MityCAM CameraLink Control Panel Users Guide

The MityCAM Camera Link Control Panel User's Guide will guide you through the software installation process and the steps to configure a MityCAM camera through a Camera Link serial port interface using this application.

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1 Revision History

Revision	Date	Notes
Draft	10/8/2014	Draft Release
Rel. 1.0	10/14/2014	Initial 1.0 Release
Rel. 1.1	2/18/2015	Added MityCAM-B1910F support
60-000008-1	04/01/2015	Use assigned document number. Remove specific reference to B2521/B1910 as application supports other models as well.

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2 Application Overview

The MityCAM Camera Link Control Panel application is a Microsoft Windows application designed for Windows XP and newer PC operating systems. The application allows for the configuration of several MityCAM cameras via the serial port of the Camera Link interface. A user can specify both their target camera and whether they would like to use preset configuration modes, send a custom text file or single commands to the camera.

The application requires that a Camera Link interface card be installed in the PC and that the proper drivers are installed. This application is expected to work with most Camera Link frame grabber cards as long as they conform to the Camera Link serial interface specification. Please contact your Critical Link representative for specific frame grabber support questions.

3 Setup CameraLink Connection from PC to MityCAM

For this application to be able to communicate with a MityCAM product the Camera Link 1 input on the camera needs to be connected via Camera Link to your PC's frame grabber card. For MityCAM-B2521F/B1910F cameras it is identifier #3 of Figure 1 below. If dual Camera Link interfaces are supported by your card it is advised that both be connected to the camera for later image acquisitions.

Figure 1: MityCAM-B2521F/B1910F

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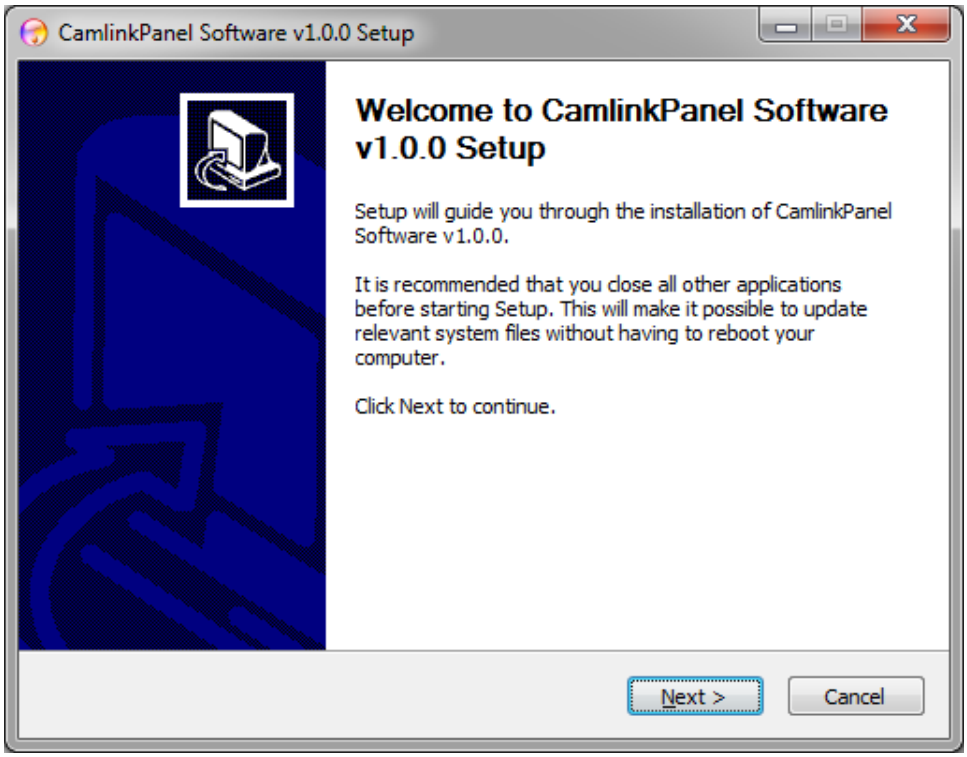
4 Install MityCAM Camera Link Control Panel

The MityCAM Camera Link Control Panel is a Windows PC application which lets you setup and configure the MityCAM sensor for use with Camera Link frame grabber cards. Follow the steps below to install the application on your PC.

Installing the application on your computer will create shortcuts to start it under the standard menus (Start→Programs→Critical Link→MityCAM on a Windows based computer).

Select the application (CamlinkPanel_X.X.X_setup.exe) from the CD / DVD or download and then follow the prompts.



