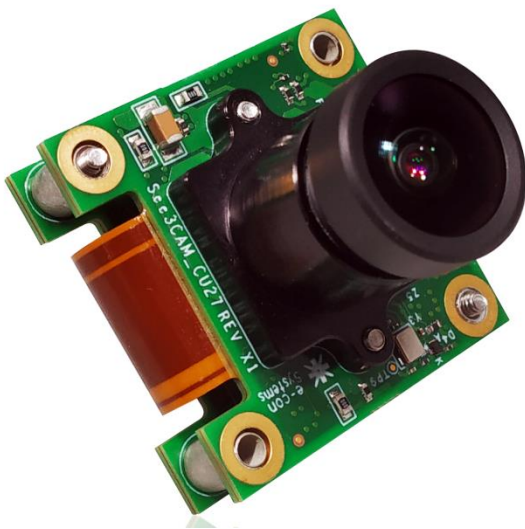


See3CAM_CU27

e-CAMView Streaming Application User Manual



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e-con Systems

Your Product Development Partner

Disclaimer

The specifications of See3CAM_CU27 camera board and instructions on how to connect this board with PC are provided as reference only and e-con Systems reserves the right to edit/modify this document without any prior intimation of whatsoever.

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Introduction to See3CAM_CU27

See3CAM_CU27 is a 2 MP, color, UVC compliant, USB 3.1 Gen 1 SuperSpeed camera from e-con Systems, a leading Embedded Product Design Services Company which specializes in the advanced camera solutions. It is the latest member of the See3CAM family of USB 3.1 Gen 1 SuperSpeed camera products.

See3CAM_CU27 is a 2 MP camera that is based on the 1/2.8" IMX462 CMOS image sensor. It is also backward compatible with the USB 2.0 high speed interface, albeit at lower frame rates.

See3CAM_CU27 is UVC compliant camera, and it does not require any drivers to be installed on the PC. The native UVC drivers of Windows and Linux Operating Systems (OS) will be compatible with this camera. e-con Systems also provides the sample application that demonstrates some of the features of this camera. However, this camera can utilize any DirectShow application such as Skype and so on.

e-con Systems provides a sample DirectShow application, called e-CAMView, along with the See3CAM_CU27 camera.

Prerequisites

The steps to initialize the device with the host computer are as follows:

1. Connect the one end of USB 3.1 Gen 1 cable to the USB 3.1 Gen 1 connector provided at the back of See3CAM_CU27.
2. Connect the other end of USB 3.1 Gen 1 cable to the USB 3.1 Gen 1 host controller on the computer.

Once connected, the LED on the device will glow indicating that See3CAM_CU27 is powered up and ready to use.

As See3CAM_CU27 is a generic UVC device, Windows will automatically detect and installs the drivers. This happens for the first time and from the second time onwards the device will be detected immediately by the host PC and will be ready for use.

To view the preview, the e-CAMView application designed for See3CAM_CU27 must be installed. Refer to the *e-CAMView_Streaming_Application_Installation_Manual_See3CAM_CU27.pdf* to know more on how to install the e-CAMView application.

Description

See3CAM_CU27 is a USB 3.1 Gen 1 color camera capable of streaming the resolution and frame rates as listed in below table.

Table 1: See3CAM_CU27 Resolution and Frame Rates with FOV Crop

Format	Resolution	Frame Rate		% Crop in FOV	
		USB 3.1 Gen 1	USB 2.0	Horizontal	Vertical
UYVY	VGA (640 x 480)	120 fps	30 fps	41.87%	0%
	720P (1280 x 720)	80 fps	NS	0%	0%
	1080P (1920 x 1080)	60 fps	NS	0%	0%
MJPEG	VGA (640 x 480)	120 fps	30 fps	41.87%	0%
	720P (1280 x 720)	100 fps	30 fps	0%	0%
	1080P (1920 x 1080)	100 fps	30 fps	0%	0%

For streaming MJPEG, use MainConcept-MJPEG codec package. Find the installer in the install path **C:/Program Files (x86)/e-con_Systems/e-CAMView** and install a demo version of the codec by selecting **ignore for demo version** while prompted.

Note: The above frame rates are subject to change with different renderers, and PC configuration.

The camera controls of See3CAM_CU27 are as follows:

- Brightness
- Contrast
- Saturation
- Sharpness
- White Balance (both manual and automatic)
- Backlight Compensation
- Gain
- Exposure (both manual and automatic)
- Roll

This document explains the following sections:

- Selecting the supported preview resolutions.
- Selecting the still image resolution.
- Capturing still images.
- Using supported controls.
- Getting the Unique ID of the camera.

The Field of View (FOV) of See3CAM_CU27 is shown below.

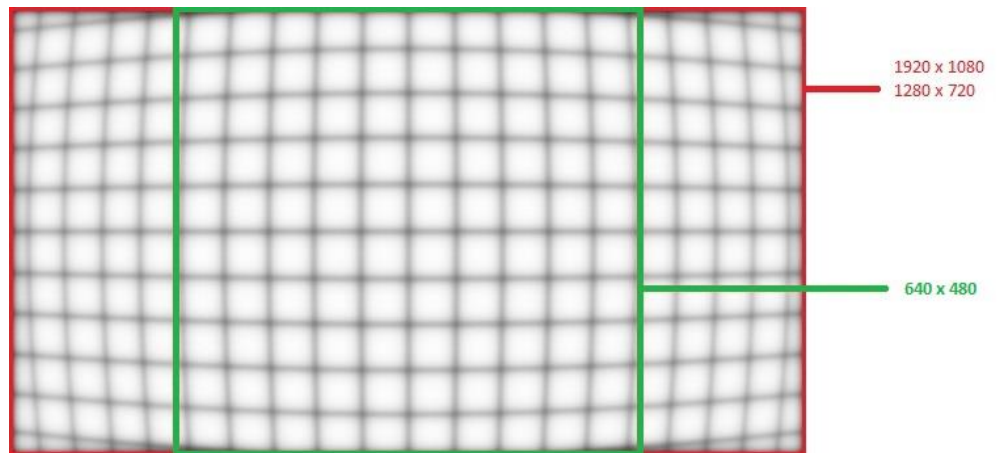


Figure 1: FOV of See3CAM_CU27

Using e-CAMView

This section describes how to use the e-CAMView application.

