

e-CAMView

User Manual Document

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1 Revision History

Rev No	Date	Major Changes	
Initial Draft	September 24, 2011	Initial Draft	

2 Introduction

The **e-CAMView** is an application used with the USB Camera devices of the XtendLan. The features provided in the application are as follows:

- a) Enumerating and listing all USB video and audio devices connected.
- b) Properties of audio capture devices (if any audio device is available).
- c) Properties of video renderer.
- d) Changing properties of capture filter.
- e) Changing resolution and color space/compression for video stream (if different resolution are supported by the device)
- f) Changing the resolution and color space/compression for still stream (if different resolution are supported by the device),
- g) Currently configured values of preview which is being shown.
- h) User can capture still images and set the path where still images will be saved.
- i) Configure UVC Extension Control (if supported by device)
- j) Displaying the average frame rate and current resolution.

All the above listed properties can be configured by attractive and easy to use Graphical User Interface. The application will run in Windows XP, Windows 7 and Windows Vista.

3 Launching the Application

- Connect the CARDUSB camera to the PC.
- Launch the e-CAMView from the Desktop or in the Programs Menu shortcut created after successful installation of **mView** Installer.
- When application is launched the initial appearance of window will be as shown in figure 1 below.



Figure 1 Initial Window Appearance when application is launched

4 Application Features

The features that are supported in current version of installer are briefly described here.

In the status bar of the window current resolution of video stream, achieved frame rate are displayed.

4.1 Device Menu

When user clicks on Devices menu all the audio and video devices connected to the PC will be enumerated and listed out. A check mark will be placed along side the sub menu whose images are being previewed in the window.

For CARDUSB3:



:

Figure 2 Enumerated Device List

User can switch between the connected and enumerated video devices to see the images being previewed from the selected device. As soon as user selects a different device to see its preview a check mark will be placed along side it indicating the device's images are being previewed on the window.

4.2 Options Menu

When user selects options menu, the menus appears as shown in figure 3.



Figure 3 Options Menu

4.2.1 Audio Capture Filters

The audio capture filter menu will launch a dialog box in which the user can configure the Audio Input mixer properties. Clicking on **Ok** will set the values as configured by the user.

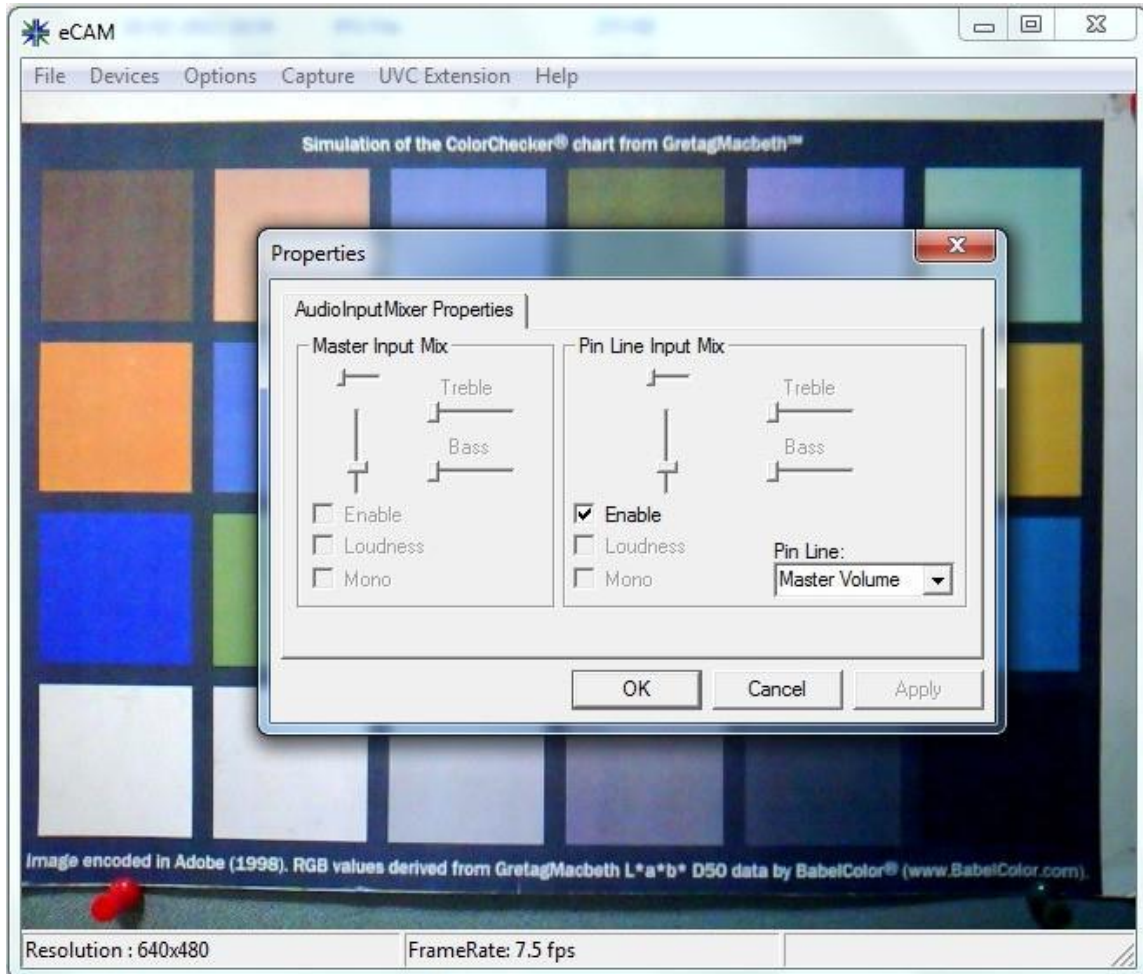


Figure 4 Audio Capture Filter Properties

4.2.2 Video Renderer

The video renderer properties displayed on being selected is shown in figure 5. The renderer properties include Frames played, average frame rate achieved, etc. The average frame rate achieved is for device whose preview is currently running on the window.

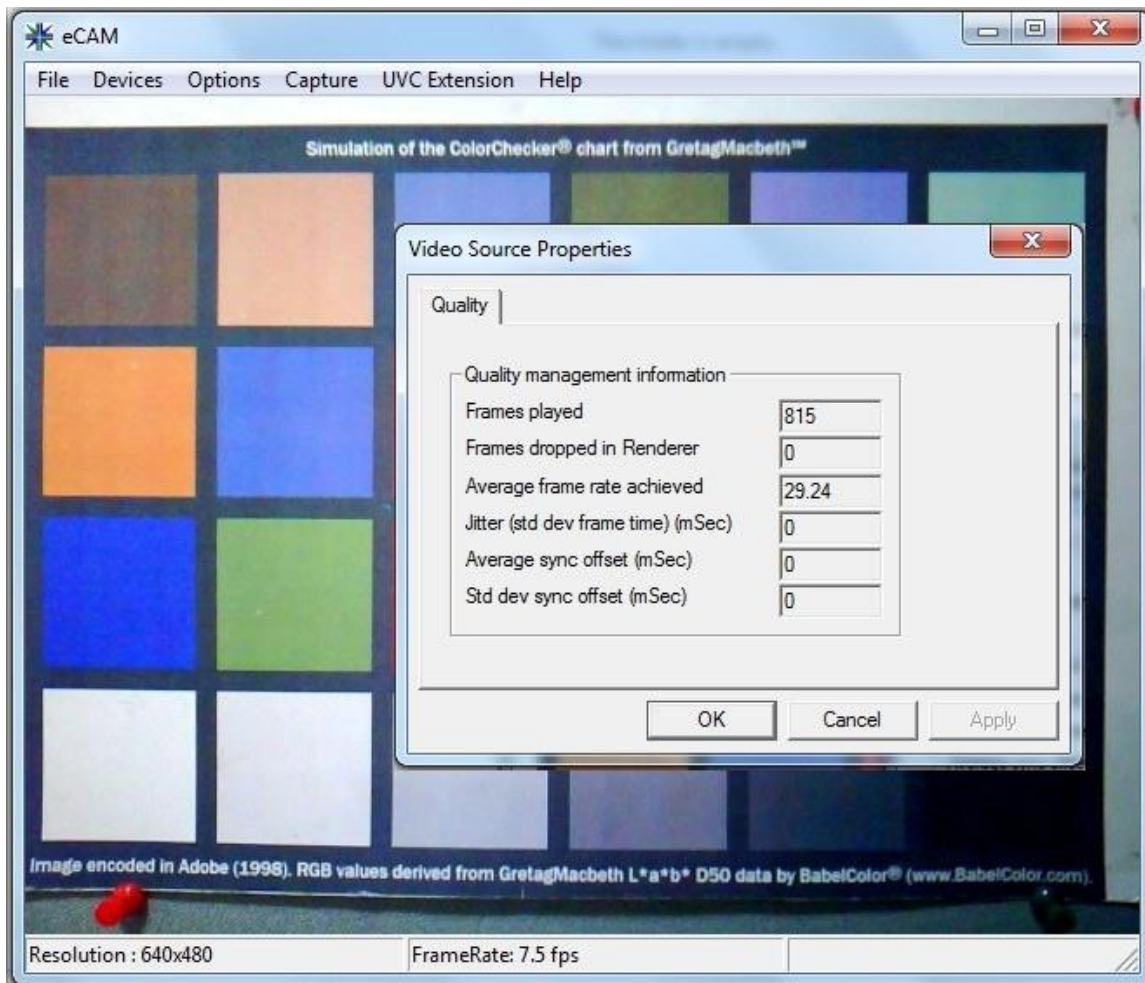


Figure 5 Video Renderer Properties

4.2.3 Video Capture Filter

On selecting Video Capture Filter, a dialog will be launched which displays 2 kinds of video capture filter properties.