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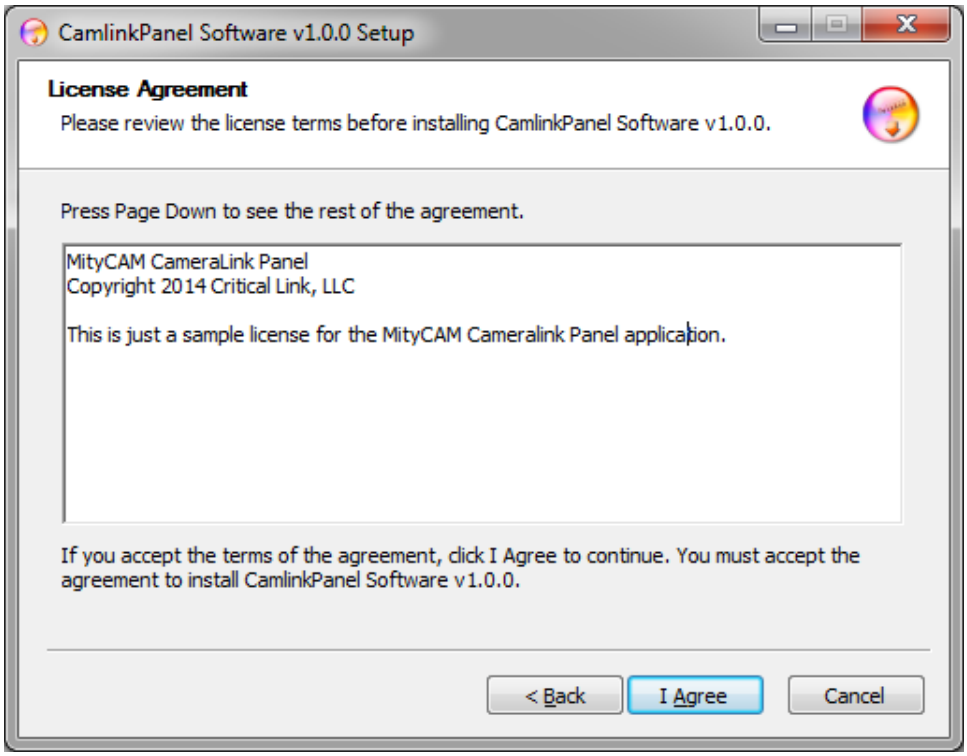

