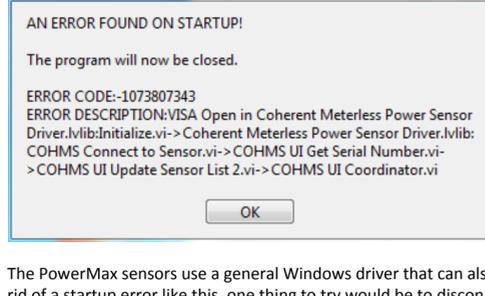


PowerMax-USB troubleshooting tips

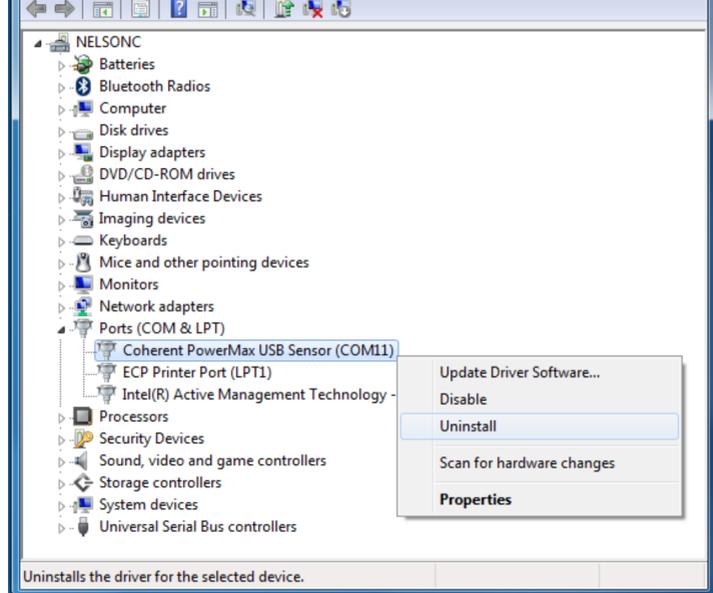
If running into problems with the PowerMax-USB sensors not being found by the PowerMax-PC software or losing connection intermittently, the first thing to check is the connection to the computer. If a USB hub or extension cable is being used, first try removing that and plugging the sensor directly into a USB port on the computer. This can help determine whether the problem is with the PowerMax product or if it is related to the hub or extension cable being used. If using a USB hub, it is recommended that it be an externally powered USB hub. This means the hub uses an external AC adapter that plugs into an electrical outlet to supply full power to the USB ports on it. Passive USB hubs and extension cables can cause problems if they are not able to supply enough power to the PowerMax product.

If an error shows up when starting the PowerMax-PC software (like what is shown below) this could indicate a driver conflict with the sensor being used.

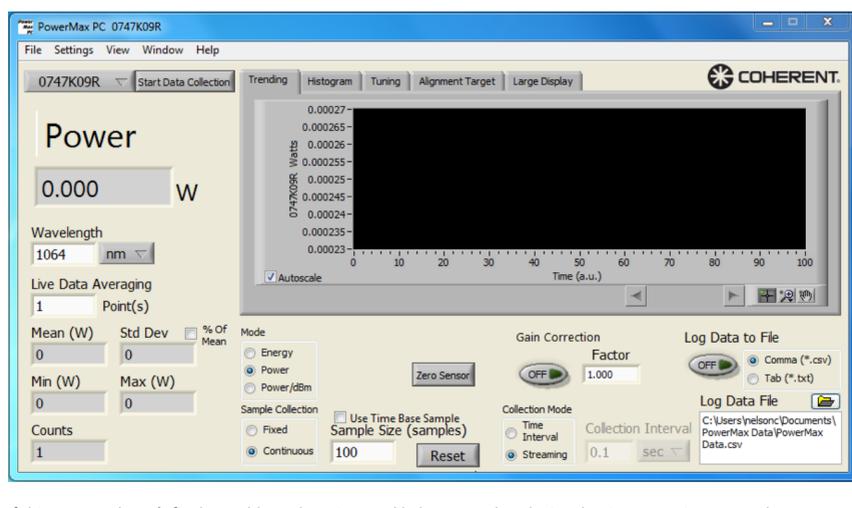


The PowerMax sensors use a general Windows driver that can also be used by other types of USB devices. To get rid of a startup error like this, one thing to try would be to disconnect the sensor and reconnect it to a different USB port on the computer before opening the PowerMax-PC software again. A new COM port number will be assigned to the sensor for each new USB port that it is connected to, which could possibly resolve conflicts with another device.