To launch the e-CAMView video streaming and capture application, click **Start > All Programs > e-con Systems > e-CAMView**.

The e-CAMView application is provided with a set of features that can be used to attain the full functionality of See3CAM_CU27. The Menu bar at the top contains menu items and the Status bar at the bottom shows related information such as resolution and frame rate. When the application is running, the current preview resolution and the frame rate are displayed in the Status bar as shown below.

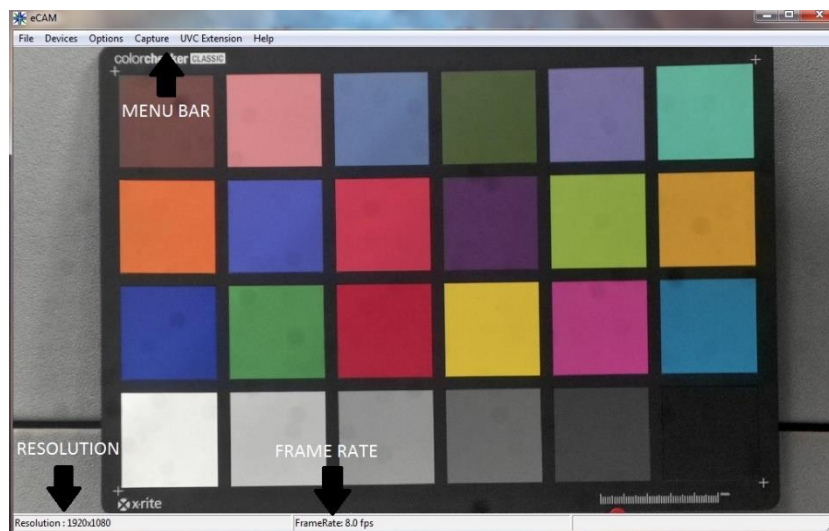


Figure 2: Application Launch Appearance

The following sections describe each of the menu items in detail.

Devices Menu

You can click the **Devices** menu to view the currently connected video devices to host PC and you can select any video devices attached to the computer. A check mark is placed before the device indicating the video device which is currently streaming. By default, the See3CAM_CU27 device will be indicated by the name **See3CAM_CU27**. The See3CAM_CU27 camera being listed in the **Devices** menu is shown below.

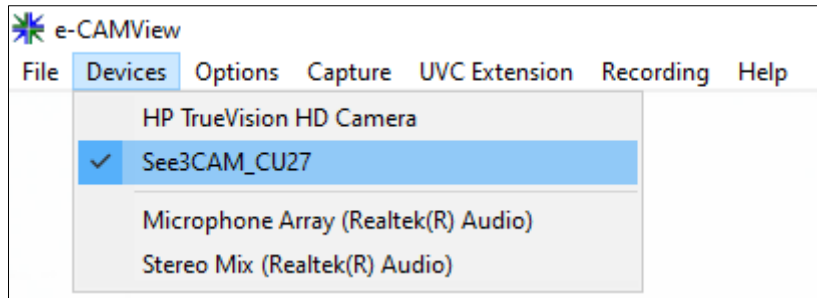


Figure 3: Enumerated Devices List

In case any other video device such as on-board webcam is connected, e-CAMView will list those video capture devices and you can switch between the available video capture devices, by selecting the respective device.

Note: There is no audio capture source available with the See3CAM_CU27 camera.

Options Menu

You can click the **Options** menu to select the various preview, image resolutions and the controls that are supported by See3CAM_CU27. When you click the **Options** menu, you can view the options listed in the **Options** menu as shown below.

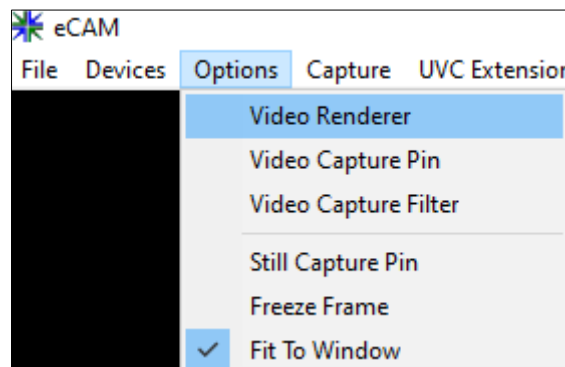


Figure 4: Options Menu

From this **Options** menu, you can select the following options:

- [Video Capture Pin](#) - to select various video preview resolutions supported by the device.
- [Video Capture Filter](#) - to change brightness, contrast, saturation, sharpness, white balance, backlight compensation, gain, exposure, and roll.
- [Still Capture Pin](#) - to select various still image resolutions supported by the device.
- [Freeze Frame](#) - to pause the live preview.
- [Fit To Window](#) - to resize the preview to e-CAMView window.