Figure 2: Software License Information

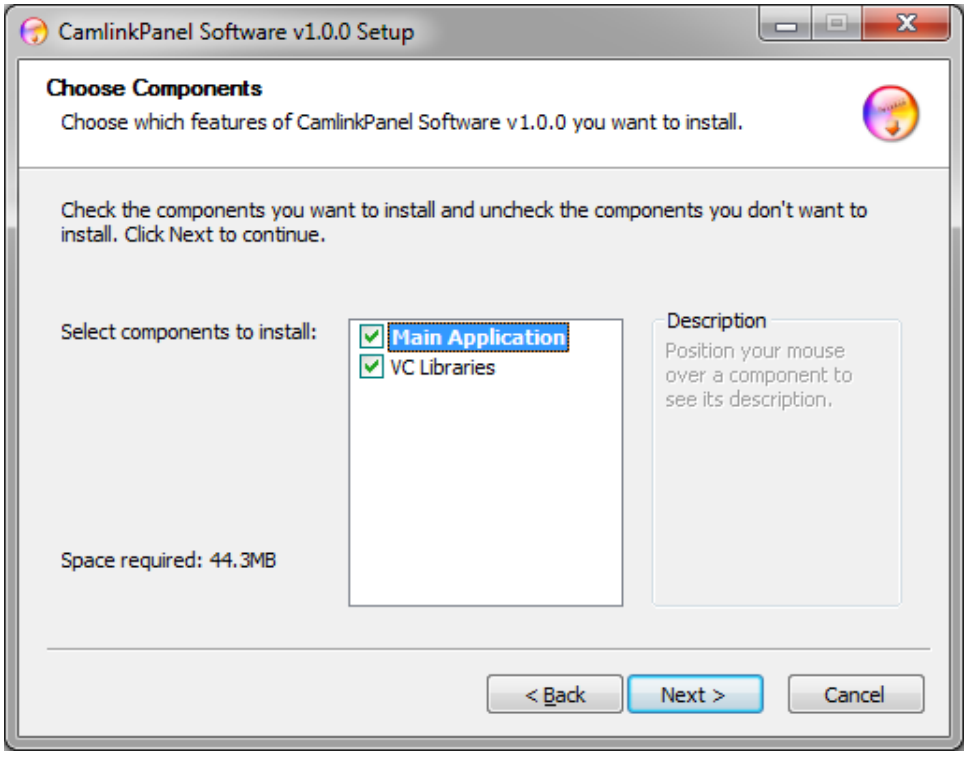

Figure 3: All components are selected by default

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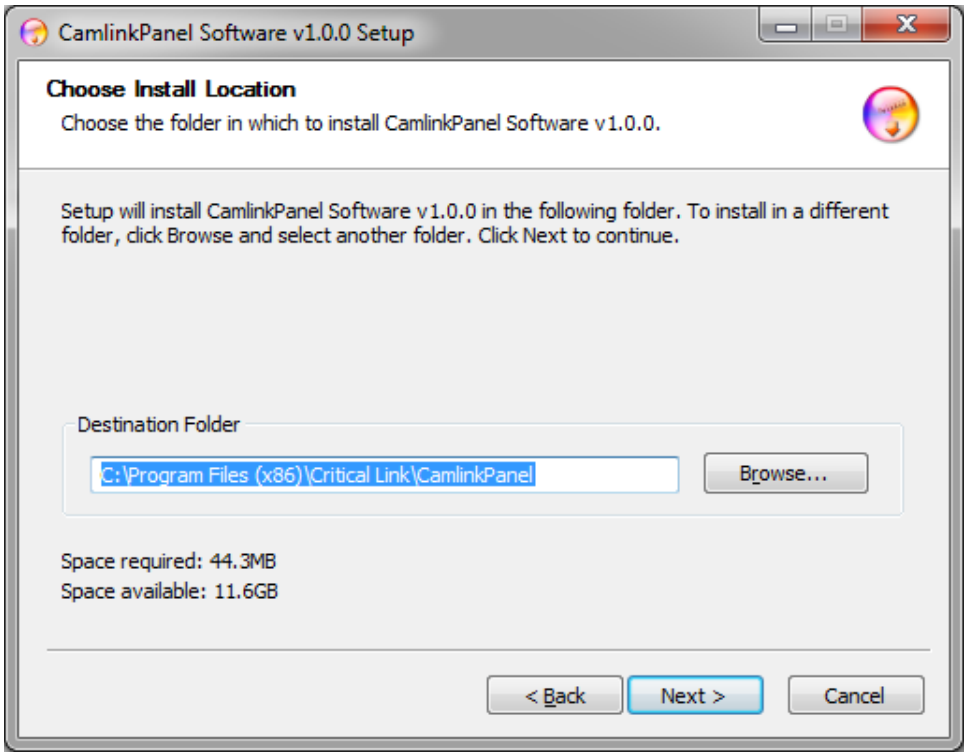
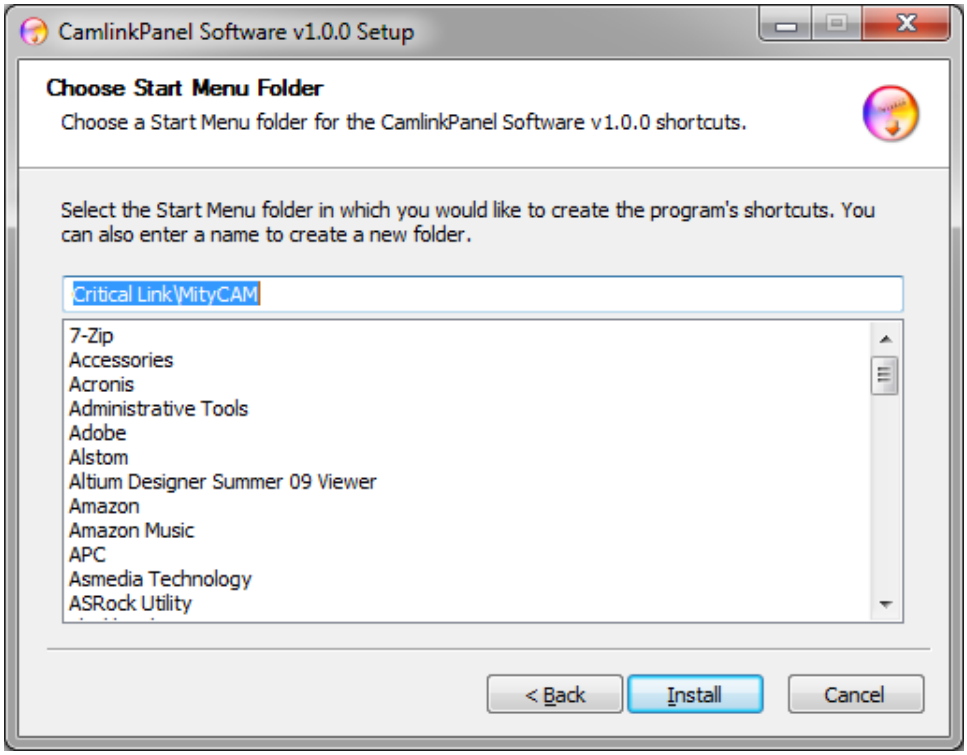


