



# **KAYA Vision Point**

## **Application for**

### **Acquisition Mode**

**User Guide**  
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International Distributors

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Version	Date	Notes
1.0	07/2014	Initial Release Support for: Predator Frame Grabber
2.0	07/2015	App release 1.0.8.362 Support for: Predator Frame Grabber , Komodo Frame Grabber , Komodo4R4T Frame Grabber , Komodo Fiber Additional options and functionality: <ul style="list-style-type: none"> <li>• Save image as .raw file</li> <li>• Extract xml file from camera</li> <li>• Silent Discovery Mode</li> </ul>
3.0	03/2016	Application release 3.0 <ul style="list-style-type: none"> <li>• Application renamed from Predator to Vision Point</li> </ul>
4.0	11/2016	Application release 4.0 Support for: CLHS cameras implementing 10G X protocol and 10G GigE Vision cameras Additional options and functionality: <ul style="list-style-type: none"> <li>• Windows 10 support</li> <li>• multiple cameras support</li> <li>• Save Video and Replay Mode</li> <li>• Packed data output and Queued buffer mechanism</li> </ul>
4.1	07/2017	Application release 4.1 <ul style="list-style-type: none"> <li>• Support for both Camera Simulator and Frame Grabber</li> <li>• Documentation improvements</li> </ul>
4.2	09/2017	Application release 4.2 <ul style="list-style-type: none"> <li>• Support for all KAYA Instruments JetCam HS Cameras</li> <li>• Documentation improvements</li> <li>• Troubleshoot section was added</li> </ul>
4.3	04/2018	Application release 4.3 <ul style="list-style-type: none"> <li>• New Python API</li> <li>• New .NET API</li> </ul>
4.4	09/2018	Application release 4.4 <ul style="list-style-type: none"> <li>• Saving video buffer - additional file output formats</li> </ul>
5.0	03/2019	Application release 2019.1/API 5.0 <ul style="list-style-type: none"> <li>• Automatic monitoring of PoCXP for CoaXPress cameras</li> <li>• Added description for toolbar new and modified features</li> </ul>
5.0.1	05/2019	Application release 2019.1/API 5.0.1 <ul style="list-style-type: none"> <li>• Added “Grabber Links” parameter to indicate the device link connection</li> <li>• Indication message about Camera connection loss</li> <li>• Camera re-detection retains open cameras</li> </ul>

Table 1 : Revision History

### 2.1 Safety Precautions

With your *Frame Grabber board* in hand, please take a minute to read carefully the precautions listed below in order to prevent unnecessary injuries to you or other personnel or cause damage to property.

- **Before using the product, read these safety precautions carefully to assure correct use.**
- **These precautions contain serious safety instructions that must be observed.**
- **After reading through this manual, be sure to act upon it to prevent misuse of product.**



#### Caution

**In the event of a failure, disconnect the power supply.**

If the product is used as is, a fire or electric shock may occur. Disconnect the power supply immediately and contact our sales personnel for repair.

**If an unpleasant smell or smoking occurs, disconnect the power supply.**

If the product is used as is, a fire or electric shock may occur. Disconnect the power supply immediately. After verifying that no smoking is observed, contact our sales personnel for repair.

**Do not disassemble, repair or modify the product.**

Otherwise, a fire or electric shock may occur due to a short circuit or heat generation. For inspection, modification or repair, contact our sales personnel.

**Do not touch a cooling fan.**

As a cooling fan rotates in high speed, do not put your hand close to it. Otherwise, it may cause injury to persons. Never touch a rotating cooling fan.

**Do not place the product on unstable locations.**

Otherwise, it may drop or fall, resulting in injury to persons or failure.

**If the product is dropped or damaged, do not use it as is.**

Otherwise, a fire or electric shock may occur.

**Do not touch the product with a metallic object.**

Otherwise, a fire or electric shock may occur.

**Do not place the product in dusty or humid locations or where water may splash.**

Otherwise, a fire or electric shock may occur.

**Do not get the product wet or touch it with a wet hand.**

Otherwise, the product may break down or it may cause a fire, smoking or electric shock.

**Do not touch a connector on the product (gold-plated portion).**

Otherwise, the surface of a connector may be contaminated with sweat or skin oil, resulting in

contact failure of a connector or it may cause a malfunction, fire or electric shock due to static electricity.

**Do not use or place the product in the following locations.**

- Humid and dusty locations
- Airless locations such as closet or bookshelf
- Locations which receive oily smoke or steam
- Locations close to heating equipment
- Closed inside of a car where the temperature becomes high
- Static electricity replete locations
- Locations close to water or chemicals

Otherwise, a fire, electric shock, accident or deformation may occur due to a short circuit or heat generation.

**Do not place heavy things on the product.**

Otherwise, the product may be damaged.

**Be sure to drain static electricity from body before you touch any electronics component**

The electronic circuits in your computer and the circuits on Frame Grabber board are sensitive to static electricity and surges. Improper handling can seriously damage the circuits. In addition, do not let your clothing come in contact with the circuit boards or components.

Otherwise, the product may be damaged.

## 2.2 Disclaimer

This product should be used for interfacing of imaging devices and acquiring of video streams. KAYA Instruments assumes no responsibility for any damages resulting from the use of this product for purposes other than those stated.

Even if the product is used properly, KAYA Instruments assumes no responsibility for any damages caused by the following:

- Earthquake, thunder, natural disaster or fire resulting from the use beyond our responsibility, acts caused by a third party or other accidents, the customer's willful or accidental misuse or use under other abnormal conditions.
- Secondary impact arising from use of this product or its unusable state (business interruption or others).
- Use of this product against the instructions given in this manual or malfunctions due to connection to other devices.

KAYA Instruments assumes no responsibility or liability for:

- Erasure or corruption of data arising from use of this product.
- Any consequences or other abnormalities arising from use of this product, or damage of this product not due to our responsibility or failure due to modification.

Repair of this product is carried out by replacing it on a chargeable basis, not repairing the faulty devices. However, non-chargeable replacement is offered for initial failure if such notification is received within two weeks after delivery of the product.

### 2.3 Overview

KAYA Vision Point App is a high-level windows application that provides a way to connect, calibrate, control and capture images from your camera.

It allows:

- Monitoring and management of PoCXP for CoaXPress cameras
- Interfacing to various cameras
- Configuration of camera parameters
- Configuration of Frame Grabber parameters
- Capturing and viewing video streams
- Analyzing captured images
- Saving captured pictures to file
- Saving Frame Grabber and camera configuration to file
- Loading Frame Grabber and camera configuration from file

Vision Point App is also provides interactive and highly configurable camera simulation interface for the Chameleon camera simulators. For Chameleon Camera Simulator mode, please refer to KAYA Vision Point Camera simulator application User Guide document.



## 2.4 Requirements

To run the Vision Point App a PC with following is required

- Intel x64 processor or compatible.
- At least 4 GB of system memory.
- One of the following operating systems:
  - Windows 7 32/64 bit OS
  - Windows 10 32/64 bit OS
  - Ubuntu 14.04
  - Ubuntu 16.04
  - Linux Red Hat 7
  - Linux CentOS 7
- A hard drive with 200 MB of free space
- At least one of KAYA Instruments Frame Grabber boards installed
- Internet connection

## 2.5 Installation

Vision Point App is included with KAYA Frame Grabber software package installation.

Please refer to the Installation manual for the installation information.

NOTES:

- 1) Vision Point 2019.1 will be the last version to support Windows 7 OS. We encourage our customers to switch to Windows 10 OS in order to support our latest updates and hotfixes.
- 2) In order for Windows OS to support the latest version of Vision Point, please make sure your Windows is up to date and all the latest updates and hotfixes are installed.
  - a. In case your computer hardware does not support Windows 7 latest updates, please consider using Vision Point 4.4 software version.
  - b. In order to downgrade Vision Point application from version 2019.1 to 4.4, please refer to “Vision\_Point\_Software\_Installation\_Guide” document, troubleshooting section.

The Vision Point App main window with all of its components as shown in Figure 1.

