

ZL41 Quick Start Guide - USB 3.0 Models

For ZL41 Cell and ZL41 Wave models with air or liquid cooling



2 Unpack the Camera

Camera	Essentials	Cables				
 ZL41 sCMOS Camera (USB version) (ZL41 5.5 USB 3.0 or ZL41 4.2 USB 3.0 version)	 USB 3.0 PCIe Card	 Coolant Pipes water cooled models only	 Hex Key (1.5 mm)	 USB 3.0 Cable	 Power Supply	 Country Specific Power Cord
	 Documentation scan or visit: andor.oxinst.com/ welcome	 Software (copy supplied)	 Multi I/O Timing Cable	 Anti-Static Strap		

1 Prepare your Facility



Handle the camera and accessories with care.



Use correct power supply and cables.



Observe anti-static precautions when installing the controller card and camera.



Store between -10°C and 50°C.



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



ZL41 5.5 (all models), ZL41 4.2 (water cooled): operate between 0°C and 35°C
ZL41 4.2 (air cooled): operate between 0°C and 27°C



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

For water cooled models the coolant system must be connected and water temperature set above the dew point before the camera is switched on.



Keep dry, <70% humidity non-condensing.

Refer to the user manual for further information

3 Install Software (Solis or SDK)

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

These instructions cover installation of both Andor Solis and Andor SDK if ordered. A copy of the software is provided within the camera box. Additionally, the latest software files are available to download on request, please sign in or create an account at andor.oxinst.com/downloads

Windows: Switch on the PC, run the setup exe from the supplied copy or the downloaded file: e.g. AndorSDK3Setup-<version>.exe

1. Confirm the version of software (minimum is v3.14.x).
2. Follow the on screen prompts.
3. Select the installation directory when prompted.
4. If prompted for camera type select **Zyla**.
5. On the final window click on **"Install"**. Continue to follow the on screen prompts.
6. To complete the installation, when prompted select **"Yes, restart the computer now"** and click on the finish button.

Linux:

For detailed instructions on how to install the SDK3 drivers on Linux please refer to Section 1.5.2 in the Andor Software Development Kit Manual, available at andor.oxinst.com/downloads.

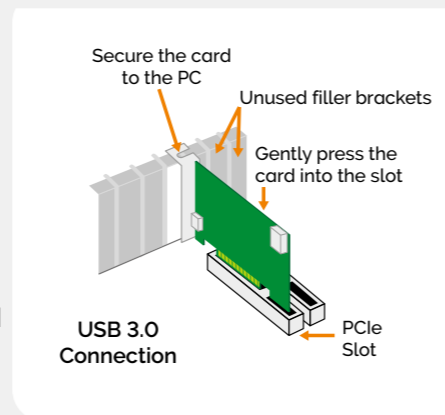


4 Install the Camera Controller (PCIe) Card

 Ensure your PC is powered off.

 Ensure anti-static precautions and use the anti-static strap provided to prevent potential ESD damage. 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 (x4, x8 x16 PCIe recommended - note that x1 slots may be shared with other devices resulting in reduced system performance).
4. *If you are unsure which slot is correct, please consult the PC user manual.*
5. Remove the filler bracket corresponding to the slot you intend to use.
6. Remove the controller card carefully from its protective ESD packaging and insert the card connector fully into the expansion slot.
7. 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.
8. Replace the computer cover and secure with mounting screws if applicable.
9. Reconnect any accessories you were using previously.



Notes:


- Use only the USB 3.0 cable supplied by Andor.
- Do not connect any other device to the USB 3.0 PCIe card as this may interfere with normal camera operation or performance.
- Camera operation with USB 3.0 PCIe cards not supplied by Andor cannot be guaranteed.

Check & Set BIOS options (for PCs not supplied by Andor)

Enter the BIOS menu when starting PC. For Dell workstations, press F12 at start-up and select System Setup in the One Time Boot Menu. For Dell workstations 3 options in the Performance menu of the BIOS need to be checked/ set:

- C-States Control – Disable C-States.
- Intel Speed-step – Disable Speed-step.
- Memory Node Interleaving – Set from NUMA to SMP. Note: This option is only available on larger workstations with 2 physical processors and may have a different name- ensure that NUMA is disabled.

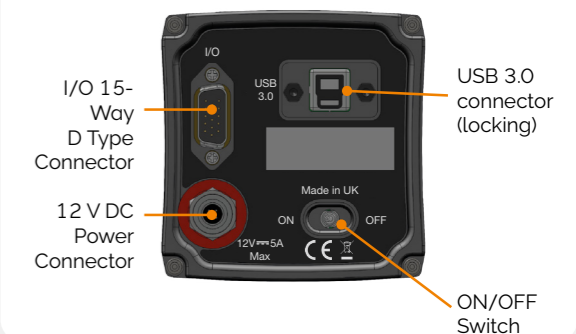
5 Connect the Camera and Switch it on

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

- For **Water Cooled** models, ensure the coolant system is connected before the camera is switched on- *please refer to the user manual.*
- Insert the 12 V DC power cable into the power connector at the rear 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 Framegrabber PCIe card.
- 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 (a long beep).
- Turn ON the PC.
- Start your software.
- View and adjust the acquisition settings as required.
- Start acquiring data.

Note: If you need to adjust the C-mount, refer to the ZL41 user manual.

ZL41 USB 3.0 version Connections



? Troubleshoot

Camera buzzer does not sound on start-up

- The camera buzzer should be audible momentarily (as a short beep followed by a long beep) 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.

Camera is not recognized by PC

- Ensure camera is switched to ON (The camera must be powered up before the software is initiated).
- Check that the camera cable(s) are securely and correctly connected between the camera head and the PCIe card in the PC (shown in step 4).
- Check that the PCIe card and drivers have been installed properly (Control Panel – System – Hardware – Device Manager – Imaging Devices).

Please see the [Hardware Guide](#) for further information on Troubleshooting.

Online access to technical documentation and software downloads is available at:

andor.oxinst.com/downloads