MityCAM-120MXS Evaluation Kit Quick Start Guide

Purpose:

This document provides instructions on the setup and capture of images using the MityCAM-120MXS 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-120MXS Camera Head (provided)
- Camera Power Supply (provided)
- USB 3.0 Cable (provided)
- GPIO/Serial Cable (provided)

Camera Back Panel Annotation

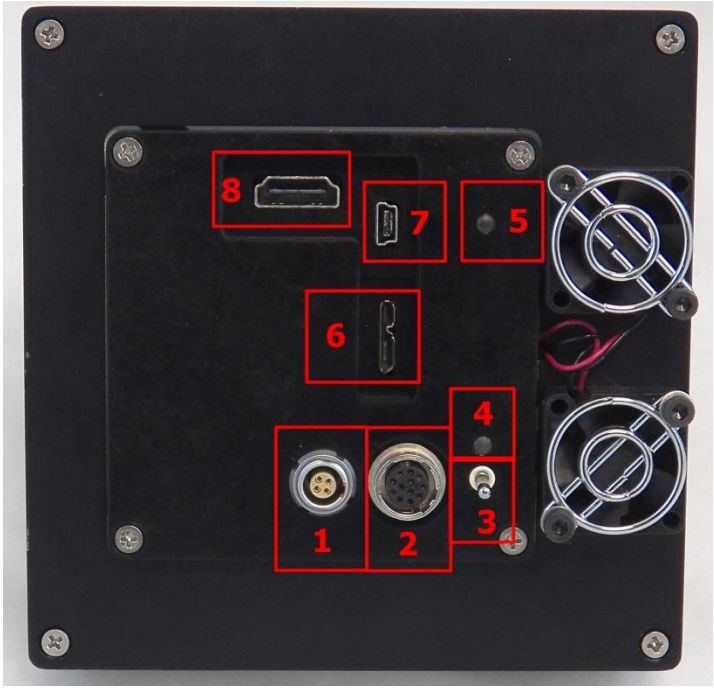

Figure 1

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

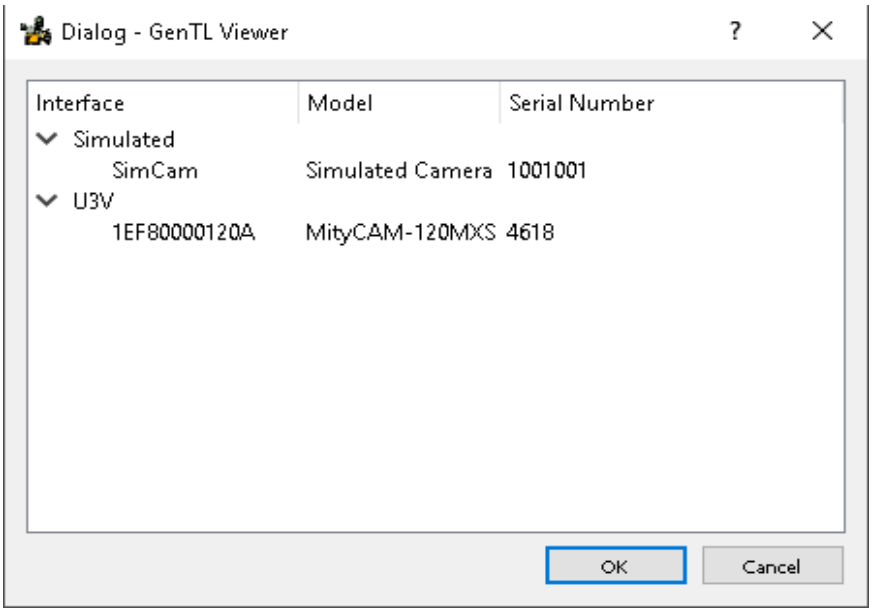

Figure 3 Open Dialog

7. Select the “MityCAM-120MXS” 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 120MXSM, data is scaled to 8 bits per pixel
        Mono12p for 120MXSM, data is scaled to 12 bits per pixel
        BayerRG8 for 120MXSC, data is scaled to 8 bits per pixel color image
        BayerRG12p for 120MXSC, data is scaled to 12 bits per pixel color image
        BayerRG8IR for 120MXSI, data is scaled to 8 bits per pixel color image + IR
        BayerRG12pIR for 120MXSI, 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.