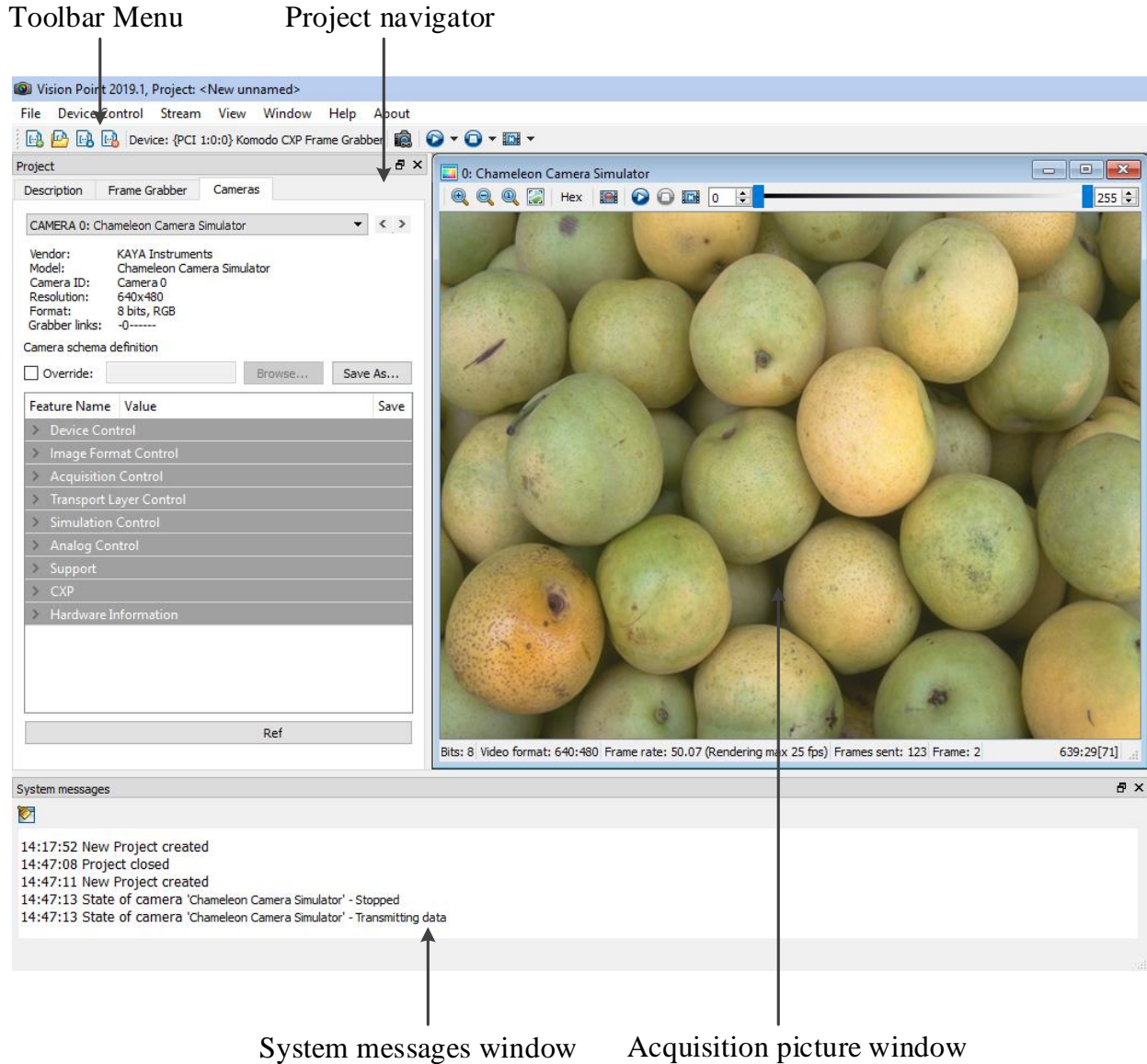


Figure 1 : Vision Point App main window

The main items of Vision Point App are:

### 3.1 Main Toolbar Menu

The Toolbar Menu includes project operation buttons, hardware selection and stream acquisition control buttons. The Toolbar Menu is shown in Figure 2 and includes the following components:

1. New project button to create a new project from scratch.
2. Open project button to open an existing project or example.
3. Save project button to save the opened project and all of its configurations
4. Close project button.
5. Frame Grabber selection list enables to select single frame grabber board, among the available boards, or running in demo mode with no hardware connection.
6. Detect cameras button, to detect connected cameras for the chosen Frame Grabber.
7. Stop button to stop acquisition of stream from connected camera (arrow to stop acquisition on a specific camera).
8. Start button to start continues grab (arrow to start continues grab on a specific camera).
9. Single grab button to grab one frame at a time (arrow to grab 1 frame on a specific camera).

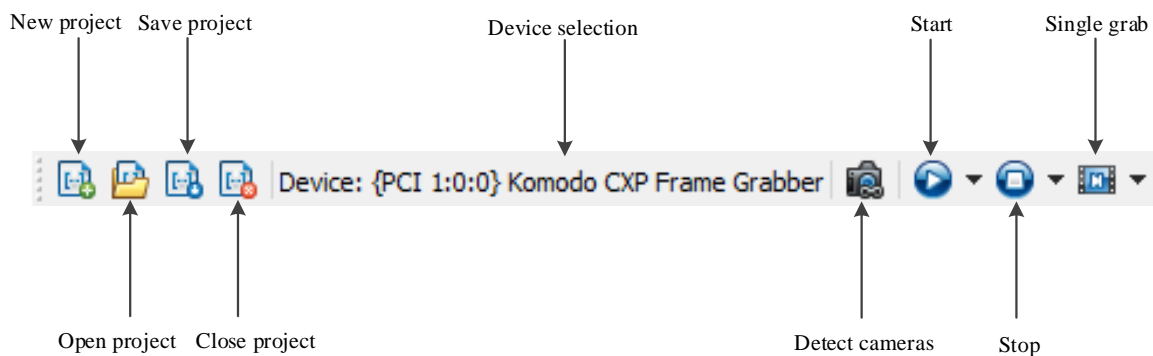


Figure 2 : Main Toolbar Menu

Starting from Vision Point 2019.1 version, an automatic monitoring and management of PoCXP for CoaXPress cameras will be available, by monitoring the connection state and turning PoCXP on/off automatically. This feature is available for the following devices:

Hardware device	Firmware version	Details
Komodo CoaXPress	4.10	Voltage monitoring support Note: Starting from hardware revision no. 3
Predator CoaXPress	4.5	Voltage monitoring support Note: Starting from hardware revision no. 3

Table 2 : Firmware release notes for version 2019.1

Note: In case the software detects an outdated firmware, it disables all sets of operation, except firmware update, which should be performed in order to proceed.

Additional PoCXP buttons will appear on application open with CoaXPress Frame Grabber devices, which has lower hardware revisions, as shown below.

1. PoCXP ON button to enable Power over CoaXPress to all links.
2. PoCXP OFF button to disable Power over CoaXPress to all links.

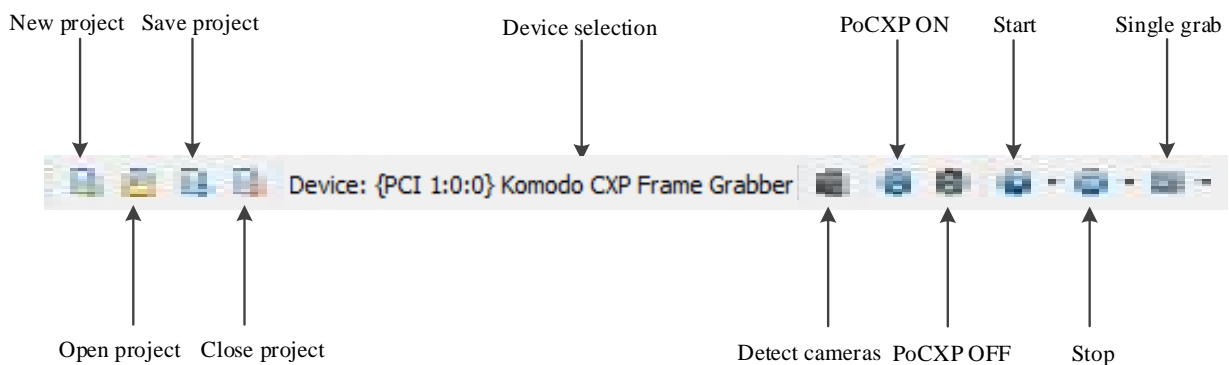


Figure 3 : Main Toolbar Menu for CoaXPress Frame Grabbers

## 3.2 Project navigator

The project navigator allows configuring and controlling the camera via standard Gen<i>Cam interface. It includes several tabs:

1. A General tab, used to list the connected cameras to the chosen Frame Grabber. Also shows camera details as shown in Figure 4.  
Note: Starting from API version 5.0.1, Grabber Link parameter indicates the device link connection (In the example below, Grabber channel 1 connected to camera's link 0).
2. A Description tab, used to specify the project name and description as shown in Figure 5.
3. A Frame Grabber tab, describing Frame Grabber related information and configurations, e.g. I/O control and hardware information. These are controlled using Gen<i>Cam interface. The Frame Grabber tab is shown in Figure 6.
4. A Camera tab enables configuring the camera Gen<i>Cam parameters listed in the camera XML file. An external XML file may be loaded in the absence of a native one from the camera. The camera tab is shown in Figure 7.

