

INSTALLATION OF WIN8/8.1 COMPATIBLE DRIVER FOR ORION STARSHOOT AUTOGUIDER (SSAG 4.0)

The previous Orion StarShoot AutoGuider driver (**SSAG**) was found to be incompatible with **USB3** ports on **Windows 8** computers.

When plugged into a **USB2** port on a **Windows 8** computer the **SSAG** may function normally.

But when plugged into a **USB3** port on a **Windows 8** computer the **SSAG** was not recognized correctly.
(Device Descriptor Request Failed)

The problem can be seen as an unknown device within Device Manager (**FIGURE 1**).

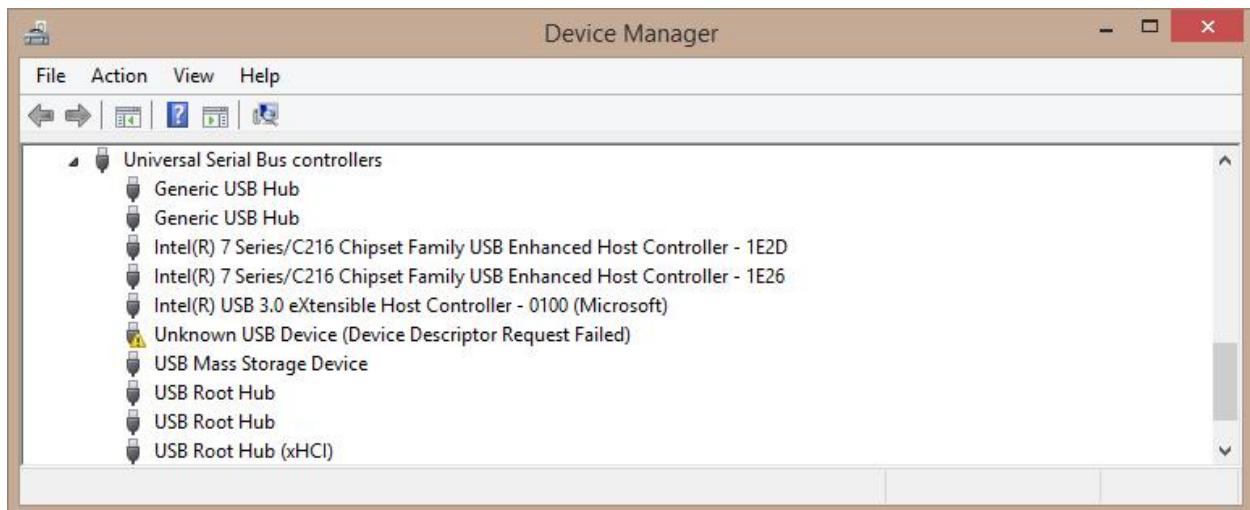


FIGURE 1. Unknown USB Device (Device Descriptor Request Failed)

REMOVAL OF PREVIOUS SAG DRIVERS

In order to install the **windows 8/USB3** compatible driver the old **SSAG** driver must first be removed if previously installed.

If an old driver has not been installed proceed to section **INSTALLATION OF NEW WINDOWS 8/USB3 COMPATIBLE DRIVER**

To uninstall the old driver first unplug the **SSAG** camera if connected to computer.



Figure 2. Uninstall StarShoot Autoguider Drivers.

Open an Explorer window (**Windows key + “E” key**) and navigate to the following location

"C:\Program Files (x86)\Orion\SSAG_Drivers"

Next double click on the file” **unins000.exe**” to uninstall the old drivers.

Alternatively if using shell menu, from the start menu select **Programs->SSAG Drivers->Uninstall StarShoot Autoguider Drivers (Figure 2)**.

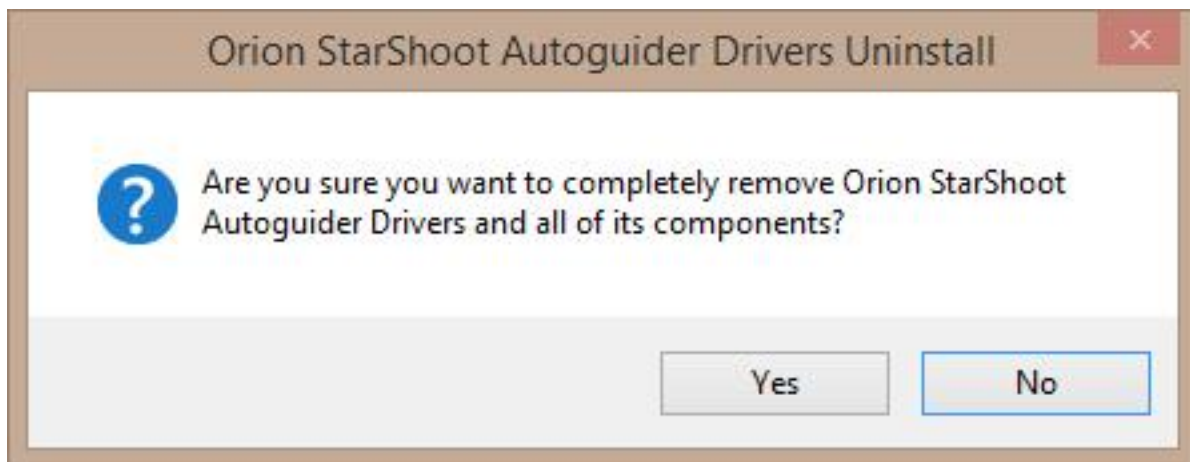


Figure 3. On screen prompt for Driver removal.

