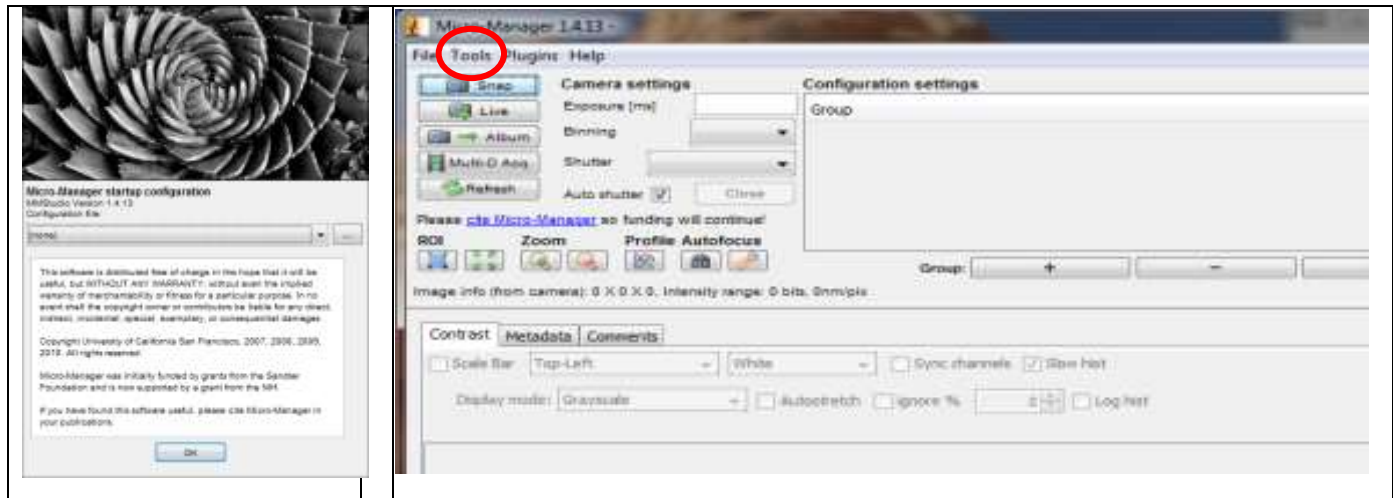


## Quick Start Guide for Teledyne Lumenera Micro-Manager Plug-in

Please ensure that the Teledyne Lumenera plug-in for Micro-Manager has already been installed following the installation guide instructions. The intent of this document is to provide a simple outline of the steps required to use Micro-Manager with your INFINITY camera. For more complete information on the use and capabilities of Micro-Manager, refer to the website: <http://valelab.ucsf.edu/~MM/MMwiki/>

1. Run Micro-Manager. If it is the first time using Micro-Manager, the Configuration file should be already set to **none**. Otherwise, an existing configuration can be selected for modification. Press the <OK> button to continue.

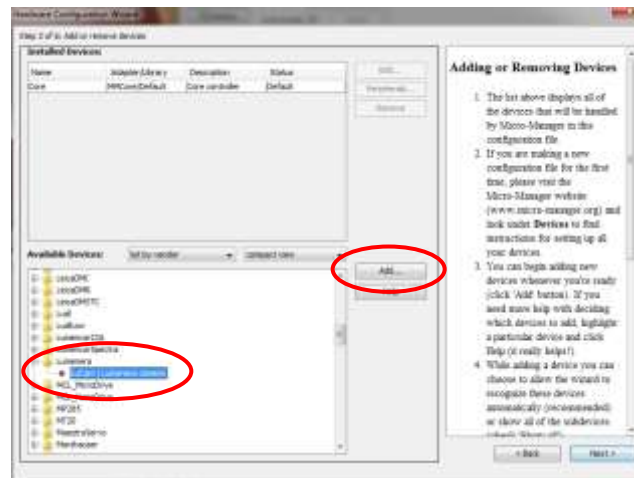


2. In order to load the Teledyne Lumenera cameras drivers in Micro-Manager, run the Hardware configuration Wizard tool using the menu option: Tools→Hardware configuration Wizard



3. First-time users must select Create new configuration. Otherwise, select an existing hardware configuration file to Modify, then use the Browse button to select the configuration file to change. Select <Next> to continue.