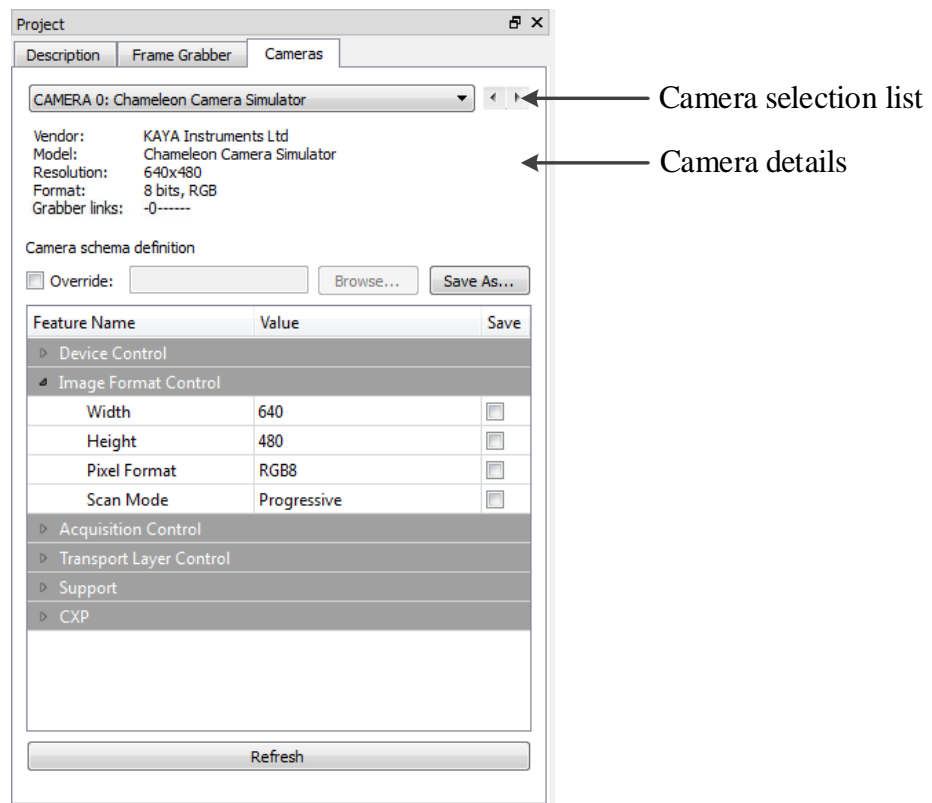


Figure 4 : List of connected cameras

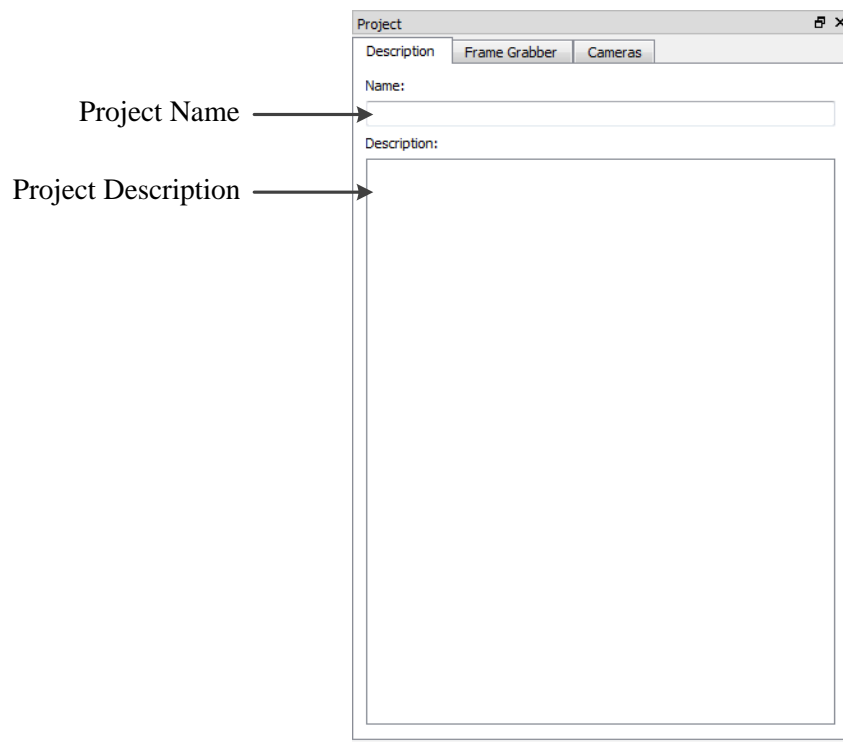


Figure 5 : Project description tab

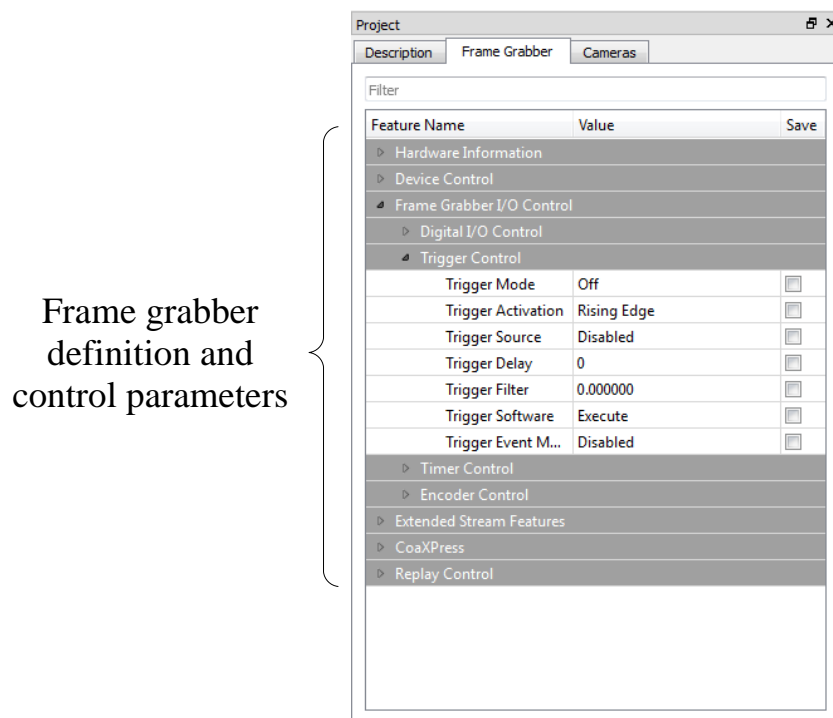


Figure 6 : Frame Grabber navigator tab

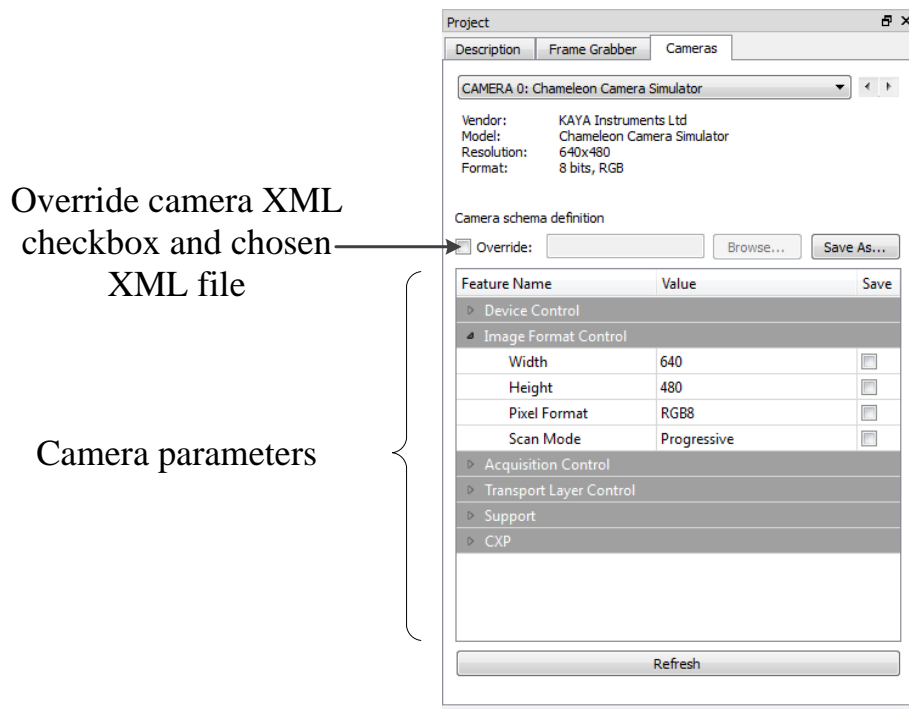


Figure 7 : Camera navigator tab

### 3.3 System messages window

The system messages window displays general, runtime informational and error messages regarding the state of stream grabbing and changes to various components. If not needed, the message window can be hidden/shown via View tab of the Vision Point App menu bar. The system messages window is shown in Figure 8.

