# 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.

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Figure 2 GenTL Viewer

6. File->Open Device

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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:
  - 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.

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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.

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Figure 5: Command Console

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   TestControl Width of image, in pixels. 0.00 fps Figure 6: Camera Settings Tab
- 11. The GenICam camera registers can be viewed by opening the 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