Figure 4: Default installation location



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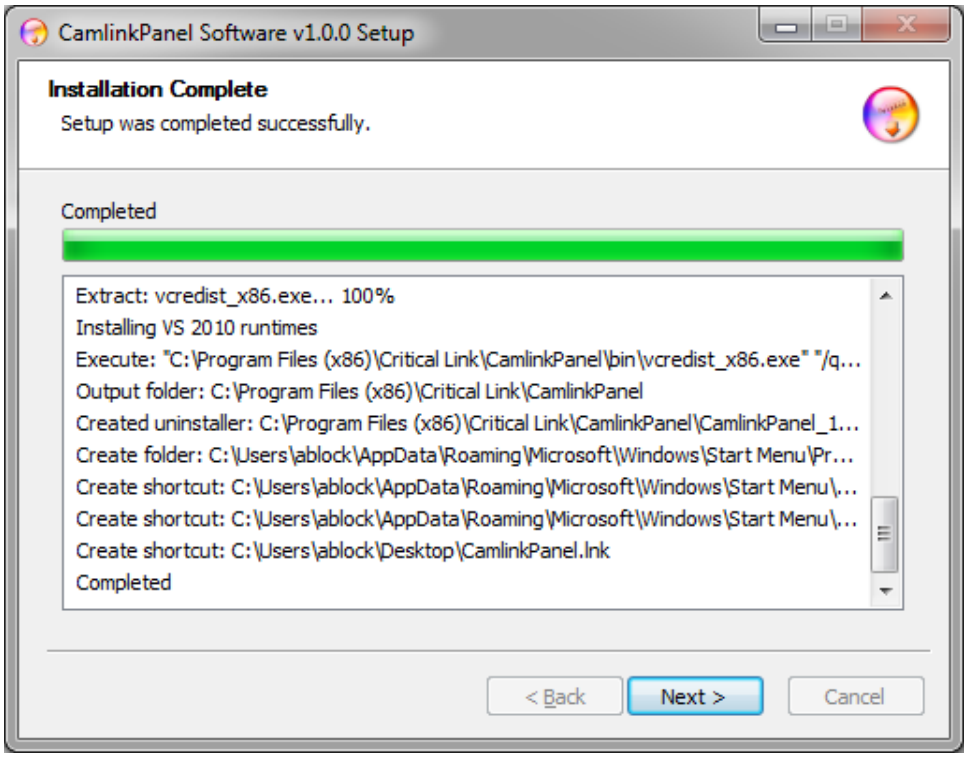

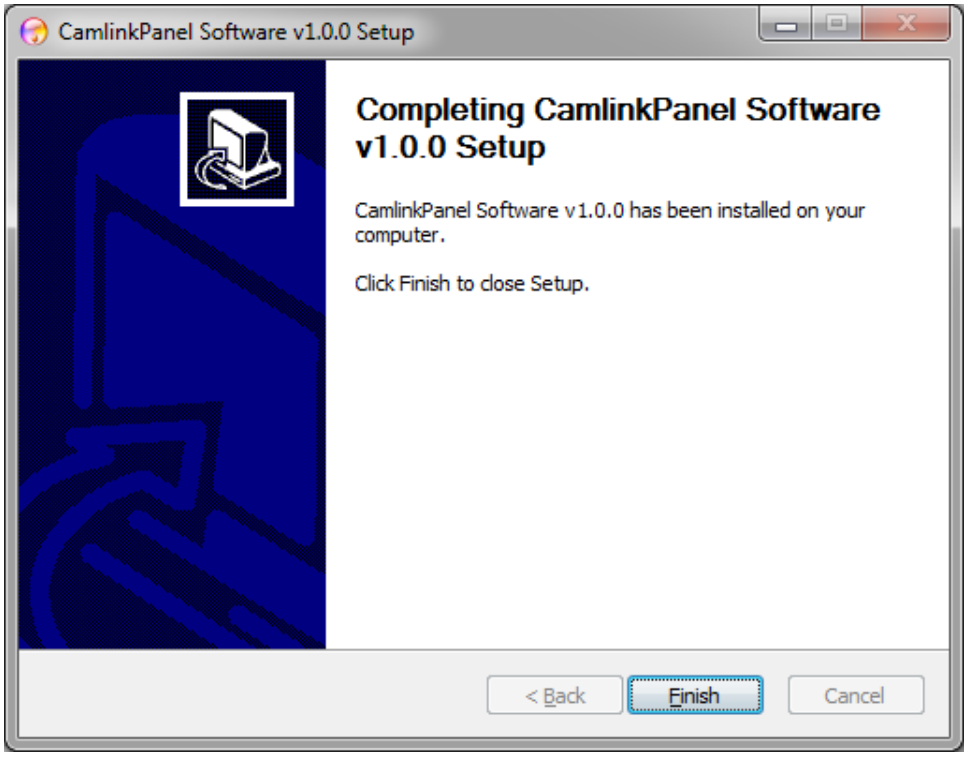

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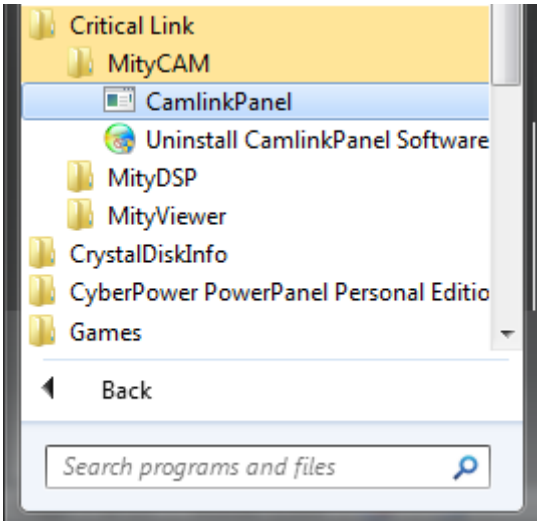
5 Control Panel Usage

This section discusses the steps needed to open the CameraLink serial port to the camera, select the desired camera and send commands by each of the three available methods.