Select **Yes** to onscreen prompt to remove the Autoguider driver (**Figure 3**). After a short while another pop window will appear stating that the driver has been successfully removed (**Figure 4**).

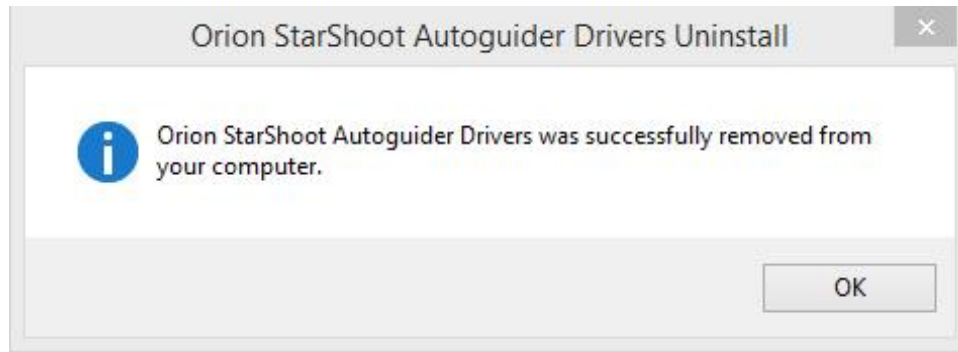


Figure 4. Successful removal of driver.

Next check that no other versions of the driver still exists on the system. This is done by first plugging in the **SAG** into a **USB2** port on the computer, then Go to Device Manager, and select “**Action->Scan for Hardware changes**”. Please note it is important to plug into a **USB2** port at this stage if you have both USB3 and USB2 ports.

Please note: If you have no USB2 ports on the computer then please use USB3 ports instead.

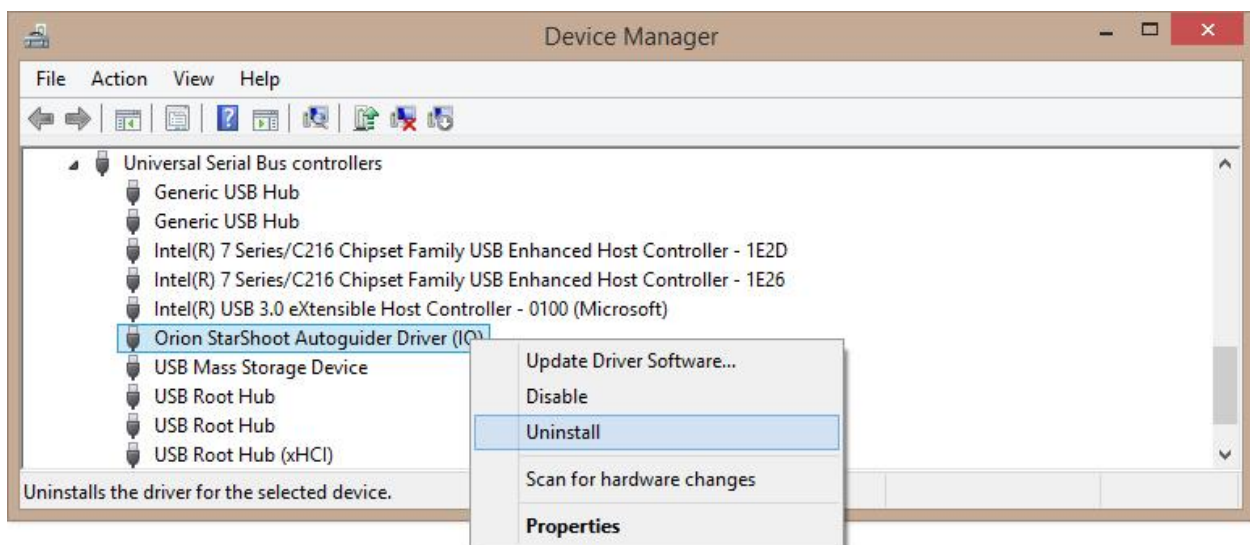


Figure 5. Removing Orion StarShoot Autoguider Driver (IO).

If the **Orion StarShoot Autoguider Driver (IO)** is seen listed under **Universal Serial Bus controllers** then right click on **Orion StarShoot Autoguider Driver (IO)** and select **Uninstall (Figure 5)**.