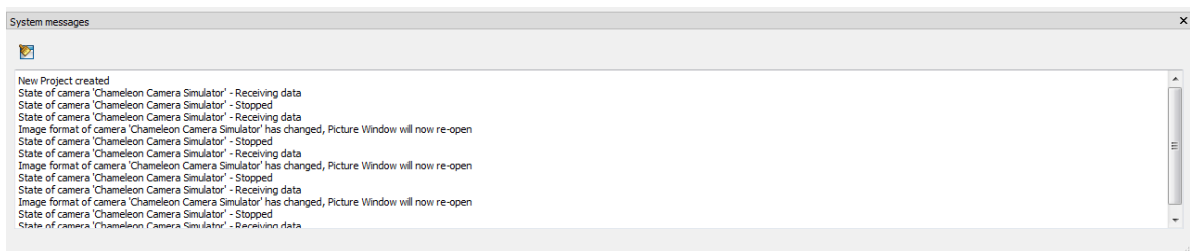


Figure 8 : System messages window

### 3.4 Acquisition picture window

The acquisition picture window, displays the last frame that has been grabbed. Information on frame rate and image format can be found at the bottom of the picture window. The picture window can be seen in Figure 9.

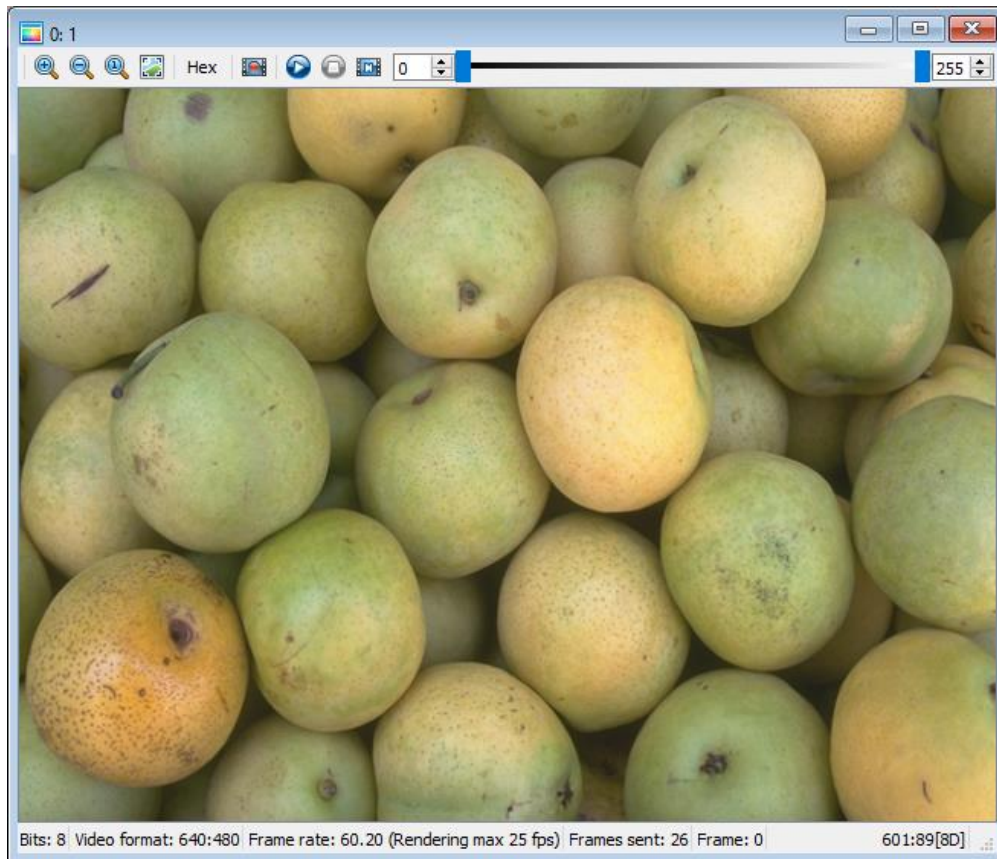


Figure 9 : Picture window

#### 3.4.1 Picture window toolbar

The Picture window toolbar includes stream acquisition and image dimensions control buttons. The Picture window toolbar is shown in Figure 10 and includes the following components:

1. Zoom in button to zoom in the image.
2. Zoom out button to zoom out the image.
3. Zoom 1:1 button to reset the image size.
4. Fit to window button to fit the image to the current window size.
5. Hex view of the picture
6. Acquisition / **Replay Mode** to switch between live acquisition and replaying frames.
7. Stop button to stop acquisition of stream from specific camera.
8. Start button to start continues grab of stream from specific camera.



9. Single grab button to grab one frame at a time from specific camera.
10. Color level threshold bar - Adjust image level in range of specified minimum and maximum threshold pixel values
11. Minimum threshold pixel value
12. Maximum threshold pixel value

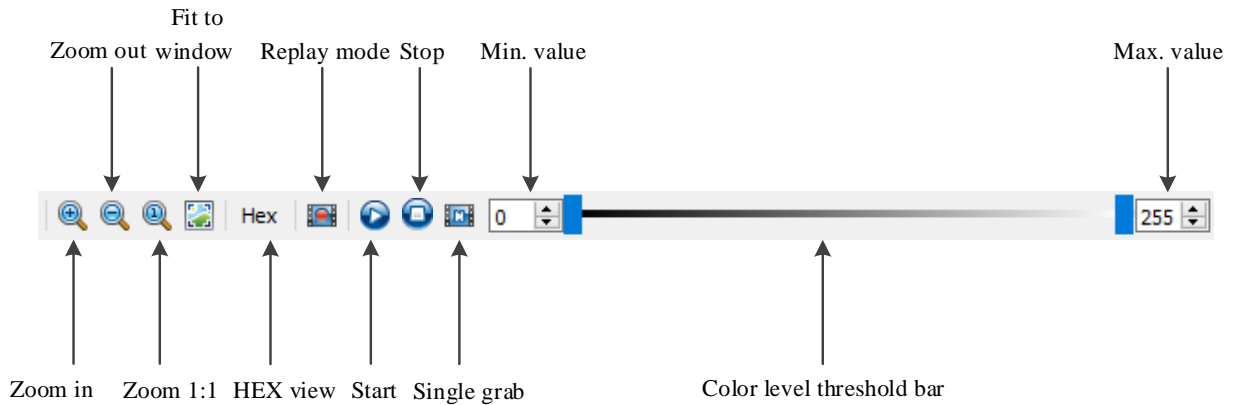


Figure 10 : Picture window toolbar

### 3.4.2 Picture window summary

The Picture summary display toolbar is shown in Figure 11 and includes the following components:

1. Image format
2. Resolution of the image
3. Frame rate
4. Number of sent frames
5. Current frame number
6. Pixel value - location of the mouse cursor in x : y [R G B]

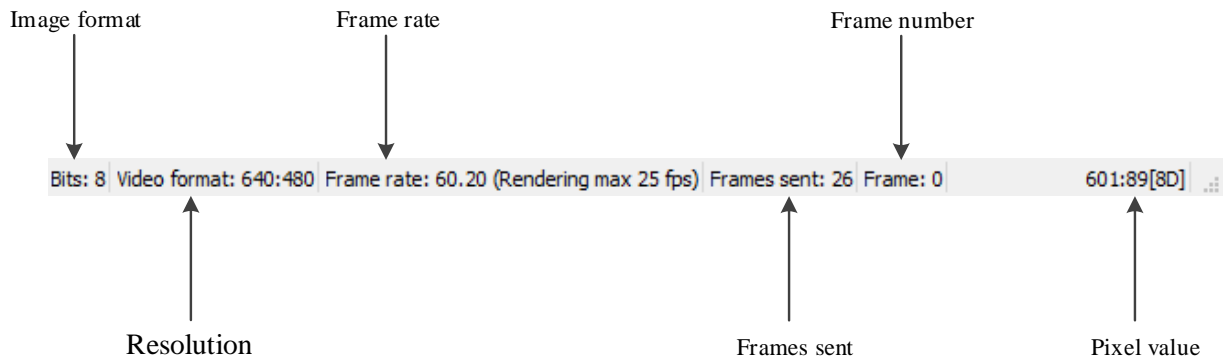


Figure 11 : Picture window summary display toolbar

In addition to the image dimension control buttons in picture window toolbar, two features are available:

1. Moving picture – by holding left mouse button and moving the mouse.
2. Zooming IN/OUT using scroll mouse button – by moving the mouse cursor on top of the image and use scroll button.

### 3.4.3 Buffer Replay Mode toolbar

When Replay Mode for specific camera is chosen, additional icons will appear, as shown in Figure 12:

1. Play button to play the recorded stream.
2. Stop button to stop the recorded stream.
3. Show previous frame button to show the previous recorded frame.
4. Show next frame button to show the next recorded frame.
5. Jump to start button to go to the first recorded frame.
6. Jump to end button to go to the last recorded frame.
7. Looping ON/ OFF button to play/stop the broadcasted frames in a loop.
8. Frame rate window shows the current frame rate.

