

## OmniVision Camera Update Kit

If you have not read the **General Plumbing Instructions** for replacing plumbing parts on the KinExA® please do so now before continuing.

The following **Parts and/or Tools** are required to complete this installation:

### Parts:

- [1] *OmniVision Switch Power Cable* ([617340](#))
- [2] *RJ-45 Plugs* ([629100](#))
- [1] *OmniVision Mounted Lens* ([852338](#))
- [1] *OmniVision Camera Assembly* ([865340](#))

### Tools:

- [1] *Flush Cutters* ([070200](#))
- [1] *T10 Screwdriver* ([012010](#))
- [1] *Spanner Wrench* ([040412](#))
- [1] *Dielectric Grease* ([231362](#))
- [1] *3/4" Cable Tie Mount* ([619018](#))
- [3] *8" Cable Ties* ([619108](#))

- Power off the Instrument and remove the *Retaining Ring* and *Cover* using the *T10 Screwdriver* ([012010](#)). Remove the *Optics Cover* and set it on a soft surface to keep it from getting scratched.
- Use the *T10 Screwdriver* to remove the [2] *M3x8 Countersunk Screws* that are holding the *Camera Cover* and then set the *Screws* aside as they will be used again. Open the *Flow Cell Reflector* and slide the *Retention Clip* to the right. Gently move the *Flow Cell* out of the *Grooved Lens* and over the top and to the left of the *Reflector* since there is no need to disconnect the plumbing. Remove the *Optics Slide Retention Nuts* and then gently pull to remove the *Optics Slide* from the Instrument (Figure 1a).

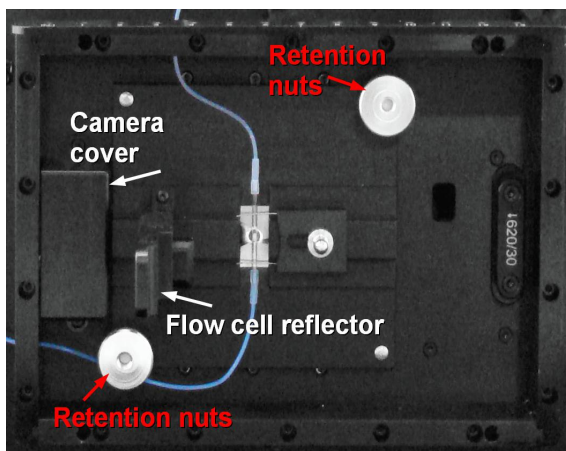


Figure 1a: Name of parts.

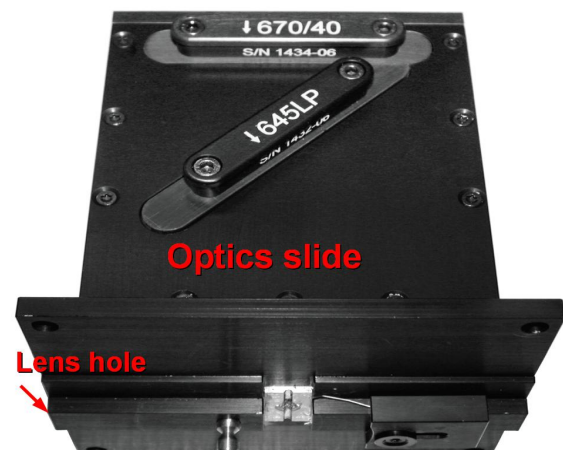


Figure 1b: Optics Slide and Lens Hole.

- Use the *Spanner Wrench* ([040412](#)) to carefully remove the *Lens Retaining Ring* and the *Achromat Lens* from the hole located on the front left side of the *Optics Slide*. **Important:** Be very careful that the *Spanner Wrench* is fully seated into the *Lens retaining ring* so that the small wires on the *Wrench* do not get bent. Return the *Optics Slide* to the Instrument, replace the *Optics Slide Nuts*, and return the *Flow Cell* to the *Grooved Lens*. Slide the *Retention Clip* to the left to secure the *Flow Cell* (Figures 1a and 1b above). **Note: Apply a small amount of Dielectric Grease** ([231362](#)) **to the Grooved Lens before replacing the Flow Cell.**
- Disconnect the *Red Ethernet Cable* from the *Camera Power* outlet on the *Power Supply* and from the *Camera*.

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- Disconnect the current *Camera* from behind the *Front Panel* using the thumbscrews (that are attached to the *Camera*). Install the updated *OmniVision Camera Assembly (865340)* into the same location, orienting it so that black cable is closest to the ceiling and the *Sensor* is facing the lens hole in the *Optics Slide* (Figures 2a and 2b).