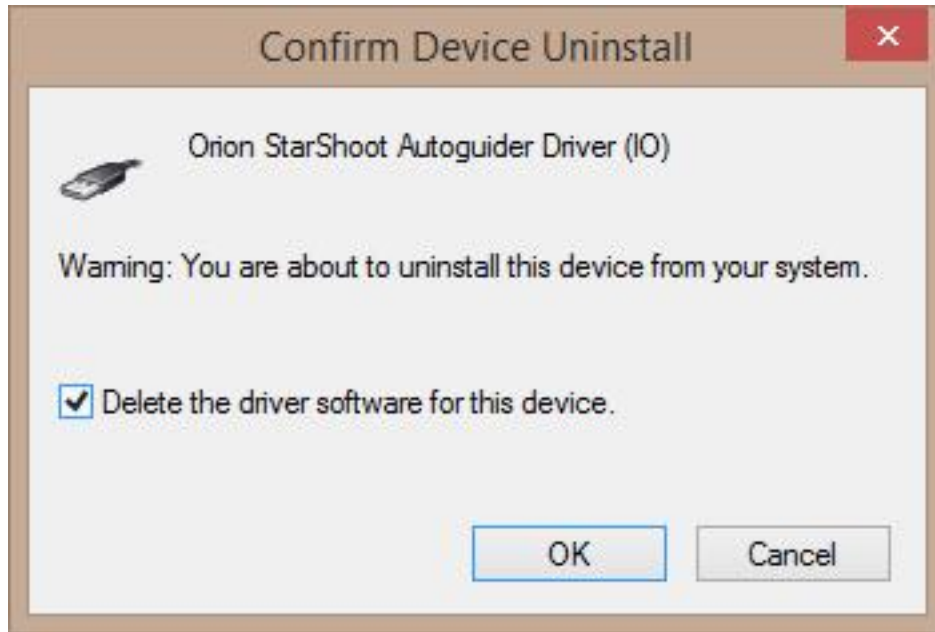


Figure 6. Confirm Device Uninstall (Autoguider Driver IO).

In the **Confirm Device Uninstall** window check the checkbox to **Delete the driver software for this device** and press **OK (Figure 6)**.

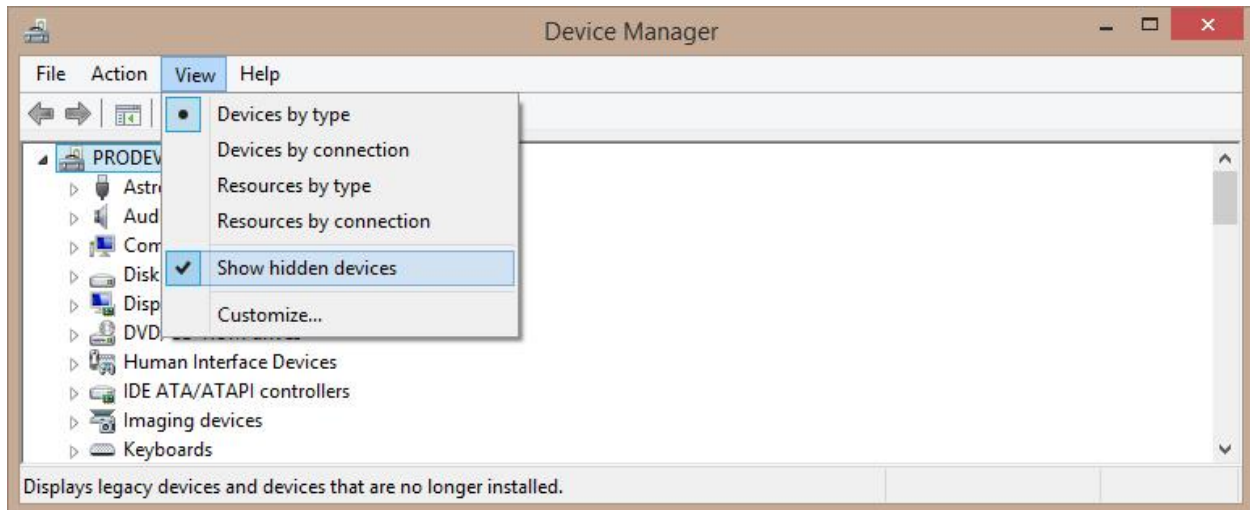


Figure 7. Show hidden devices.

Within Device Manager select **View->Show hidden devices** to turn on display of hidden **devices (Figure 7)**.