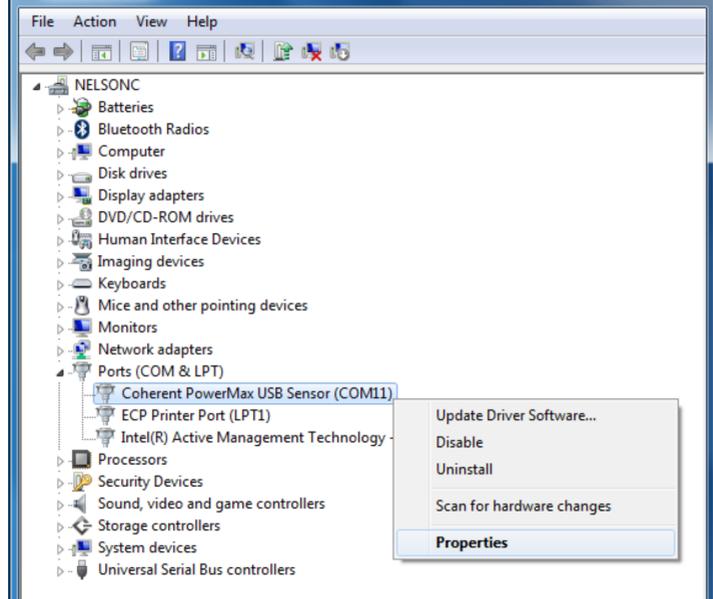
If that doesn't work or isn't an option, the next step would be to manually uninstall and reinstall the driver for the PowerMax sensor. This can be done through Device Manager on the computer. The PowerMax sensor should be listed under the "Ports" category in Device Manager. Right-click on the Coherent PowerMax sensor and select "Uninstall".



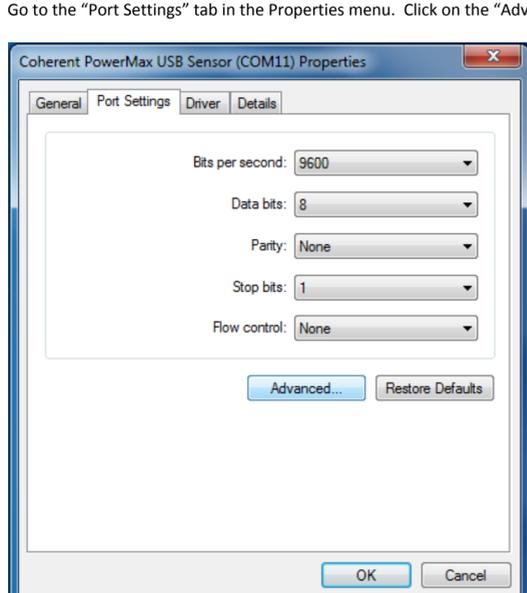
The step above should remove the PowerMax sensor from Device Manager. Once that is complete, disconnect the PowerMax sensor from the USB port on the computer, then reconnect the PowerMax sensor to the same USB port. The sensor should go through the new driver installation the same way it did the first time it was connected. Once the driver update has completed, try opening the PowerMax-PC software again. The software should hopefully open correctly and display the serial number of the sensor that is connected.