The details of each of these options are described below.

Video Capture Pin

You can click the Video Capture Pin option of the **Options** menu to select the various supported resolutions by See3CAM_CU27. When you click the Video Capture Pin option, the **Properties** dialog box appears as shown below.

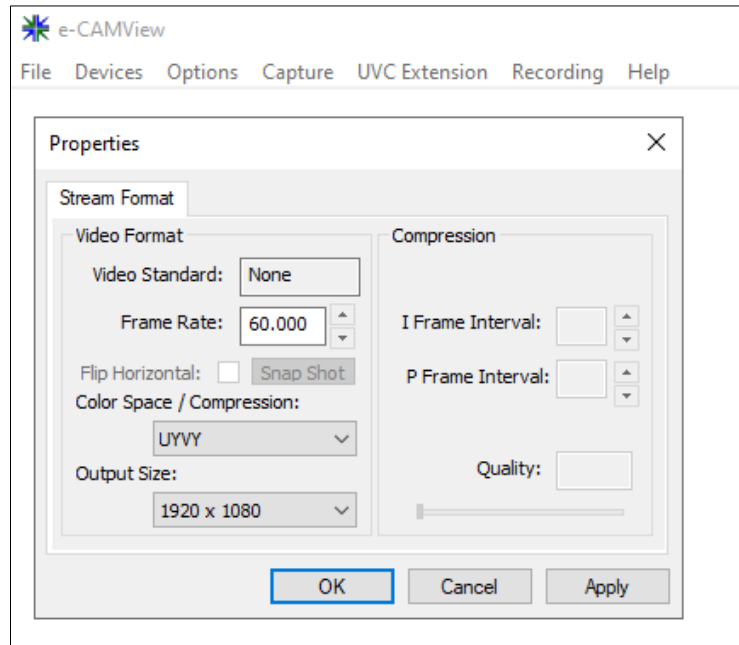


Figure 5: Video Capture Pin

To change the resolution, you can select any one of the resolutions from the **Output Size** drop-down list box. The frame rate supported by the current resolution will appear in the **Frame Rate** text box. Refer *Table 1* for the resolution and frame rate supported in See3CAM_CU27. In UYVY format, you can select any one of the frame rates from **Frame Rate** text box.

While changing the preview resolution, the preview will be stopped and resume once again when the resolution is selected and click **OK**.

Video Capture Filter

You can click the Video Capture Filter option of the **Options** menu to configure some of the camera parameters of See3CAM_CU27 camera. When you click the **Video Proc Amp** tab in the **Properties** dialog box, you can view the controls that are available in the **Properties** dialog box as shown below.

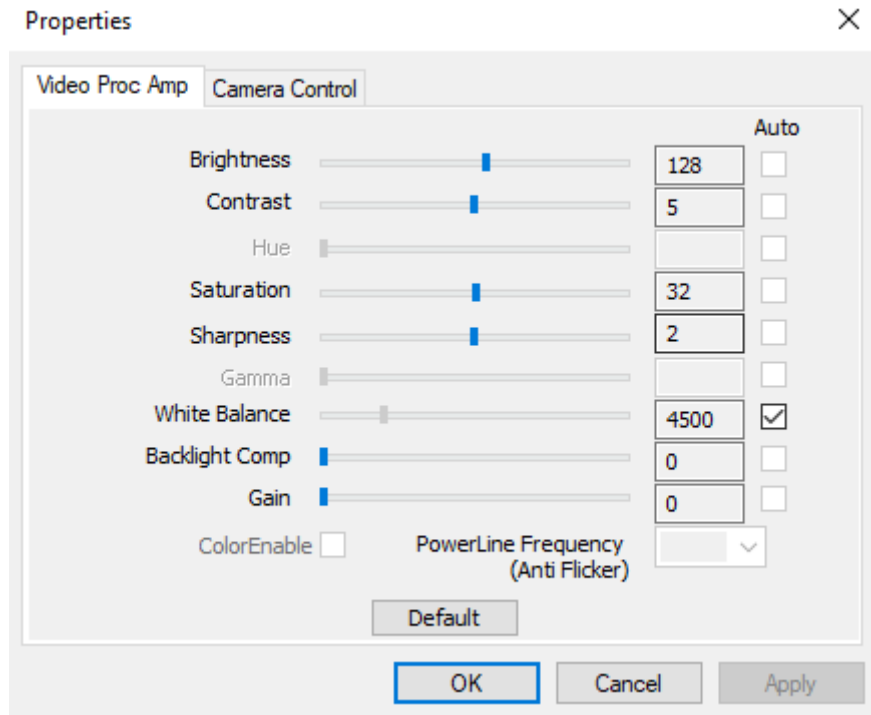


Figure 6: Video Proc Amp

The camera parameters of See3CAM_CU27 are as follows:

- [Brightness](#)
- [Contrast](#)
- [Saturation](#)
- [Sharpness](#)
- [White Balance](#)
- [Backlight compensation](#)
- [Gain](#)
- [Exposure](#)
- [Roll](#)

The controls are classified into two tabs. The brightness, contrast, saturation, sharpness, white balance, backlight compensation and gain controls are available in the **Video Proc Amp** tab whereas the exposure (manual and auto), and roll controls are available in **Camera Control** tab as shown below.