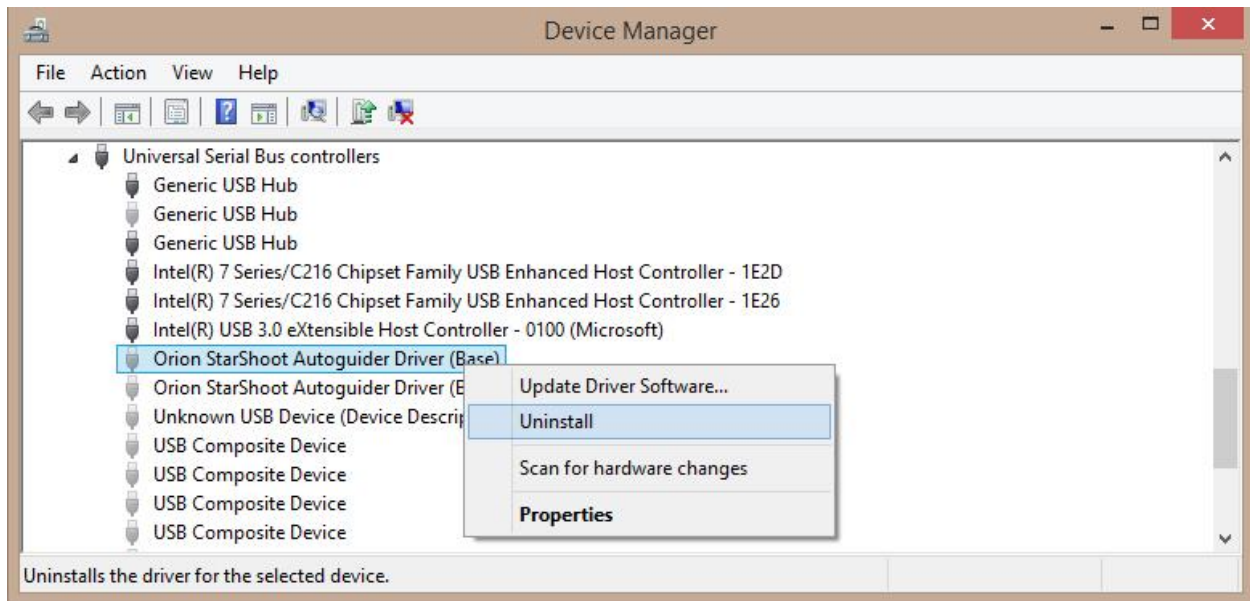


Figure 8. Uninstalling each instance of hidden devices.

If **Orion Starshoot Autoguiding Driver (Base)** is seen listed under **Universal Serial Bus Controllers** please right click on each instance and select **uninstall (Figure 8)**.

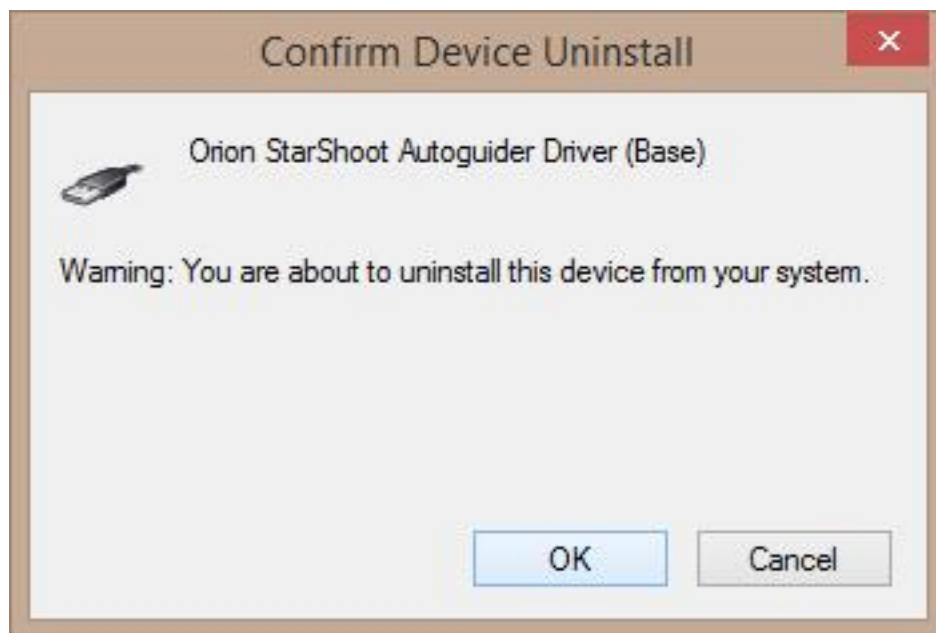


Figure 9. Confirm Device Uninstall (Autoguiding Driver Base).

Press **OK** to confirm Device Uninstall (**Figure 9**).

Repeat uninstall procedure for each instance of the driver seen listed under **Universal Serial Bus Controllers**.

After removing all instances of the StarShoot Autoguider driver, unplug camera, then plug camera back into a USB2 port and within Device Manager select “**Action->Scan for Hardware changes**”.

No Orion Autoguider drivers should now be listed under **Universal Serial Bus Controllers**.