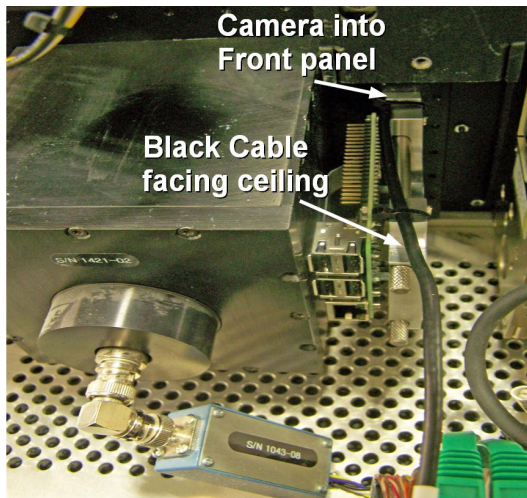


Figure 2a: Installation of *OmniVision Camera Assembly*.

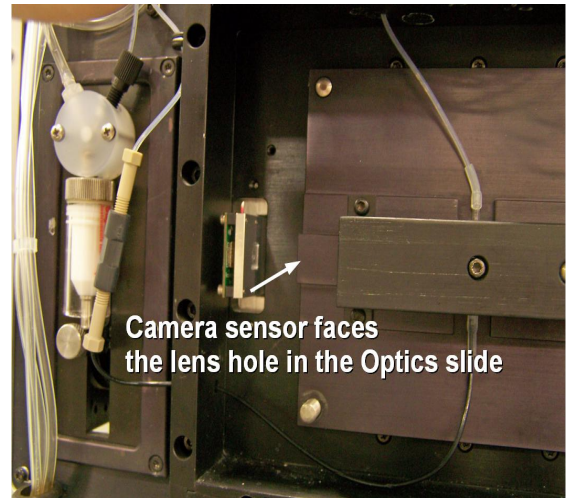


Figure 2b: Location of lens hole.

- Remove the *Blue Ethernet Cable* from the *Switch Outlet* on the *Power Supply*, loop the other end around [1] time, and then insert it into the bottom connection on the *Camera*. Gently peel the labels off of the *Power Supply* and then insert the [2] *RJ-45 Plugs (629100)* into the outlets (they can only fit one way) (Figures 3a and 3b).

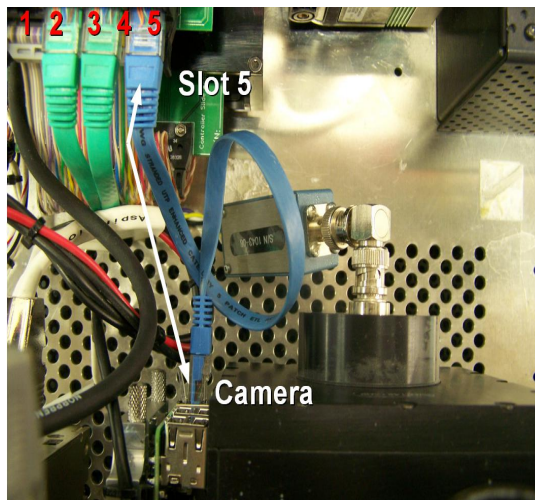


Figure 3a: *Camera* and *Slot 5*.

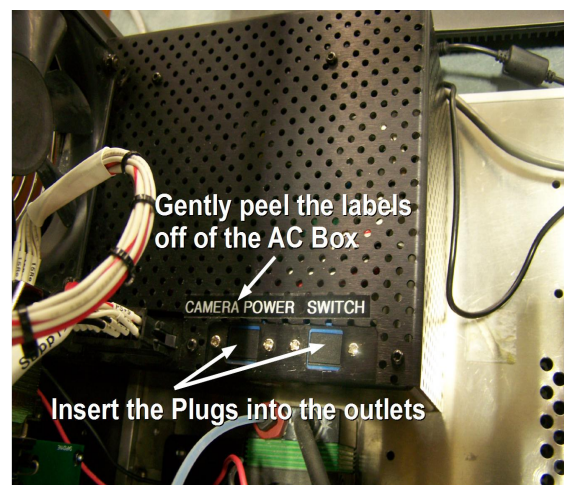


Figure 3b: *RJ-45 Plugs* into outlets.