- a) Video Proc Amp Settings
- b) Camera Control Settings

a) Video Proc Amp Settings:

The user can adjust the Video proc amp settings in the dialog. Sliders whose labels are not grayed out can only be configured. The user can move the slider and configure the preview settings according to their needs. The value being set will be displayed in the text box based on the position of the slider marker. As soon as the slider is moved to configure the values the preview's property will change at that instance, on clicking **Apply** button the changes will be saved until next time the dialog is opened.

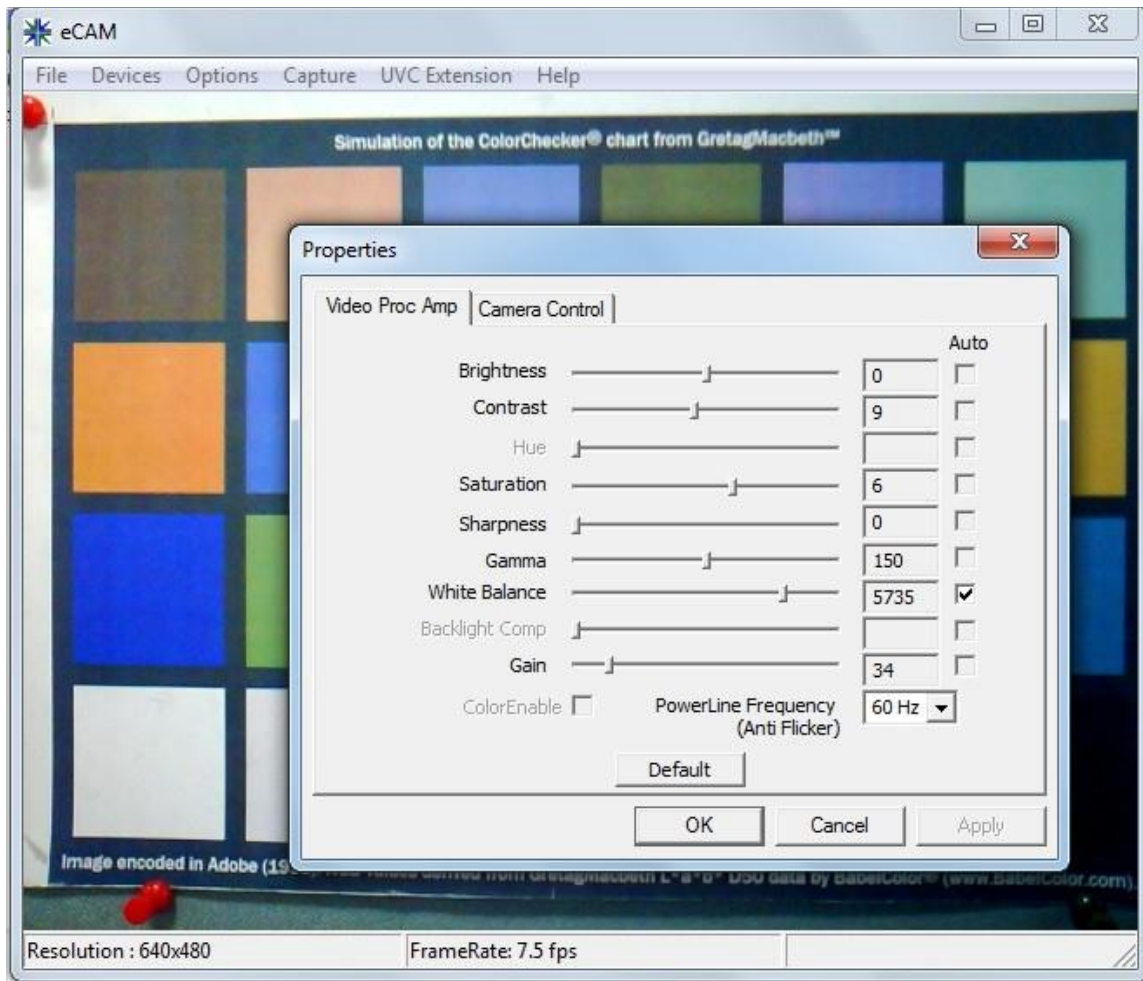


Figure 6 Video Proc Amp Properties

b) Camera Control Settings

To configure the camera control settings of video capture filter the user can click on the other tab available. Once again slider control will help the user to configure the camera settings according to their need.

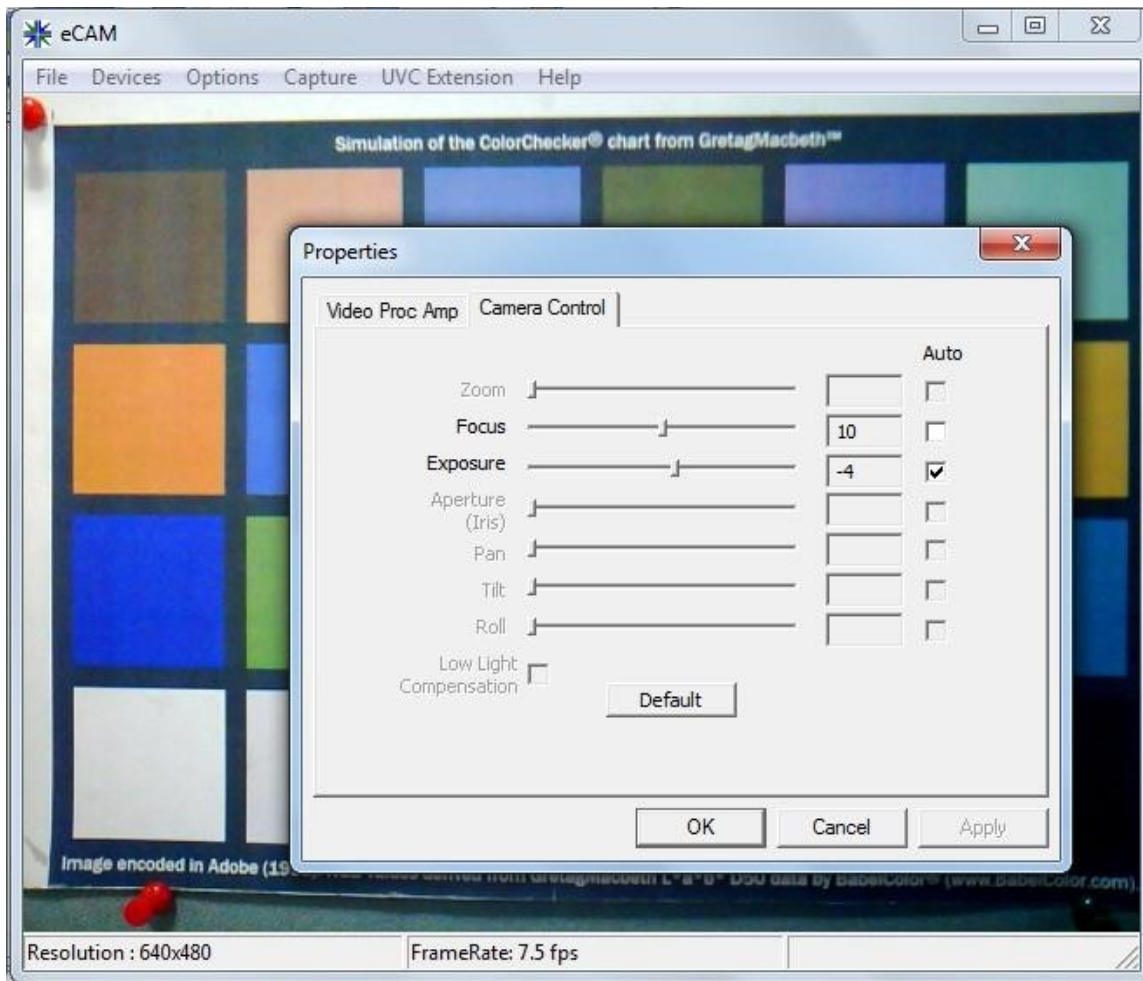


Figure 7 Camera Control Properties

4.2.4 Video Capture Pin

On clicking the video capture pin sub menu a dialog box will be opened so that user can configure the output size and compression features of stream format. The preview running in the main application will be stopped till the video capture pin dialog box is active. Once the dialog box is closed preview will start automatically.

The available output size and color spaces will be listed in the combo box. After selecting the required output size and color space, the user has to press the **Apply** button to configure the changes. Pressing **Ok** will start previewing the video stream with newly configured output size and compression values.

At any point of time user can click on **Cancel** button to exit the dialog and start the preview.

