

# Chameleon II Camera Simulator Feature Guide

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## Revision History

| Version     | Date    | Notes   |
|-------------|---------|---|
| 1.0         | 06/2020 | Initial release   |
| 2.0         | 07/2021 | CoaXPress 2 support was introduced in this software release, including CXP2 tagged command packets and the ability to generate CXP2 HeartBeats and Events |
| 2.1         | 05/2024 | Document design updated   |
| 2.2 - 6.4.2 | 08/2024 | The same document without changes   |

Table 1 – Revision History

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# 1 Figures & Tables

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## 2 Introduction

### 2.1 Safety Precautions

With your *Chameleon II Simulator* in hand, please take the time to read the precautions listed below in order to prevent preventable and unnecessary injuries and damage to you, other personnel or property. Read these safety instructions carefully prior to your first use of the product, as these precautions contain safety instructions that must be observed. After reading through this manual, be sure to follow it to prevent misuse of product.



**Caution! Read Carefully and do not disregard these instructions.**

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

Disconnect the power supply immediately and contact our sales personnel for repair. Continuing to use the product in this state may result in a fire or electric shock.

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

Disconnect the power supply immediately! Continuing to use the product in this state may result in a fire or electric shock. After verifying that no smoking is observed, contact our sales personnel for repair.

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

This may result in a fire or electric shock due to a circuit shortage or heat generation. Contact our sales personnel prior to inspection, modification or repair.

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

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

**Do not use the product if dropped or damaged.**

Otherwise, a fire or electric shock may occur.

**Do not touch the product with metallic objects.**

Otherwise, a fire or electric shock may occur.

**Do not place the product in dusty or humid environments, nor where water may splash.**

Otherwise, a fire or electric shock may occur.

**Do not wet the product or touch it with wet hands.**

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

**Do not touch the gold-plated sections of the connectors on the product.**

Otherwise, the surface of the connector may be contaminated by sweat or skin-oil, resulting in contact failure of a connector, malfunction, fire or electric shock due to static electricity discharge.

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

- Unventilated areas such as closets or bookshelves.
- Near oils, smoke or steam.
- Next to heat sources.
- A closed (and not running) car where the temperature becomes high.
- Static electricity replete locations
- Near 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 objects on the product.**

Otherwise, the product may be damaged.

**Be sure to discharge static electricity from body before touching any sensitive electronic components.**

The electronic circuits in your computer and the circuits on the *Chameleon II Simulator* board is sensitive to static electricity and surges. Improper handling may 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 only be used for image capturing and processing. **KAYA Instruments** will assume no responsibility for any damage that may ensue by the use of the camera for any purpose other than intended, as previously stated. Without detracting from what was previously written, please be advised that the company will take no responsibility for any damages caused by:

- Earthquake, thunder strike, natural disasters, fire caused by use beyond our control, wilful and/or accidental misuse and/or use under other abnormal and/or unreasonable conditions.
- Secondary damages caused by the use of this product or its unusable state (business interruption or others).
- Use of this product in any manner that contradicts this manual or malfunctions that may occur due to connection to other devices. Damage to this product that is out of our control or failure due to modification
- Accidents and/or third parties that may be involved.

Additionally, **KAYA Instruments** assumes no responsibility or liability for:

- Erasure or corruption of data caused by the use of this product.
- Any consequences or other abnormalities following the use of this product
- Repairs to this product are carried out by replacing it on a chargeable basis and not by repairing the faulty device. Non-chargeable replacement is offered for initial failure, as long as it is reported no later than two weeks post-delivery of the product.

## 3 Overview

The purpose of this document is to describe the provided functionality and features of KAYA's Camera Simulator. Camera connectivity and streaming can be easily achieved in few easy steps and almost no configurations. Camera control is provided through standard GenICam interface subordinate to camera's descriptive schema (xml) file. Advanced features and custom configurations can be done to enhance streaming and image processing of camera output. These are available using interactive GenICam interface and provided API functionality. SDK functionality is subject to hardware device and burned firmware capabilities. A firmware and software upgrade might be needed to support complete functionality set.

For more information about API functionality and SDK usage please refer to "Vision Point API Data Book". All the parameters described in this document are *Chameleon II Simulator* parameters and can be accessed from GUI Camera tab in the project navigator or from API using KYFG\_SetCameraValue and KYFG\_GetCameraValue function variations (and their sub-functions) call, with CAMHANDLE (Connected Camera Handle) instead of FGHANDLE (Frame Grabber Handle).

It is important to note that some parameters might vary slightly compared to this document or may be absent entirely, subject to the active firmware capabilities: a firmware upgrade might be needed to support complete functionality set. Please feel free to contact our team over at [support@kayainstruments.com](mailto:support@kayainstruments.com) with any questions that may arise.

### 3.1 Directories and File Hierarchy

The directory hierarchy of Vision Point App as can be seen after a complete installation:

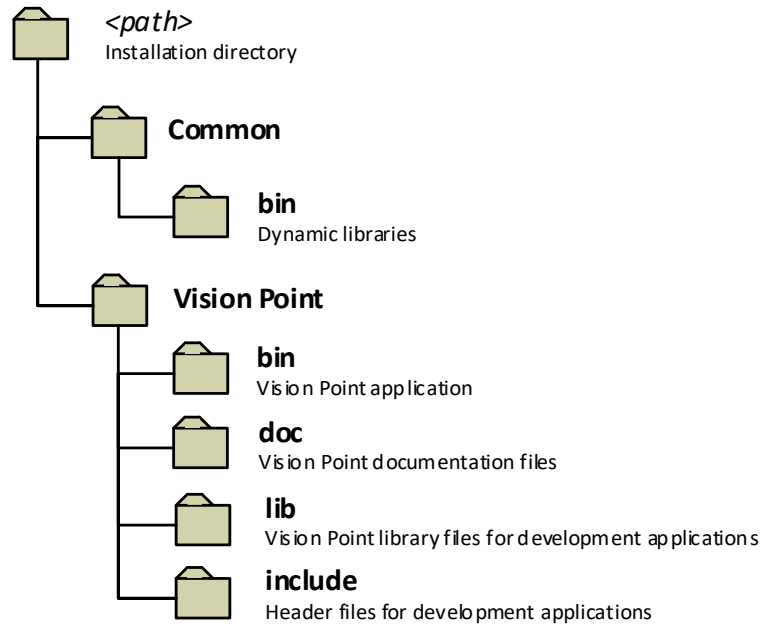


Figure 1 – Main directory and file hierarchy

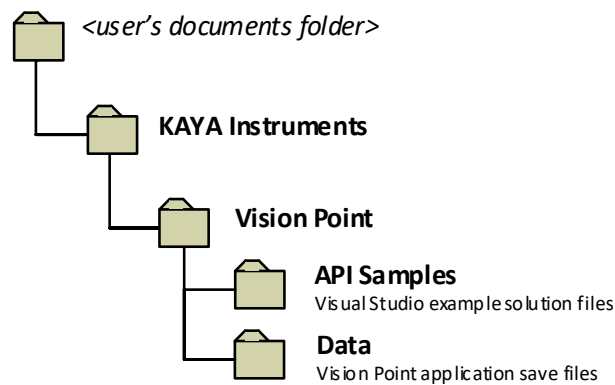


Figure 2 – Examples and save directories



## 4 Hardware Information

The Hardware information contains parameters describing the currently connected Simulator board and includes device capabilities, basic connectivity details and currently running firmware. This information can be used to identify the specific card and its capabilities and inform if a firmware update is needed to support complete functionality set. It can also help to indicate about certain performance issues. The hardware information parameters can be found in the following table:

| Parameter  | Description                            | Gen<i>Cam name        | Type    | Possible values |                | Remarks              |
|--|--|-----------------------|---------|-----------------|----------------|----------------------|
|  |  |                       |         | Value           | Gen<i>Cam name |                      |
| <b>Gen&lt;i&gt;Cam Category: HardwareInformation</b> |  |                       |         |                 |                |                      |
| Device Firmware Version                              | The firmware version of the device     | DeviceFirmwareVersion | String  |                 |                |                      |
| Serial Number  | Serial Number of the device            | DeviceSerialNumber    | String  |                 |                |                      |
| Device Revision                                      | Revision of the device                 | DeviceRevision        | Integer |                 |                |                      |
| Maximum Links  | Maximum available links on the device  | MaxLinks              | Integer |                 |                |                      |
| PCIe Generation                                      | Supported generation of connected PCIe | DevicePciGeneration   | Integer | 1,2,3           |                |                      |
| PCIe lanes   | Number of connected PCIe lanes         | DevicePciLanes        | Integer | 1,2,4,8         |                |                      |
| Core Temperature                                     | Device CPU Temperature                 | DeviceTemperature     | Integer |                 |                | Temperature is in °C |

Table 2 – Hardware information parameters

| Hardware Information    |         |                          |
|-------------------------|---------|--------------------------|
| Device Firmware Version | 4.1.7.0 | <input type="checkbox"/> |
| Serial Number           | 0       | <input type="checkbox"/> |
| Device Revision         | 0       | <input type="checkbox"/> |
| Maximum available links | 4       | <input type="checkbox"/> |
| PCIe generation         | 3       | <input type="checkbox"/> |
| PCIe lanes              | 8       | <input type="checkbox"/> |
| Core Temperature        | 63      | <input type="checkbox"/> |

Figure 3 – Hardware information parameters in Vision Point App

## 5 Device General Control

The Device Control contains manufacturer parameters describing the currently connected hardware device. The information includes device vendor name, basic manufacturer information details and device identifier. The “Device Reset” command can be used to resets the device configuration and parameters to its power up state. The device information parameters summarized in the following table:

| Parameter                                      | Description  | Gen<i>Cam name         | Type    | Possible values |                | Remarks |
|--|--|------------------------|---------|-----------------|----------------|---------|
|  |  |                        |         | Value           | Gen<i>Cam name |         |
| <b>Gen&lt;i&gt;Cam Category: DeviceControl</b> |  |                        |         |                 |                |         |
| Device Vendor Name                             | Name of the manufacturer of the device             | DeviceVendorName       | String  |                 |                |         |
| Device Model Name                              | The model of the device                            | DeviceModelName        | String  |                 |                |         |
| Device Manufacturer Info                       | Extended manufacturer information about the device | DeviceManufacturerInfo | String  |                 |                |         |
| Device Version                                 | The version of the device                          | DeviceVersion          | Float   |                 |                |         |
| Device ID                                      | Stores a camera identifier                         | DeviceID               | Float   |                 |                |         |
| Device Reset                                   | Resets the device to its power up state            | DeviceReset            | Command | 1 - Activate    |                |         |

Table 3 – Device control parameters

| ▼ Device Control         |                            |                          |
|--------------------------|----------------------------|--------------------------|
| Device Vendor Name       | KAYA Instruments           | <input type="checkbox"/> |
| Device Model Name        | Chameleon Camera Simulator | <input type="checkbox"/> |
| Device Manufacturer Info | KAYA Instruments           | <input type="checkbox"/> |
| Device Version           | 1.1                        | <input type="checkbox"/> |
| Device ID                | 1.1                        | <input type="checkbox"/> |
| Device Reset             | Execute                    | <input type="checkbox"/> |

