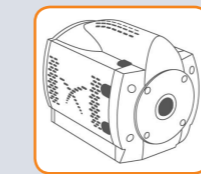


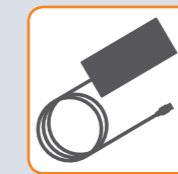
2 Unpacking the Boxes



iXon Ultra 897
EMCCD Camera



Software or Driver
CD and User
Manual on CD



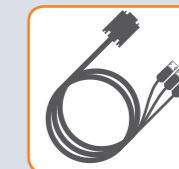
PS-24 Power
Supply



Country Specific
Power Cord



USB Cable



Multi I/O
Timing Cable

1 Preparing Your Facility



Handle the camera and accessories with care. iXon Ultra 897 weighs 3.7 kg [8 lb 2 oz].



Use correct power supply and cables.



Observe anti-static precautions when installing the camera.



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



Ensure 90 mm clearance around camera and power supply vents (Do **not** block vents when operating on benchtop).



Refer to the cooling guidelines in Section 6 and your iXon Ultra user manual for further information



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.

Refer to the user manual for further information.

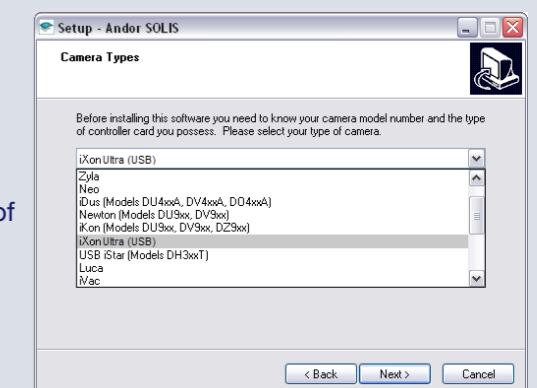
3 Installing Software (Solis, SDK or iQ)

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 "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.
- When prompted for camera type select **iXon Ultra (USB)**.
- 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.



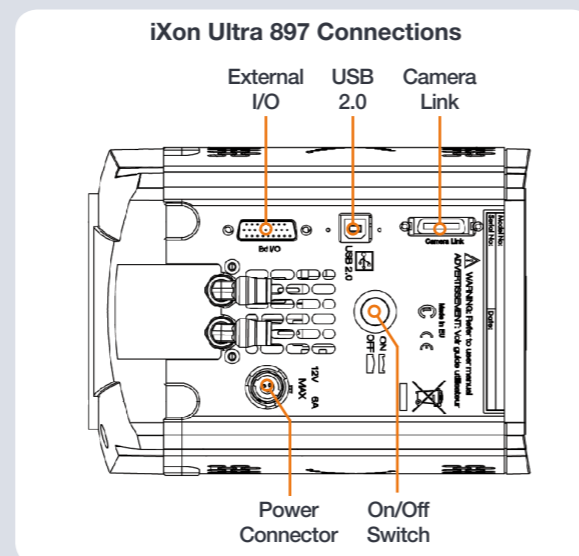
For more information visit: andor.com/software/software_support/

4 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 cable between the USB connection on the camera and the corresponding slot on the PC
- If required, connect the multi I/O cable to the External 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.
- Start acquiring data.



6 Guidelines for use of Water Cooling with the iXon Ultra 897



NOTE: Always ensure that the temperature of the liquid coolant circulated through the camera head is above the dew point of the camera ambient. Use of coolant at or below the dew point will result in permanent damage to the camera head, due to formation of condensation on internal components.

- **Recommended Tubing: 10 mm (0.4") outside diameter**, i.e. a wall thickness of 2 mm (0.08"). Alternative hose dimensions and materials should be thoroughly tested to ensure a leak tight seal is achieved with the barbed inserts.
- **Recommended Coolant:** It is recommended that **de-ionized water (without additives)** is used as the coolant to prevent deposits forming. Some mains supply water is heavily mineralized (i.e. "Hard") which could cause deposits in the water circuit inside the camera. This can reduce the flow-rate and cooling efficiency.
- The specified cooling performance of the camera can be achieved with coolant flow rates of >0.75 litres per minute, the maximum recommended pressure of coolant circulating through the camera head is 2 bar (30 PSI).
- In the event that replacement hose inserts / barbs are required, please contact your local Andor representative.
- **Connecting the Coolant Hoses**
 1. Secure the hose to the barbs on the hose inserts
 2. Click both hose inserts into the quick-release couplings on the side of the camera
 3. Ensure the hose inserts are located securely in place
- **Removing the Coolant Hoses**
 1. Depress the collar on the quick-release couplings
 2. The hose insert connections will now be released and can be disconnected from the quick-release coupling

WARNING: Ensure that all water has been drained from the hoses and the coolant channel within the camera head before removing the coolant hoses. Care must be taken to avoid permanent damage to the camera system resulting from leakage of coolant during connection / removal of hoses.

5 USB 2.0 Interface Information



The following guidelines for the Camera to PC USB connection should help ensure you achieve the optimum performance from your iXon Ultra 897.

Selecting USB ports

- It is recommended to use a rear panel USB connector on the PC for best performance as these are mounted directly on the motherboard of the PC.
- On some desktop PCs, the USB connectors on the front panel are implemented badly and may fail to connect to USB 2.0 high speed devices. If this occurs, please use another USB port on the rear panel of the PC.

Connecting more than one iXon Ultra to a PC

- Most modern desktop PCs are fitted with two EHCI (Enhanced Host Controller Interfaces) and are therefore able to support at least two iXon Ultras running at "high speed". Please contact Andor if any problems are encountered.
- USB 3.0 PCI-e interface cards can be used if more than two high speed USB 2.0 interfaces are required simultaneously (USB 2.0 interface cards generally use a PCI interface standard and do not offer the adequate bandwidth).

? 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.

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 (90 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 on the CD provided and for technical information about the iXon Ultra go to: andor.com/iXon