

MityCAM-3U5MGXS Evaluation Kit Quick Start Guide

Purpose:

This document provides instructions on the setup and capture of images using the MityCAM-3U5MGXS Evaluation Kit (EVK) with Critical Link GenTL Viewer software.

Required Hardware/Software:

- Windows 10 64 bit PC with USB 3.0 port available
- GenTL Viewer Software (provided)
- MityCAM-3U5MGXS Camera Head (provided)
- Camera Power Supply (provided)
- USB 3.0 Cable (provided)
- GPIO/Serial Cable (provided)

Camera Back Panel Annotation

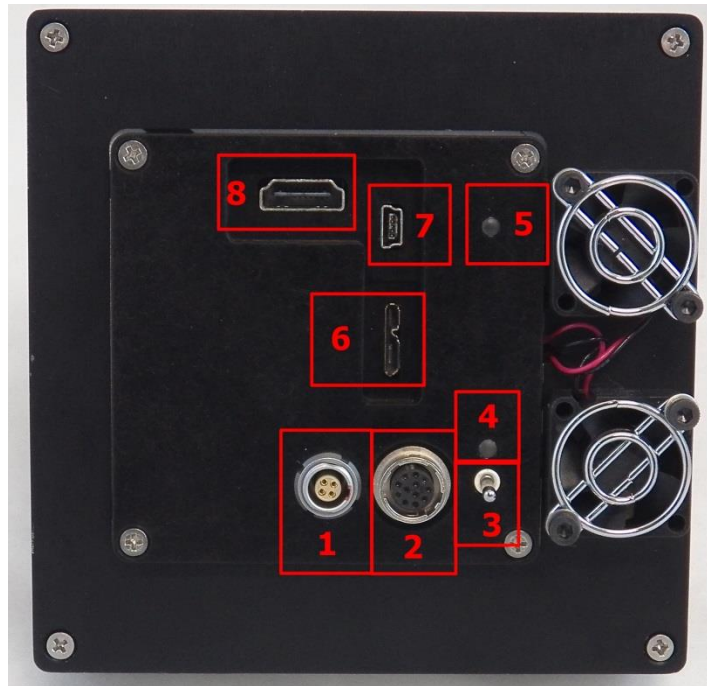


Figure 1

1. Power Input Connector – Keyed
2. GPIO and Serial Connector – Keyed
3. Power Switch
4. Power Good Indicator LED
5. Status LED
 - a. Green – Ready to Capture Images
 - b. Blinking Blue – Capturing Images
 - c. Red – Error State
6. USB 3.0 Connector – PC Image Capture Interface
7. USB 2.0 Connector – Network connection
8. Monitor Connector – Not Utilized

Setup and Initial Image Capture

1. Install software (from website or USB stick).
2. Connect USB 3.0 cable to camera and PC (Figure 1 Find #6).
3. Connect Power (Figure 1 Find # 1) .
4. Power the camera on with the switch (Figure 1 Find #3).
 - a. The power good LED (Figure 1 Find #4) should light immediately.
 - b. Within 30 seconds the camera status LED (Figure 1 Find #5) should be solid green.
5. Launch the GenTL Viewer software on the PC. A screen similar to Figure 2 should be shown.