Figure 4 – Device control parameters in Vision Point App

## 6 Image Format Control

The Image Format Control is responsible for defining the output image dimensions and format type. The resolution of the image and output format will influence the maximum frame rate, which can be achieved.

| Parameter   | Description   | Gen<i>Cam name | Type        | Possible values   |                | Remarks |
|---|---|----------------|-------------|---|----------------|---------|
|   |   |                |             | Value   | Gen<i>Cam name |         |
| <b>Gen&lt;i&gt;Cam Category: ImageFormatControl</b> |   |                |             |   |                |         |
| Width   | Represents the actual image width expelled by the camera (in pixels)  | Width          | Integer     | ≥ 1   |                |         |
| Height  | Represents the actual image height expelled by the camera (in pixels)   | Height         | Integer     | ≥ 1   |                |         |
| Width Max   | Maximum width (in pixels) of the image. The dimension is calculated after horizontal binning, decimation or any other function changing the horizontal dimension of the image | WidthMax       | Integer     |   |                |         |
| Height Max  | Maximum height (in pixels) of the image. This dimension is calculated after vertical binning, decimation or any other function changing the vertical dimension of the image   | HeightMax      | Integer     |   |                |         |
| Offset X  | Horizontal offset from the origin to the area of interest (in pixels)   | OffsetX        | Integer     |   |                |         |
| Offset Y  | Vertical offset from the origin to the area of interest (in pixels)   | OffsetY        | Integer     |   |                |         |
| Pixel Format  | Indicates the format of the pixel to use during the generation  | PixelFormat    | Enumeration | 0x00000101 Mono8<br>0x00000102 Mono10<br>0x00000103 Mono12<br>0x00000104 Mono14<br>0x00000105 Mono16<br>0x00000311 BayerGR8<br>0x00000312 BayerGR10<br>0x00000313 BayerGR12<br>0x00000314 BayerGR14<br>0x00000315 BayerGR16<br>0x00000321 BayerRG8<br>0x00000322 BayerRG10<br>0x00000323 BayerRG12<br>0x00000324 BayerRG14<br>0x00000325 BayerRG16<br>0x00000331 BayerGB8<br>0x00000332 BayerGB10<br>0x00000333 BayerGB12 |                |         |

|           |  |          |             |            |                 |
|-----------|--|----------|-------------|------------|-----------------|
|           |  |          |             | 0x00000334 | BayerGB14       |
|           |  |          |             | 0x00000335 | BayerGB16       |
|           |  |          |             | 0x00000341 | BayerBG8        |
|           |  |          |             | 0x00000342 | BayerBG10       |
|           |  |          |             | 0x00000343 | BayerBG12       |
|           |  |          |             | 0x00000344 | BayerBG14       |
|           |  |          |             | 0x00000345 | BayerBG16       |
|           |  |          |             | 0x00000401 | RGB8            |
|           |  |          |             | 0x00000402 | RGB10           |
|           |  |          |             | 0x00000403 | RGB12           |
|           |  |          |             | 0x00000404 | RGB14           |
|           |  |          |             | 0x00000405 | RGB16           |
|           |  |          |             | 0x00000501 | RGBA8           |
|           |  |          |             | 0x00000502 | RGBA10          |
|           |  |          |             | 0x00000503 | RGBA12          |
|           |  |          |             | 0x00000504 | RGBA14          |
|           |  |          |             | 0x00000505 | RGBA16          |
|           |  |          |             | 0x00000621 | YUV422_8        |
|           |  |          |             | 0x00000625 | YUV422_16       |
|           |  |          |             | 0x00000821 | YCBCR709_422_8  |
|           |  |          |             | 0x00000825 | YCBCR709_422_16 |
| Scan Mode | Indicates whether generated picture is progressive or interlaced | ScanMode | Enumeration | 0          | Progressive     |
|           |  |          |             | 1          | Interlaced      |

Table 4 – Image Format control parameters

| Image Format Control |             |                          |
|----------------------|-------------|--------------------------|
| Width                | 640         | <input type="checkbox"/> |
| Height               | 480         | <input type="checkbox"/> |
| Width Max            | 5000        | <input type="checkbox"/> |
| Height Max           | 5000        | <input type="checkbox"/> |
| Offset X             | 0           | <input type="checkbox"/> |
| Offset Y             | 0           | <input type="checkbox"/> |
| Pixel Format         | Mono 8      | <input type="checkbox"/> |
| Scan Mode            | Progressive | <input type="checkbox"/> |

Figure 5 – Image Format Control category in Vision Point App

## 7 Acquisition Control

The Acquisition stream control section describes settings and state for data generation (commands and stream). Generation can be controlled through executing the relevant commands from this category from the Frame Grabber side, after Chameleon II Simulator camera was detected. The acquisition control parameters are summarized in the following table.