Within Device Manager select **View->Show hidden devices** to now turn off display of hidden devices (**Figure 7**).

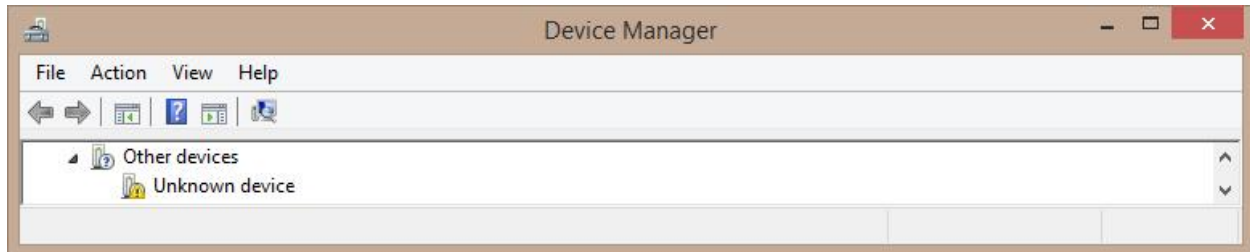


Figure 10. Other devices -> Unknown device.

If the camera is now plugged into a **USB2** port **Unknown device** will now be listed under **Other devices** (**Figure 10**).

Please Note that there will be a yellow warning sign to show that no drivers have been loaded for this device.

If the camera is plugged into a **USB3** port **Unknown device** will be listed under **Other devices**.

All previous **SSAG** drivers have been removed and the computer is now ready for installation of the **Windows 8/USB3** compatible driver.

INSTALLATION OF NEW WINDOWS 8/USB3 COMPATIBLE DRIVER

Unplug camera from computer.

Extract all files from **SAG_Win8_Compatible_Driver.zip** to a local directory on your computer.

Double click the file **SSAGdrvfull.exe** for a full installation of the driver, PHD guiding DLL and the ASCOM driver. (If a security message comes up choose more info and Run Anyway).

Alternatively double click the file **SSAGdrvinst.exe** to install the driver only.

Alternatively double click the file **SSAGASCOMSetup.exe** to install the ASCOM driver only.

Alternatively double click the file **SSAGPHDUPDATE.exe** to install the PHD update only.

Alternatively double click the file **SSAGPHD2UPDATE.exe** to install the PHD2 update only.

Please note: If **PHD** or **PHD2** software is re-installed at any time then the **SSAGPHDUPDATE.EXE** or **SSAGPH2UPDATE.EXE** patch installers must also be installed too.

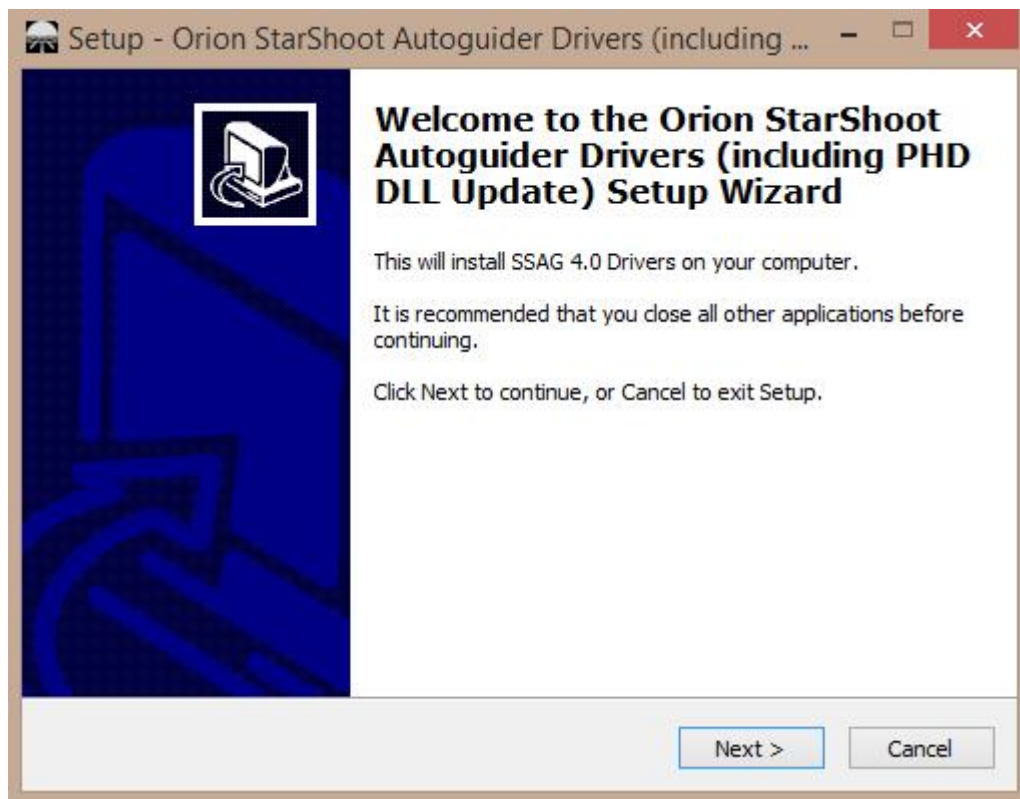


Figure 11. Installing SSAG 4.0 Drivers.

