



# InternationalLight

## TECHNOLOGIES

### *Troubleshooting the ILT1000/ILT5000*

#### CONTENTS:

Device is not taking Measurements, no error on display

1. Check proper Power-On sequence Page 2

2. Applications have already claimed ownership of the device Page 3

3. Check for proper driver installation

Windows Page 3

Mac Page 4

No Device Found:

4. No Devices Found, Hidden applications claiming the device Page 4

5. No Device noted in registry, Mouse driver claiming the device Page 5

6. Wireless Troubleshooting

ILT5000 Wireless Troubleshooting Page 6

7. .Net Framework Error Page 6

8. Missing Visual C++ Redistributables Page 6

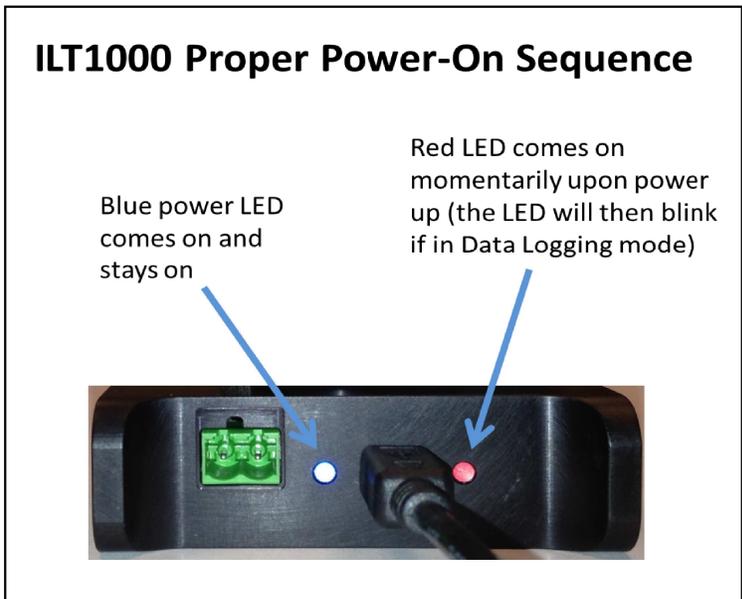
If there are issues running any of the DataLight application software and connecting to the device, follow the steps below to troubleshoot the issue.

### 1. Check proper Power-On sequence

#### ILT1000

When the ILT1000 is plugged into a USB port, two things should happen:

- a) The Blue LED should light and stay lit. This indicate the unit has power.
- b) The Red LED should blink momentarily to indicate that the firmware on the device is running properly. If the device is configured for Data Logging, the red LED with then continue to blink. If the red LED does not blink (watch carefully upon applying power as it happens quickly), contact ILT support.

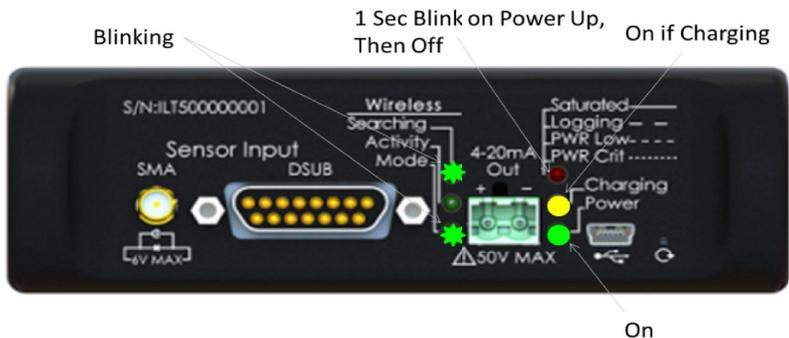


#### ILT5000

**IMPORTANT:** Make sure the ILT5000 rear panel power switch is set to On (Up) before connecting the ILT5000 to a USB port.

When the ILT5000 is powered on, the following should happen:

- α) The Green “Power” LED should light and stay lit. This indicates the unit has power.
- β) The Red LED should blink momentarily to indicate that the firmware on the device is running properly. If the device is configured for Data Logging, the red LED with then continue to blink. If the red LED does not blink (watch carefully upon applying power as it happens quickly), contact ILT support.