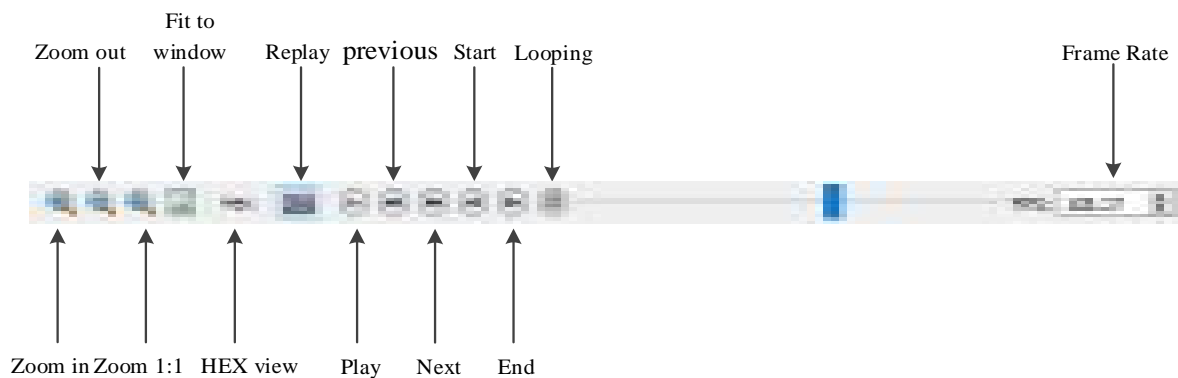


Figure 12 : Replay mode additional toolbar

### 4.1 Using Vision Point App

This section describes the basic setup for connecting and configuring the Frame Grabber and connected cameras. The basic steps include:

1. Selecting a grabber board
2. Opening, creating and closing a project
3. Update the firmware
4. Adjusting the grabber parameters
5. Scanning and adjusting the camera parameters
6. Starting an image acquisition

### 4.2 Selecting a grabber board

A Vision Point App requires selecting a KAYA Frame Grabber target board before starting an image acquisition. Different boards may include different feature sets. The target board is selected from the combo box and is only available when there is no active project mounted. If a different target board to be selected, the active project should be closed first.

To select a target board:

- Click the ▾ button of the grabber selection combo box located on the Toolbar Menu.
- When the list of available target boards will open, select the required board/demo mode from the list.
- Click “Create new project” to create new project from scratch or “Open existing project...” to open an existing one.

The grabber selection example is shown in Figure 13.

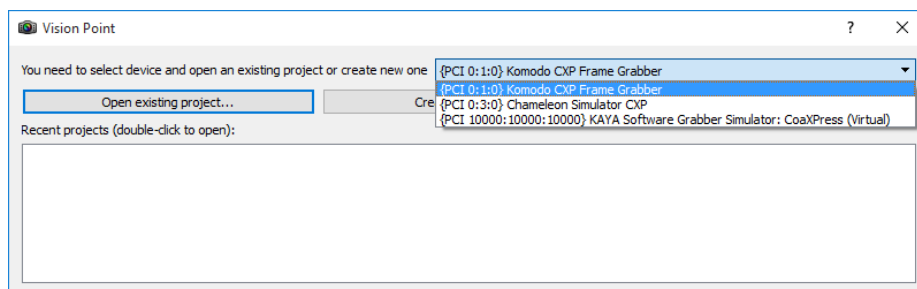




Figure 13 : Selecting the Frame Grabber

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### 4.3 Open a project file

After a target board is selected, a new project can be opened.

To open a project file choose one of the options:

- Click on the  Toolbar Menu button, or select “Open Project” from “File” menu.
- Use the  button located on the Toolbar menu
- Click “Open Project” located under “File” menu


Select the desired project file (file extension .fgprj).

Upon project load, the corresponding parameters for the Frame Grabber and Camera would be retrieved. See section **Error! Reference source not found.** to define the parameters that would be set upon a project load.

Remark: Please pay attention that if a project file is loaded with a different camera than the original one, it may cause some values not to be set and may alter the desired operation of the chosen camera.

### 4.4 Creating new project file


To create a new project file choose one of the options:

- Click “Create new project” button located on the application start dialog
- Use the  button located on the Toolbar menu
- Click “New Project” located under “File” menu

A connection will be locked for the chosen Frame Grabber and you can start working with it. In order to connect to a different Frame Grabber, the current project should be closed. Afterwards you may connect to a different Frame Grabber.

### 4.5 Saving a project


To save a project file choose one of the options:

- Click “Save” or “Save As...” located under “File” menu
- Use the  button located on the Toolbar menu

### 4.6 Closing a project

To close an opened project use choose one of the options:

- Click “Close” located under “File” menu

- Use the  button on Toolbar Menu button

Closing a project will disconnect from the previously connected Frame Grabber. Now you can connect to a new Frame Grabber using either the “New Project” or “Open Project” option or connect to the same device.

NOTE: Closing the project window using the X button, simply closes the project window, without closing the project itself. Display options can be found under “View” menu.

## 4.7 Firmware update

After creating a project, firmware update option is available. The “Firmware update...” option can be found under “Grabber Control” category, as shown in Figure 14.

For more detailed information, please refer to section 7.1.

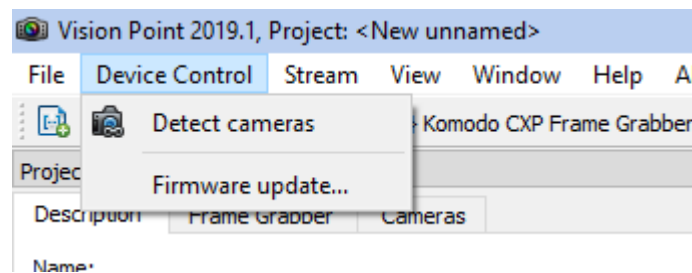



Figure 14 : Firmware update

## 4.8 Adjusting the Frame Grabber parameters

The Frame Grabber configurations contain Frame Grabber related features and controls. Hardware information, stream state, I/O definition and more can be modified using standard GenCam interface. Each feature’s description is provided via the tooltips in Vision Point application. The Frame Grabber parameters can be configured under the “Frame Grabber” tab in the project dialog as can be seen in Figure 6.

## 4.9 Scanning for connected cameras

After a Frame Grabber was chosen, use the  Toolbar Menu button, or click “Detect cameras” in the “Grabber Control” menu, to initiate a camera scan.

To successfully connect a camera to the Frame Grabber, the Frame Grabber links should be first scanned to detect the connected cameras. Up to 4 cameras can be simultaneously connected to the

Frame Grabber while there is no constraint on the order of link connectivity or the default speed of the camera.

#### 4.9.1 Silent Discovery Mode

Silent camera discovery process is mainly used for retransmit applications. A silent scan for connected cameras is made without resetting any camera parameters (i.e. no writes are made to the camera. Nevertheless multiple reads are made).

If needed, camera Reset sequence and speed configuration should be performed from external source before a camera scan can be initiated using mode. To activate set the Silent Discovery Mode to “On”.

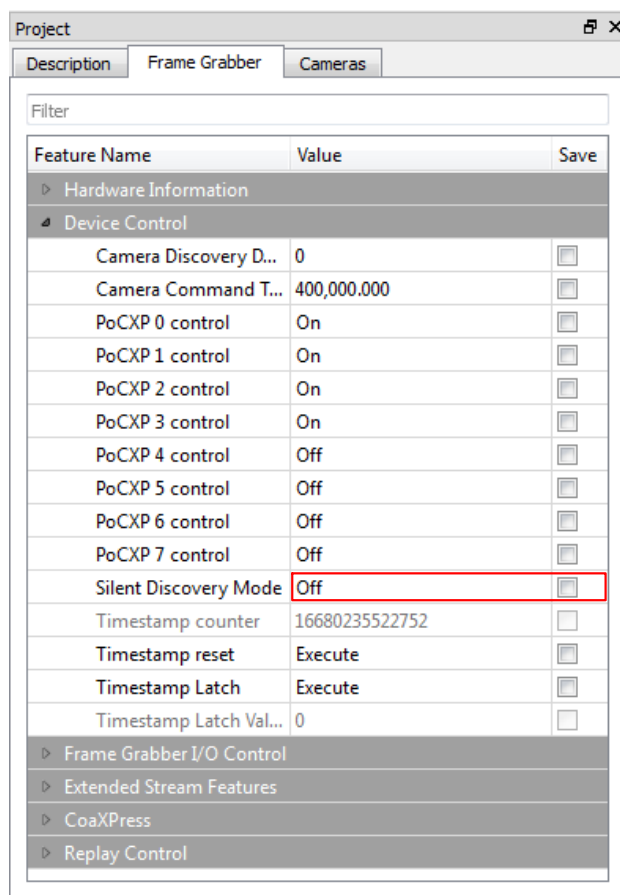


Figure 15 : Silent camera discovery

#### 4.9.2 Override camera XMLfile

In order to override cameras native XML file, **first** the “Override Camera schema definition with file” option, located in the “Camera” tab, should be checked and a legitimate XML file is to be selected. If not checked, the Frame Grabber will try to retrieve the native XML file from the camera. This can be seen in Figure 16. Following this, you can initiate a camera scan. **WARNING:** Override XML will resets all previous parameters to their default values. The user is responsible to re-set all needed parameters after XML is re-loaded.