| Parameter   | Description  | Gen<i>Cam name           | Type        | Possible values                 |   | Remarks        |
|---|--|--------------------------|-------------|---------------------------------|---|----------------|
|   |  |                          |             | Value                           | Gen<i>Cam name  |                |
| <b>Gen&lt;i&gt;Cam Category: AcquisitionControl</b> |  |                          |             |                                 |   |                |
| Acquisition Mode                                    | Controls the acquisition mode of the device                                | AcquisitionMode          | Enumeration | 0x00<br>0x01<br>0x02            | Continuous<br>SingleFrame<br>MultiFrame   |                |
| Acquisition Start                                   | Starts the Acquisition of the device                                       | AcquisitionStart         | Command     | 1 - Activate                    |   |                |
| Acquisition Stop                                    | Stops the Acquisition of the device at the end of the current Frame        | AcquisitionStop          | Command     | 0 - Activate                    |   |                |
| Acquisition Frame Count                             | Number of frames to be sent in MultiFrame AcquisitionMode                  | AcquisitionFrameCount    | Integer     | ≥ 1                             |   |                |
| Acquisition Reset                                   | Resets the image acquisition logic and counters                            | AcquisitionReset         | Command     | 1 - Activate                    |   |                |
| Frame Rate  | Controls the acquisition rate at which the frames are captured             | AcquisitionFrameRate     | Float       | ≥ 1                             |   | In units of Hz |
| Video Source Type                                   | Type of video source for stream generation                                 | VideoSourceType          | Enumeration | 0<br>1<br>2                     | Pattern<br>File<br>Folder   |                |
| Pattern Type  | Type of pattern in case pattern source is selected                         | VideoSourcePatternType   | Enumeration | 0<br>1<br>2<br>3<br>4<br>5<br>6 | Horizontal ramp<br>Horizontal ramp (color)<br>Vertical ramp<br>Vertical ramp (color)<br>Diagonal ramp<br>Diagonal ramp (color)<br>Fixed |                |
| Image source file                                   | Path to a file if single file is selected as video source                  | SourceFilePath           | String      |                                 |   |                |
| Images source folder                                | Path of a folder if folder with multiple files is selected as video source | SourceFolderPath         | String      |                                 |   |                |
| Video Source File Type                              | Type of video source file in case folder source is selected                | VideoSourceFileType      | Enumeration | 0<br>1<br>2<br>3                | Raw<br>Bmp<br>Tif<br>Png  |                |
| Source File Count                                   | Number of files to read in case folder source is selected                  | VideoSourceFileCount     | Integer     |                                 |   |                |
| Fixed pattern value 1                               | Fixed pattern value 1  | VideoSourcePatternValue1 | Integer     |                                 |   |                |

|                       |                       |                          |         |  |  |
|-----------------------|-----------------------|--------------------------|---------|--|--|
| Fixed pattern value 2 | Fixed pattern value 2 | VideoSourcePatternValue2 | Integer |  |  |
| Fixed pattern value 3 | Fixed pattern value 3 | VideoSourcePatternValue3 | Integer |  |  |
| Fixed pattern value 4 | Fixed pattern value 4 | VideoSourcePatternValue4 | Integer |  |  |

Table 5 – Acquisition Control parameters

| Acquisition Control     |                 |                          |
|-------------------------|-----------------|--------------------------|
| Acquisition Mode        | Continuous      | <input type="checkbox"/> |
| Acquisition Start       | Execute         | <input type="checkbox"/> |
| Acquisition Stop        | Execute         | <input type="checkbox"/> |
| Acquisition Frame Count | 1               | <input type="checkbox"/> |
| Acquisition Frame Rate  | 60.000000       | <input type="checkbox"/> |
| Video source type       | Pattern         | <input type="checkbox"/> |
| Pattern type            | Horizontal ramp | <input type="checkbox"/> |
| Image source file       |                 | <input type="checkbox"/> |
| Images source folder    |                 | <input type="checkbox"/> |
| Source file type        | RAW             | <input type="checkbox"/> |
| Source files count      | 1               | <input type="checkbox"/> |
| Fixed pattern value 1   | 0x0             | <input type="checkbox"/> |
| Fixed pattern value 2   | 0x0             | <input type="checkbox"/> |
| Fixed pattern value 3   | 0x0             | <input type="checkbox"/> |
| Fixed pattern value 4   | 0x0             | <input type="checkbox"/> |

Figure 6 – Acquisition Control category in Vision Point App

## 8 Transport Layer Control

The Transport Layer Control section describes the characteristics of two main features:

### 8.1 Payload Size

Provides the number of bytes transferred for each image or chunk on the stream channel. This includes any end-of-line, end-of-frame statistics or other stamp data. This is the total size of data payload for a data block.

### 8.2 Device Tap Geometry

This device tap geometry feature describes the geometrical properties characterizing the taps of a camera as presented at the output of the device. The following table specifies the transport layer control parameters:

| Parameter  | Description   | Gen<i>Cam name    | Type        | Possible values |                | Remarks |
|--|---|-------------------|-------------|-----------------|----------------|---------|
|  |   |                   |             | Value           | Gen<i>Cam name |         |
| <b>Gen&lt;i&gt;Cam Category: TransportLayerControl</b> |   |                   |             |                 |                |         |
| Payload Size   | Provides the number of bytes transferred for each image or chunk on the stream channel. This includes any end-of-line, end-of-frame statistics or other stamp data. This is the total size of data payload for a data block | PayloadSize       | Integer     |                 |                |         |
| Device Tap Geometry                                    | This device tap geometry feature describes the geometrical properties characterizing the taps of a camera as presented at the output of the device  | DeviceTapGeometry | Enumeration | 1X-1Y           |                |         |

Table 6 – Transport Layer Control parameters

| Transport Layer Control |            |                          |
|-------------------------|------------|--------------------------|
| Payload Size            | 1583308639 | <input type="checkbox"/> |
| Device tap geometry     | 1X-1Y      | <input type="checkbox"/> |

Figure 7 – Transport Layer Control category in Vision Point App

## 9 Simulation Control

This section describes features and state for data generation in the Camera Simulator. The Trigger Control describes all features related to image acquisition using trigger(s), and the Timer Control lists all features that relates to control and monitoring of timers. The Simulation control parameters summarized in the following table.