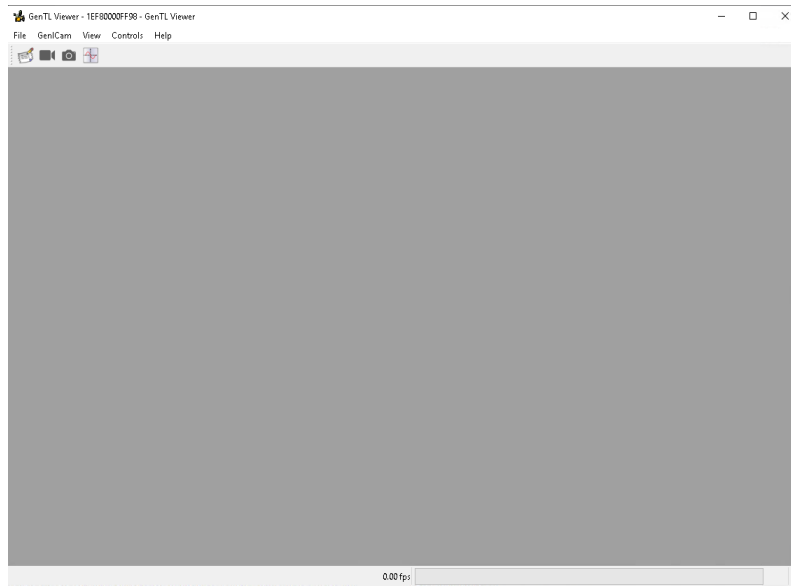


Figure 2 GenTL Viewer

6. File->Open Device

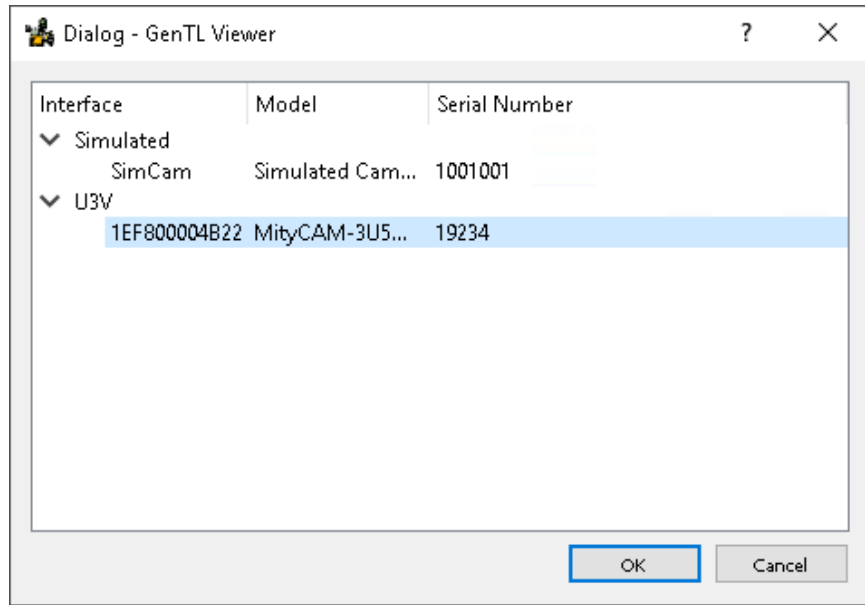


Figure 3 Open Dialog

7. Select the “MityCAM-3U5MGXS” camera from the list and press OK
 - a. It may take approximately 5 seconds for the camera to connect with the GenTL Viewer software.
8. To do a multi-image capture, live video, perform the following steps:
 - a. Select one of the “Pixel Formats”, each of these controls the bit-depth of the image and how the pixel data will be converted to color/greyscale.
Available options are:
 - Mono8 for 3U5MGXSBAM, data is scaled to 8 bits per pixel
 - Mono12p for 3U5MGXSBAM, data is scaled to 12 bits per pixel
 - BayerRG8 for 3U5MGXSBAC, data is scaled to 8 bits per pixel color image
 - BayerRG12p for 3U5MGXSBAC, data is scaled to 12 bits per pixel color image
 - BayerRG8IR for 3U5MGXSBAI, data is scaled to 8 bits per pixel color image + IR
 - BayerRG12pIR for 3U5MGXSBAI, data is scaled to 12 bits per pixel color image +IR
 - b. The Exposure and Frame Rate can be changed.
 - c. Acquisition Mode needs to be set to Continuous for live video or Multi-frame for burst captures.
 - d. Press the play button to start captures.

