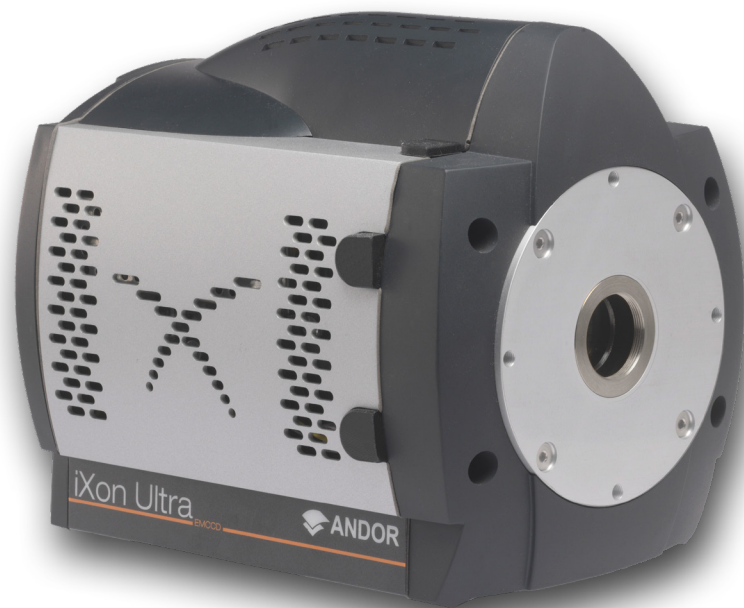
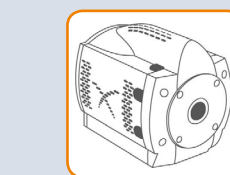


# iXon Ultra & Life 888 Quick Start Guide



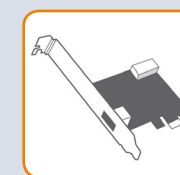
## 2 Unpacking the Boxes



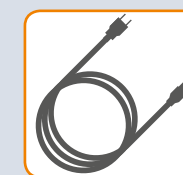
iXon Ultra or Life 888  
EMCCD Camera



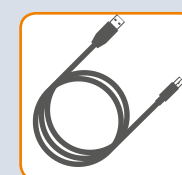
Software or Driver  
CD and User  
Manual on CD



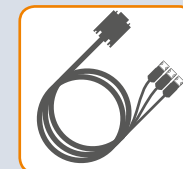
USB 3.0  
Framegrabber  
PCIe Card



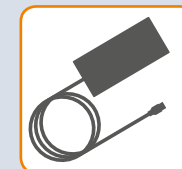
Country Specific  
Power Cord



USB 3.0 Cable



Multi I/O  
Timing Cable



PS-90 Power  
Supply

## 1 Preparing Your Facility



Handle the camera and accessories with care.  
iXon Ultra & Life 888 weighs 3.7 kg [8 lb 3 oz].



Observe anti-static precautions when  
installing the camera.



Ensure 100 mm clearance around camera  
and power supply vents (Do **not** block  
vents when operating on benchtop).



Operation of the camera close to intense  
pulsed sources (e.g. plasma and X-ray  
sources) may compromise performance.



Keep dry, <70% humidity non-condensing.



Use correct power supply and cables.



Operate between 0°C and 30°C  
Store between -25°C and 50°C.



Stable cooling performance will depend on  
variables including: readout speed, vertical shift  
speed, size of region of interest (standard or crop  
mode) and ambient temperature  
User testing is advised to determine stable cooling  
temperature for selected conditions.  
Refer to the user manual for guidelines on cooling  
recommendations.

Refer to the user manual for further information.

## 3 Installing Software (Solis, SDK or iQ)

**You must have administrator access on your PC to perform this installation.**

The same instructions cover the installation procedure for Andor's Solis, SDK or iQ software, which is used in conjunction with third party software. If you are planning to run your camera through a third party interface you will require the Andor Drivers, called SDK.

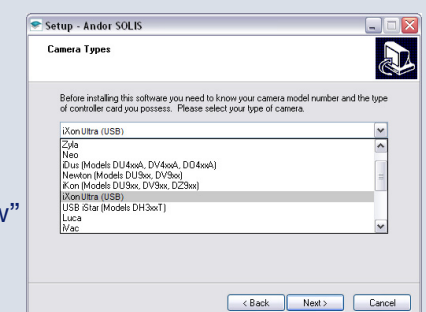
Switch on the PC, insert CD and run the **Solis (or SDK) setup .exe** file on the CD or download location.

- Confirm the version of software.
- Follow the on screen prompts.
- Select the installation directory when prompted.
- If prompted, select the appropriate camera model from the list.
- On the final window click on **"Install"**. During the installation a number of other windows will appear as various drivers are installed.
- To complete the installation, when prompted select **"Yes, restart the computer now"** and click on the finish button.

For more information visit: <http://www.andor.com/scientific-software>

AndorSolisSetup-4.30.30040.0-64-bit.exe

AndorSDKSetup-2.102.30040.0.exe

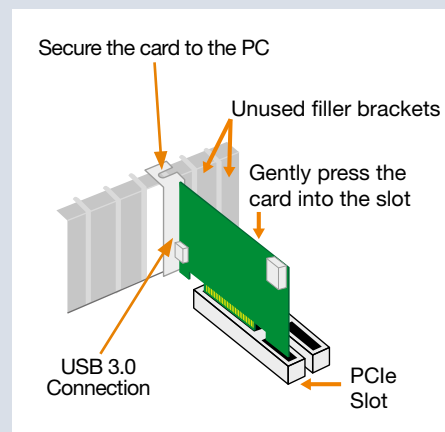


## 4 Installing the Camera USB 3.0 PCIe Card & Card Driver



**Ensure your PC is powered off. Ensure anti-static precautions using anti-static strap provided. Keep all screws safe.**

1. Unplug all cables from the rear of the computer.
2. Open the PC enclosure to gain access to the expansion slots.
3. Locate a suitable PCIe slot: **use an x4 PCIe slot only.**  
*If you are unsure which slot is correct, please consult the PC user manual.*
4. Remove the filler bracket corresponding to the slot you intend to use.
5. Remove the USB 3.0 card from its protective ESD packaging and insert fully into the expansion slot.
6. Ensure the card's mounting bracket is flush with any other mounting or filler brackets to either side of it, then secure the controller card in place.
7. Replace the computer cover and secure with mounting screws if applicable.
8. Reconnect any accessories you were using previously.