| Parameter   | Description   | Gen<i>Cam name              | Type                   | Possible values                   |                      | Remarks  |
|---|---|-----------------------------|------------------------|-----------------------------------|----------------------|--|
|   |   |                             |                        | Value                             | Gen<i>Cam name       |  |
| <b>Gen&lt;i&gt;Cam Category: SimulationControl</b>                  |   |                             |                        |                                   |                      |  |
| Link Discovery  | Discovery speed settings  | LinkDiscovery               | Enumeration            | 0x010028                          | DISCOVERY_CXP_1      | 1.250 Gbps discovery speed                       |
|   |   |                             |                        | 0x010038                          | DISCOVERY_CXP_3      | 3.125 Gbps discovery speed                       |
|   |   |                             |                        |                                   |                      |  |
| Bandwidth Utilization   | Utilization percentage of set bandwidth   | BandwidthUtilization        | Float                  | 0≤BW≤100                          |                      |  |
| <b>Gen&lt;i&gt;Cam Category: SimulationControl / TriggerControl</b> |   |                             |                        |                                   |                      |  |
| Trigger Mode  | This feature controls the transmission trigger mode of the device   | SimulationTriggerMode       | Enumeration            | 0<br>1                            | FreeRun<br>Triggered |  |
| Trigger Activation  | Specifies the activation mode of the trigger  | SimulationTriggerActivation | Enumeration            | 0x0000                            | RisingEdge           | See section 9.1                                  |
|   |   |                             |                        | 0x0001                            | FallingEdge          |  |
|   |   |                             |                        | 0x0002                            | AnyEdge              |  |
|   |   |                             |                        | 0x0003                            | LevelHigh            |  |
|   |   |                             |                        | 0x0004                            | LevelLow             |  |
| Trigger Source  | Specifies the internal signal or physical input Line to use as the trigger source. The selected trigger must have its SimulationTriggerMode set to On | SimulationTriggerSource     | Enumeration (Selector) |                                   |                      | See Table 8                                      |
| Trigger Delay   | Specifies the delay in microseconds(us) to apply after the trigger reception before activating it   | SimulationTriggerDelay      | Integer                |                                   |                      | In units of microseconds (us)<br>See section 9.2 |
| Trigger Filter  | Filter for trigger, helps prevent signal de-bouncing. 8ns resolution, units in microseconds(us)   | SimulationTriggerFilter     | Float                  | Min. Val. 0<br>Max. Val. 34359738 |                      | In units of microseconds (us)<br>See section 9.3 |
| Trigger Software  | Generates an internal trigger. SimulationTriggerSource must be set to Software  | SimulationTriggerSoftware   | Command                | 1 - Activate                      |                      |  |
| Trigger Event Mode  | Selects the trigger event generation mode   | SimulationTriggerEventMode  | Enumeration            | 0                                 | Disabled             |  |
|   |   |                             |                        | 1                                 | RisingEdge           |  |
|   |   |                             |                        | 2                                 | FallingEdge          |  |
|   |   |                             |                        | 3                                 | AnyEdge              |  |
| <b>Gen&lt;i&gt;Cam Category: SimulationControl / TimerControl</b>   |   |                             |                        |                                   |                      |  |
| Timer Selector  | Selects which Timer to configure  | TimerSelector               | Enumeration            | 0x00                              | Timer0               |  |
|   |   |                             |                        | 0x01                              | Timer1               |  |
|   |   |                             |                        | 0x02                              | Timer2               |  |
|   |   |                             |                        | 0x03                              | Timer3               |  |
|   |   |                             |                        | 0x04                              | Timer4               |  |
|   |   |                             |                        | 0x05                              | Timer5               |  |



|                 |   |                |       | 0x06<br>0x07                     | Timer6<br>Timer7 |                               |
|-----------------|---|----------------|-------|----------------------------------|------------------|-------------------------------|
| Line Duration   | Specifies the delay in microseconds(us) to apply between each line  | LineDuration   | Float | Min. Val. 0<br>Max. Val. 8000000 |                  | In units of microseconds (us) |
| Frame Duration  | Specifies the delay in microseconds(us) to apply between each frame | FrameDuration  | Float | Min. Val. 0<br>Max. Val. 8000000 |                  | In units of microseconds (us) |
| Active Duration | Specifies the delay in microseconds(us) to apply between each frame | ActiveDuration | Float | Min. Val. 0<br>Max. Val. 8000000 |                  | In units of microseconds (us) |

Table 7 – Simulation Control parameters

|  |                            |                          |
|--|----------------------------|--------------------------|
| <div style="background-color: #cccccc; padding: 2px;">           Simulation Control         </div>   |                            |                          |
| Link Discovery   | 1.250 Gbps discovery speed | <input type="checkbox"/> |
| Bandwidth utilization percentage   | 100.000000                 | <input type="checkbox"/> |
| <div style="background-color: #cccccc; padding: 2px;">           Trigger Control         </div>      |                            |                          |
| Trigger Mode   | Free Running               | <input type="checkbox"/> |
| Trigger Activation   | Rising Edge                | <input type="checkbox"/> |
| Trigger Source   | LVTTTL 0                   | <input type="checkbox"/> |
| Trigger Delay  | 0                          | <input type="checkbox"/> |
| Trigger Filter   | 0.000000                   | <input type="checkbox"/> |
| Trigger Software   | Execute                    | <input type="checkbox"/> |
| Trigger Event Mode   | Disabled                   | <input type="checkbox"/> |
| <div style="background-color: #cccccc; padding: 2px;">           Frame Timing Control         </div> |                            |                          |
| Active Duration  | 0.000000                   | <input type="checkbox"/> |
| Line Duration  | 0.000000                   | <input type="checkbox"/> |
| Frame Duration   | 0.000000                   | <input type="checkbox"/> |