5.1 Launch the Control Panel

Launch the MityCAM CameraLink Control Panel software by going to the Windows Start menu and typing "Camlink" (Windows 7). The program will start and be shown. Alternatively you can also find the application in your start menu under Start→Programs→Critical Link→MityCAM.



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5.2 Main Screen

When the application starts you will see a window similar to the following, Figure 5.

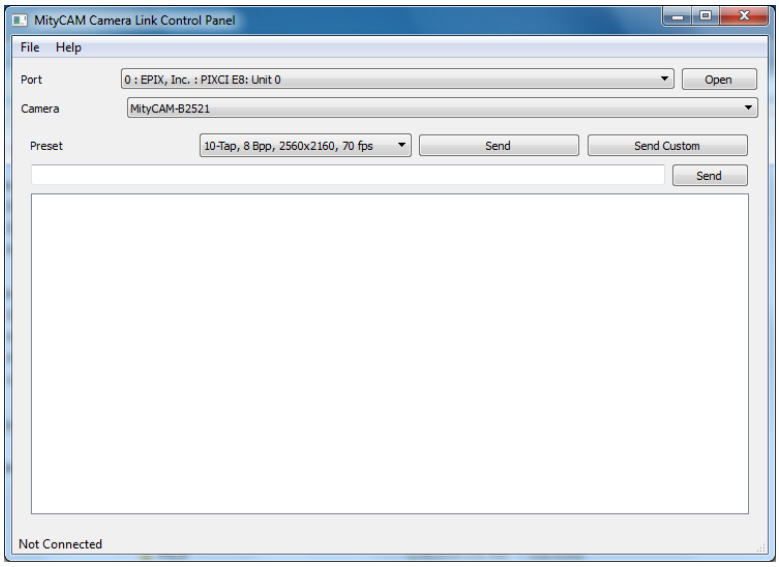

Figure 5: Main Screen

5.3 Serial Port Settings and Camera Selection

On the main screen you will find a "Port" section which includes a drop down menu and an Open/Close button, Figure 6.

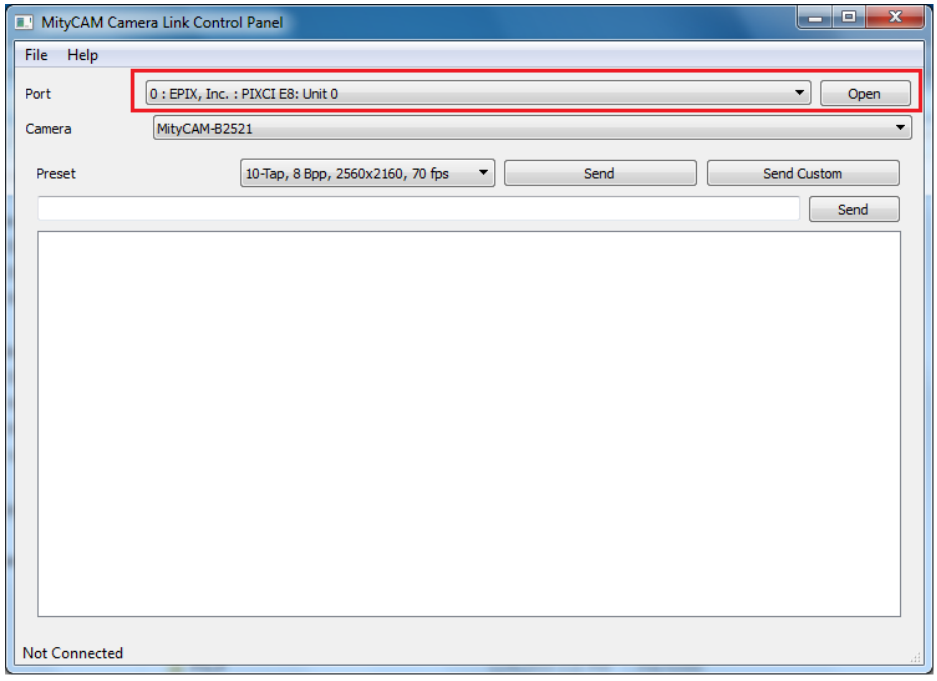

Figure 6: Port Section

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5.3.1 Port Selection Drop Down

The drop down menu allows for the selection of available Camera Link serial port interfaces. Note that "standard" RS232 serial port interfaces will not be shown. In most cases there will be only a single option (Figure 7), however if no serial port interfaces are shown please ensure that your CameraLink frame grabber card is properly installed.

