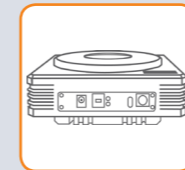




## 2 Unpacking your Camera and Accessories

### Camera

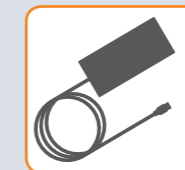


Apogee Alta CCD Camera

### Standard Items



Apogee Integration Starter Kit CD



12 V Alta Power Supply



Country Specific Power Cord



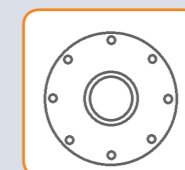
USB 2.0 Cable

### Optional Items

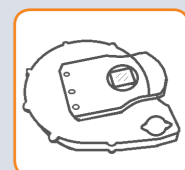
Optional items are supplied as specified at the time of ordering:

Items include:

- Lens Adapters
- Telescope Adapter
- USB Extender
- Filter Wheel
- Temperature compensated focuser



Lens Adapter



Filter Wheel

## 1 Preparing your Facility



Handle the camera and accessories with care. Apogee Alta weighs approx 1.9 kg [4 lb 2 oz].



Use correct power supply and cables.



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



Operate between 0°C and 40°C. Refer to User guide for further information regarding ambient temperature, cooling performance and dew point.



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

Store between -25°C and 50°C.



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 the Camera Acquisition Software

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

- We recommend you install your camera acquisition software e.g. Windows SDK for Apogee, Micro-Manager or MaxIm DL/CCD before setting up your Apogee camera.
- Please see the Windows SDK for Apogee, Micro-Manager or MaxIm DL/CCD installation guides for specific instructions related to installation of this software.
- Apogee cameras are supported by MaxIm DL/CCD version 3.21 and beyond.

If you are using different camera control software, please refer to the software installation information supplied with the software.

For more information visit: [andor.com/software/software\\_support/](http://andor.com/software/software_support/)

## 4 Install the Camera Drivers

### WARNING:

- Do not connect your Apogee camera to a PC before installing the drivers. If you do and the “Add New Hardware Wizard” appears, please select the Cancel button.
- Never connect or disconnect the camera from the PC during operation.

1. Make sure your Windows user account has administrator privileges.
2. Double click on the setupApogeeSoftware.

|                     |                  |                       |          |
|---------------------|------------------|-----------------------|----------|
| AIS-69x32           | 01/06/2012 20:30 | Icon                  | 7 KB     |
| apgSwInstall_x86    | 25/07/2014 08:09 | Windows Installer ... | 5,629 KB |
| apgSwInstall_x861   | 25/07/2014 08:09 | Cabinet File          | 5,388 KB |
| ApogeeUsb.32bit     | 25/07/2014 08:09 | Windows Installer ... | 2,674 KB |
| ApogeeUsb.64bit     | 25/07/2014 08:09 | Windows Installer ... | 3,440 KB |
| autorun             | 01/06/2012 20:30 | Setup Information     | 1 KB     |
| setupApogeeSoftware | 25/07/2014 08:09 | Application           | 370 KB   |

3. Follow the steps in the Installation Wizard.
4. Click Finish.
5. The drivers for your Apogee camera are now installed on your PC (A notification should be displayed in the bottom right corner of your PC screen).

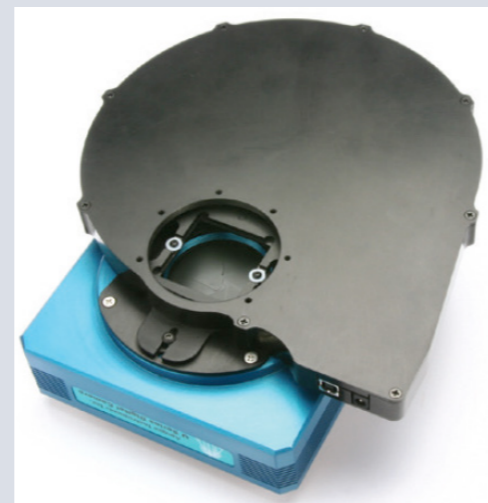
## 5 Mounting the Camera

The Alta can be connected to a telescope, lens or other equipment using a wide range of plate-lens adapters and other accessories. An outline is shown below. Refer to your user guide and contact your customer support representative for further information if required.

1. Ensure the camera control software (e.g Maxim DL/CCD) and drivers have been installed.
2. Attach the camera mounting adapter (or filter wheel) to the camera face plate using the supplied mounting screws.
3. Attach the camera and mounting assembly to the telescope or lens.
4. Now connect the power and signal connections.



Above: Example of some common adapter types that enable connection of the Alta camera to a wide range of equipment.



Above: Filter Wheel attached to an Alta-ready for attachment of the required lens adapter.

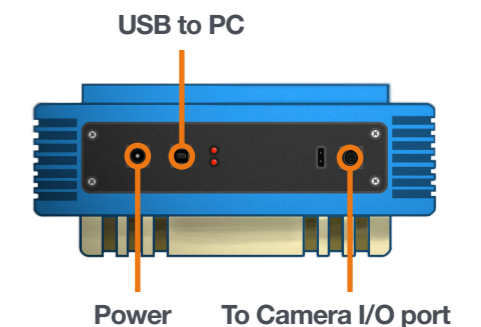
## 6 Connecting your Camera and Switching it on

### WARNING:

- Do not connect your Apogee camera to a PC before installing the drivers. If you do and the “Add New Hardware Wizard” appears, please select the Cancel button.
- Never connect or disconnect the camera from the PC during operation.

1. Insert the 12V DC power cable into the power connector on the Connections panel of the camera.
2. Connect the supplied USB cable between the USB connector on the camera and the corresponding slot on the PC
3. *Optional: An 8-pin Mini DIN connection enables various hardware signals to be controlled by the device. If this is required, connect the I/O Connection cable to the I/O 8 mini DIN type connector (refer to the user guide for further information).*
4. Turn power to the camera ON.
5. Turn ON the PC.
6. Start your software.
7. Start acquiring data.

### Connections



## ? Troubleshooting

### Camera LEDs do not light

- The LEDs should flash on startup, if this does not occur, ensure that the power cables are connected and the power is turned on.

### Cannot find camera when using ApogeeCameraInfo

- The ApogeeCameraInfo search process takes approximately 10 seconds to complete. In extremely rare circumstances, the camera may take longer than 10 seconds to respond.
- If the first attempt to find the camera fails, try a second time. If the second attempt fails, the “Broadcast Address” field may be incorrect. Verify the correct broadcast address and try again.

For additional troubleshooting information please refer to the user manual on the CD provided and for technical information about the Apogee Alta go to:

[www.andor.com/scientific-cameras/apogee-camera-range/alta-ccd-series](http://www.andor.com/scientific-cameras/apogee-camera-range/alta-ccd-series)