellent screen images and step by step instructions. Find the instructions for your version of Windows at the above link and download the PDF.

If you are using this because your computer can't access the internet, and so Windows can't search for a device driver, go to a computer that can access the internet and download the appropriate installer and save it to a portable drive that you can then connect to your computer that you want to use the PIM-U with. Again, just follow the instructions that FTDI provides.

##end##