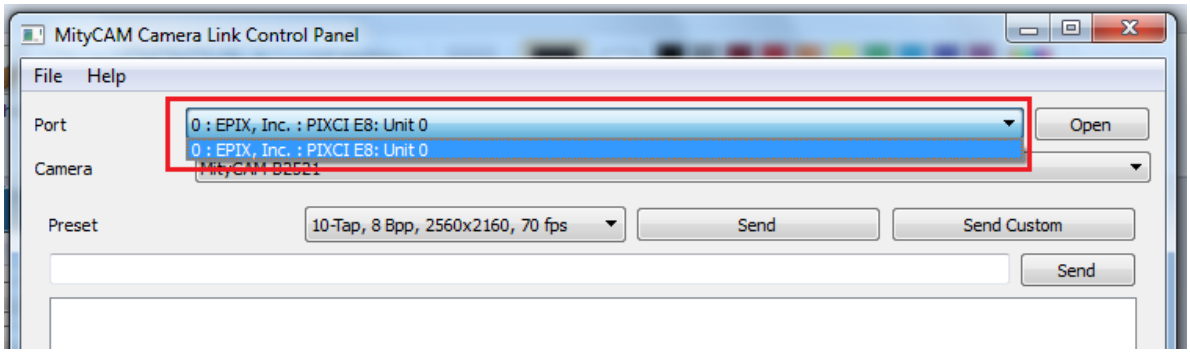

Figure 7: Serial Port Selection

5.3.2 Camera Selection

The MityCAM Camera Link Control Panel supports a number of MityCAM products from Critical Link. Use the drop down menu (Figure 8), to select the camera that you will be interfacing with. This menu also configures the specific "Presets" that will be available to send to the camera.

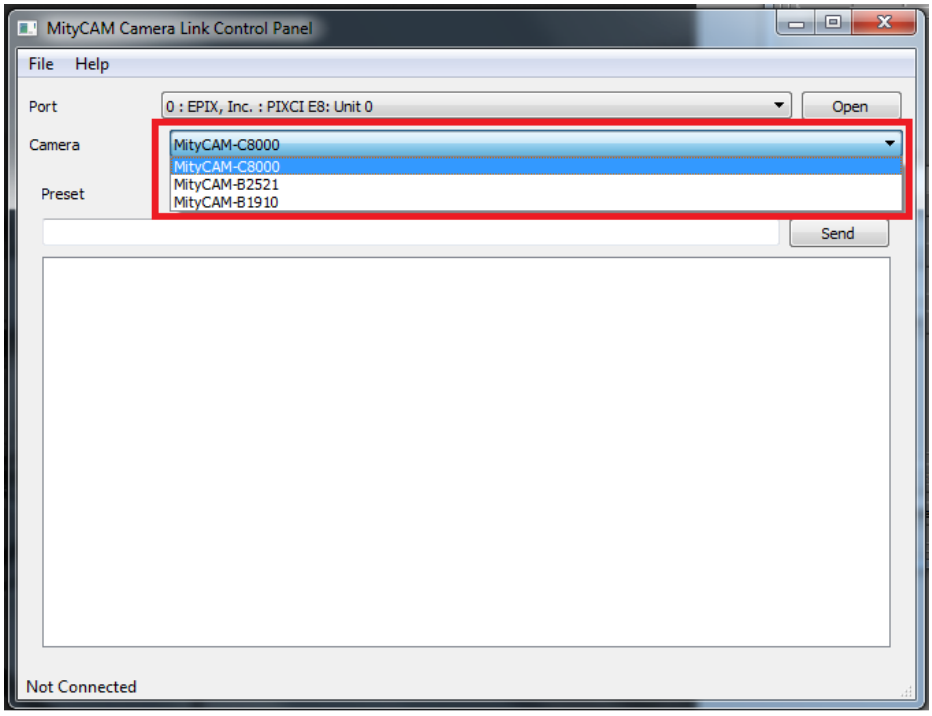

Figure 8: Camera Selection

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5.3.3 Open/Close Camera Serial Port Interface

Once a serial port interface and desired camera type have been selected the serial port to the camera must be "opened". Press the "Open" button. At this time a message should be flashed in the bottom left corner of the screen stating that the application is "Connected" to the camera and the open button will now show "Close". As well the Camera selection menu will now be grayed out.