Follow the install prompts to install **SSAG 4.0** drivers (**Figure 11**).

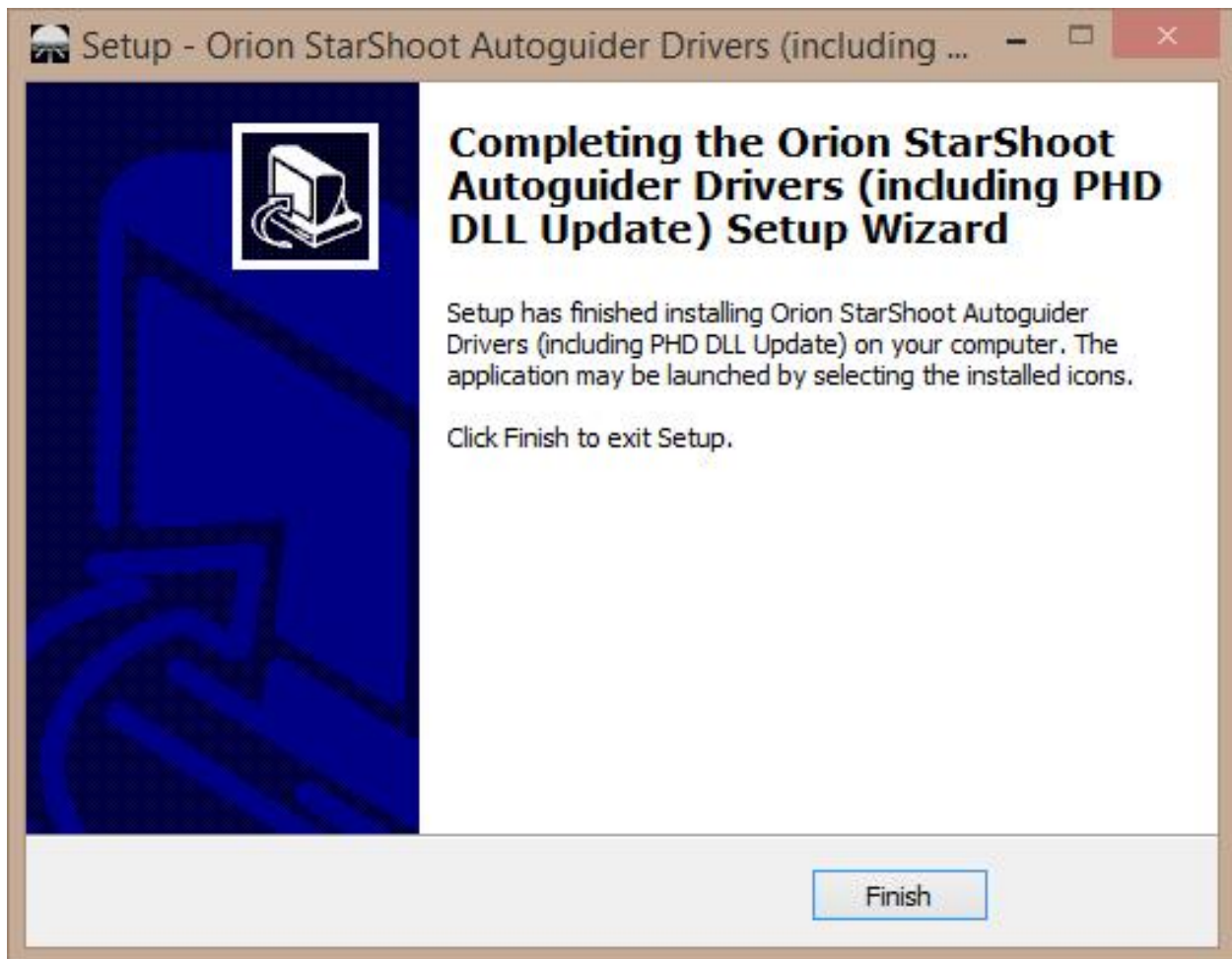


Figure 12. Complete installation.

Select **finish** to complete installation (**Figure 12**).

VERIFY INSTALLATION OF NEW DRIVER

Plug camera into a **USB3** port and check if camera is now recognized.

If device is seen as “**Unknown device**” right click the unknown device and select “**Update Driver Software**” (Figure 13).