Figure 8 – Simulation Control category in Vision Point App

| Value | Output              | Gen<i>Cam parameter name |
|-------|---------------------|--------------------------|
| 0     | OptoCoupled Input 0 | KY_OPTO_IN_0             |
| 1     | OptoCoupled Input 1 | KY_OPTO_IN_1             |
| 2     | OptoCoupled Input 2 | KY_OPTO_IN_2             |
| 3     | OptoCoupled Input 3 | KY_OPTO_IN_3             |
| 4     | OptoCoupled Input 4 | KY_OPTO_IN_4             |
| 5     | OptoCoupled Input 5 | KY_OPTO_IN_5             |
| 6     | OptoCoupled Input 6 | KY_OPTO_IN_6             |
| 7     | OptoCoupled Input 7 | KY_OPTO_IN_7             |
| 8     | LVDS Input 0        | KY_LVDS_IN_0             |
| 9     | LVDS Input 1        | KY_LVDS_IN_1             |
| 10    | LVDS Input 2        | KY_LVDS_IN_2             |
| 11    | LVDS Input 3        | KY_LVDS_IN_3             |
| 12    | TTL 0               | KY_TTL_0                 |
| 13    | TTL 1               | KY_TTL_1                 |
| 14    | TTL 2               | KY_TTL_2                 |
| 15    | TTL 3               | KY_TTL_3                 |
| 16    | TTL 4               | KY_TTL_4                 |
| 17    | TTL 5               | KY_TTL_5                 |

|    |                      |               |
|----|----------------------|---------------|
| 18 | TTL 6                | KY_TTL_6      |
| 19 | TTL 7                | KY_TTL_7      |
| 20 | LVTTTL 0             | KY_LVTTTL_0   |
| 21 | LVTTTL 1             | KY_LVTTTL_1   |
| 22 | LVTTTL 2             | KY_LVTTTL_2   |
| 23 | LVTTTL 3             | KY_LVTTTL_3   |
| 24 | LVTTTL 4             | KY_LVTTTL_4   |
| 25 | LVTTTL 5             | KY_LVTTTL_5   |
| 26 | LVTTTL 6             | KY_LVTTTL_6   |
| 27 | LVTTTL 7             | KY_LVTTTL_7   |
| 28 | OptoCoupled Output 0 | KY_OPTO_OUT_0 |
| 29 | OptoCoupled Output 1 | KY_OPTO_OUT_1 |
| 30 | OptoCoupled Output 2 | KY_OPTO_OUT_2 |
| 31 | OptoCoupled Output 3 | KY_OPTO_OUT_3 |
| 32 | OptoCoupled Output 4 | KY_OPTO_OUT_4 |
| 33 | OptoCoupled Output 5 | KY_OPTO_OUT_5 |
| 34 | OptoCoupled Output 6 | KY_OPTO_OUT_6 |
| 35 | OptoCoupled Output 7 | KY_OPTO_OUT_7 |
| 36 | LVDS Output 0        | KY_LVDS_OUT_0 |
| 37 | LVDS Output 1        | KY_LVDS_OUT_1 |
| 38 | LVDS Output 2        | KY_LVDS_OUT_2 |
| 39 | LVDS Output 3        | KY_LVDS_OUT_3 |

Table 8 – Line selection options

Large array of GPIO is available for configuring trigger source from external signal generators, such as TTL, LVDS, LVTTTL and OptoCoupled. The auxiliary GPIO signals can be used to initiate on-board events, transmitted to other devices or rerouted from other signals, such as CoaXPress triggers and other GPIOs. The GPIOs can be configured from the API and be set as a trigger sources. The API enables routing of any input to any output as well as to the CoaXPress IO and Trigger lines.

## 9.1 Simulation Trigger Activation

The trigger activation mode configures the generation of signal state. Default value is Rising Edge, which will trigger generation of a frame on signal rising edge event. The different modes functionality is as follows:

1. Any Edge:  
The frames will be generated both on rising and falling edges of the trigger source.
2. Rising Edge:  
The frames will be generated only on rising edge of the trigger source. Falling edge of the source is ignored.
3. Falling Edge:  
The frames will be generated only on falling edge of the trigger source. Rising edge of the source is ignored.
4. Level High:  
High signal level enables a continuous image generated, Low signal level will halt the trigger generation.
5. Level Low:  
Low signal level enables a continuous image generated, High signal level will halt the trigger generation.

## 9.2 Simulation Trigger Delay

The trigger delay is a mechanism for postponing the outgoing signal for a specified number of microseconds (us). As a result, trigger will be issued after specified time delay to overcome known system latency or set trigger generation period. To disable, value 0 should be set.

## 9.3 Simulator Trigger Filter

The filter of the trigger signals acts as a de-bouncing mechanism for better noise immunity. By default, the filter is disabled with the value of 0. The signal filter resolution can be set at 8ns intervals for high resolution functionality. If the trigger filter is set to a larger value than the width of the trigger pulse, then the pulse will be filtered out and no trigger will occur. Available interface in API provides input in microsecond (us); nevertheless, to achieve higher resolution, relevant fraction values should be entered after the decimal point.