4. Select the **Lucam | Teledyne Lumenera camera** device under Teledyne Lumenera and then click the <Add...> button to continue.



5. The plug-in requires 2 input parameters to be set. The first one is the Camera Index, which corresponds to the camera number. If there is only one Teledyne Lumenera camera then this Camera index should always be one, otherwise users can specify multiple cameras using different label names and index numbers. The second parameter lets users switch between USB and GigE Vision camera. Press the <OK> button to continue.



6. To add more devices in your configuration, such as a second camera, click the <Add...> button. When the process of adding new devices is complete, press the <Next>> button.



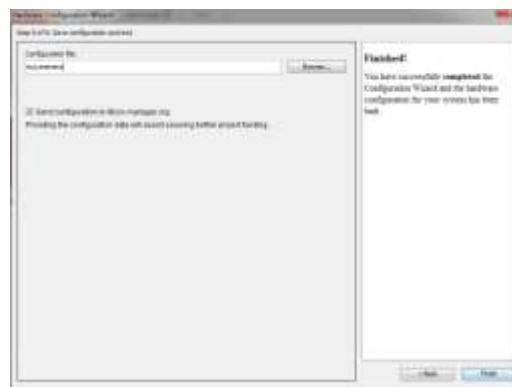
7. Select the default camera, default shutter and default focus stage devices to use. In this example, there is no hardware shutter and no focus stage control.



8. With the next two Windows (delays for devices without synchronization and state devices) there is nothing to set for Teledyne Lumenera cameras, so review whether these settings are required for other hardware and click the Next button to continue.

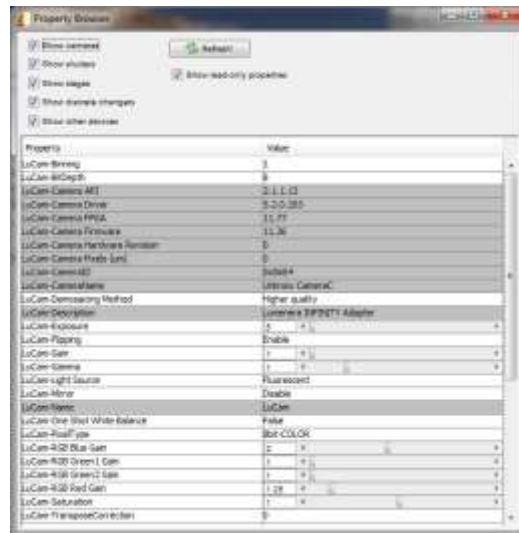


9. Name this configuration file to complete the process and click the Finish button.



**Special notes:**

- The list of supported properties will depend on the camera model and supported features. To control any of these properties in Micro-Manager, first select the **Tools-> Device Property Browser...** menu within Micro-Manager. This will open a window similar to the next image. Adjustments are available in the control zones for most of the camera properties, and will take numeric entries and/or slider controls accordingly.



- For color cameras, White Balancing is achieved using the “Lucam-One Shot White Balance” property in the Property Browser window. To perform a color balance operation to set the color channel response to your light source, first stop the video streaming. Next set the property for **Lucam-One Shot White Balance** to **True**. Restart the video stream. The white balance operation takes place during the first few frames returned from the camera, which may take a few seconds. When the function completes, the Property line will automatically return to **False**.
- For all other application functions, such as acquiring a captured image into Micro-Manager, refer to the User Documentation available from the Micro-Manager web site (<http://valelab.ucsf.edu/~MM/MMwiki/>)