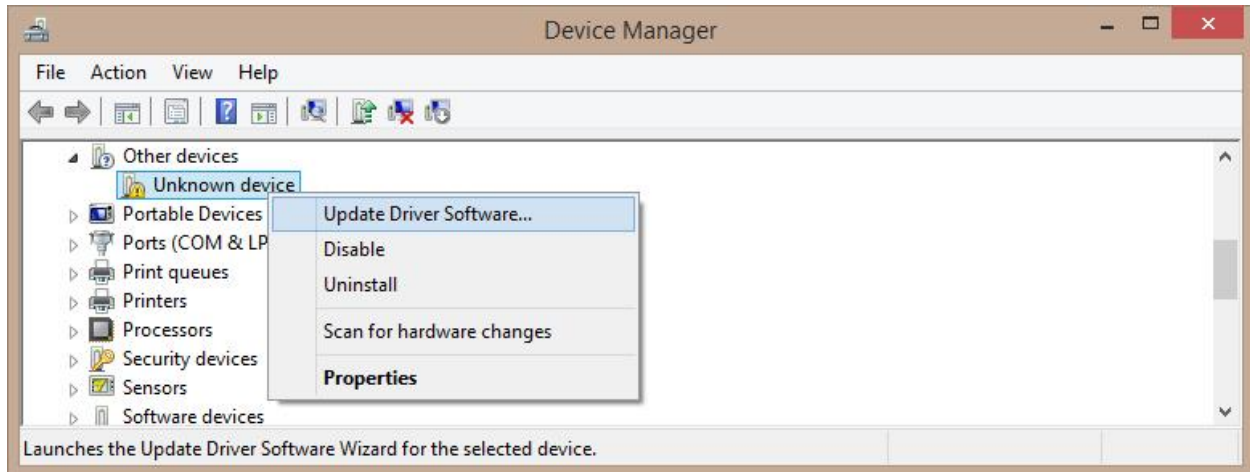


Figure 13. Unknown Device in Device Manager.

Next select “**Browse my computer for driver software**”.

The driver installer uses the following path by default unless another location was chosen at the time of installation.

C:\Program Files (x86)\Orion\SSAG_Drivers_WIN8

Click **Browse** button and browse to the location of the installed drivers.

Select “**Next**” to continue installation.