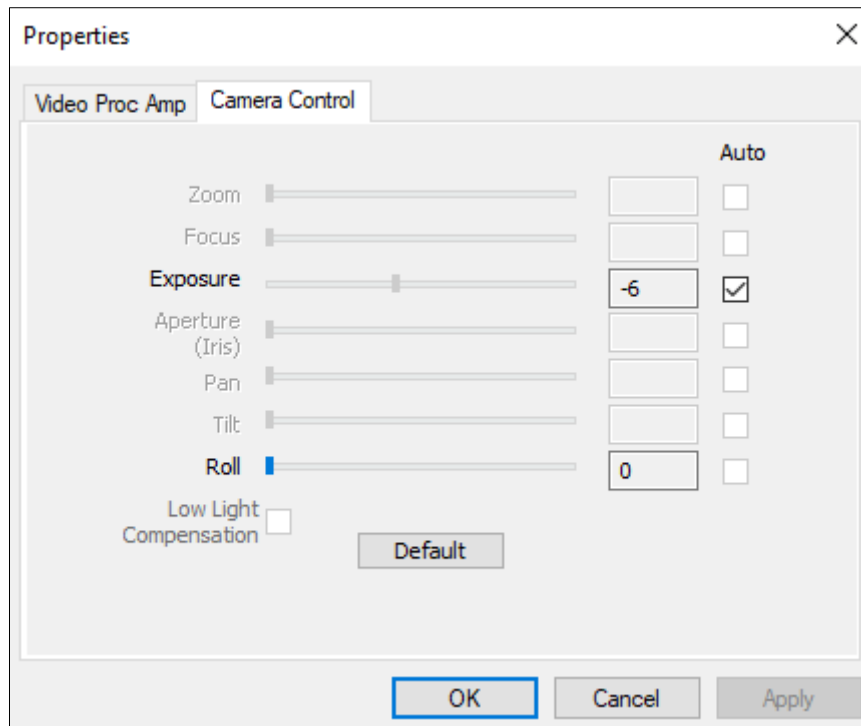


Figure 7: Camera Control

The **Default** button in both the tabs is used to select the default inbuilt values of all the controls for See3CAM_CU27.

The values of See3CAM_CU27 controls are shown in below table.

Table 2: Values of See3CAM_CU27 Controls

Controls	Minimum Value	Maximum Value	Default Value	Manual Control	Auto Control
Brightness	0	238	128	YES	NO
Contrast	0	10	5	YES	NO
Saturation	0	63	32	YES	NO
Sharpness	0	4	2	YES	NO
White Balance	2500	12500	4500	YES	YES
Backlight Compensation	0	1	0	YES	NO
Gain	0	154	0	YES	NO
Exposure	-11 (500 μ s)	-1 (500 ms)	-6 (15.6 ms)	YES	YES
Roll	0	180	0	YES	NO

Brightness

You can change the brightness values from a minimum value of 0 to 238 by moving the slider, and the exact changes will be reflected immediately in the preview. This brightness control increases the low light performance of See3CAM_CU27. The default value is 128.

Note:

1. Changes in the brightness control will not be effective in manual exposure mode.
2. Changes in brightness value may not be visible in some bright scenes.

Contrast

You can change the contrast values from a minimum value of 0 to 10 by moving the slider, and the exact changes will be reflected immediately in the preview. Increasing the contrast control increases the luminance of See3CAM_CU27. The default value is 5.

Saturation

You can change the saturation values from a minimum value of 0 to 63 by moving the slider, and the exact changes will be reflected immediately in the preview. Increasing the value of saturation control increases the intensity of the color of See3CAM_CU27. The default value is 32.

Sharpness

You can change the sharpness values from a minimum value of 0 to 4 by moving the slider, and the exact changes will be reflected immediately in the preview. This sharpness control increases clarity of See3CAM_CU27. The default value is 2.

White Balance

You can change the white balance values from a minimum value of 2500 to 12500 by moving the slider, and the exact changes will be reflected immediately in the preview. This white balance value decides the color temperature of See3CAM_CU27. The default value is 4500.

Backlight Compensation

You can change the backlight compensation ON/OFF from minimum value of 0 to 1. The default value is 0.

Gain

You can change the gain values from a minimum value of 0 to 154 by moving the slider, and the exact changes will be reflected immediately in the preview. The default value is 0.

Thee See3CAM_CU27 slider value and its exposure time mapping values are listed in below table.

Table 3: See3CAM_CU27 Slider Value- Gain Mapping

Slider Value	Gain (dB)
0	0
1	0.3
2	0.6
.	.
.	.
10	3.0
11	3.3
12	3.6
.	.
.	.
128	38.4
.	.
.	.
154	66.0

Note: Increase in the gain control will not be effective in auto exposure mode.

Exposure

To select the exposure control, you can select the **Exposure** check box as shown in *Figure 7*.

See3CAM_CU27 supports both auto and manual exposure control which can be controlled using the **Camera Control** tab of the Video Capture Filter option. The exposure value could be manually changed by moving the slider, and See3CAM_CU27 supports exposure values ranging from 500 μ s to 500 ms represented from -11 to -1 in the slider. The exposure values are configured inside the CMOS image sensor based on the sensor configuration and clock configuration details. In the DirectShow application layer, the exposure values are encoded as -11 to -1. Default value is -6.

To obtain a good low light performance, it is essential to change the exposure according to the change in lighting conditions. To support this feature, See3CAM_CU27 has an auto exposure feature, by which the exposure of the camera will be changed according to the lighting conditions which gives the best low light performance.

Note: If the exposure value is increased above the maximum exposure time, the frame rate will drop.

The slider values are computed according to the UVC standards, and hence the exposure time that is applied is shown in below table.