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- Locate and unplug the current *Switch Power Cable* that is installed in the side of the *Ethernet Circuit Board*. Follow the *Cable* underneath the *Vacuum Chamber* and unplug the other end of the *Cable* from the *Wiring Harness*. **Note: You may need to cut the *Cable Tie* that is holding the *Cable* in place using *Flush Cutters (070200)* (Figure 4).**

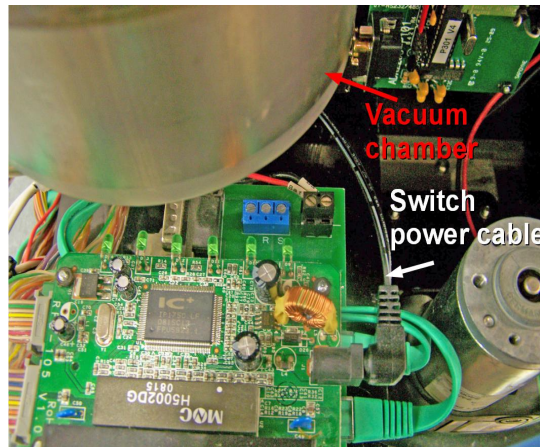


Figure 4: Route of Cable.

- Route the *Camera Switch Power Cable (617340)* so that it connects to the *Black Cable* on the *Camera* (labeled *Cam Power*), the *Ethernet Circuit Board (Switch)*, and the *Wiring Harness (Cam/Switch)* as shown. Important: This Figure has been modified to showcase the best way to route the *Power Cable* and in no way wants you to unplug or remove the components that have been removed for this Figure. Attach a new *Cable Tie Mount (619018)* onto the *Control Board Cover* next to the *Ethernet Circuit Board* and tie down the wires with the [3] *Cable Ties (619108)* so that there is plenty of strain relief. **Note: Clip the *Cable Tie* that is holding the *Optics Amplifier Wires* (on the bottom panel) and use that *Cable Tie Mount* to neatly arrange both sets of wires (Figure 5).**

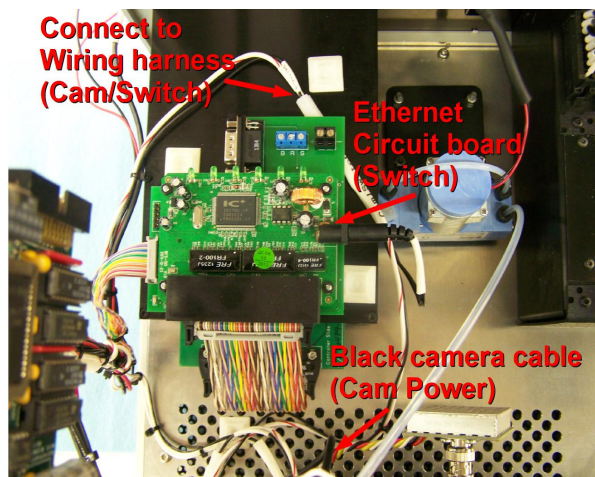


Figure 5: Route of Camera Switch Power Cable.

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- Use the [2] *M3x8 Countersunk Screws (93h308)* from before and the *T10 Screwdriver* to orient the *Camera Lens Housing (852338)* over the *Camera Sensor* as shown (Figure 6).

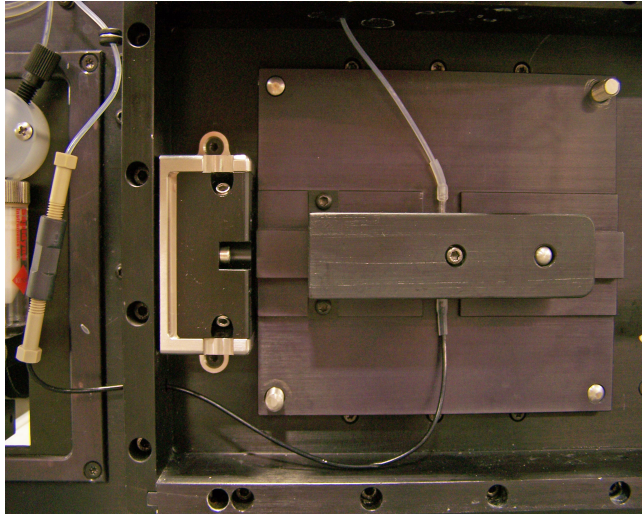


Figure 5: Camera Lens Housing.

- Power on the Instrument and align the Camera using the *OmniVision Camera Alignment Instructions HG246*.