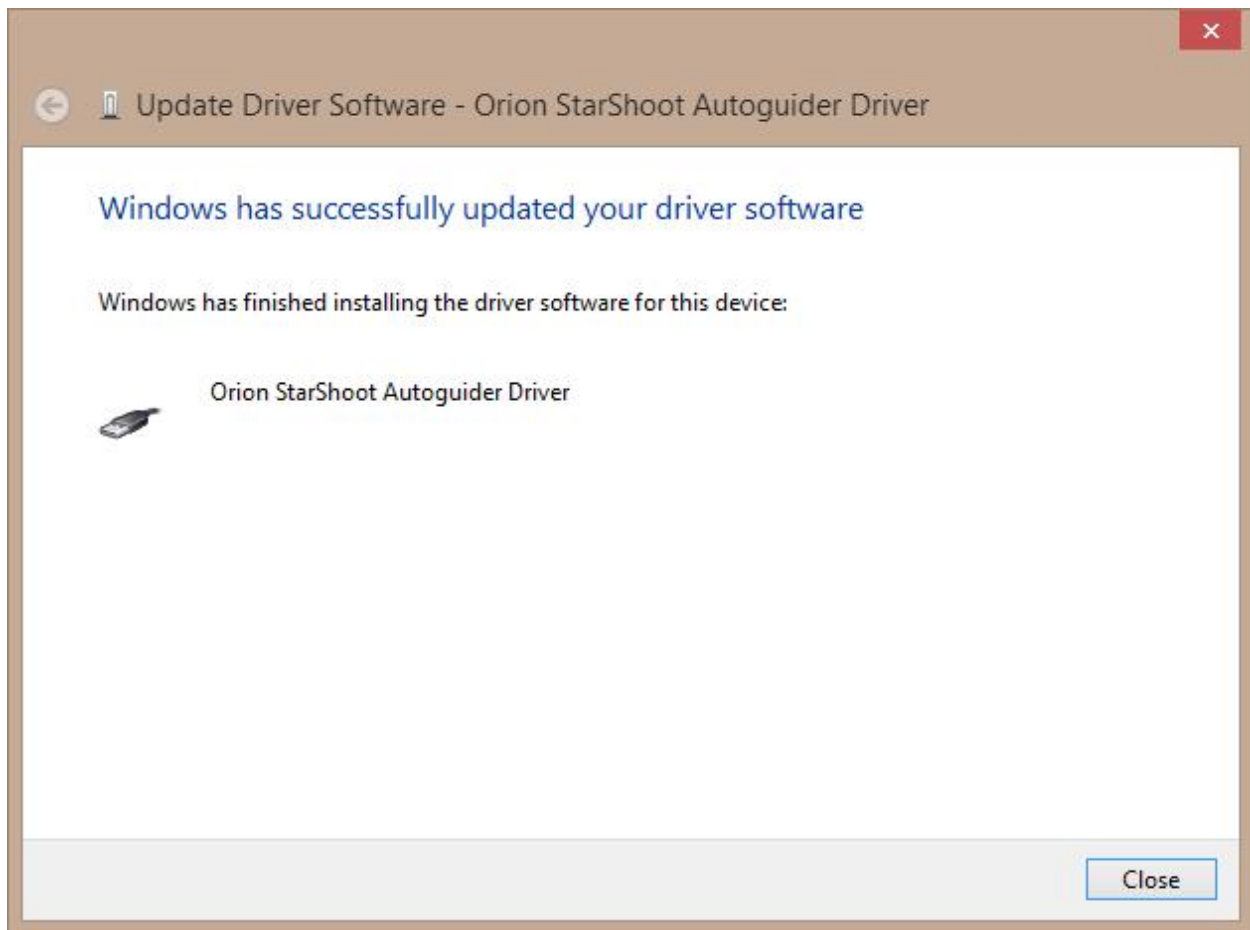


Figure 14. Successful update to driver software.

After installation windows will indicate successful installation of the **SSAG 4.0** driver (**Figure 14**).

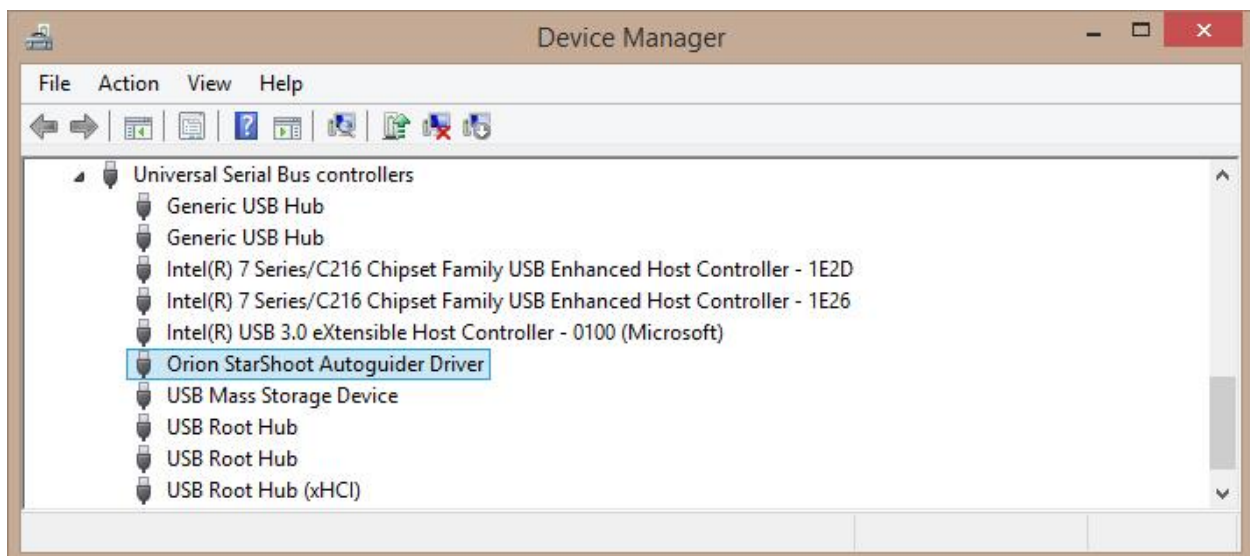


Figure 15. Device Manager showing newly installed driver.

Device manager should now display “**Orion StarShoot Autoguider Driver**” indicating successful installation of the new driver (**Figure 15**).

Using SSAG 4.0 with PHD guiding software.

PHD guiding software should have already been installed prior to installation of the driver.

If not run the full installer again (**SSAGdrvfull.exe**) or just the PHD patch installer (**SSAGPHDUPDATE.exe**). This will allow the StarShoot autoguider to be selected from the camera drop down menu within PHD software.

Please note” It may take a few seconds to connect to the camera once selected from the drop down.

Using SSAG 4.0 with PHD2 guiding software.

PHD2 guiding software should have already been installed prior to installation of the driver.

If not run the full installer again (**SSAGdrvfull.exe**) or just the PHD2 patch installer (**SSAGPHD2UPDATE.exe**). This will allow the StarShoot autoguider to be selected from the camera drop down menu within PHD2 software.

Please note” It may take a few seconds to connect to the camera once selected from the drop down.

Using SSAG 4.0 with ASCOM software.

The **SSAG** can also be selected as an ASCOM camera within PHD software (or other compatible **ASCOM** software) if the **SSAG ASCOM** driver was installed using either the full installer (**SSAGdrvfull.exe**) or the ASCOM installer (**SSAGASCOMSetup.exe**).

Select **Orion SSAG Camera** from list of **ASCOM** devices. The camera gain can be adjusted under properties.