Table 4: See3CAM_CU27 Slider Value-Exposure Time Mapping

Slider Value	Exposure Time
-11	500 μ s
-10	1 ms
-9	2 ms
-8	3.9 ms
-7	7.8 ms
-6	15.6 ms
-5	31.2 ms
-4	62.5 ms
-3	125 ms
-2	250 ms
-1	500 ms

Roll

You can select the roll control to change the image orientation horizontally or vertically by moving slider value from 0 to 180.

Still Capture Pin

You can click the Still Capture Pin option of the **Options** menu to select the various resolutions supported by See3CAM_CU27 for capturing still images. The e-CAMView application will save the images in Bitmap (.bmp) for YUV format and JPEG (.jpg) for MJPEG format in the location you have specified.

When you click the Still Capture Pin option, you can view the **Still Pin Properties** dialog box as shown below.

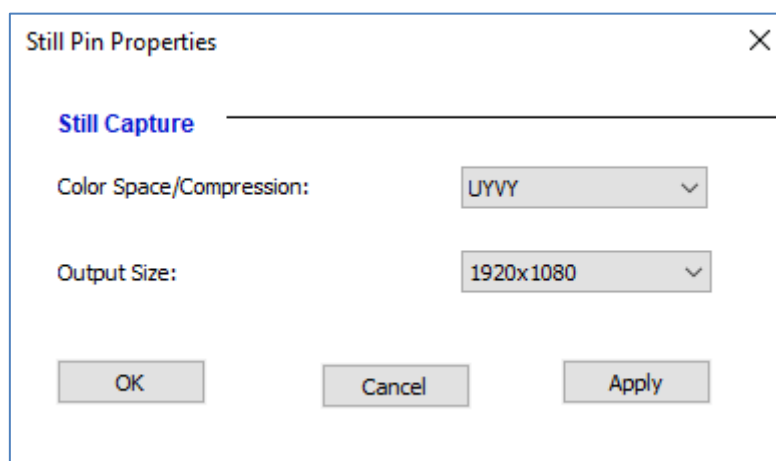


Figure 8: Still Capture Pin

To change the color space or compression format, you can select the format in the **Color Space/Compression** drop-down list box. To change the resolution, you can select any one of the resolutions from the **Output Size** drop-down list box.

Note:

- Still resolution supported in USB 3.0 is 1080p in both MJPEG and UYVY.
- Still resolution supported in USB 2.0 is 1080p in MJPEG and 640x480 in UYVY.
- While changing the still image resolution, the preview will be stopped. You can resume once again when the resolution is selected and click **OK**.

Freeze Frame

You can select the Freeze Frame option of the **Options** menu to pause and resume a streaming preview in any resolution. The shortcut key for Freeze Frame option is Space bar.

Fit To Window

When Fit-To-Window option is enabled, the streaming preview is resized to fit into the streaming window to maintain the aspect ratio. If disabled, then a cropped version of the preview will be displayed in the streaming window.

Capture Menu

You can click the **Capture** menu to capture the image by using the e-CAMView application. It can also be used to select the still image capture path where the images will be saved as shown below.

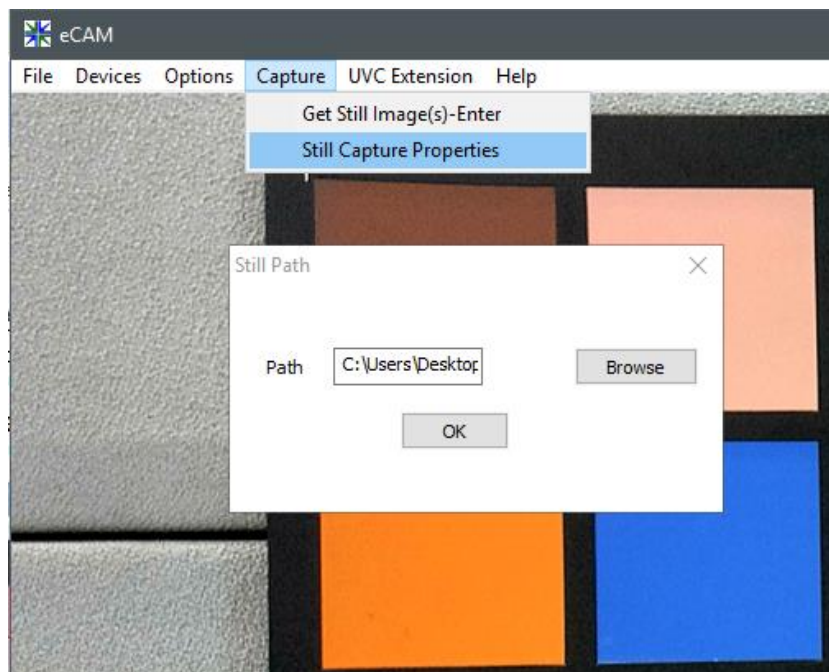


Figure 9: Capture Menu

To capture an image, you can either click the **Get Still Images(s)-Enter** option or press the **Enter** key of the keyboard. The image will be captured and stored in the location you have specified as shown in above figure.

Note: By default, e-CAMView will set the Desktop as the image storage path for easy access, but you can change it to any location by using the Still Path option.

UVC Extension Menu

The See3CAM_CU27 camera has some additional controls and features and are listed as UVC Extension controls; hence they are not included in the standard UVC controls. You can click the **UVC Extension** menu to select these extended UVC controls of See3CAM_CU27 as shown below.