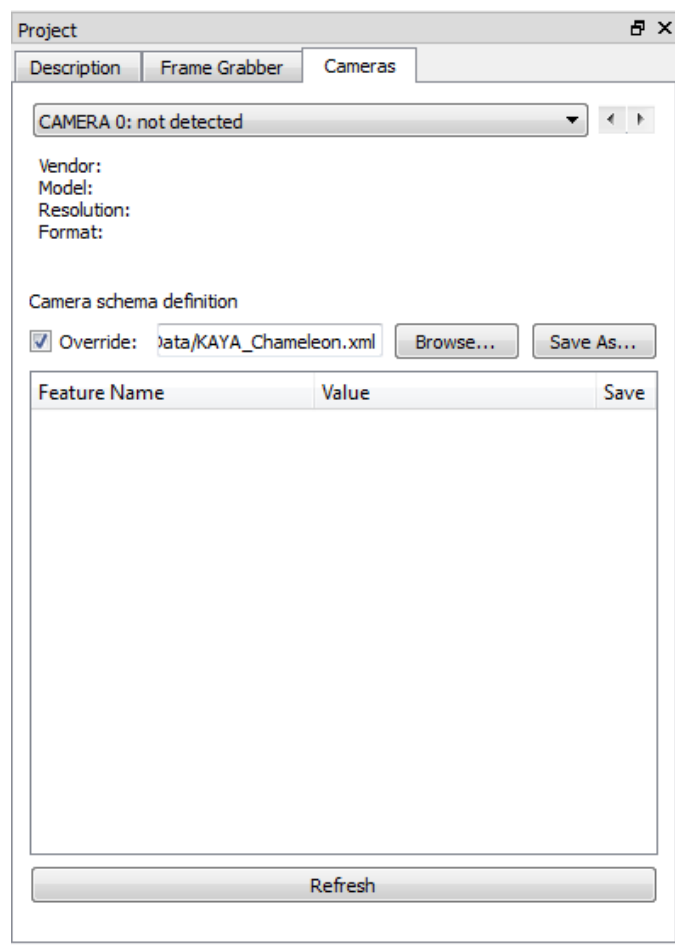


Figure 16 : Override camera native XML file




## 4.10 Adjusting the camera parameters




The camera configuration contains many parameters. Some of the parameters are standard CoaXPress features, some are camera dependent and some affect the image type and geometry. Before starting the image acquisition, the camera should be modified to the desired configurations or simply left with the default ones.

The parameters can be configured under the “Camera” tab in the project dialog as can be seen in Figure 7. Please refer to your camera manufacturer manual for description of the camera parameters.

## 4.11 Controlling acquisition

After a camera was selected and configured, the stream acquisition can commence.

In order to start the acquisition from the main Toolbar Menu on all detected cameras, simply press the  button or select the correct option using the  button. In order to start acquisition on a specific camera, use the  button.






To stop the acquisition from the main Toolbar Menu on all detected cameras, press the  button or select the correct option using the  button. In order to stop acquisition on a specific camera, use the  button.

The start acquisition will issue the “AcquisitionStart” command to the camera.




The stop acquisition will issue the “AcquisitionStop” command to the camera.

### 4.11.1 Controlling acquisition and Buffer Replay Mode from the picture window

After the stream acquisition commenced, controlling acquisition and replaying frames can be made using the picture window toolbar.








1. Zoom in  button to zoom in the image.
2. Zoom out  button to zoom out the image.
3. Zoom 1:1  button to reset the image size.
4. Fit to window  button to fit the image to the current window size.
5. Hex view of the picture
6. Simulation / **Replay Mode**  button to switch between live acquisition and replaying frames. In this case, additional icons will appear. See section 4.11.2.




7. Stop  button to stop simulation of stream of specific camera.
8. Start  button to start continues simulation of stream of specific camera.
9. Single grab  button to simulate one frame at a time of specific camera.
10. Color level threshold bar - Adjust image level in range of specified minimum and maximum threshold pixel values
11. Minimum threshold pixel value
12. Maximum threshold pixel value

#### 4.11.2 Buffer Replay Mode toolbar

When Replay Mode for specific camera is chosen, additional icons will appear in the Picture window toolbar.


1. Play  button to play the simulated stream.
2. Stop  button to stop the simulated stream.
3. Show previous frame  button to show the previous simulated frame.
4. Show next frame  button to show the next simulated frame.
5. Jump to start  button to go to the first simulated frame.
6. Jump to end  button to go to the last simulated frame.
7. Looping ON/ OFF  button to play/stop the broadcasted frames in a loop.
8. Frame rate window shows the current frame rate.


The system messages window will display runtime informational and error messages regarding the state of stream grabbing and changes to various components. Click on the  button in order to clear the Messages Window.

#### 4.12 Manual PoCXP control

Starting from application version 2019.1, version, an automatic monitoring and management of PoCXP for CoaXPress cameras is implemented. This will monitor the connection state, turn PoCXP on/off automatically and will be available for new CoaXPress devices, listed in Table 2. PoCXP control will still be available for devices, with hardware revision below 3.

In order to control manually Power over CoaXPress, use the following Toolbar Menu button:

To enable PoCXP press the  button – this will enable PoCXP to all links.

To disable PoCXP press the  button – this will disable PoCXP to all links.

To control individual PoCXP channel follow the PoCXP controls located under the Frame Grabber tab “Control” category as described in Figure 17.

**⚠Caution:** Manually enabling PoCXP will drive 24V to all the Frame Grabber ports. Avoid hot plugging the camera while the PoCXP was manually enabled to reduce the risk of camera damage.

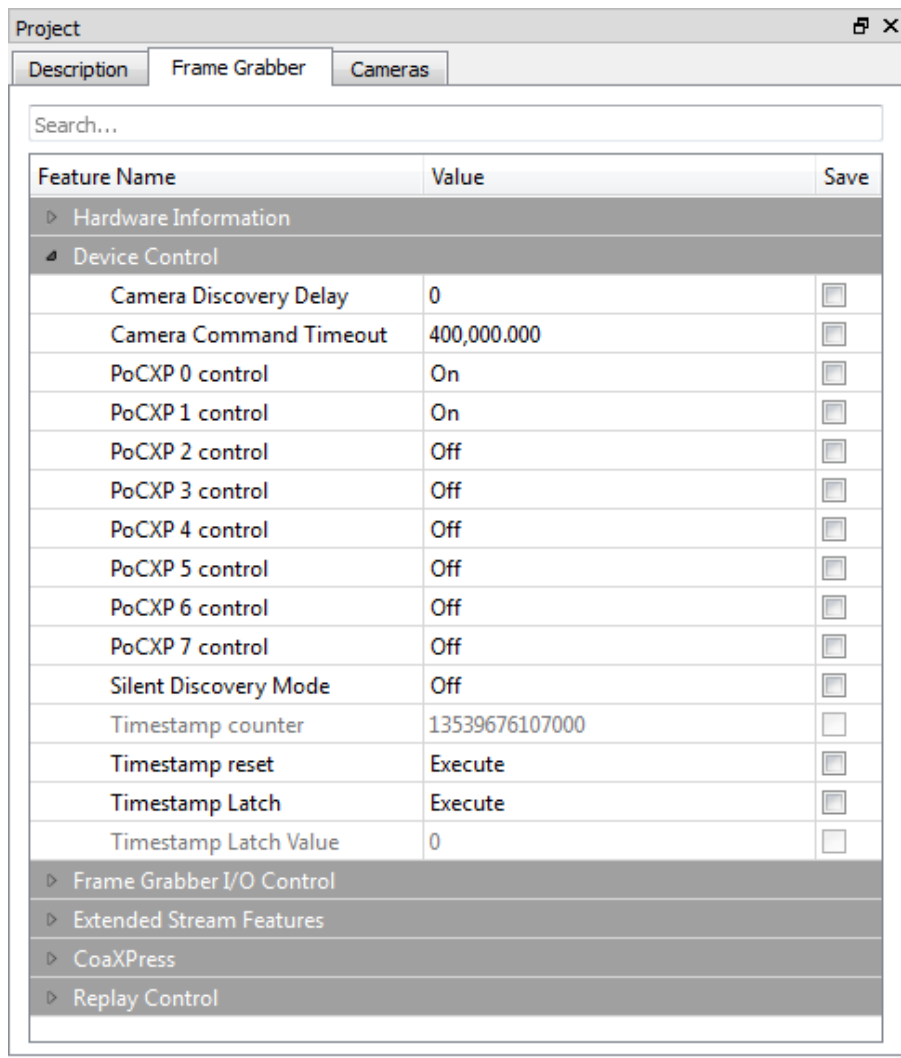


Figure 17 : PoCXP manual controls

### 4.13 Camera Command Timeout control

The Camera Command Timeout can be configured for a particular camera. Prior camera detection, the camera command timeout should be increased for cameras with longer initialization period than the default value. For multiple camera detection, the Camera Command Timeout should be modified for all the cameras, according to the camera with the longest initialization period, in order to ensure proper camera detection. This option located under the Frame Grabber tab “Control” category as shown in Figure 17.