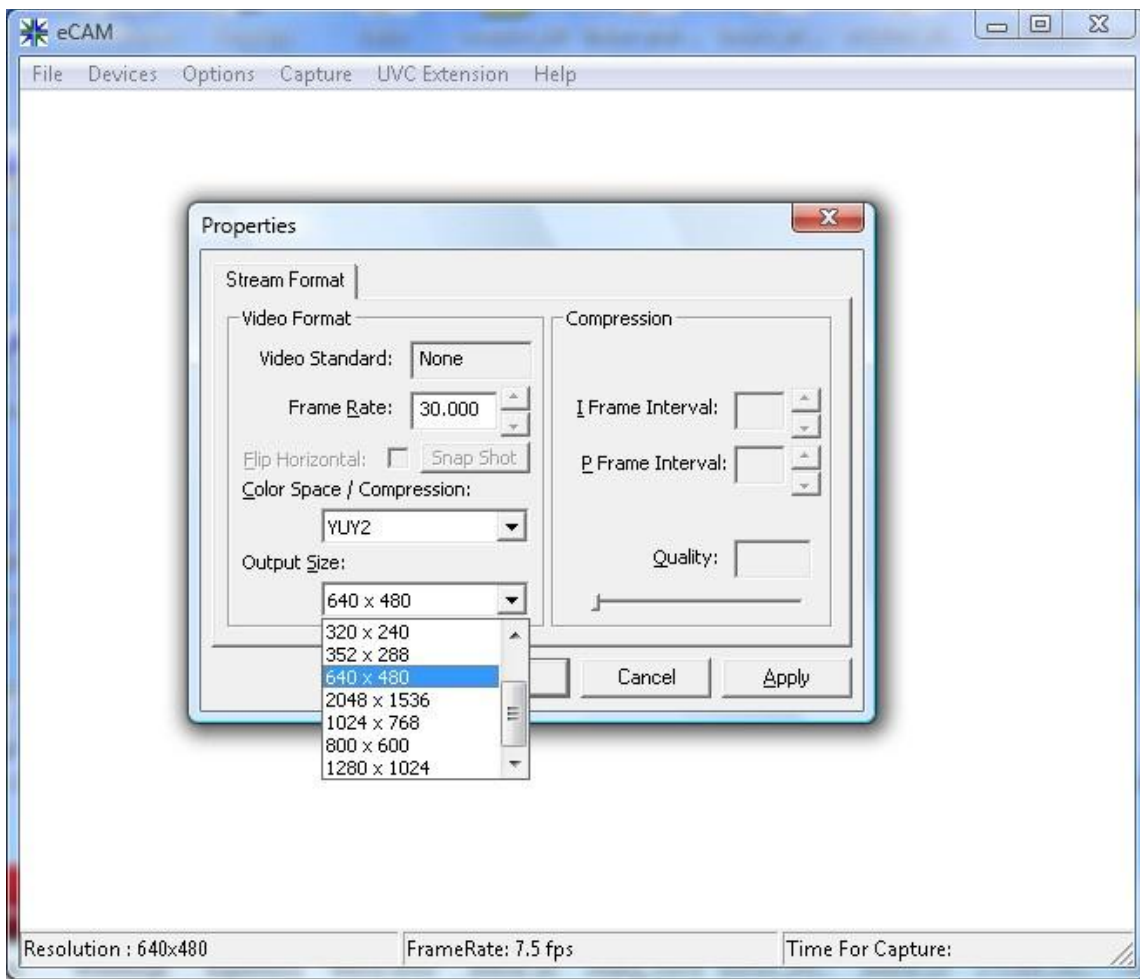


Figure 8 Supported video resolutions in video property page

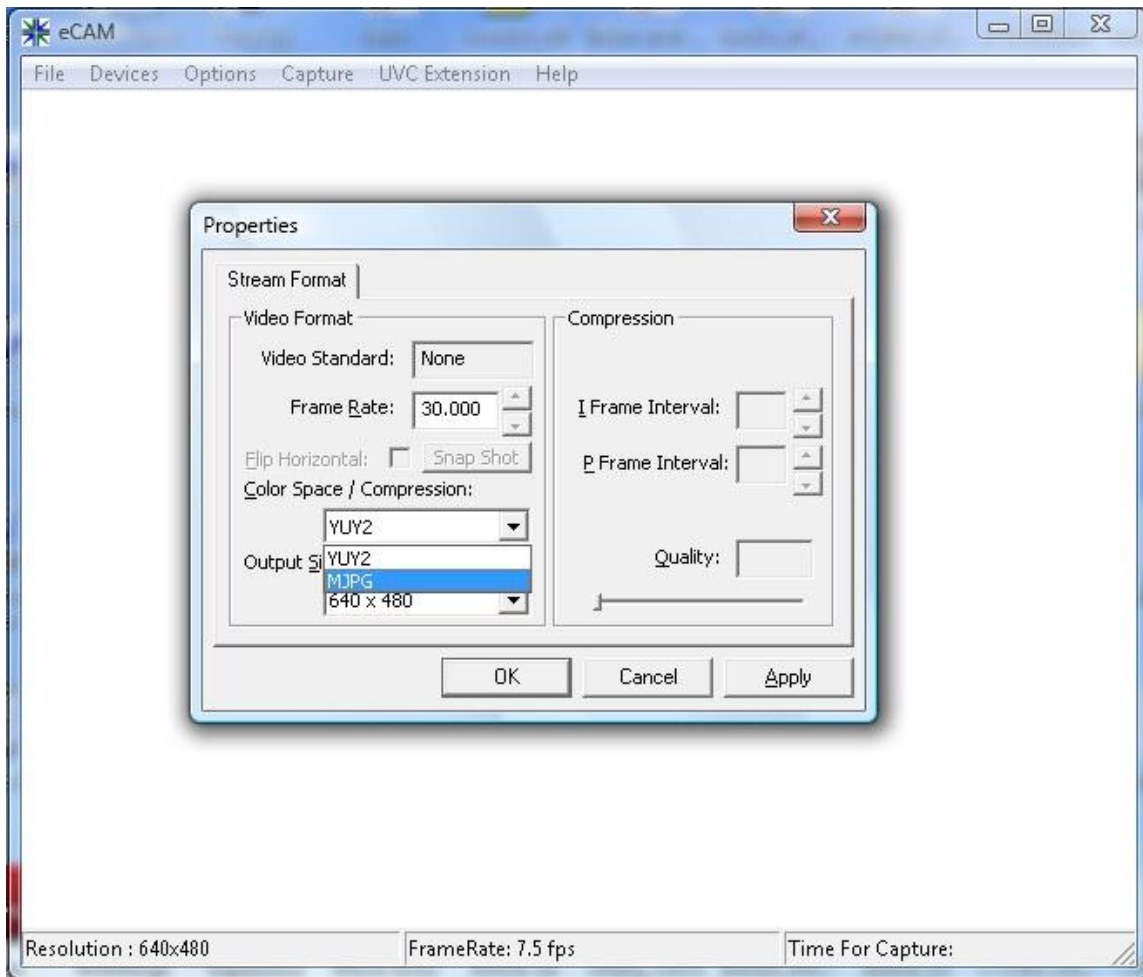


Figure 9 Supported Video Color space in Video Property Page

The window will be resized to the same size as that of the video stream output format.



Figure 10 Resized window according to resolution

The video window height and width reduced/enlarged according to selected output size of video stream as shown in figure 10.

4.2.5 Still Capture Pin

On clicking the still capture pin sub menu, a dialog box will be opened so that user can configure the output size and compression features of still capture pin. The preview running in the main application will be stopped till the still capture pin dialog box is active. Once the dialog box is closed preview will start automatically.

The available output size and color spaces will be listed in the combo box. After selecting the required output size and color space, the user has to press the **Apply** button to configure the changes. Pressing **Ok** will start previewing the video stream with newly configured output size and compression values.

