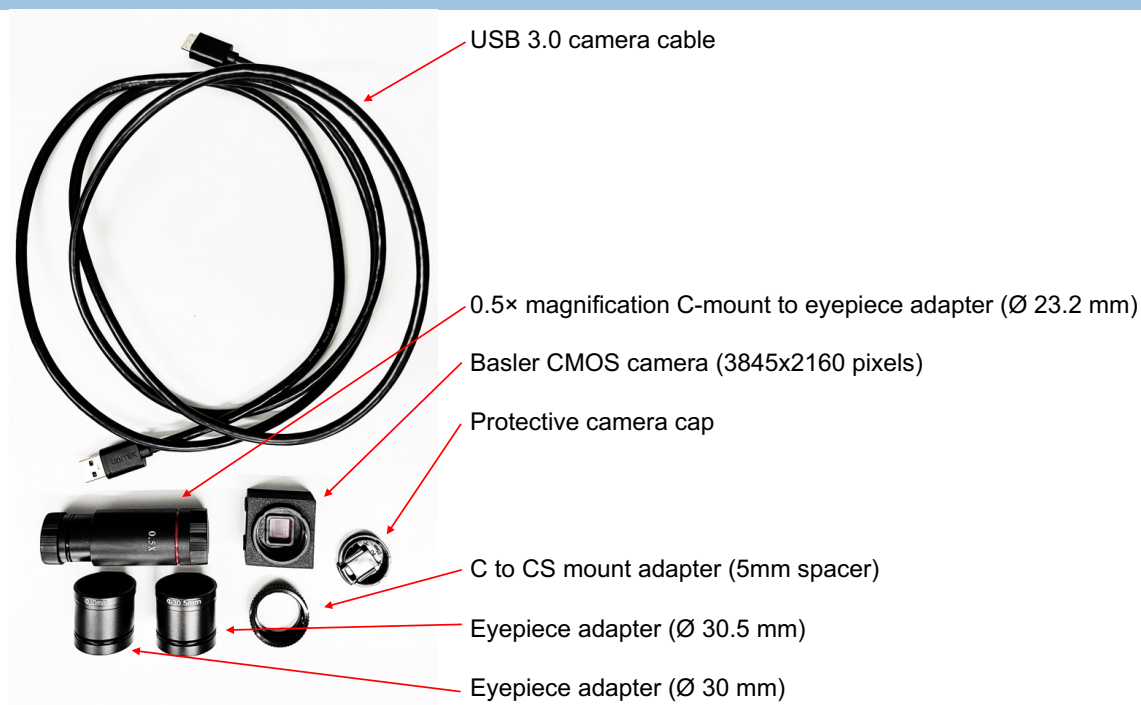


openEyeCam

Kit instructions
September 2025

Part 1: Components of the openEyeCam kit



Part 2: Assembling the openEyeCam

- 1 Screw on the **C to CS mount adapter (5 mm spacer)** to the camera:
- 2 Screw the **C-mount to eyepiece adapter** on to the 5mm spacer on the camera:



- 3 Choose the correct ocular adapter and attach it to the C-mount adapter:

The size of the ocular adapter will be dependent on your type of microscope. General guidelines are provided below:



Ø23.2mm: *No additional adapter required.*

- Early versions of microscopes.
- Early versions of stereoscopes.
- Early versions of clinical microscopes
- Student microscopes.
- Teaching microscopes.

Ø30mm:

- Modern research microscopes.
- Modern clinical microscopes.

Ø30.5mm:

- Modern stereomicroscopes
- Modern dissecting microscopes.

- 4 Connect the camera to the computer using the **USB 3.0 cable**
- 5 Insert the *openEyeCam* assembly into the microscope eyepiece after removing the ocular

Please follow the video for additional information. <https://youtu.be/F6l2HmyDNZU>

Part 3: Installing the Basler Software (camera software)

- 1 Follow the link on the *openEyeCam* website to the Basler software website (Pylon SDK): <https://openscopes.com/openeyecam>
- 2 Download the **pylon Camera Software Suite**. Se sure to select the suitable operating system (i.e., Windows)
- 3 Run the install file, follow the setup wizard and be sure to install the

pylon basler in your Program Files folder

- 4 Run the Basler software
- 5 Select: Camera user > Select: USB.

Part 4: Installing Micro-Manager for *openEyeCam*

- 1 Download Micro-Manager following the link shared on the *openEyeCam* website: <https://openscopes.com/openeyecam>
- 2 Run the install file and follow the setup wizard
- 3 Launch Micro-Manager (note: Fiji will launch along with the Micro-Manager Startup Configuration window)
- 4 Under Hardware Configuration File, select '(none)'
- 5 Go to **Devices > Hardware Configuration Wizard...**
- 6 Click Next to **Create new device** (Step 1)
- 7 In Step 2, find the **BaslerPylon** folder under **Available Devices**.

Expand by clicking the + symbol to the left.

Click on BaslerCamera and then click the "Add..." button to the right.

Click OK on the new window.

Click Next
- 8 For Step 3, leave all default settings and click Next.
- 9 For Step 4, click Next.
- 10 For Step 5, click Next.

- 11 For Step 6, input the Filename and Browse for your save location (default: “Micro-Manager-2.0” folder)

Save the configuration as a .cfg file; i.e., openEyeCam.cfg

Click Finish

Part 5: Operating *openEyeCam*

- 1 With the camera connected, run Micro-Manager.

Select your saved Hardware Configuration File (.cfg file from Part 3, Step 11) and click OK.
- 2 At the top-left, click “Live” to view the live camera feed.
- 3 **Remember the camera display is dependent on the light coming from the microscope, the exposure time, and the contrast settings of the histogram.**

Adjust the Exposure [ms] parameter to a suitable value to see an image and the histogram shows the values approximately halfway between 0 (min.) and 255 (max.). A greater Exposure value will make the image brighter and the histogram shift right (towards max.).

Remember to operate your microscopy normally and ensure the sample is in focus.
- 4 Click Stop Live on the main window to end the camera feed.
- 5 Images can be saved by clicking “Snap” and then the save icon on the bottom-right of the image window.

- 6 Zoom in or zoom out by clicking the + or - magnifying glass symbol on the top-left of the image window.
- 7 Close Micro-Manger to end the program before disconnecting the camera USB connection.

Part 6: Troubleshooting

- | | | |
|---|-------------------------------------|---|
| 1 | Camera not detected in pylon Viewer | Check cables, power supply, and USB 3.0/GigE ports. |
| 2 | Camera not listed in Micro-Manager | Make sure Basler drivers are correctly installed and that Micro-Manager is using the right configuration. |
| 3 | Black or slow image | Adjust Exposure time in Micro-Manager. |