

## Procedure for updating firmware code on Kepler Cameras.

**WARNING:** If programming fails and you shut off your camera, the camera may no longer function! If programming fails, retry the programming. If you have retried programming the new firmware several times and it has failed every time, please try your previous version of code.

1. Prior to starting a Firmware update we highly recommend you back up your internal camera settings for later use. Please follow the Kepler – Saving and Reloading Camera Factory Settings found in the Kepler Camera Firmware Updater.zip file.
2. Download the Kepler Camera Firmware Updater.zip file.
  - a) This can be downloaded from the Support page of our website:  
<http://flicamera.com/software/index.html>
3. Ensure that Pilot or any other FLI software is closed through this process unless otherwise noted.
4. Open and Run FLIP\_Installer.exe
5. Once the program installer has finished, open FLI Camera Programmer (FCP) from the start menu.
6. Connect your camera to the computer and power it on.
7. In the top left of FCP you should see your camera under Detected Devices. If it does not show up after a few moments, click refresh. Once recognized, click on the Connect button.
8. In case an error occurs, you should make note of the current versions of software that are loaded on your computer by clicking on the Versions button and writing down the 3 versions of code.
9. Please follow the steps below to update the

### FPGA Code Update

- a) Move the Device Type to FPGA Firmware.
- b) Select the Browse button and select the latest version of firmware from the folder that was downloaded in step 1. It should be labeled KL(400 or 4040)\_FPGA\_CODE

#### Notes:

- 1) FPGA Firmware files are .mcs

- c) Once you have the correct file selected click Program. The process may take around 10 minutes, longer if you are on USB 2.0 or have an old computer. **DO NOT** turn off the camera during this process, if power interruption occurs the camera may not function and need to be sent back to the factory for correction.

### Firmware-Cypress Code Update

- a) Move the Device Type to Cypress Firmware.
- b) Select the Browse button and select the latest version of firmware from the folder that was downloaded in step 1. It should be labeled KL(400 or 4040)\_FIRMWARE-CYPRESS\_CODE

#### Notes:

- 1) Cypress Firmware files are .img

- c) Once you have the correct file selected click Program. The process may take around 10 minutes, longer if you are on USB 2.0. **DO NOT** turn off the camera during this process, if power interruption occurs the camera may not function and need to be sent back to the factory for correction.

10. After the programming completes please power down the camera for at least 5 seconds, then turn the power back on. You should now be good to close FCP and run the camera with FLI Pilot to verify everything is working properly.
11. If you are not able to get a good image, you may wish to go back to your previous version of code. Please also contact us so that we may work on the problem and assist you.
12. If you backed up your internal Camera Settings, now would be the time to reload them onto your camera following the guidance in Kepler – Saving and Reloading Camera Factory Settings, found in the Kepler Camera Firmware Updater.zip file.

You should now be good to go. Thanks, FLI