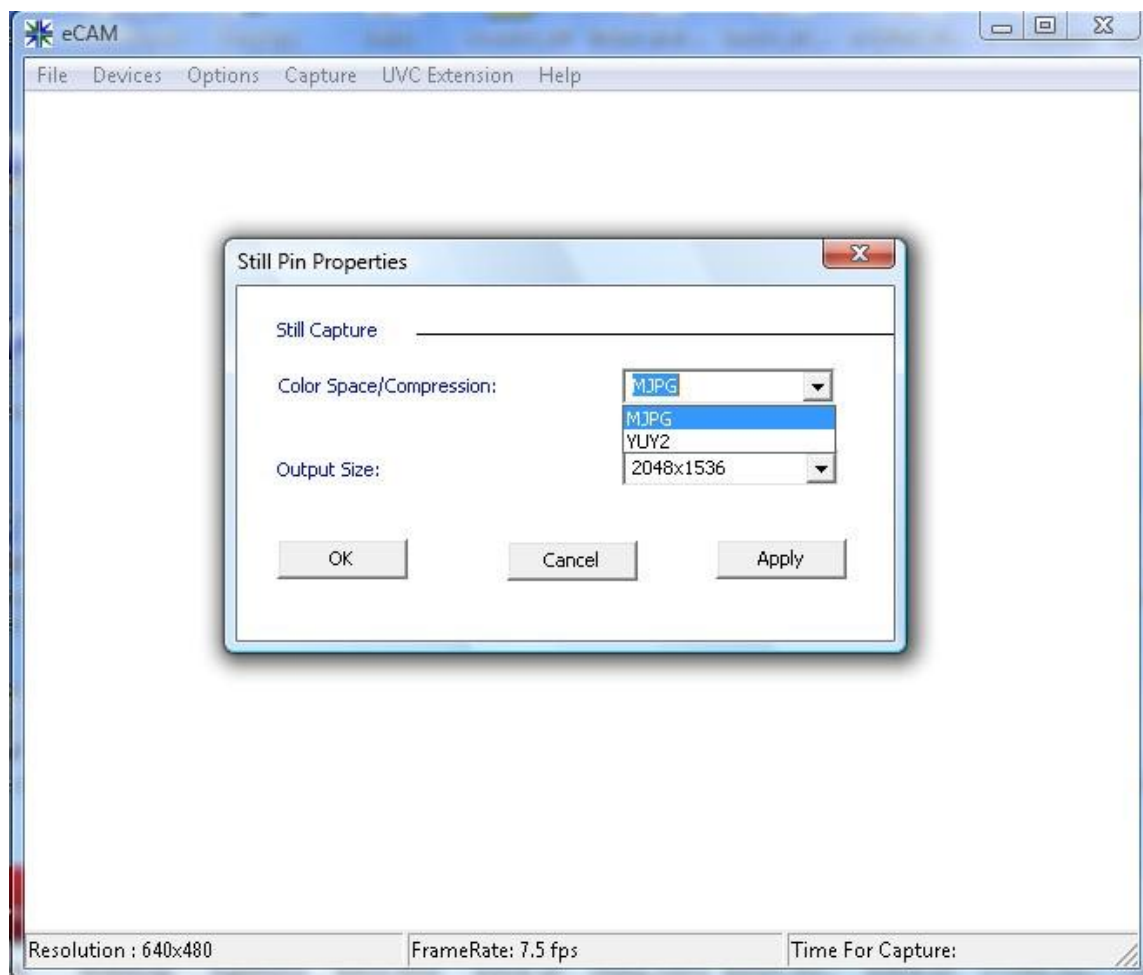


Figure 11 Still Pin Properties dialog showing available Color Space

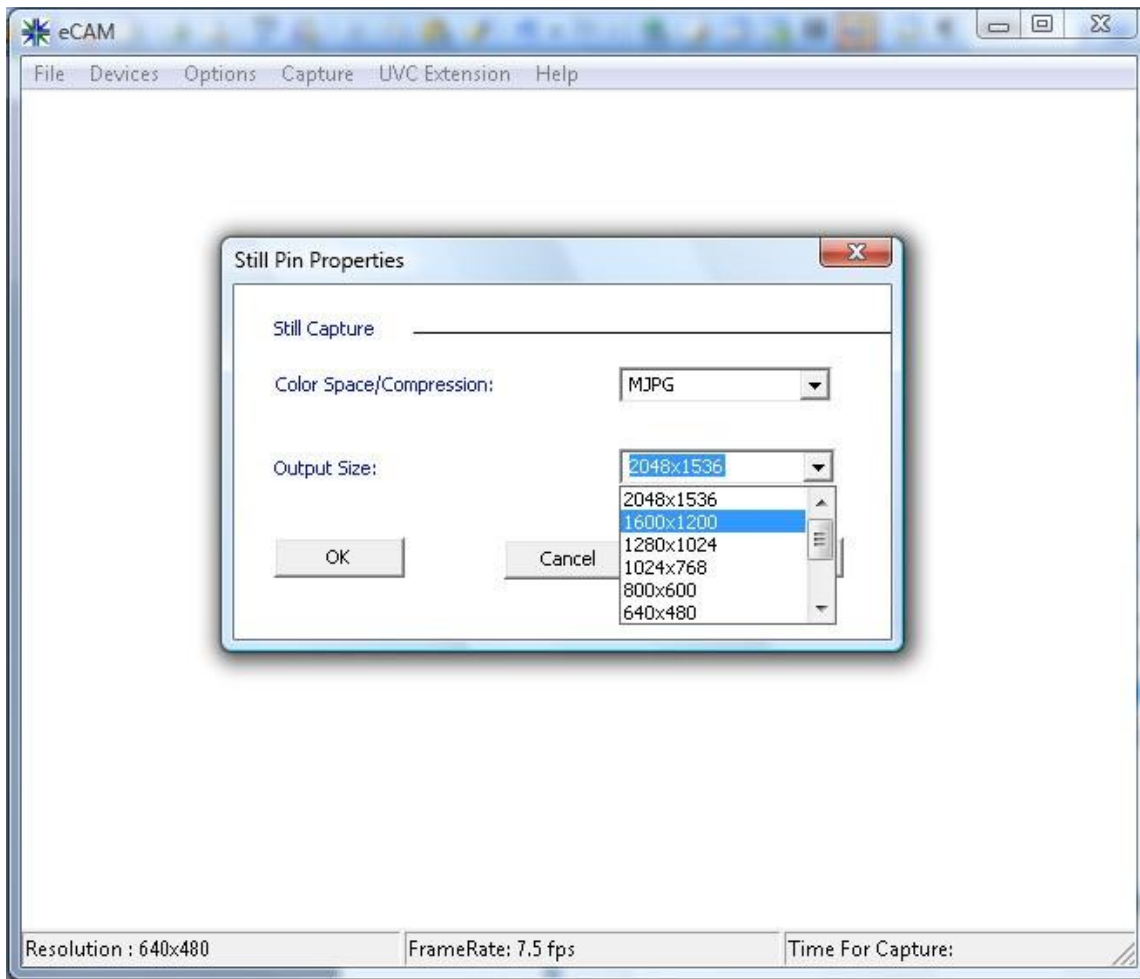


Figure 12 Supported still resolutions listed in descending order

At any point of time user can click on **Cancel** button to exit the dialog and start the preview.

4.2.6 Current Settings

On selecting the current settings sub menu a dialog box will be opened which will list out all the currently configured values for the device. With this user can see all the properties he has configured and the effects of it on the video that is rendered onto the application window.



Figure 13 Current Settings Dialog

4.3 Capture Menu

The Capture Menu has 2 options.

- Get Still (Enter)
- Set File Path

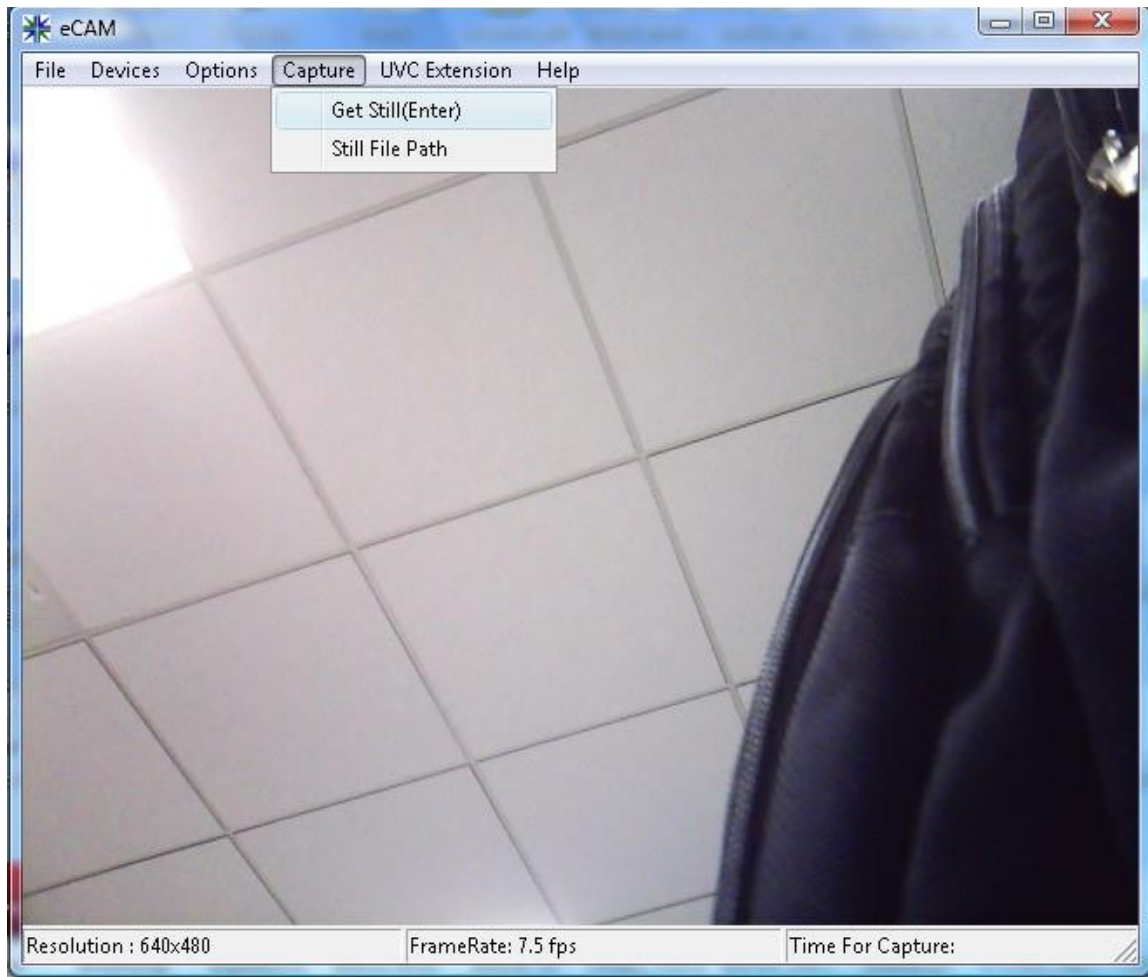


Figure 14 Capture Menu

4.3.1 Get Still (Enter)

The user can capture the still image from the still pin by selecting this menu or pressing **Enter** key through keyboard. The image will be saved in the desktop directory by default. The user can configure the folder where in to save the images by clicking on the still file path and configuring the directory as required. The file name of the image saved will be the current timestamp.

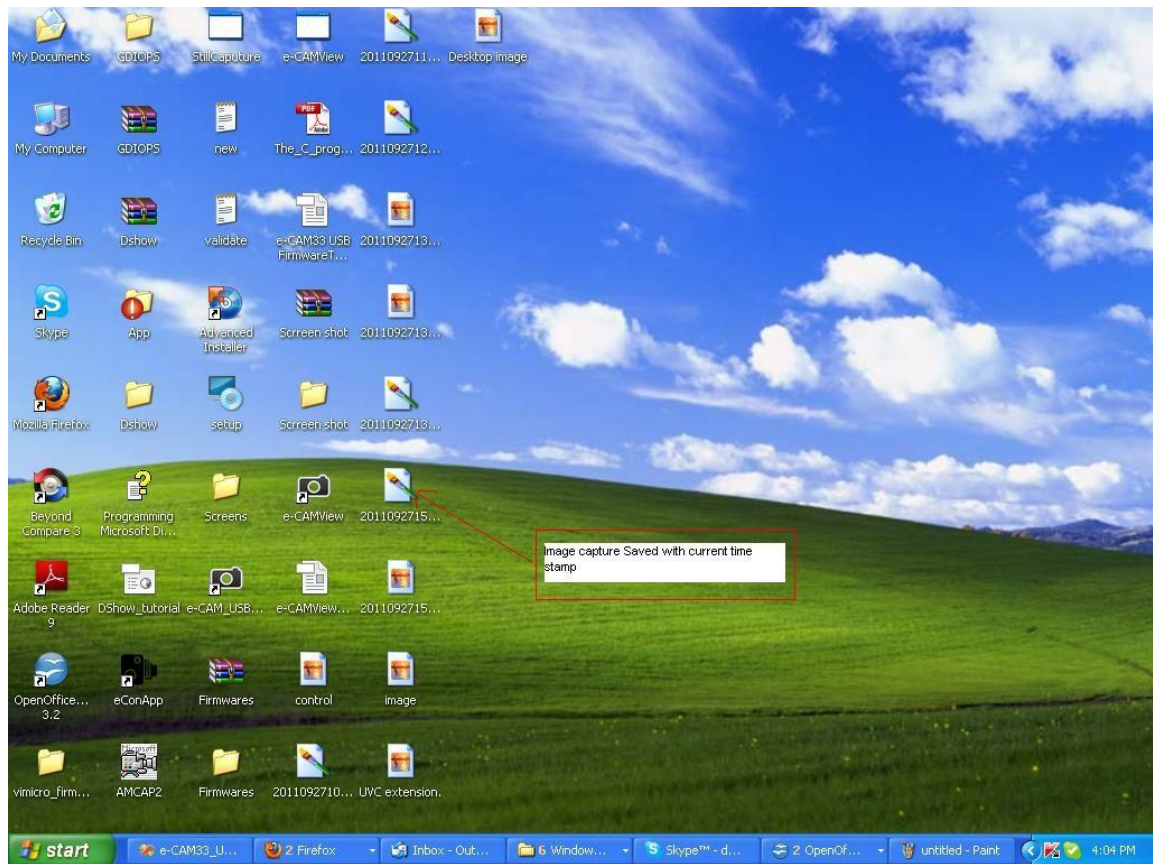


Figure 15 Captured still image in Desktop

4.3.2 Still File Path

By using this menu user can set up the folder where the images captured will be saved. The user can browse to the required directory so that in future images captured will be saved in that folder.