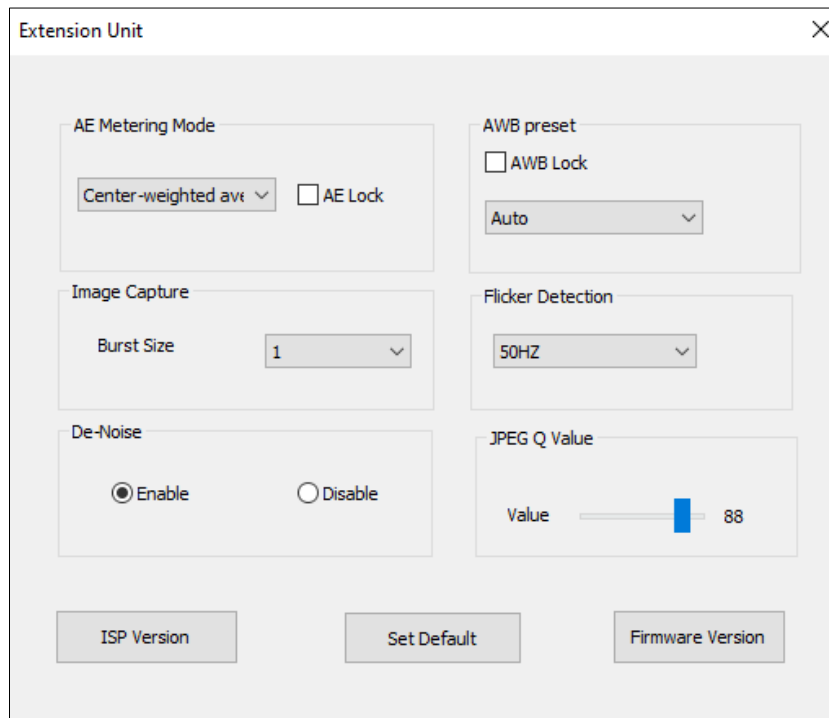


Figure 10: UVC Extension Menu

The controls supported in the UVC Extension menu are as follows:

- [Auto Exposure \(AE\) Metering Mode](#)
- [Image Capture](#)
- [De-Noise](#)
- [AWB Preset](#)
- [Flicker Detection](#)
- [JPEG Q Value](#)
- [ISP Version](#)
- [Set Default](#)
- [Firmware Version](#)

AE Metering Mode

AE metering mode control allows you to select different auto exposure modes.

The auto exposure metering algorithm set the metering mode based on the weight table values of full frame.

Default value is center-weighted average.

Note:

- When manual exposure is selected in Video Capture Filter option, AE OFF will be selected in AE metering mode.
- If AE lock is selected, AE metering mode drop down box will be greyed.
- If AE lock is selected and Exposure in Video Capture Filter option is changed to manual, automatically AE lock will be deselected.

The tables of center-weighted average, all block integral, spot 1(small area), and spot 2(large area) are shown in below figures.

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	2	2	2	2	0	0	0	0	0	0
0	0	0	0	0	0	2	2	2	2	0	0	0	0	0	0
0	0	0	0	2	2	2	3	3	2	2	2	0	0	0	0
0	0	0	0	2	2	2	3	3	2	2	2	0	0	0	0
0	0	0	2	2	3	3	4	4	3	3	2	2	0	0	0
0	0	0	2	3	4	4	5	5	4	4	3	2	0	0	0
0	0	2	3	4	4	5	5	5	4	4	3	2	0	0	0
0	0	2	3	4	5	13	13	13	13	4	3	3	2	0	0
0	0	2	3	4	5	13	13	13	13	4	3	3	2	0	0
0	0	2	3	4	5	13	13	13	13	5	4	3	2	0	0
0	0	2	3	4	5	13	13	13	13	5	4	3	2	0	0
0	0	2	3	4	5	13	13	13	13	5	4	3	2	0	0
0	0	2	3	4	6	6	6	6	4	3	3	2	0	0	0
0	0	2	3	4	6	6	6	6	4	3	3	2	0	0	0
0	0	0	2	3	4	5	5	5	5	4	3	2	0	0	0
0	0	0	2	3	4	5	5	5	5	4	3	2	0	0	0
0	0	0	2	3	4	4	4	4	4	3	3	2	0	0	0
0	0	0	2	3	3	3	3	3	3	3	2	2	0	0	0
0	0	0	2	3	3	3	3	3	3	3	2	2	0	0	0
0	0	0	0	0	0	2	2	2	2	0	0	0	0	0	0
0	0	0	0	0	0	2	2	2	2	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 11: Center-Weighted Average - Weight Table

[illegible]

Figure 12: All Block Integral - Weight Table

[illegible]

Figure 13: Spot1 (Small Area) - Weight Table

Figure 14: Spot2 (Large Area) - Weight Table

Image Capture

You can select the Burst size from 1 to 5. When still captured, certain number of images will be saved based on burst size selected in the location selected in Still capture properties.

De-Noise

You can select Disable or Enable Denoise control. By default, enable option will be selected.

AWB Preset

The AWB preset allows you to select the pre-defined white balance mode which decides color temperature of the See3CAM_CU27 camera. If AWB lock is selected, then the change in AWB mode does not reflect in the preview.

When white balance in Video Capture Filter option is changed to manual, custom preset will be selected and when AWB preset changed, corresponding color temperature will be selected in slider value of white balance in video capture filter.

By default, auto value will be selected.

The preset and its color temperature is listed in below table.

Table 5: Preset and its Color Temperature

Preset	Color Temperature
Cloudy	6575K
Daylight	5500K
Flash	5000K
Cool White Fluorescent	3700K
Tungsten	3000K
Candlelight	2800K
Horizon	2270K
Custom	2500K to 12500K

Flicker Detection

Flicker detection is used to avoid flicker in the video preview due to AC light sources. You can select between the auto mode, or force 50Hz and 60Hz or completely disable the flicker avoidance. Default value is Auto.