## 2. Ensure other DataLight applications have not already claimed ownership of the device

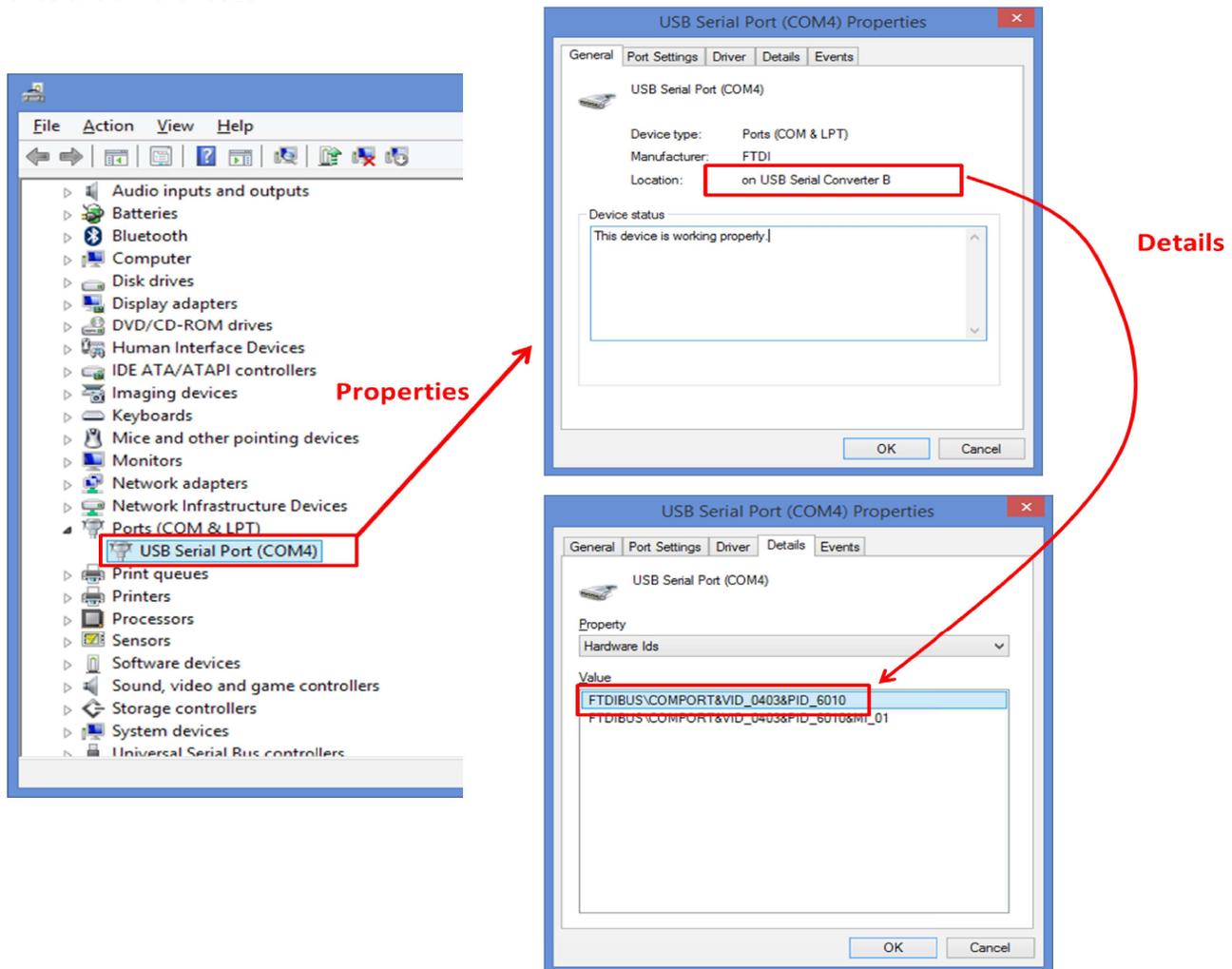
One of the most common issues encountered is when the user is accidentally attempting to run two DataLight applications at once, attempting to access the sample ILT1000/5000 device. For example, "CLI" may have been run to check a configuration item, but left open after the item was verified, and then "Trend" was invoked. In this case, "Trend" will not be able to find the device because "CLI" has already claimed it. This is also true of any other application that may be claiming the device such as a terminal server (Hyperterminal, Putty, etc) or a program such as LabView.

Ensure all other DataLight applications, *and any other applications that might be claiming ownership of the device*, are closed. Note that sometimes it takes time after a program closes to release the device. A warm boot will help ensure that all applications free ownership of the device, but applications that start on boot-up might also be claiming the device (for more information, see "Hidden applications claiming the device" below).

## 3. Check for proper driver installation

Windows:

Check for proper driver installation within Device Manager. The ILT1000/5000 is recognized as a USB Serial Port. The "COM4" in the figure below is for illustration purposes only. The device can show up on any COM port. The Properties page General tab should indicate a Location of "on USB Serial Converter B", and the Details tab should indicate a VID of 0403 and a PID of 6010.