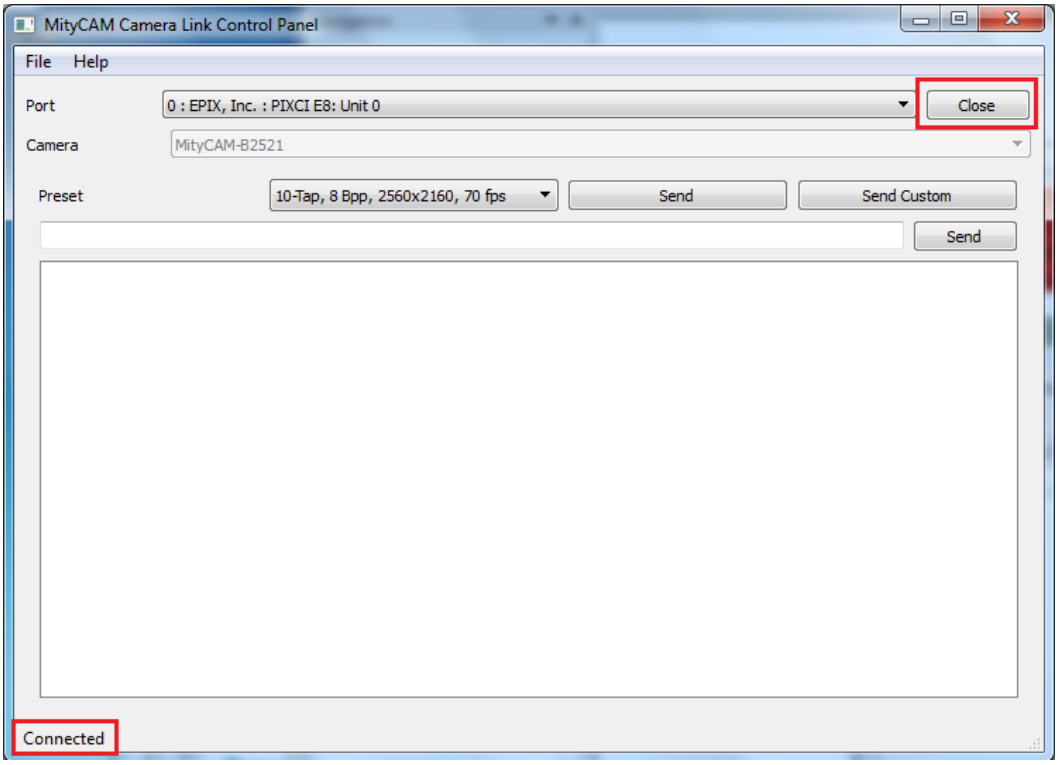

Figure 9: Connected to Camera

When you are done sending commands to the camera it is advised that you "Close" the connection through the use of the Close button in the Control Panel application. When used a "Not Connected" message should now be seen at the bottom left corner of the application.

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5.4 Sending Commands to Configure a Camera

The MityCAM CameraLink Control Panel offers three different ways to send a command to the connected camera. Each method writes a command(s) to the camera through the Camera Link serial interface. You can find a list of available commands in the "Camera Link Interface Document" provided by Critical Link for each MityCAM product.

5.4.1 Presets

For each camera that can be selected from the "Camera" drop down there are a number of Preset modes that are provided with the Control Panel application. You can select the drop down menu in the Preset section of the application to see the different modes. For each mode (Figure 10), you are shown whether the connection is 10-tap or base, number of Bits per Pixel (bpp), the ROI resolution and expected frames per second that the camera can output.

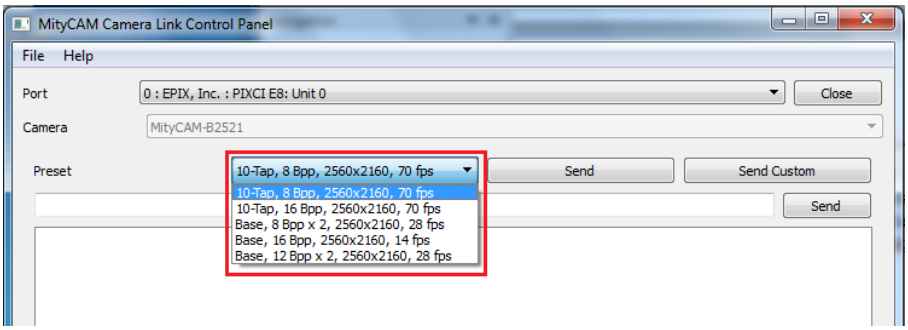

Figure 10: Preset Mode Selection

Note that even though a specific FPS is shown, your PC and/or frame grabber may not be able to display at that rate.

When a preset is selected you can then use the "Send" button to issue the commands to configure the camera for the specified preset. The commands issued to the camera will be shown in the dialog box (Figure 11). For each command that is sent an <ACK> should be received to indicate that the command was processed properly by the camera.

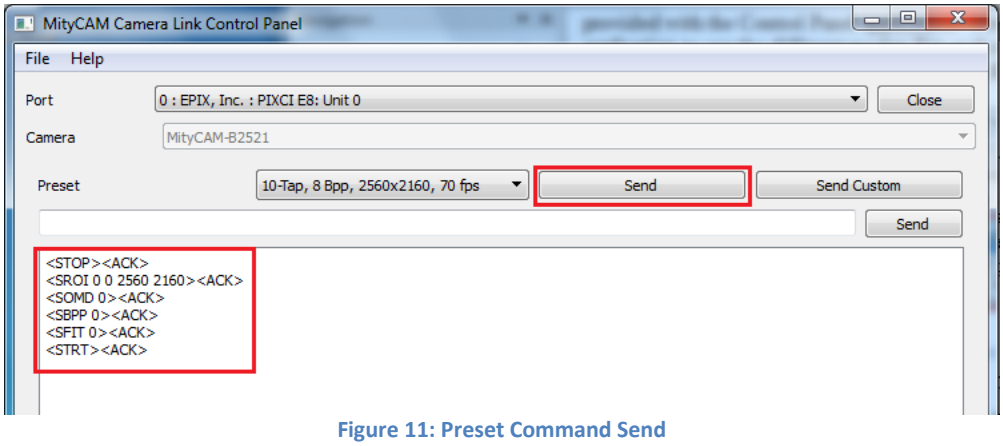

Figure 11: Preset Command Send

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5.4.2 Custom Command Files

Another method of sending commands to the MityCAM is through the use of a custom command file. The format of this file should be a .txt file using returns to separate each command like the example shown in Figure 12. To use your custom command file press the "Send Custom" button in the application and a Browse dialog will be shown. Select your file and then "open" from the dialog box and the commands will be issued to the camera and shown in the dialog box below. For each command that is sent an <ACK> should be received to indicate that the command was processed properly by the camera.