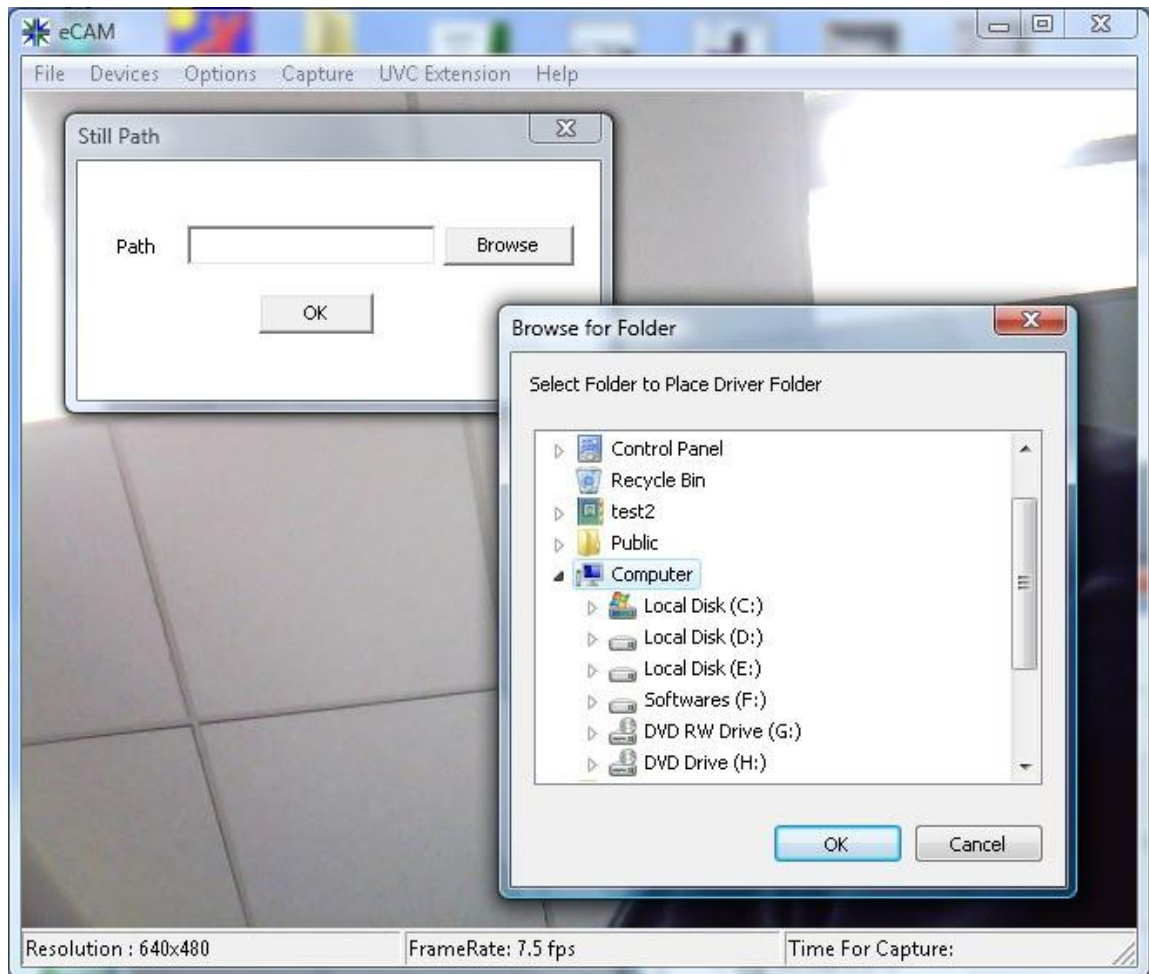


Figure 16 Browse Folder dialog to set the Still Image Folder

4.4 UVC Extension Control

On selecting the UVC Extension menu the UVC Extension Control dialog box opens, if the device supports extension unit.

The UVC Extension has the features mentioned as below

- Auto Focus Status
- Auto Focus Trigger
- Focus Mode
- Update GPI Status
- Set / Clear GPO's
- Get Sensor ID
- Get Firmware Version

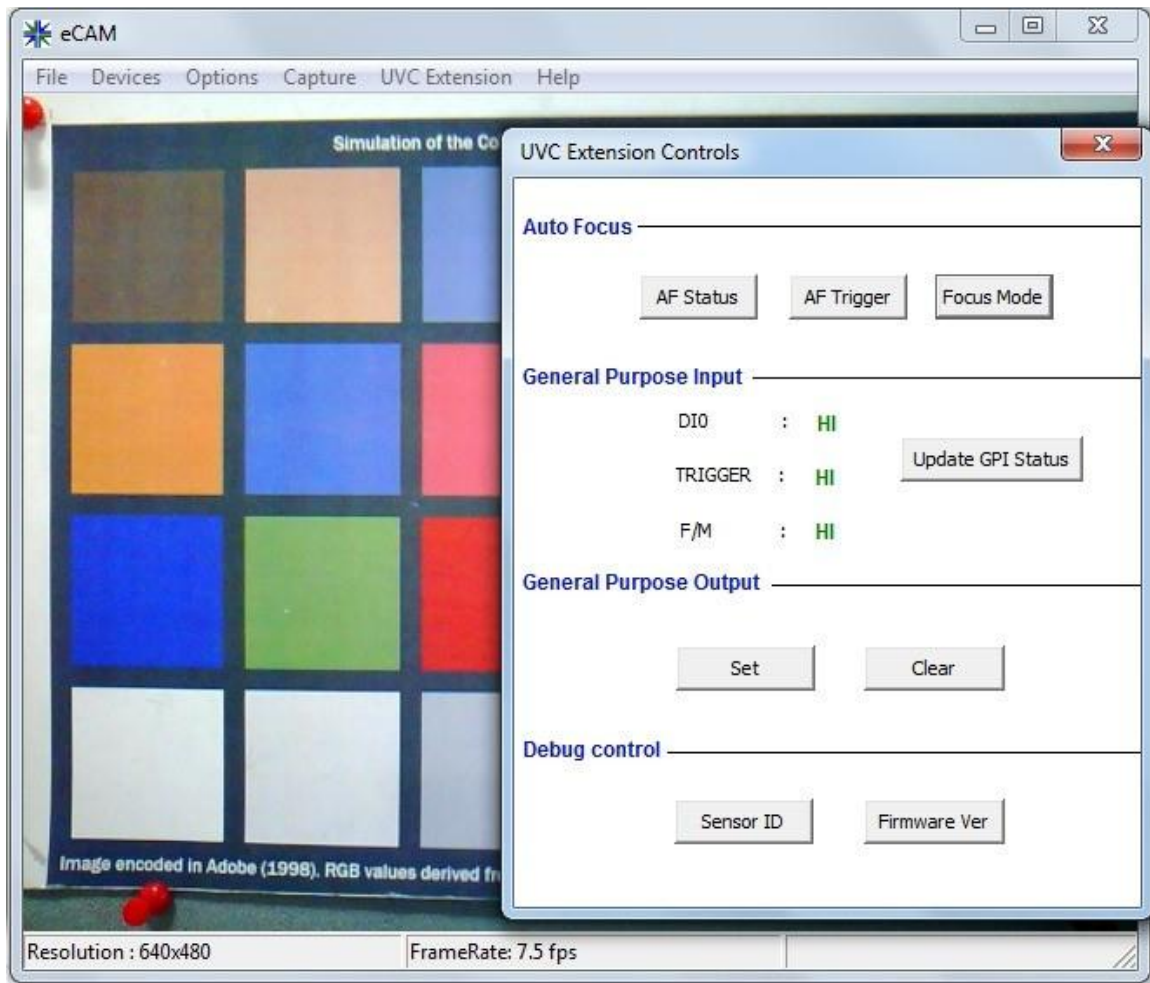


Figure 17 UVC Extension Controls

4.4.1 AF Status

The **AF Status** button shows the current auto focus status. The focus status as mentioned below.

- AF is Manual
- AF is Single Trigger Focusing
- AF is Single Trigger Focused

4.4.2 AF Trigger

The **AF Trigger** button will perform the Single Trigger Auto Focus.