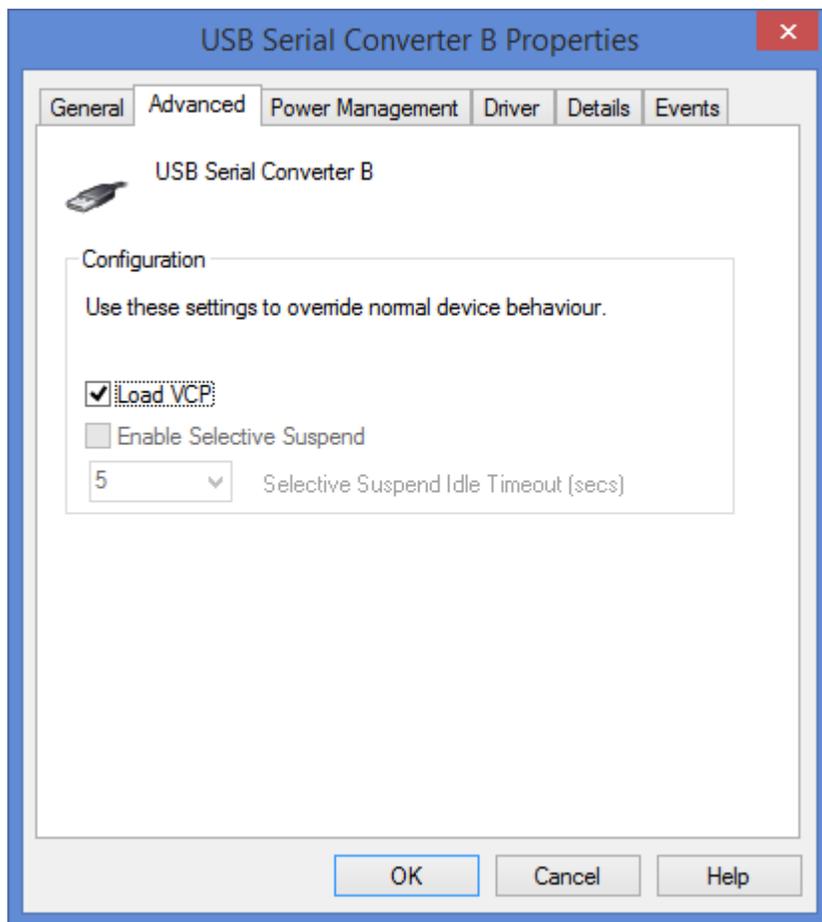
## MAC OS:

1. Open a Terminal window on the MAC.
  - a. The Terminal program is found at: Applications -> Utilities -> Terminal
2. From within Terminal, type **ls /dev**
  - a. This will list all the devices found on the system.
3. Verify the existence of *tty.usbserial[.....]A* and *tty.usbserial[.....]B*
  - a. Examples:
    - i. **tty.usbserial-TIWNK5JQA**
    - ii. **tty.usbserial-TIWNK5JQB**

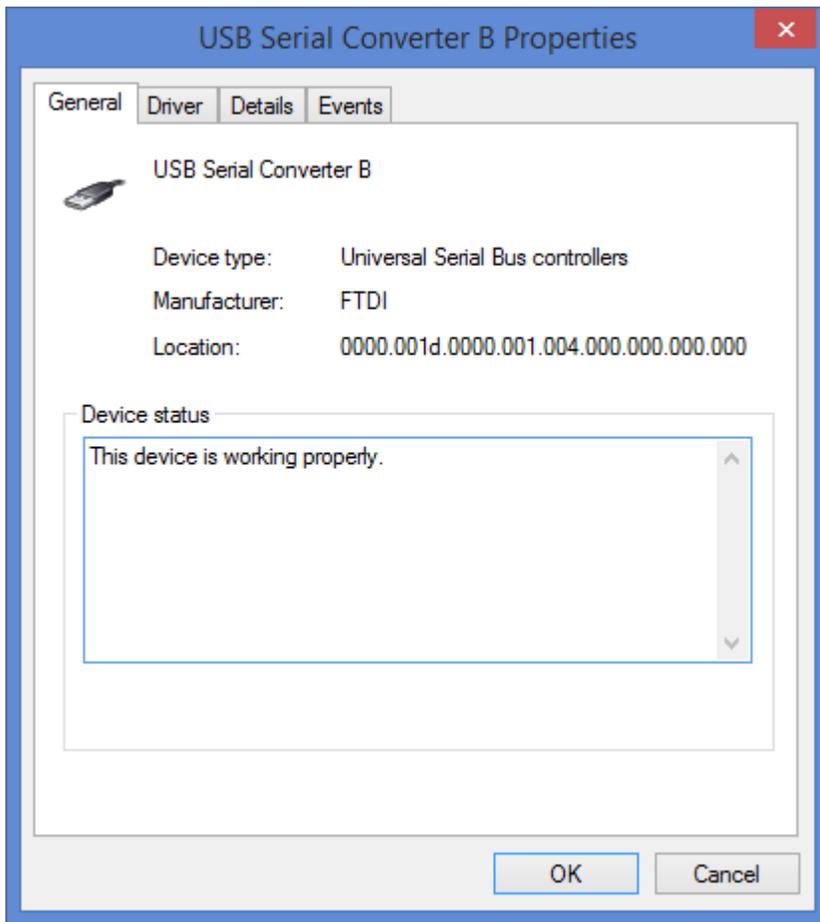
If these items are not listed, the drivers are not properly installed.

