Thank you for choosing the sCMOS Development Kit from Critical Link.

The sCMOS Development Kit Hardware Setup Guide will introduce you to the hardware components of your development kit. Once completed, you should be able to follow the Application Quick Start Guide (located on the included DVD), which will guide you through your first image acquisition using the sCMOS camera.

The sCMOS Development Kit contains the following:

Provided Hardware:
- sCMOS Camera
    - Housing
    - sCMOS sensor
    - Acquisition electronics
    - MityDSP-L138F CPU Platform
- USB to 10/100 Network Interface Adapter
    - Critical Link has supplied an independent adapter to facilitate interfacing to the development kit while eliminating modifications and changes to the user's PC network settings.
- AC/DC 24V 2.1A power adapter and cabling
- Standard Lens (C-Mount)
- Ethernet (CAT5) cable
- 3-Pin to DB-9 Debug serial adapter (future support)
- IO Connector breakout cable (future support)
- DVD with Mity Viewer Software and Users Guide DVD with Vision Development Kit Documentation

Printed Documents:
- sCMOS Hardware Setup Guide (this document)
- sCMOS Application Quick Start Guide

Software and Documentation:
- Mity Viewer – PC (Windows) software
- sCMOS Kit Application Users Guide
- sCMOS Kit Datasheet
- MityCAM Exposure Interval Timing - Application Note
- Pixel Combining Design Document - Application Note

Suggested Hardware (not provided):
- Laptop / PC to host the Mity Viewer software
- USB to Serial adapter, if PC does not have a serial port
- Spectrum Digital JTAG for TI ARM and DSP Debug (optional)
- Xilinx JTAG pod for FPA debug (optional)

Hardware Setup

Figure 1 - sCMOS Camera Backpanel

1) Ensure that the Power "On/Off" toggle switch is in the "Off" position. (Identifier #2).

2) Insert the DC (4-pin) power connector into the "DC In" connector on the back panel of the sCMOS camera. (Identifier #1).

3) Note location of PWR Ok LED (Identifier #4).

4) Insert the Ethernet cable (CAT5) into the RJ45 receptacle (Identifier #3). Connect this cable to the provided USB to 10/100 Ethernet Adapter.

5) Thread supplied lens into front plate assembly.

6) On your Windows PC, connect the USB to Ethernet adapter into a USB port of the PC. Note that if the PC is Windows 7, no drivers are necessary but with Windows XP, they must be downloaded.

7) The following steps were done with Win 7, but Win XP is similar.

8) Open the Network Connections dialog (shown below). The Network Connections may be found on the main screen or by selecting Control Panel -> Network and Internet -> Network Connections.
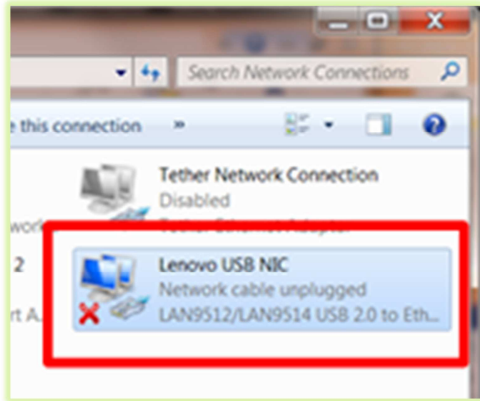

9) Select and 'right-click' the Lenovo USB NIC icon (highlighted in red) and then select "Properties" from the pop-up menu.

10) Select "Internet Protocol Version 4 (TCP/IPv4) and then press the "Properties" button.
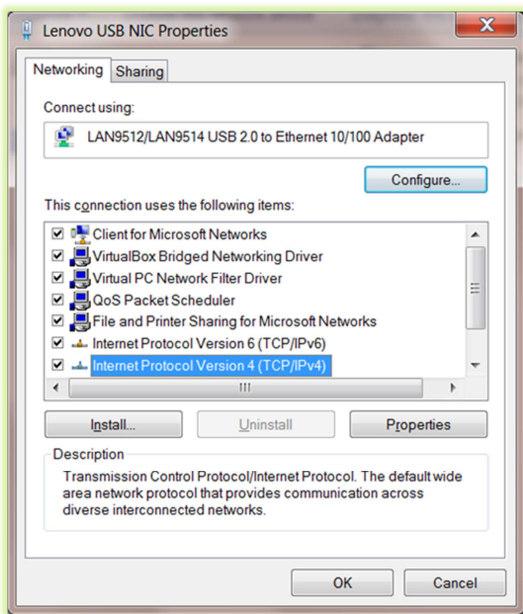
11) Enable static IP for the USB by NIC by setting the following parameters:

    a. Select "Use the following IP address" radio button

b. Enter IP address: 10.0.60.1

c. Enter subnet mask 255.255.0.0

d. Leave Default Gateway blank

e. Select "Use the following DNS server addresses" radio button and leave all lines blank
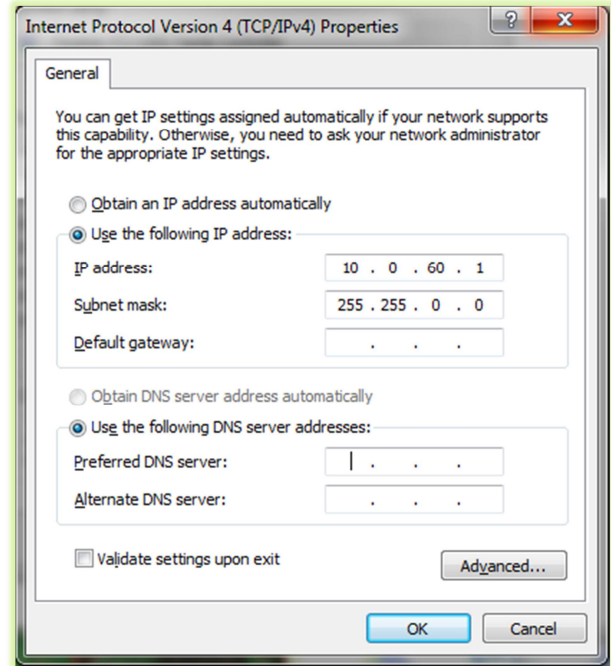
12) The USB NIC is now configured for use with the sCMOS camera.

13) Record Kit S/N (Identifier #5). This will be used later in the "Mity Viewer" Application when connecting to the camera.

14) Plug power jack into proper outlet and then turn the "On/Off" switch to the "On" position.

15) Note that the "I/O" connector is currently not used, but a flying lead assembly has been included for future support.

16) Please continue on to the "sCMOS Application Quick Start Guide" to setup the software for your first image acquisition.

Thank you!

sCMOS Development Kit

Hardware Setup Guide