### 5.1 Saving the Frame Grabber/camera parameters

To save a certain Frame Grabber or camera parameter, the “Save” checkbox, located to the right of each field, should be checked. Only selected parameters would be saved and retrieved upon load.

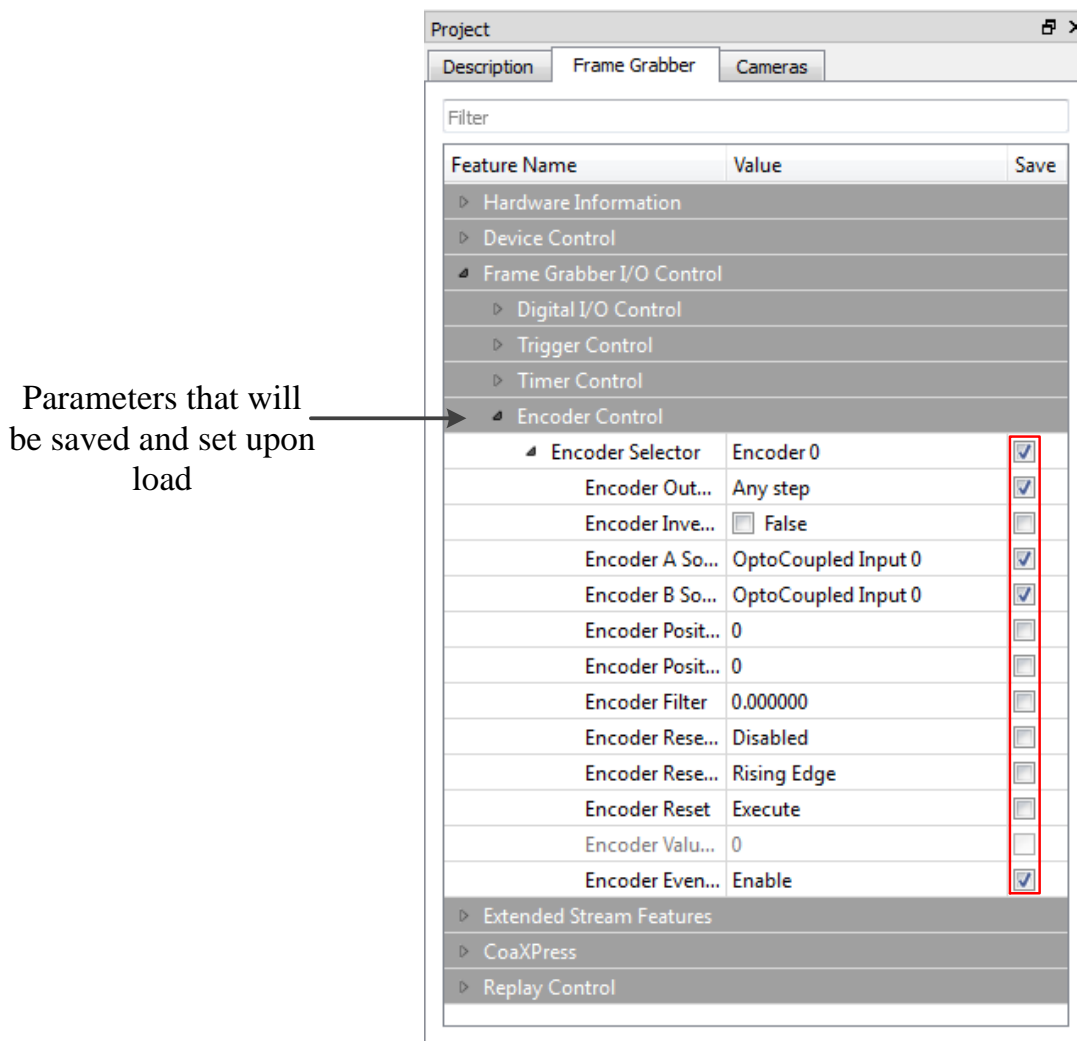



Figure 18 : Saving grabber configurations

### 5.2 Saving a project

To save a project file, use the  toolbar button or click “Save” or “Save As...” in the “File” menu.

### 5.3 Saving a captured image

In order to save a captured image, open “File” menu and click “Save Picture...” option. This will open a save dialog, where you should choose the image format, destination folder and file name.

Click “Save” to save the image currently captured in the “Picture Window”.

To save captured image as raw data, open “File” menu and click “Save raw file...” option. This will open a save dialog, where you should choose the destination folder and file name.

Click “Save” to save the image currently captured in the “Picture Window” as raw data without any scaling or reordering.

### 5.4 Saving video buffer

In order to save a Video stream, open “File” menu and click “Save video buffer...” option. This will open a save dialog, where you should choose the destination folder, file name and output format.

Click “Save” to save the currently captured video in the “Picture Window”.

Available file output formats:

1. “.AVI” – uncompressed mpeg output file
2. “Single .RAW file” – Single uncompressed raw file containing complete video captured in allocated buffers.
3. “Multiple .RAW files” – Series of uncompressed raw files, one per each captured frame in allocated buffers.

CoaXPress standard ([http://jiia.org/en/standard\\_dl/CoaXPress-wg/](http://jiia.org/en/standard_dl/CoaXPress-wg/))

- Gen<i>cam standard (<http://www.emva.org/cms/index.php?idcat=47>)
- Vision Point Installation and hardware reference manual
- Vision Point API reference manual

### 7.1 Updating the device firmware using Vision Point Application

In order to update the firmware of a KAYA Instrument's device, an "XXX\_XX.bin" file is needed, when the XXX is the board name and XX is the desired firmware number.

1. In the Toolbar Menu, under Device Control tab, chose the "Firmware update" option. A new window will open displaying the current device firmware version.
2. Click "Browse..." button, as shown in Figure 19, and select the desired firmware update file, in accordance with the device chosen (.bin file extension), and Click "Next >" button.

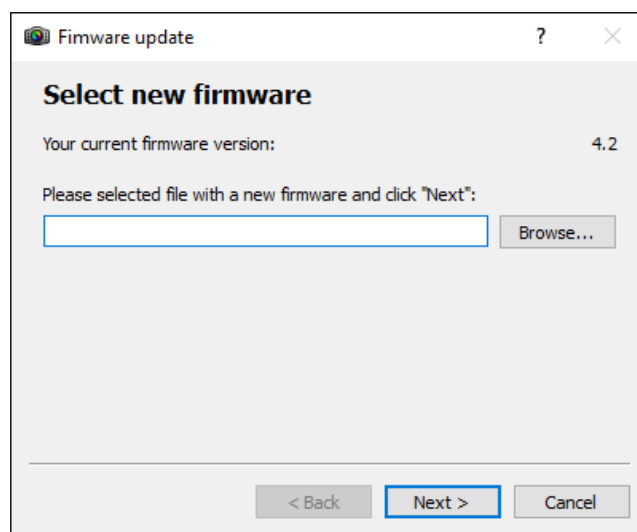


Figure 19 : Firmware Update selection window

3. The next window will display both, current and new firmware, as shown in the Figure 20. By clicking the "Next >" button, the conformation is made and the firmware update will start immediately.

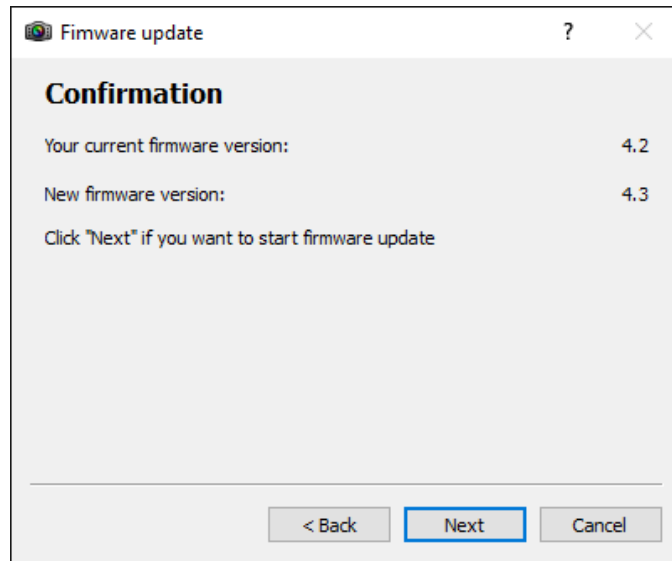


Figure 20 : Firmware Update Confirmation window

4. The next window displays the initiated firmware update. The firmware update process displayed in the first progress bar and the firmware validation displayed in the second, as shown in Figure 21.
5. **Do not interrupt the process!**  
In case of an error, the firmware update will fail and return to previous operation mode.
6. A successful update will result in reaching 100% on both progress bars.
7. **A full PC power off cycle is required to activate the new firmware.**
8. Turn on the PC and check the firmware version by opening the Vision Point application, Frame Grabber tab. The firmware version located under Hardware information. Make sure that the firmware version matches the version supplied. That would insure the success of the firmware update operation.