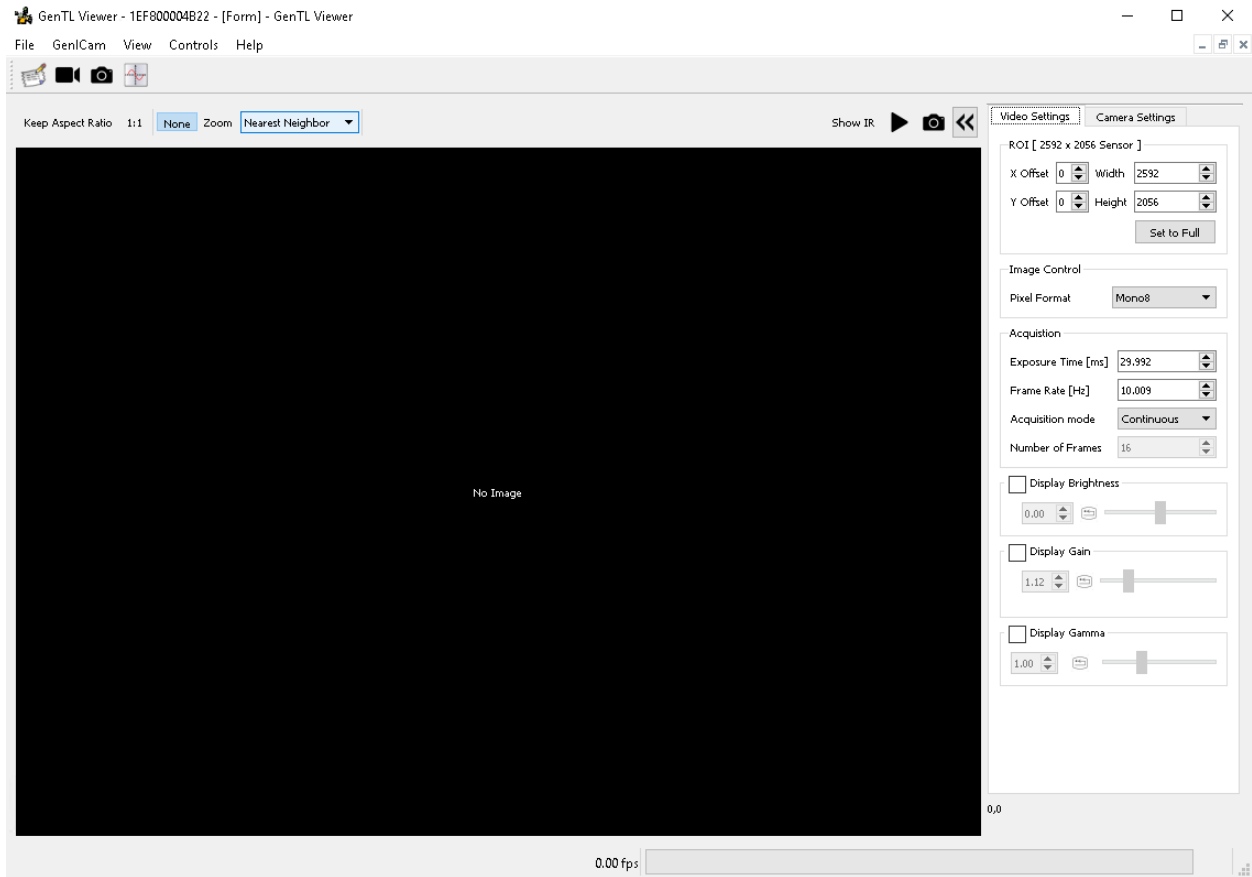


Figure 4: Camera Opened

9. To capture a single image:
 - a. Press the camera button; this will configure the camera in SingleFrame Acquisition mode.
 - b. A single frame will be sent.

10. The GenTL Viewer software can read (peek) and write (poke) registers of the camera sensor.
 - a. Select “Controls” dropdown menu and select “Command Console”.
 - b. Run the HELP command to see the available commands.
 - c. To read a value: In the “Commands” field, Enter “PEEK 0x4d”, and hit the “Do it” button.
 - i. The value read will be shown in the text box below in decimal format.
 - d. To write a value: In the “Commands” field, Enter “POKE 0x4d 4096” and hit the “Do it” button.
 - a. The response should report OK if the write was successful.

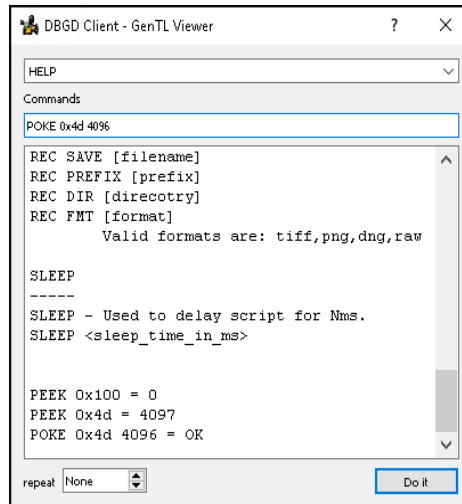


Figure 5: Command Console

11. The GenICam camera registers can be viewed by opening the Camera Settings tab.

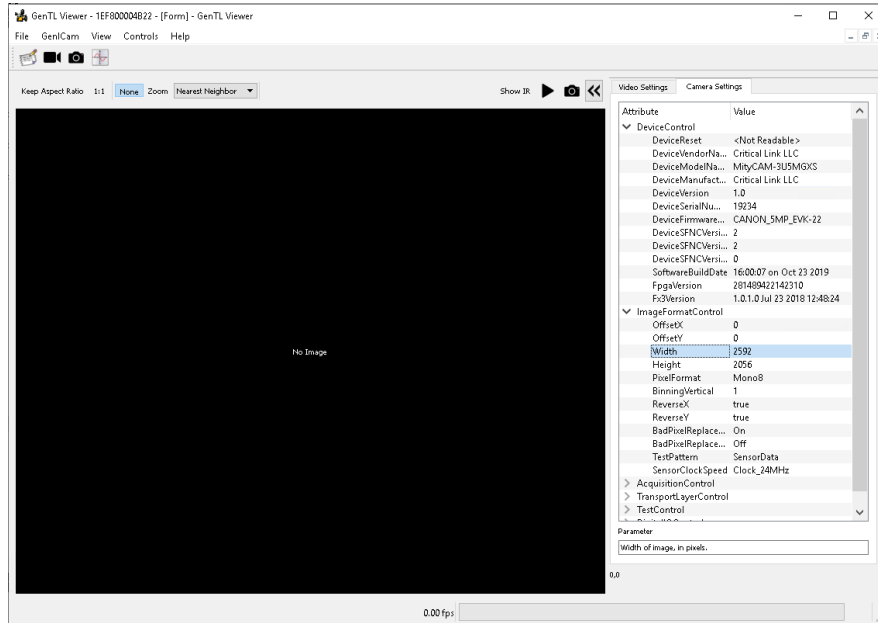


Figure 6: Camera Settings Tab

12. To power off the camera use the power switch on the rear of the camera, Figure 1 (Find #3).

Reference the GenTLViewer Manual for additional features.

Quick Start Revision History

Date	Rev	Comments
11/18/2019	1	Initial Release