#### 4. Hidden applications claiming the device

Within the Windows environment, at times the ILT1000/5000 device may be “attached” to a hidden application or process. If this is the case, all the DataLight applications will report “No Devices Found” (CLI will scan all ports and exit immediately, not finding anything). The best indication that this scenario can be found in Device Manager, specifically under “Universal Serial Bus controllers”. Within this branch of the Device Manager tree, locate the USB Serial Converter B device. This is the device connected to the ILT1000/5000 unit. If there are more than one device connected to the system, there will be more than one USB Serial Converter B. With no ILT software running, the “Advanced” properties tab of the USB Serial Converter B should show up as indicated below:



If the device is somehow being claimed by another program or process, the Advanced tab will not be present (see below). It is Windows way of not allowing the VCP (Virtual COM Port) to be disabled while it is in use. For the same reason, the Power Management is also missing in the figure below.



A good test to understand if this is the issue involves attaching a another ILT1000/5000 device and see if it is recognized by an ILT application. If the hidden program is only attaching to a specific COM port, or only to the first device found, a 2<sup>nd</sup> device should show up properly.

## 5. Mouse driver claiming the device

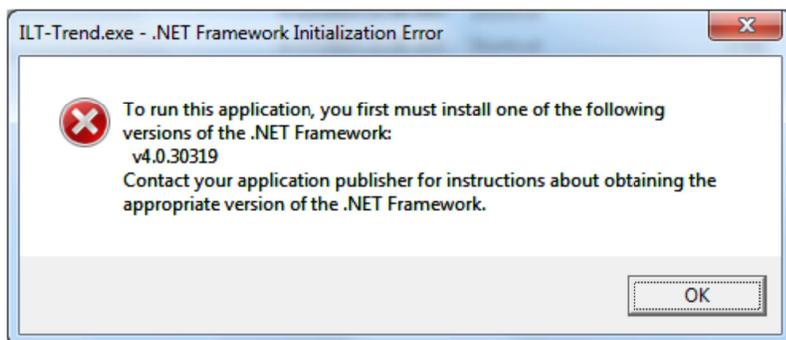
It has been documented in Microsoft support forums that, at times, a mouse driver will attach to the FTDI driver's USB Serial Port. In this case, the mouse driver would attach to the ILTx000 radiometer. To test if this may be the issue:

1. If a USB-mouse is not connected, and one is handy, connect it before connecting the ILTx000 radiometer. If this is the conflict, the mouse driver will likely attach to the actual mouse and not to the ILTx000.
2. Connect a single ILT1000 and UNcheck the following configuration item: Device Manager -> Ports (COM & LPT) -> USB Serial Port (COM ##) -> Properties -> Port Settings -> Advanced -> Serial Enumerator. And Reboot the system. The understanding is that UNchecking this setting prevents system devices (a mouse for example) from using this port.

## 6. ILT5000 Wireless Troubleshooting

<p>ILT5000 was working wirelessly but after trying access it again later, it is not responding.</p>	<ul style="list-style-type: none"> <li>• Check that the “Mode” LED is flashing slowly, indicating that the 5000 is connected to a wireless network.</li> <li>• Power-cycle the 5000 with the read-panel power switch. The 5000 “auto-pairs” to the first computer that attempts to talk to it wirelessly. If a new computer, or the same computer with a new dynamic IP address, attempts to talk to a 5000 that has been previously paired, the 5000 will not respond.</li> </ul>
<p>ILT5000 does not work, or does not work reliably, with a smartphone hot-spot network</p>	<ul style="list-style-type: none"> <li>• There is a known issue with operating the ILT5000 on an iPhones Personal Hotspot. The workaround is to disable Bluetooth, which somehow causes the iPhone network to send UDP packets, interfering with the ILT5000 command processing.</li> <li>• Issues have been reported, but not confirmed, with Samsung hot-spots. The customer reporting this issue connected a non-smartphone wireless network to work around the issue.</li> </ul>

## 7. .NET version 4 or greater not installed



This error will occur if the computer is running an older Rev of .NET or not running .NET 4.0 or

if the .NET install had an issue. To fix the error you must install or re-install Microsoft .NET Framework 4.0 Web Installer.

<https://www.microsoft.com/en-us/download/details.aspx?id=17851>

## 8. Missing Visual C++ Redistributables

The DataLight II software for Windows 7 and 8 requires the Visual C++ Redistributable for Visual Studio 2012 (VSU\_4\vcredist\_x86.exe), currently found at: <https://www.microsoft.com/en-us/download/details.aspx?id=30679>.