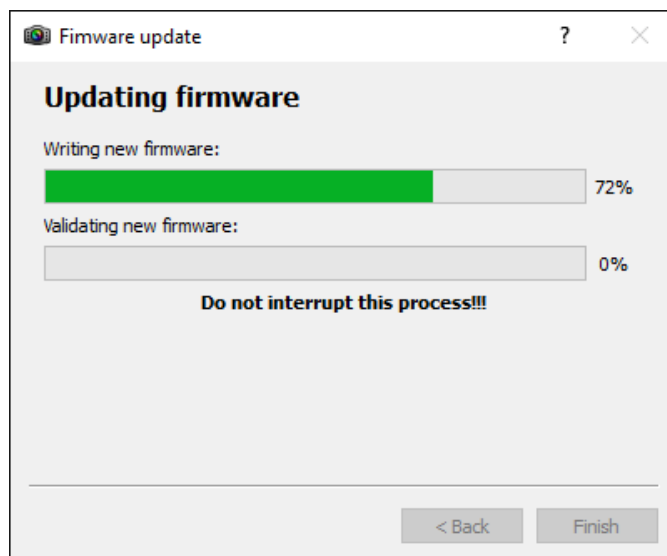


Figure 21 : Firmware Update process window

## 7.2 Updating the device firmware using pre-built utility for Linux

In order to update the firmware of a KAYA Instrument’s device, an “XXX\_XX.bin” file is needed, when the XXX is the board name and XX is the desired firmware number.

**WARNING: Currently this method is not suitable in setups where more than one board with the same product ID installed on the same machine.** Please apply to KAYA’s support if you need to update firmware in such setup

1. Make sure the .bin file is present in a local directory.
2. Open the Terminal and enter the directory path of KAYA Hardware Update executable file:  
“cd ‘opt/KAYA\_Instruments/bin’ ”.
3. Execute the KAYA Hardware Update using full path to the firmware update file as a parameter.  
Example: “./KAYA\_Hardware\_Update <path\_to\_folder\_with\_bin\_file>/Komodo\_4\_3.bin“.
4. Press Enter and wait for a message that indicates the end of process.
5. **Do not interrupt the process!**
6. **A full PC power off cycle is required to activate the new firmware.**
7. The sequence of the steps is illustrated in the screenshot below.

Please, Contact KAYA Instruments’ representative for any question.

```
kaya@kaya-System-Product-test: /opt/KAYA_Instruments/bin
kaya@kaya-System-Product-test:~$ cd '/opt/KAYA_Instruments/bin'
kaya@kaya-System-Product-test:/opt/KAYA_Instruments/bin$ ./KAYA_Hardware_Update Komodo_4r4t_4_1.bin

KAYA hardware update application:
-----
Analizing file 'Komodo_4_2.bin'File is suitable for updating devices with board ID 529
Connecting to device 0...
!--PLEASE DON'T SHUT DOWN THE COMPUTER OR DISCONNECT THE DEVICE--!
Starting device 0 update... 100%
Starting firmware validate 100%
Device 0 firmware update successful

IN ORDER FOR CHANGES TO TAKE EFFECT A COMPLETE SHUT DOWN IS REQUIRED!
kaya@kaya-System-Product-test:/opt/KAYA_Instruments/bin$
```

Figure 22 : Firmare Update via Terminal process window

### 7.3 Updating the device firmware using pre-built utility for Windows

In order to update the firmware of a KAYA Instrument’s device, an “XXX\_XX.bin” file is needed, when the XXX is the board name and XX is the desired firmware number.

**WARNING: Currently this method is not suitable in setups where more than one board with the same product ID installed on the same machine.** Please apply to KAYA’s support if you need to update firmware in such setup.

1. Make sure the .bin file is present in a local directory.
2. Open the Command line and enter the directory path of KAYA Hardware Update executable file:  
“cd ‘\Program Files\KAYA\_Instruments\Common\bin’ ”.
3. Execute the KAYA Hardware Update using full path to the firmware update file as a parameter.  
Example: “KAYA\_Hardware\_Update <path\_to\_folder\_with\_bin\_file>/Komodo\_4\_3.bin “.
4. Press Enter and wait for a message that indicates the end of process.
5. **Do not interrupt the process!**
6. **A full PC power off cycle is required to activate the new firmware.**
7. The sequence of the steps is illustrated in the screenshot below.

Please, Contact KAYA Instruments' representative for any question.

```

C:\windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\LAB-PC2-TEST>cd C:\Program Files\KAYA Instruments\Common\bin
C:\Program Files\KAYA Instruments\Common\bin>KAYA_hardware_update.exe Komodo_4_3
.bin
KAYA hardware update application:
-----
Analizing file 'Komodo_4_3.bin' File is suitable for updating devices with board
ID 528
Connecting to device 0...
!--PLEASE DON'T SHUT DOWN THE COMPUTER OR DISCONNECT THE DEVICE--!
Starting device 0 update... 100%
Starting firmware validate 100%
Device 0 firmware update successful

IN ORDER FOR CHANGES TO TAKE EFFECT A COMPLETE SHUT DOWN IS REQUIRED!
C:\Program Files\KAYA Instruments\Common\bin>_

```

Figure 23 : Firmare Update via Command line process window

## 7.4 Collecting log files

The log files created and override each time the application is launched.

### Windows operating system:

KAYA's log folder can be easily opened using one of the two ways, listed below:

1. Choose Log files folder under KAYA Instruments from the quick start:

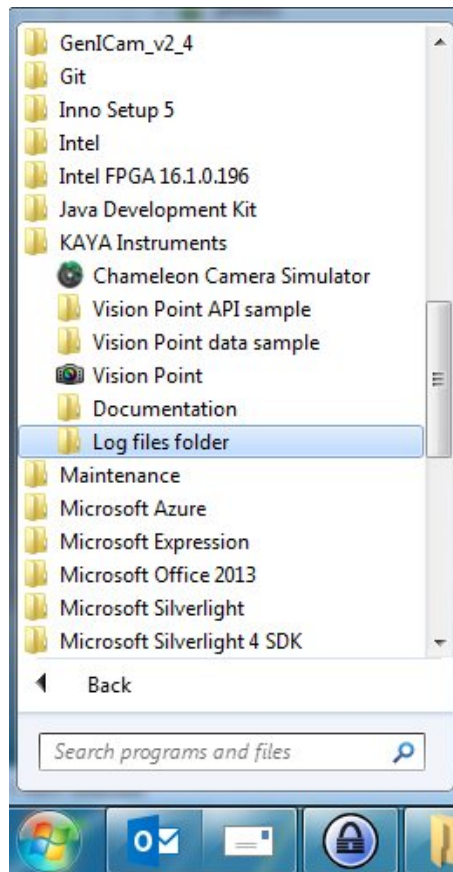


Figure 24 : Log files folder from the quick start menu path

2. Using Vision Point application. Enter “Help” tab and click on "Open logs folder" option.

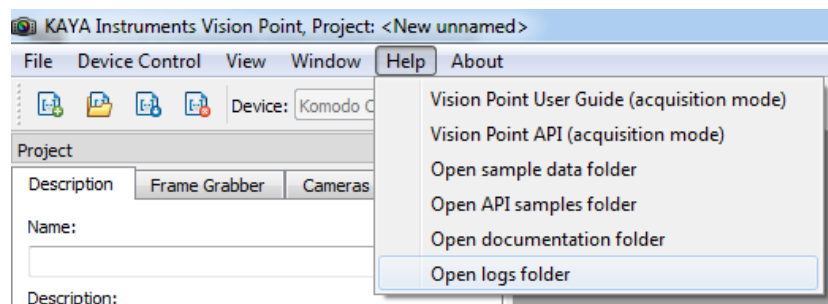


Figure 25 : Log files folder from Vision Point Help menu path

NOTES:

1. A separate log file is created for each application, which uses KAYA API, with a display name of the main executable with addition of process ID and timestamp.

2. The Vision Point application installation log files folder can be found under user's main driver: C:\Program Files\KAYA Instruments\Log\Installer folder.

### **Linux operating system:**

KAYA's log files folder can be easily opened following the path:

/var/log/KAYA\_Instruments

## 7.5 Technical Support and Professional Services

If you searched Vision Point API Data Book document and could not find the answers you need, contact KAYA Instruments support service. Phone numbers for our office are listed at the front of this document.

## 7.6 Submitting a support request

When opening support request, please provide the following information when applicable:

- PC configuration
- Operation System
- Card part number or full name
- Firmware in use
- Software in use
- Log files produced during problematic scenario

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