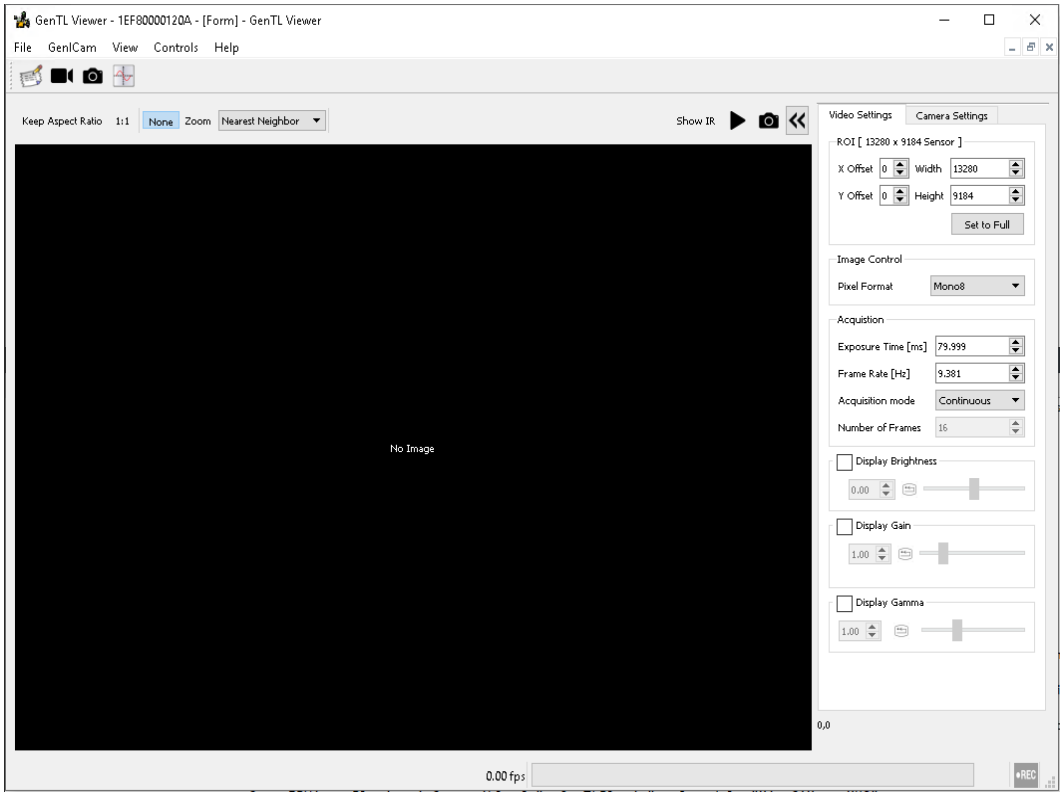

Figure 4: Camera Opened

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.

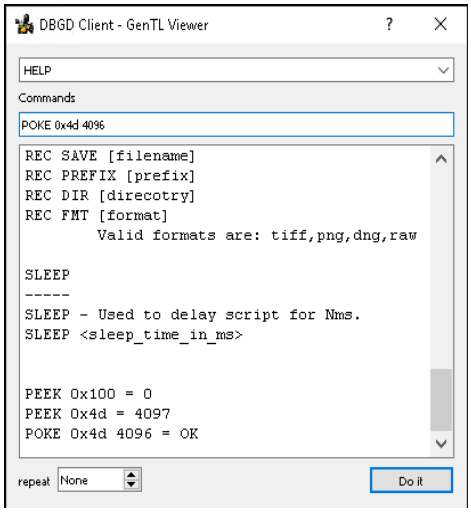

Figure 5: Command Console

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

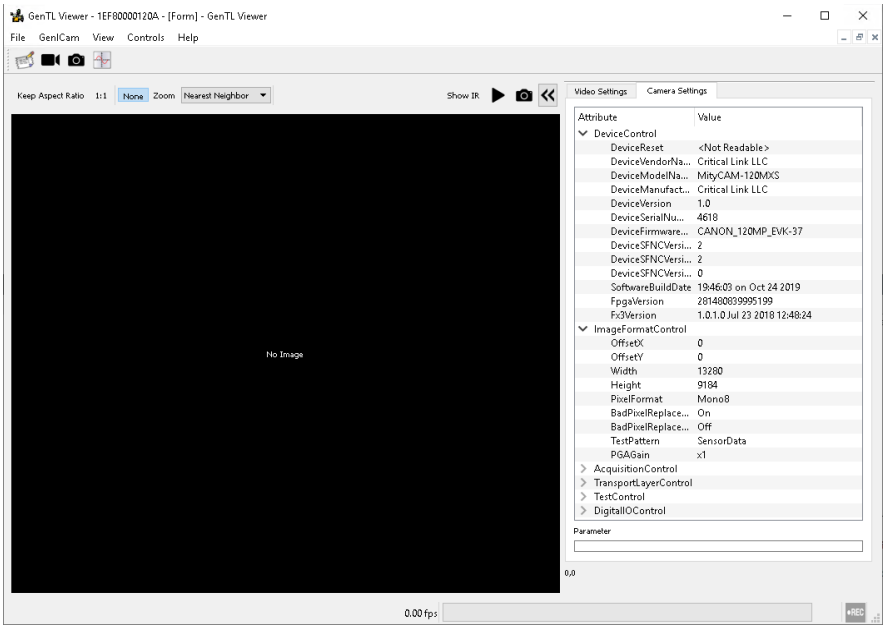

Figure 6: Camera Settings Tab

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	-	Initial Release