## 9.4 Configuring Simulator Triggers

Configuring Chameleon II Simulator trigger sourced from remote host (e.g Frame Grabber). This example illustrates an optional configuration of Chameleon II Simulator trigger and Komodo CoaXPress Frame Grabber trigger, using Timer 0 as an input trigger source for incoming signals from the camera.

### 9.4.1.1 Camera Simulator configuration

1. “TriggerMode” configured to “Triggered” in order to set the Simulator to trigger mode.
2. “TriggerSource” configured to “Camera Trigger” in order to set the Simulator to trigger source.
3. The Trigger Filter resolution (“TriggerFilter”), Activation Mode (“TriggerActivation”) and Trigger Delay (“TriggerDelay”) parameters may be configured according to desired output.

| Feature Name                        | Value                      | Save                                |
|-------------------------------------|----------------------------|-------------------------------------|
| ▷ Device Control                    |                            |                                     |
| ▷ Image Format Control              |                            |                                     |
| ▷ Acquisition Control               |                            |                                     |
| ▷ Transport Layer Control           |                            |                                     |
| ▷ Support                           |                            |                                     |
| ▷ CXP                               |                            |                                     |
| ▾ Simulation Control                |                            |                                     |
| Link Discovery(*)                   | 1.250 Gbps discovery speed | <input type="checkbox"/>            |
| Bandwidth utilization percentage(*) | 0.000000                   | <input type="checkbox"/>            |
| ▾ Trigger Control                   |                            |                                     |
| Trigger Mode(*)                     | Triggered                  | <input checked="" type="checkbox"/> |
| Trigger Activation(*)               | Rising Edge                | <input type="checkbox"/>            |
| Trigger Source(*)                   | Camera Trigger             | <input checked="" type="checkbox"/> |
| Trigger Delay(*)                    | 0                          | <input type="checkbox"/>            |
| Trigger Filter(*)                   | 0.000000                   | <input type="checkbox"/>            |
| Trigger Software(*)                 | Execute                    | <input type="checkbox"/>            |
| Trigger Event Mode(*)               | Disabled                   | <input type="checkbox"/>            |
| ▷ Frame Timing Control              |                            |                                     |
| ▷ Analog Control                    |                            |                                     |
| ▷ Hardware Information              |                            |                                     |

Figure 9 – Chameleon II Simulator trigger configuration in Vision Point App

## 10 Analog Control

VOD and Pre Emphasis define the configurations of physical analog components responsible for synchronization with the host device. Therefore changing these values will influence directly on the stability of the communication with host device, and may cause link de-synchronization. The VOD and Pre Emphasis parameters summarized in the following tables.

| Parameter                                      | Description                     | Gen<i>Cam name | Type                   | Possible values | Remarks        |
|--|---------------------------------|----------------|------------------------|-----------------|----------------|
|  |                                 |                |                        | Value           | Gen<i>Cam name |
| <b>Gen&lt;i&gt;Cam Category: AnalogControl</b> |                                 |                |                        |                 |                |
| Vod  | TX VOD settings                 | Vod            | Enumeration (Selector) |                 | See Table 10   |
| Pre Emphasis                                   | Transmitter Pre-Emphasis Levels | PreEmphasis    | Enumeration (Selector) |                 | See Table 11   |

Table 9 – Analog Control parameters

| Enum | Value | Output | Gen<i>Cam parameter name |
|------|-------|--------|--------------------------|
| 0    | 0x09  | 180 mV | VOD_180                  |
| 1    | 0x0A  | 200 mV | VOD_200                  |
| 2    | 0x0B  | 220 mV | VOD_220                  |
| 3    | 0x0C  | 240 mV | VOD_240                  |
| 4    | 0x0D  | 260 mV | VOD_260                  |
| 5    | 0x0E  | 280 mV | VOD_280                  |
| 6    | 0x0F  | 300 mV | VOD_300                  |
| 7    | 0x10  | 320 mV | VOD_320                  |
| 8    | 0x11  | 340 mV | VOD_340                  |
| 9    | 0x12  | 360 mV | VOD_360                  |
| 10   | 0x13  | 380 mV | VOD_380                  |
| 11   | 0x14  | 400 mV | VOD_400                  |
| 12   | 0x15  | 420 mV | VOD_420                  |
| 13   | 0x16  | 440 mV | VOD_440                  |
| 14   | 0x17  | 460 mV | VOD_460                  |
| 15   | 0x18  | 480 mV | VOD_480                  |
| 16   | 0x19  | 500 mV | VOD_500                  |
| 17   | 0x1A  | 520 mV | VOD_520                  |
| 18   | 0x1B  | 540 mV | VOD_540                  |
| 19   | 0x1C  | 560 mV | VOD_560                  |
| 20   | 0x1D  | 580 mV | VOD_580                  |
| 21   | 0x1E  | 600 mV | VOD_600                  |
| 22   | 0x1F  | 620 mV | VOD_620                  |
| 23   | 0x20  | 640 mV | VOD_640                  |
| 24   | 0x21  | 660 mV | VOD_660                  |
| 25   | 0x22  | 680 mV | VOD_680                  |
| 26   | 0x23  | 700 mV | VOD_700                  |
| 27   | 0x24  | 720 mV | VOD_720                  |
| 28   | 0x25  | 740 mV | VOD_740                  |
| 29   | 0x26  | 760 mV | VOD_760                  |