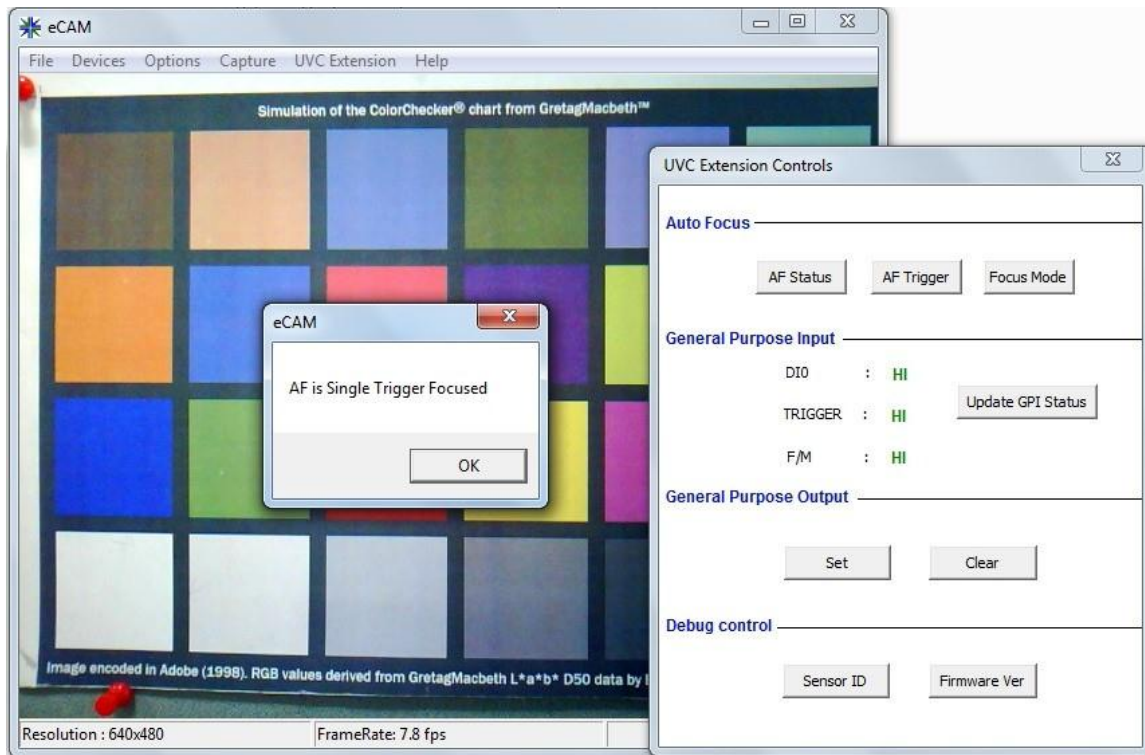


Figure 18 AF Trigger and AF Status

4.4.3 Focus Mode

The Focus Mode button opens the Focus Mode Dialog to perform Auto Focus and Manual Focus.

It contains two Radio buttons.

- 1) Auto Focus
- 2) Manual Focus

Auto focus Radio button is selected by default.

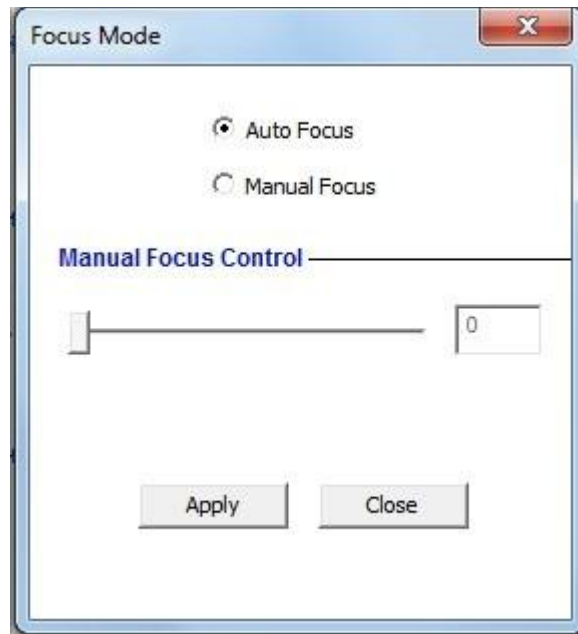


Figure 19 Focus Mode Dialog

On selecting the Auto Focus radio button the slider control and edit box will be disabled. The controls will be enabled once the manual focus radio button is selected

4.4.3.1 Auto Focus

Select the Auto Focus radio button and click the **Apply** button to set the Auto Focus mode.

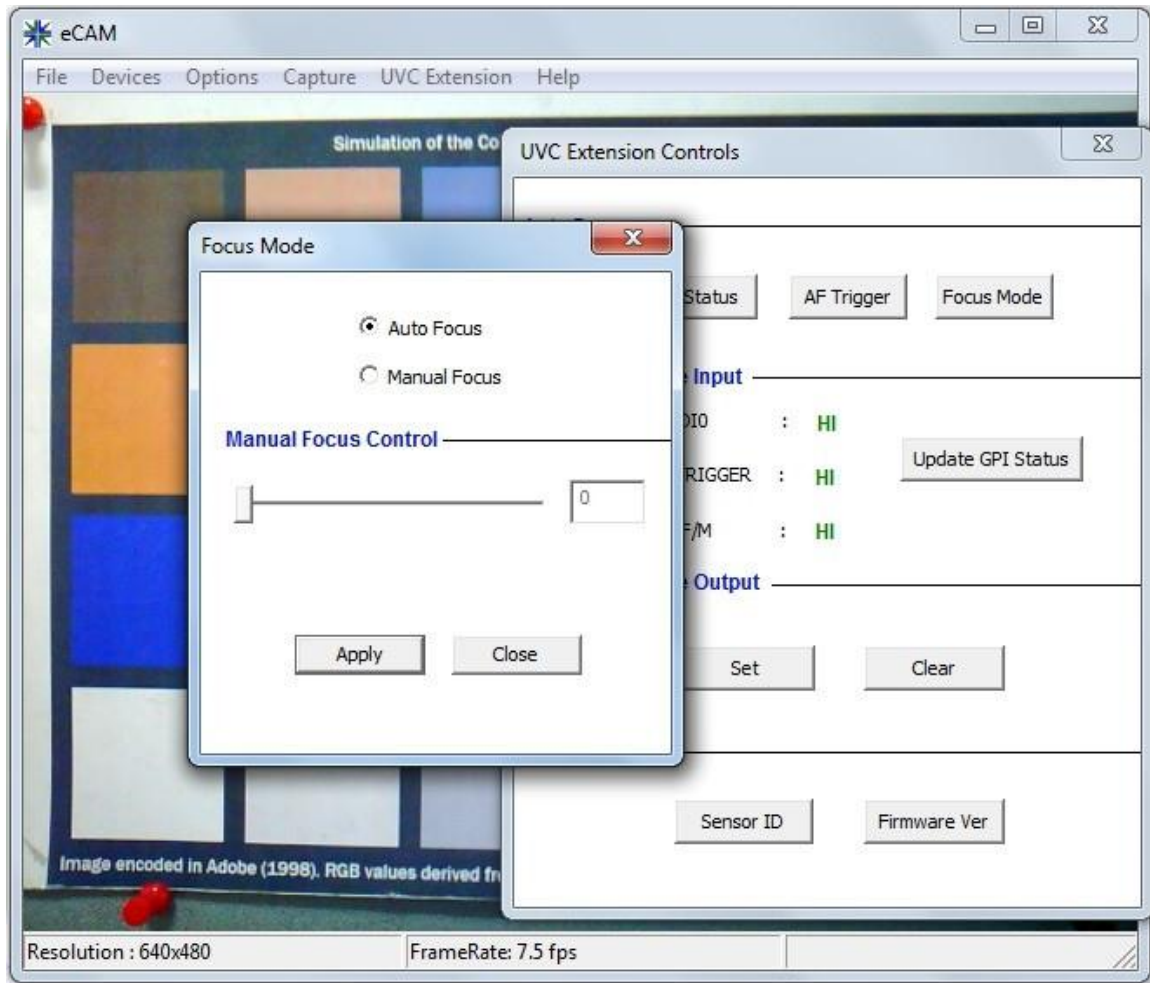


Figure 20 Auto Focus Dialog

4.4.3.2 Manual Focus

Select manual focus radio button to enable the Slider control and edit box. Slide the slider to set the manual focus. The slider position (Manual Focus Position) displays in the edit box. The Manual focus will be set after leave the slider.