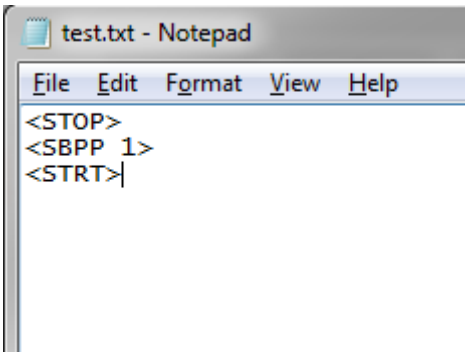

Figure 12: Sample Custom Command File

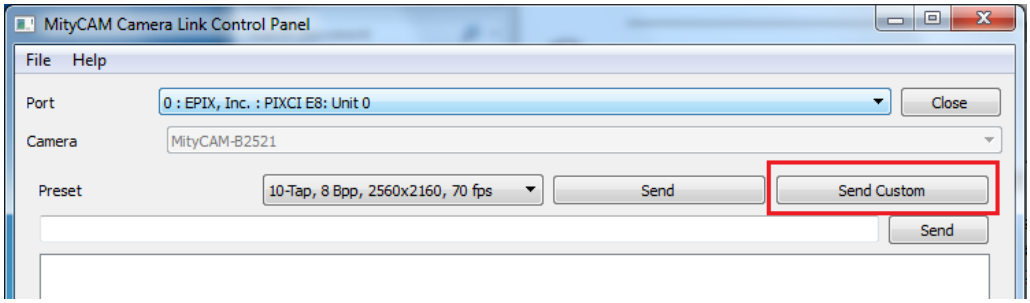

Figure 13: Send Custom

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5.4.3 Single Command Send

The final method for sending commands to the camera is through the text box in the Control Panel application. In here users can issue individual or strings (<CMD><CMD><CMD>) of commands to the camera. Simply enter the desired command in the text box and press the "Send" button. As shown in Figure 14, the command will be sent to the camera as displayed in the dialog box. For each command that is sent an <ACK> should be received to indicate that the command was processed properly by the camera.

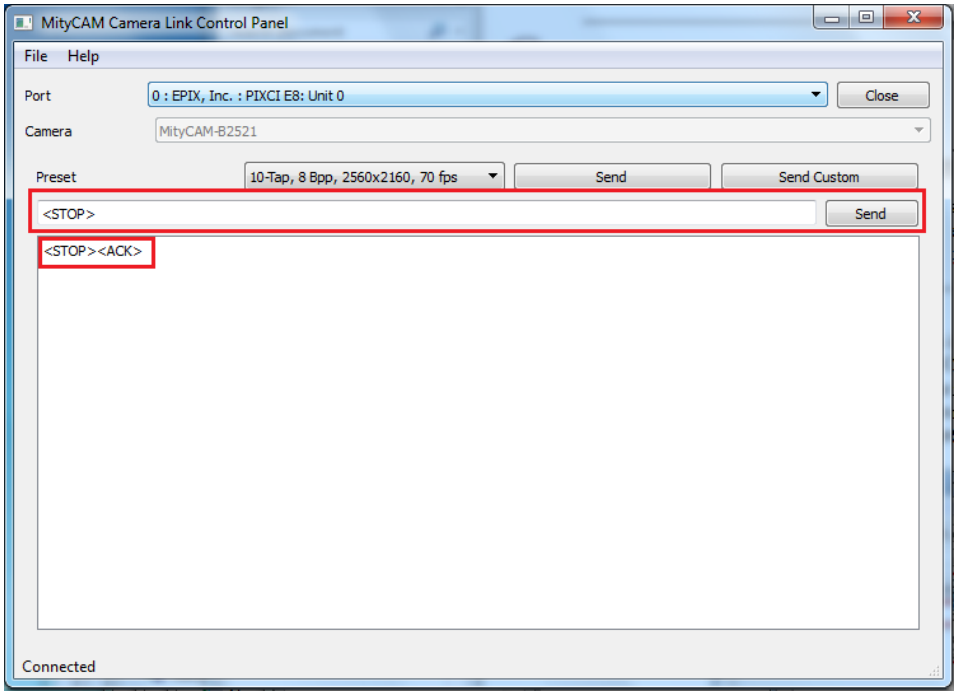

Figure 14: Single Command

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