### Install the USB 3.0 PCIe Card Driver manually (not required for Windows 10)

- USB 3.0 PCIe card drivers must be installed manually for PCs running versions prior to Windows 10. Refer to the instructions on the driver CD supplied with the USB 3.0 Card.
- Check Startech's website for the latest driver and firmware
  1. Check Startech's website for [www.startech.com/Downloads](http://www.startech.com/Downloads)
  2. Enter product code **PEXUSB3S25** and hit Search
  3. If a later driver is available, then download and install.

### Disable Power Management for the "Renesas USB 3.0 Host Controller":

1. Navigate to 'Renesas USB 3.0 Host Controller' properties menu in **Device Manager** (Control Panel>Device Manager> Universal Serial Bus Controllers).
2. Select the **Advanced** tab.
3. Check the **Disable USB 3.0 power management functions** checkbox.

## 5 Cooling Guidelines

1. The iXon Ultra and Life 888 overclock the CCD-201 sensor which generates more heat from the sensor.
2. These models retain the cooling technology and the cooling performance of other iXons at lower readout speeds (10 MHz and below ). *At higher readout speeds it is necessary to set a higher cooled temperature: -55°C is acceptable in most modes – refer to the user manual for model details.*
3. At higher readout speeds (and shorter exposures) dark current is less important, so this higher CCD operating temperature is expected to be an acceptable compromise.

If an unusual crop mode or operating regime is required it makes sense to find the camera's temperature settling point before starting the measurement.

1. Set max cooling -110°C
2. Run the camera in intended mode for 20 minutes
3. Note cooling temperature achieved
4. Set a temperature 2-5°C warmer as the set point
5. Run required measurement

If the temperature control circuit unlocks during a measurement it will impact on measurement accuracy– in particular EM gain calibration.

## 6 Connecting your Camera and Switching it on



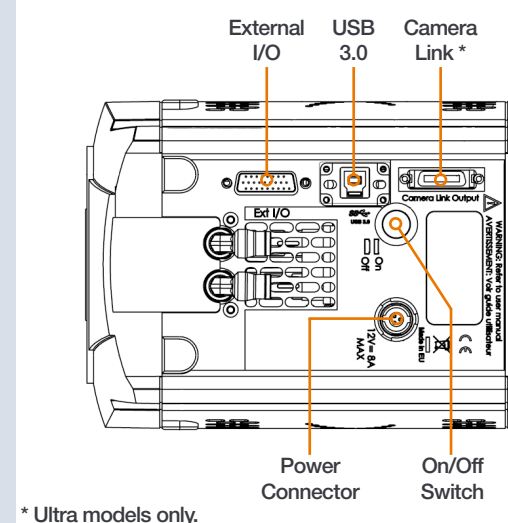
**Ensure that the Camera ON/OFF switch is in the OFF position AND your PC is switched OFF.**

- Attach the camera to lens or optical system using the camera C-mount interface as required
- Insert the 12V DC power cable into the power connector on the bottom plate of the camera, ensure the orientation is correct. **NEVER** forcibly insert the connector.
- Connect the supplied USB 3.0 cable between the USB 3.0 connector on the camera and the corresponding slot on the PC
- If required, connect the I/O expander cable to the I/O 15 way D type connector.
- Switch the camera ON using the ON/OFF switch. You should hear an audible confirmation (camera start-up tone).
- Turn ON the PC.
- Start your software.
- View and adjust the acquisition settings as required.
- Start acquiring data.

### NOTES:

- Use only the USB 3.0 cable supplied by Andor to ensure performance

iXon Ultra & Life 888 Connections



## ? Troubleshooting

### Camera start-up tone does not sound on start-up

- The camera start-up tone should be audible momentarily when the camera is switched to ON.
- If this does not occur, ensure that power is connected to the camera and the ON/OFF switch is set to ON.

### Support Device not recognised when plugged into PC

- Choose another USB port.
- If this is unsuccessful review "Use of Super speed USB 3.0 I/O on one camera" in the trouble shooting guide.

### Image Data not sent to PC

- Check that Power Management for the USB 3.0 Host Controller has been disabled

### Temperature Trip Alarm sounds (continuous tone)

Should the buzzer sound ensure the following:

#### Air Cooling

- Check that the air vents on the camera are not blocked and there is sufficient clearance (100 mm) around the camera
- The ambient air temperature is not above 30°C.
- The fan has not been deactivated (or the speed set too low) in software.

#### Water Cooling

- Check that the cooling system is operating correctly
- NOTE: When using water cooling, always use water that is above the dew point of the ambient environment to prevent condensation from occurring.



For additional troubleshooting information please refer to the user manual  
For further technical information about the iXon Ultra and Life series go to: [andor.com/iXon](http://andor.com/iXon)  
You can find the latest user manuals on [MyAndor \(http://my.andor.com/login.aspx\)](http://my.andor.com/login.aspx)