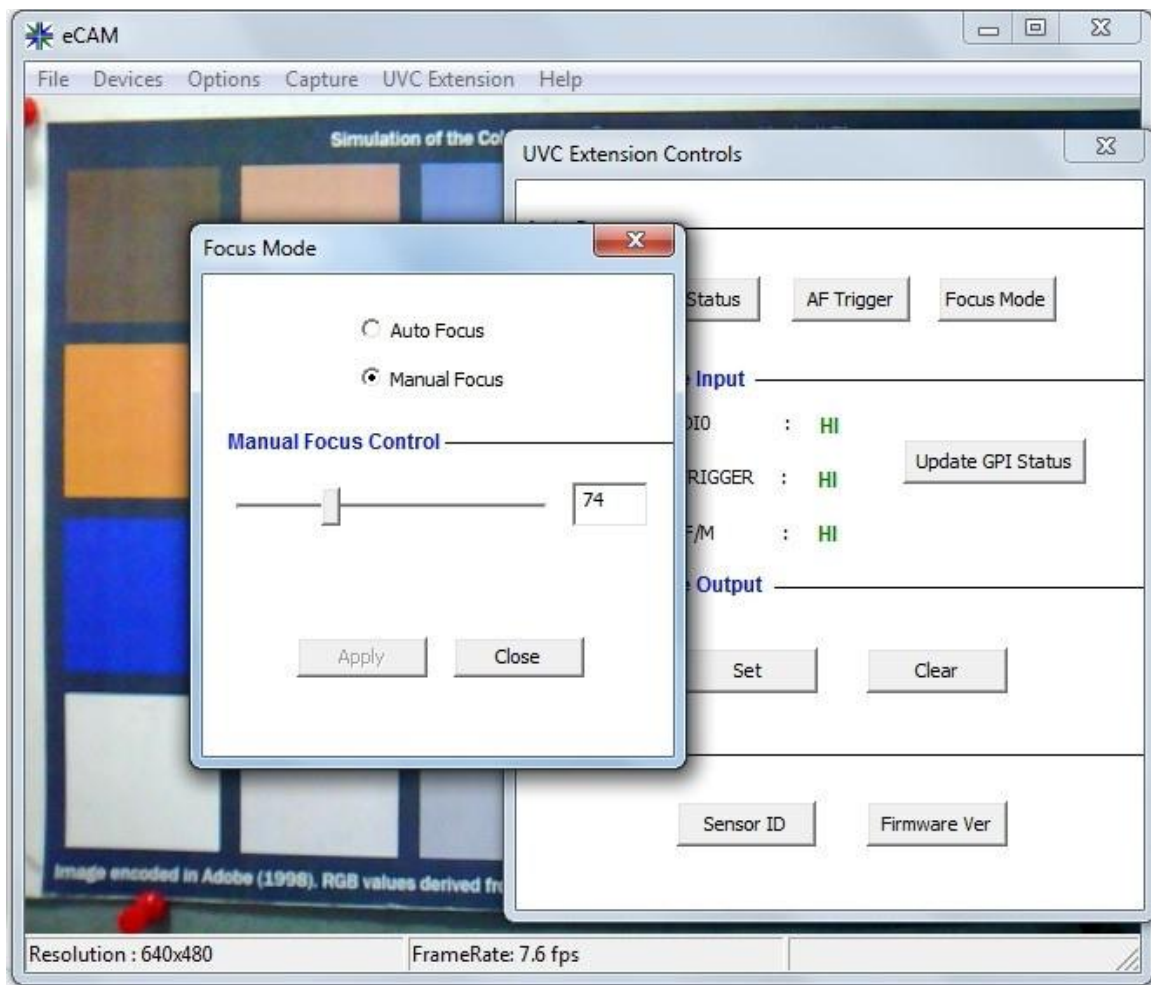


Figure 21 Manual Focus Dialog

4.4.4 Update GPI Status

Click Update GPI Status button to know the status of GPI's. There are three GPI's: **DIO**, **TRIGGER** and **F/M**. The GPI status has shown as "LO" in red color when it is Low and "HI" in green color when it is high.

4.4.5 Set / Clear GP0

The **Set** will set the GPO to High and **Clear** button will set the GPO to Low.

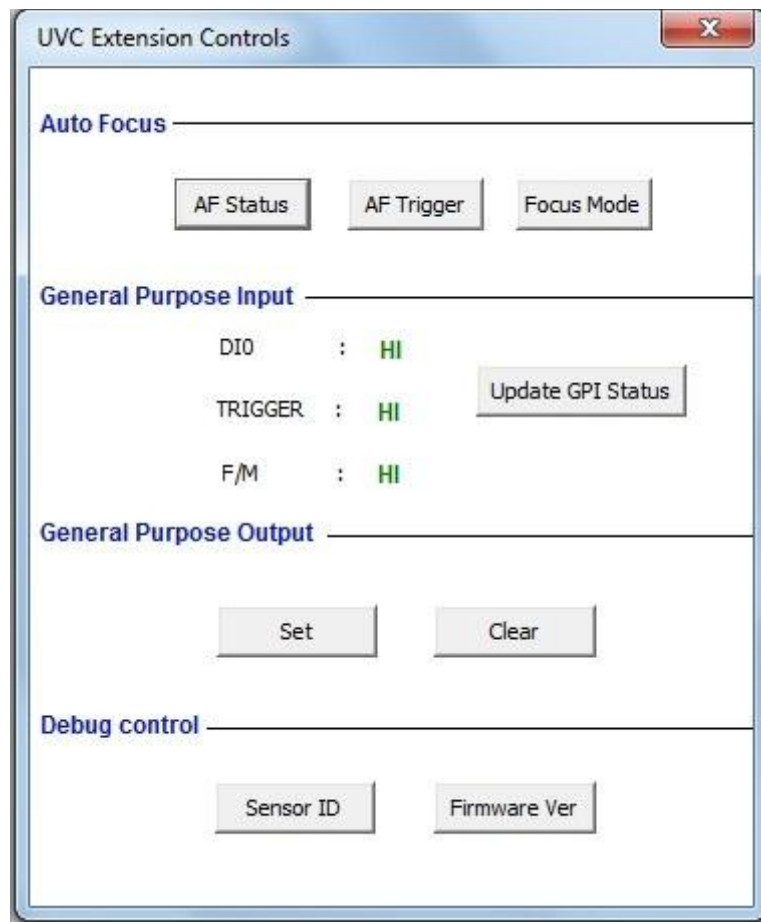
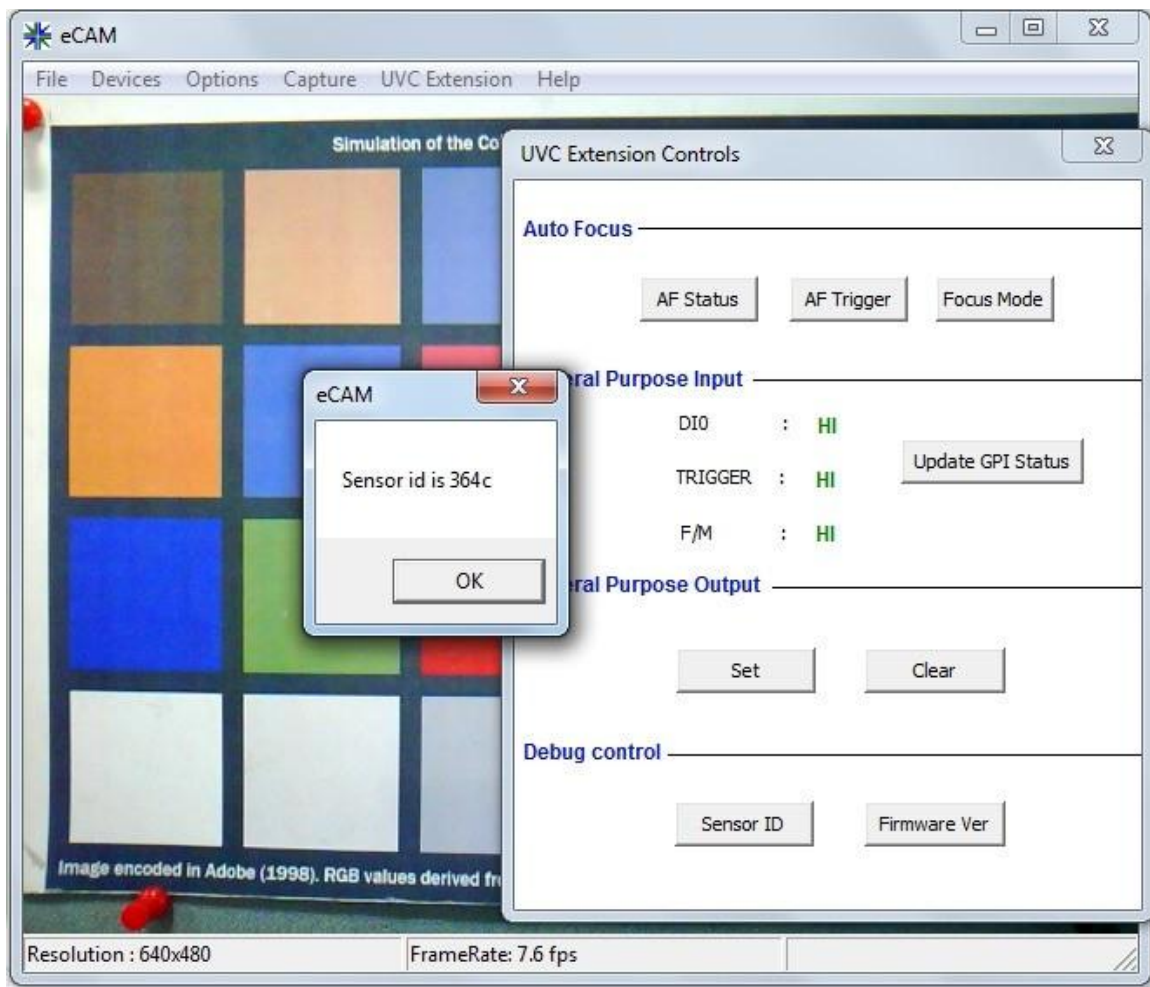


Figure 22 GPI and GPO Status

4.4.6 Sensor ID

The **Sensor ID** button will display the current sensor id details.
For **CARDUSB3**:



For CARDUSB5

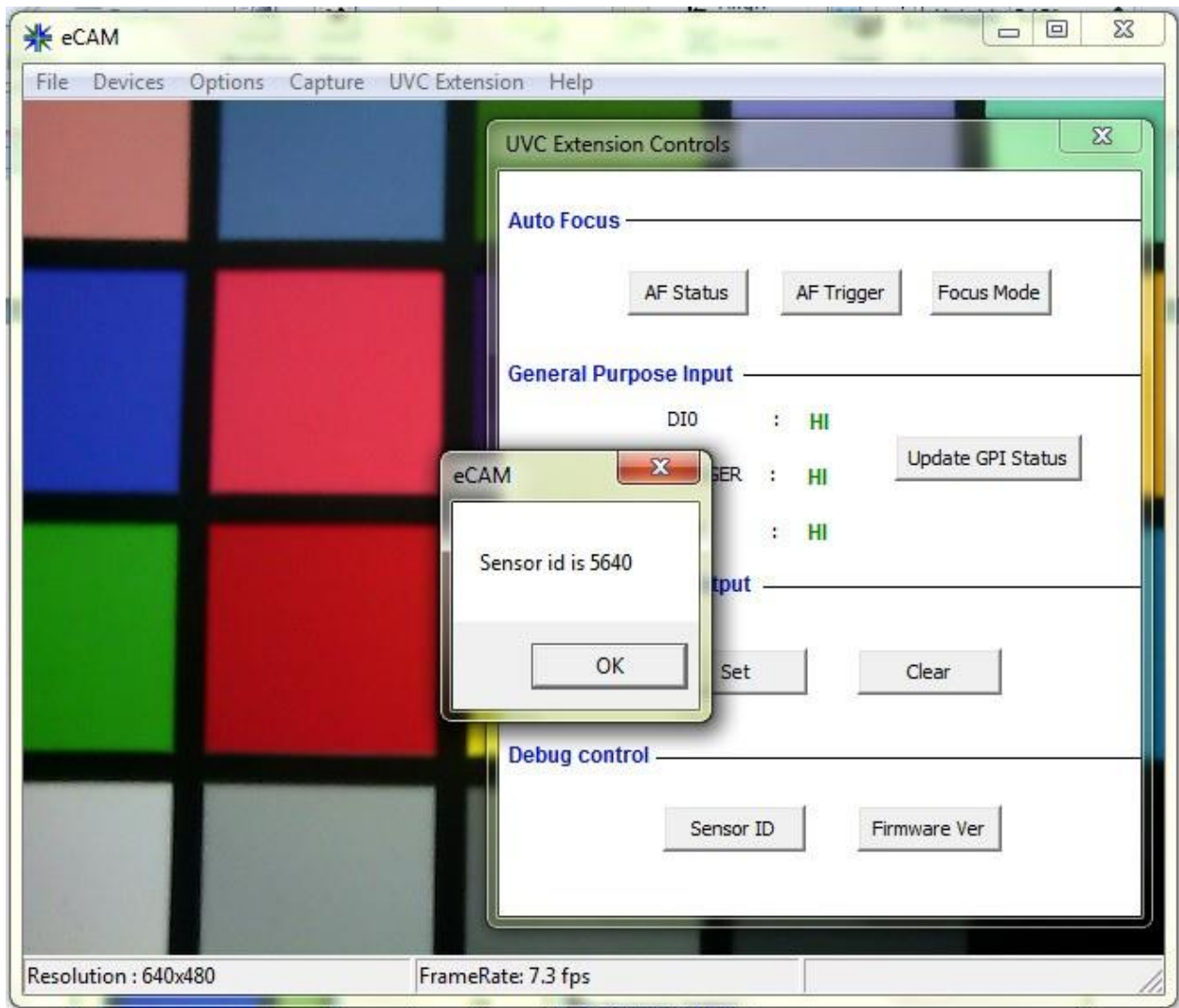
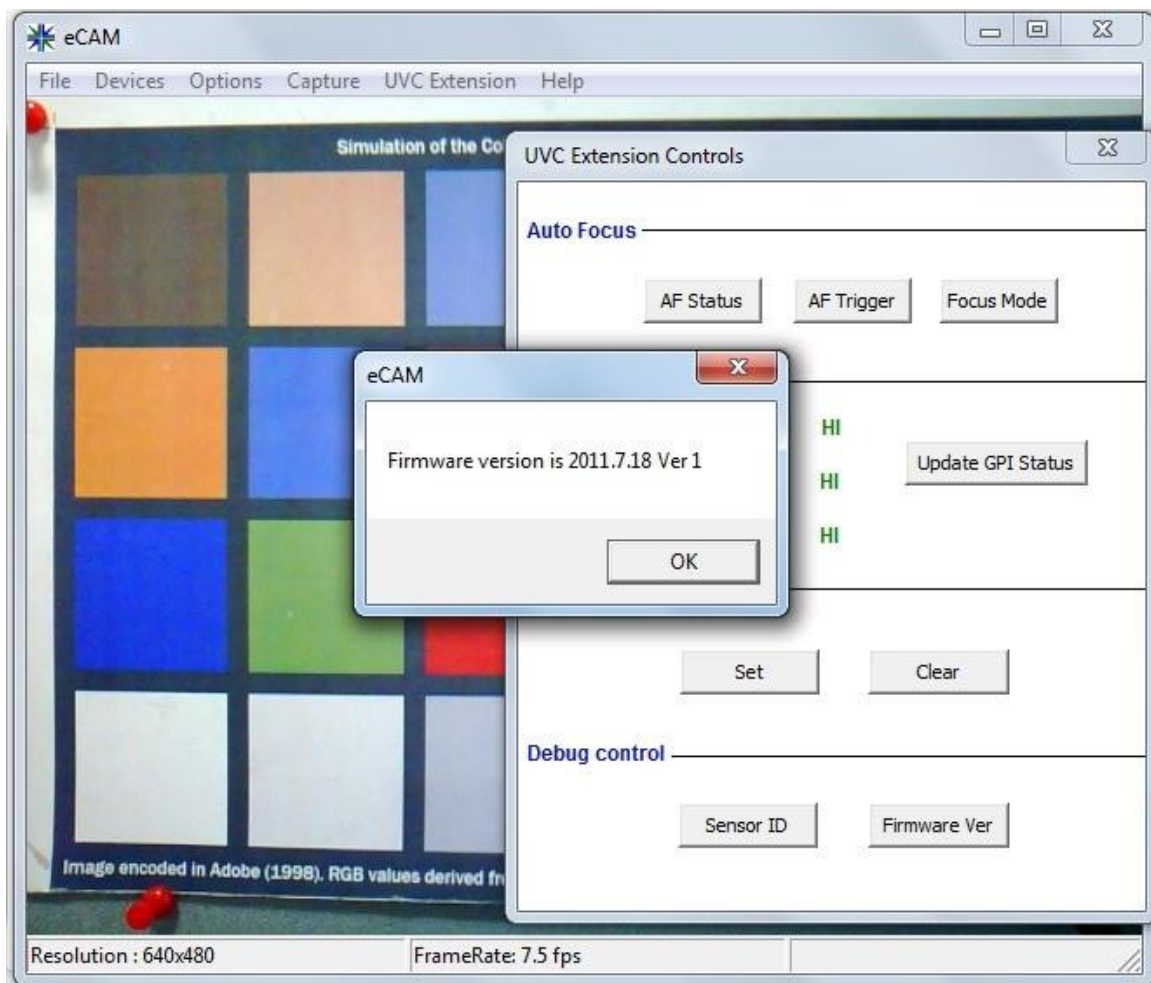


Figure 203 Sensor ID

4.4.7 Firmware Version

The **Firmware Ver** button will display the current firmware version details.
For **CARDUSB3**:



For CARDUSB5

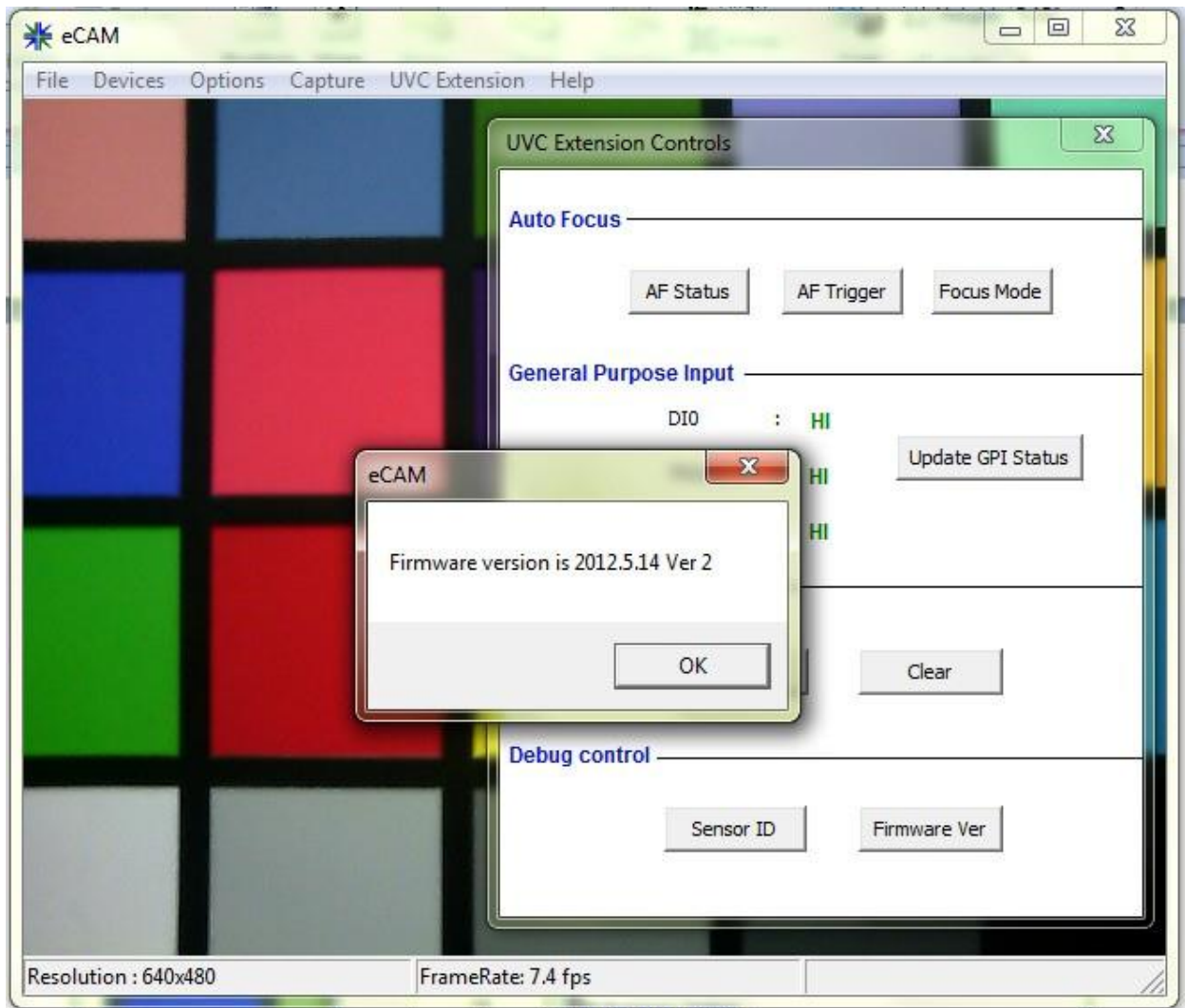


Figure 214 Firmware Version

5 Conclusion

This document provides detail explanation on various features and options available in e-CAMView application.