JPEG Q Value

MJPEG quality factor can be controlled through this control. Q factor of a JPEG compression determines the quality of the JPEG frame. You can select either auto or manual. When you select manual, you can enter the Q factor value with range of 0 to 100. Default value is 88.

ISP Version

You can click the **ISP Version** button available in the Extension Unit dialog box, to get the Unique ID that has been assigned to the See3CAM range of cameras

Set Default

When you click the **Set Default** button, all the controls will be updated to their default values.

Firmware Version

You can click the **Firmware Version** button available in the **Extension Unit** dialog box, to get the Unique ID that has been assigned to the See3CAM range of cameras.

Recording Menu

You can record video and audio by clicking the Record option.

In See3CAM_CU27, recording is available in VGA, 1280 x 720, 1920 x 1080 resolutions in both UYVY and MJPEG formats. When you click the **Recording** menu, you can view the available options as shown below.

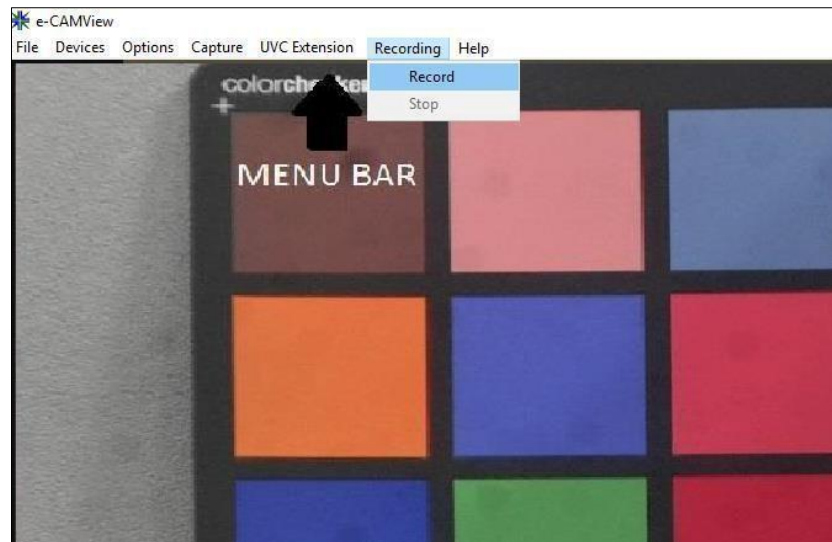


Figure 15: Recording Menu

Help Menu

You can click the **Help** menu to obtain the current version information of e-CAMView application installed in the computer. When you click the **Help** menu, the e-CAMView Version information will be displayed as shown below.

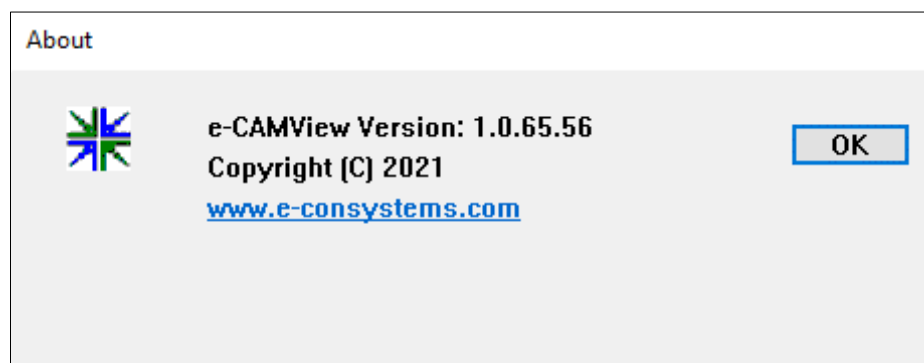


Figure 16: Help Menu

Troubleshooting

In this section, you can view the list of commonly occurring issues and their troubleshooting steps.

A device connected, power indication LED is OFF or switching between Red and OFF state.

It seems like there is no proper power input to the device. You need to check the cable or USB connector integrity. In case if a USB Hub is used, use external power.

A device connected, power indication LED is Red.

The device is powered up and ready to stream image data. You need to use either e-CAMView or QtCAM or any standard streaming application to start streaming.

In the e-CAMView sample application, the device is selected but preview window is White.

It seems like you are using an older version of e-CAMView. You need to install the latest version of e-CAMView application. You can find the latest application in the [Developer Resources](#) website.

In the e-CAMView sample application, the device is selected but the preview window is blank and the streaming Green LED light blinks continuously.

It seems like no image is received from the camera. Contact e-con Systems online support support@e-consystems.com.

Device connected, indication LED is Red, and the device is not listed in the application or device manager.

It seems like device firmware is corrupted. Try re-flashing firmware image using firmware updater application from [Developer Resources](#) website. If this does not help, contact e-con Systems online support support@e-consystems.com.

Device connected, streaming with Yellow LED showing frequent or intermittent blinks. Sometimes frame corruption seen in streaming window.

It seems like there is bandwidth limitation in USB host. This may occur when multiple cameras are connected to single USB host or in USB hosts of less powerful embedded boards. You can visit the blog <https://www.e-consystems.com/blog/camera/?p=1720> for more information on USB practical bandwidths.

FAQ

- 1. I am unable to access the UVC Extension menu for the USB camera through the e-CAMView application.**

You might be using an old version of the e-CAMView application. Please download the latest version from the [Developer Resources](#) website.