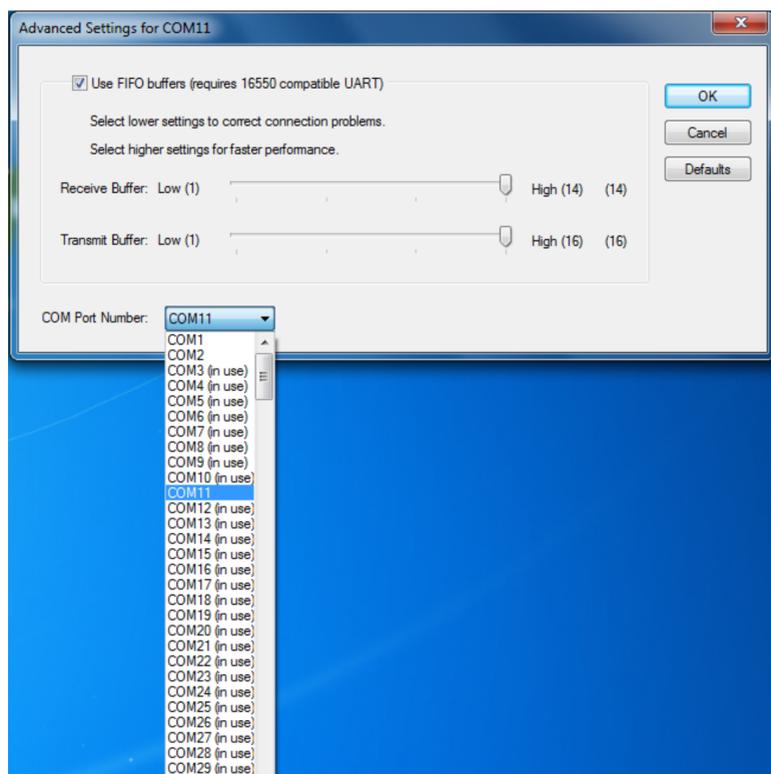
If this process doesn't fix the problem, there is most likely some other device that is attempting to use the same COM port address that the PowerMax sensor is trying to use. For example, a USB-to-RS232 adapter or some other USB device that uses a COM port address may have used that same COM port number at some time in the past. Assigning a new COM port number to the PowerMax sensor as shown below could help fix this. Avoiding a COM port conflict may require manually selecting a COM port that is not currently "in use" by the computer (meaning that no other device has been assigned to that COM port in the past.) This can be done by going back into Device Manager on the computer. Right-click on the Coherent PowerMax sensor and select "Properties".



Go to the "Port Settings" tab in the Properties menu. Click on the "Advanced" button from this menu.



This will bring up a menu that allows manual selection of a COM port to use for the device. If other similar devices have been used in the past, the COM ports that they have been assigned to will show up as "in use". Manually select a COM port number that is not "in use" and select "OK". This will assign the PowerMax sensor a new COM port number and may help get the software working correctly.



One other thing that can cause problems is the showing of National Instruments software that is used by the PowerMax-PC software. If the PowerMax sensor is showing up okay in Device Manager, but is not showing up when the PowerMax-PC software is opened, it may be related to this National Instruments software. If the PowerMax-PC software installation does not complete, it could also be related to this National Instruments software. The PowerMax-PC software uses a program called "NI VISA Runtime" to handle communication through the COM port address assigned to the sensor. If a conflicting copy of the NI VISA Runtime is on the computer while running the PowerMax-PC installation, it's possible this could cause problems installing all of the Runtime components, which can lead to problems with the PowerMax-PC application. Most of the time, this shows up as being able to see the PowerMax sensor correctly in Device Manager, and having the PowerMax-PC software open just fine, but not having the software load the serial number of the sensor into the drop-down box used to select the sensor. The other way this can show up is if an error pops up towards the end of the PowerMax-PC software installation process. If this is the case, it may be necessary to update the NI VISA Runtime program or remove it and reinstall it. The NI VISA Runtime software is a free download on the National Instruments website and an updated copy of this Runtime software can be downloaded from there and installed to help resolve this problem. Otherwise, the software can be uninstalled and then reinstalled with the PowerMax-PC installer to resolve this. Here are the steps for that process...

- 1) Go into the normal "Add/Remove Programs" menu on the computer and uninstall the PowerMax-PC software.
- 2) Once that is complete, go back into the "Add/Remove Programs" menu and scroll down to find "National Instruments Software". Double-click on this "National Instruments Software" group and it'll open up a new window that lists all of the NI software that has been installed on the computer.
- 3) From this list of NI programs, find the program called "NI VISA Runtime". Select that program and choose "Remove".
- 4) Once that is complete, reboot the computer.
- 5) Reinstall the PowerMax-PC software as normal. This will place both the PowerMax-PC software and the NI VISA Runtime software on the computer.

The hope is that by reloading the NI VISA Runtime, it will allow the sensor to be found by the software.