- 2. I need a sample code to get clear information about the UVC Extension menu (HID commands) features of the camera.**

Please download the SDK package from the [Developer Resources](#) website. You could find sample console application with source code in C++ to access the UVC extension menu (HID commands) features of the camera.

- 3. I need the dll and lib files to import them into my application to utilize the UVC extension menu (HID commands) features of the camera.**

Please download the SDK package from the [Developer Resources](#) website. You could find the dlls and lib files in both windows and Linux (32-bit and 64-bit).

- 4. I am video conferencing with one of your USB cameras in my laptop. During the call, sometimes the LED at the backside flickers and when the camera flickers the preview stops and resumes.**

It might be due to bandwidth limitation issue. Please try the following:

- Please disconnect other USB devices which are connected to the same host and connect only the USB camera and test it.
- Please use powered USB hub to overcome this issue.
- Please check in different desktop PCs in different USB ports, if it is working fine.

If you still face the same issue, please write to techsupport@e-consystems.com with your requirement in detail to get immediate support.

- 5. I am using many cameras simultaneously but unable to get a clear preview.**

It might be due to bandwidth limitation issue. Please try the following:

- Please disconnect other USB devices which are connected to the same host and connect only the USB camera and test it.
- Please use powered USB hub to overcome this issue.
- Please check in different desktop PCs in different USB ports.

- 6. I am using your See3CAM_CU27 camera. The LED flashes Yellow and Red color while attempting still image capture.**

This is expected behaviour. While performing still image capture, the preview will be stopped and resume after the image capture.

This is the reason the LED will blink from Red to Yellow and vice versa. You could also observe this behaviour while switching the resolution of the camera.

7. Can I get access to ISP registers?

No. The option is not available by default but will be provided on case-to-case basis with firmware customization.

8. Can I get access to image sensor registers?

No. The sensor registers are directly controlled by the ISP.

9. The frame rate is not consistent in MJPEG format. Can I fix it?

Yes, but the frame rate may still get reduced due to the scene details or the frame size which in turn affects the rendering capability from PC to PC. Performance improvement can be seen based on graphic card or display adapter capability. To increase the frame rates, you can decrease Q-Factor or increase De-Noise option in Extension Control menu since both decreases the frame size and hence improves the frame rates.

10. I can view frame corruption while streaming. Can this be avoided?

Yes, this is due to bandwidth limitation in USB host. This may occur when multiple cameras are connected to single USB host or in USB hosts of less powerful embedded boards. You can visit the blog <https://www.e-consystems.com/blog/camera/?p=1720> for more information on USB practical bandwidths.

11. What sort of support does e-con Systems provide along with the camera?

e-con Systems will provide the basic support on the evaluation for all the customers who have purchased the camera. e-con Systems will provide the hardware/software/firmware customization of the kit based on your requirements. e-con Systems will also manufacture your custom cameras and will be supplied.

12. Is there any software available with the camera?

Yes, e-con Systems provide the e-CAMView for Windows and QtCAM for Linux sample application demonstrating the capabilities of this camera.

13. What are the supported OSes?

The supported OSes are Windows 8.1 and 10, and Linux Ubuntu 14.04, 16.04 and 18.04 (64-bit).

14. The camera is not suitable for my requirements. Can I return the camera?

No, the kit is non-returnable and non-refundable. However, the kit is under warranty and e-con Systems will replace for any failed kit under warranty terms.

15. The camera is getting very hot. Is it suitable for usage?

Yes, but the camera module needs an external heat sink to dissipate the heat for prolonged usage.

What's Next?

After understanding the usage of e-CAMView application, you can refer to the following documents to understand more about See3CAM_CU27.

- *See3CAM_CU27 Extension Unit API Document*
- *See3CAM_CU27 Datasheet*

Glossary

CMOS: Complementary Metal Oxide Semiconductor.

MJPEG: Motion Joint Photographic Experts Group (A type of frame compression).

USB: Universal Serial Bus.

USB 2.0: Universal Serial Bus High speed.

USB 3.1 Gen 1: Universal Serial Bus Super speed.

UVC Compliant: USB Video Class Compliant.

UYVY: YUV422 16-bit image format with UYVY ordering.

VGA: Video Graphics Array (Industry name for 640 x 480 resolution).

Q-Factor: Value that is used as a scale factor for the quantization table.

Contact Us

If you need any support on See3CAM_CU27 product, please contact us using the Live Chat option available on our website - <https://www.e-consystems.com/>

Creating a Ticket

If you need to create a ticket for any type of issue, please visit the ticketing page on our website - <https://www.e-consystems.com/create-ticket.asp>

RMA

To know about our Return Material Authorization (RMA) policy, please visit the RMA Policy page on our website - <https://www.e-consystems.com/RMA-Policy.asp>

General Product Warranty Terms

To know about our General Product Warranty Terms, please visit the General Warranty Terms page on our website - <https://www.e-consystems.com/warranty.asp>

Revision History

Rev	Date	Description	Author
1.0	30-Sept-2021	Initial Draft	Camera Team
1.1	26-Oct-2021	Updated QA comments	Camera Team
1.2	06-Dec-2021	Updated changes	Camera Team
1.3	05-Jan-2022	Updated changes	Camera Team
1.4	12-Jan-2022	Updated changes	Camera Team
1.5	04-Feb-2022	Updated changes	Camera Team
1.6	14-Mar-2022	Updated changes	Camera Team
1.7	13-Apr-2022	Updated changes	Camera Team