|    |      |         |          |
|----|------|---------|----------|
| 30 | 0x27 | 780 mV  | VOD_780  |
| 31 | 0x28 | 800 mV  | VOD_800  |
| 32 | 0x29 | 820 mV  | VOD_820  |
| 33 | 0x2A | 840 mV  | VOD_840  |
| 34 | 0x2B | 860 mV  | VOD_860  |
| 35 | 0x2C | 880 mV  | VOD_880  |
| 36 | 0x2D | 900 mV  | VOD_900  |
| 37 | 0x2E | 920 mV  | VOD_920  |
| 38 | 0x2F | 940 mV  | VOD_940  |
| 39 | 0x30 | 960 mV  | VOD_960  |
| 40 | 0x31 | 980 mV  | VOD_980  |
| 41 | 0x32 | 1000 mV | VOD_1000 |
| 42 | 0x33 | 1020 mV | VOD_1020 |
| 43 | 0x34 | 1040 mV | VOD_1040 |
| 44 | 0x35 | 1060 mV | VOD_1060 |
| 45 | 0x36 | 1080 mV | VOD_1080 |
| 46 | 0x37 | 1100 mV | VOD_1100 |
| 47 | 0x38 | 1120 mV | VOD_1120 |
| 48 | 0x39 | 1140 mV | VOD_1140 |
| 49 | 0x3A | 1160 mV | VOD_1160 |
| 50 | 0x3B | 1180 mV | VOD_1180 |
| 51 | 0x3C | 1200 mV | VOD_1200 |

Table 10 – Vod selection options

| Enum | Value | Output                  | Gen<i>Cam parameter name |
|------|-------|-------------------------|--------------------------|
| 0    | 0x00  | Pre emphasis setting 0  | PRE_EMPHASIS_0           |
| 1    | 0x01  | Pre emphasis setting 1  | PRE_EMPHASIS_1           |
| 2    | 0x02  | Pre emphasis setting 2  | PRE_EMPHASIS_2           |
| 3    | 0x03  | Pre emphasis setting 3  | PRE_EMPHASIS_3           |
| 4    | 0x04  | Pre emphasis setting 4  | PRE_EMPHASIS_4           |
| 5    | 0x05  | Pre emphasis setting 5  | PRE_EMPHASIS_5           |
| 6    | 0x06  | Pre emphasis setting 6  | PRE_EMPHASIS_6           |
| 7    | 0x07  | Pre emphasis setting 7  | PRE_EMPHASIS_7           |
| 8    | 0x08  | Pre emphasis setting 8  | PRE_EMPHASIS_8           |
| 9    | 0x09  | Pre emphasis setting 9  | PRE_EMPHASIS_9           |
| 10   | 0x0A  | Pre emphasis setting 10 | PRE_EMPHASIS_10          |
| 11   | 0x0B  | Pre emphasis setting 11 | PRE_EMPHASIS_11          |
| 12   | 0x0C  | Pre emphasis setting 12 | PRE_EMPHASIS_12          |
| 13   | 0x0D  | Pre emphasis setting 13 | PRE_EMPHASIS_13          |
| 14   | 0x0E  | Pre emphasis setting 14 | PRE_EMPHASIS_14          |
| 15   | 0x0F  | Pre emphasis setting 15 | PRE_EMPHASIS_15          |
| 16   | 0x10  | Pre emphasis setting 16 | PRE_EMPHASIS_16          |
| 17   | 0x11  | Pre emphasis setting 17 | PRE_EMPHASIS_17          |
| 18   | 0x12  | Pre emphasis setting 18 | PRE_EMPHASIS_18          |
| 19   | 0x13  | Pre emphasis setting 19 | PRE_EMPHASIS_19          |
| 20   | 0x14  | Pre emphasis setting 20 | PRE_EMPHASIS_20          |
| 21   | 0x15  | Pre emphasis setting 21 | PRE_EMPHASIS_21          |

|    |      |                         |                 |
|----|------|-------------------------|-----------------|
| 22 | 0x16 | Pre emphasis setting 22 | PRE_EMPHASIS_22 |
| 23 | 0x17 | Pre emphasis setting 23 | PRE_EMPHASIS_23 |
| 24 | 0x18 | Pre emphasis setting 24 | PRE_EMPHASIS_24 |
| 25 | 0x19 | Pre emphasis setting 25 | PRE_EMPHASIS_25 |
| 26 | 0x1A | Pre emphasis setting 26 | PRE_EMPHASIS_26 |
| 27 | 0x1B | Pre emphasis setting 27 | PRE_EMPHASIS_27 |
| 28 | 0x1C | Pre emphasis setting 28 | PRE_EMPHASIS_28 |
| 29 | 0x1D | Pre emphasis setting 29 | PRE_EMPHASIS_29 |
| 30 | 0x1E | Pre emphasis setting 30 | PRE_EMPHASIS_30 |
| 31 | 0x1F | Pre emphasis setting 31 | PRE_EMPHASIS_31 |

Table 11 – Pre Emphasis selection options

| ▼ Analog Control    |                         |                          |
|---------------------|-------------------------|--------------------------|
| Vod                 | 820 mV                  | <input type="checkbox"/> |
| Pre-Emphasis Levels | Pre emphasis setting 19 | <input type="checkbox"/> |

Figure 10 – Analog Control category in Vision Point App



## 11 Support

The Support category describes the standard CoaXPress bootstrap registers for device and protocol information. The support bootstrap parameters are summarized in the following table.

| Parameter                                | Description                            | Gen<i>Cam name      | Type    | Value | Possible values<br>Gen<i>Cam name | Remarks |
|--|--|---------------------|---------|-------|-----------------------------------|---------|
| <b>Gen&lt;i&gt;Cam Category: Support</b> |  |                     |         |       |                                   |         |
| Standard                                 | Bootstrap register Standard            | Standard            | Integer |       |                                   |         |
| Revision                                 | Bootstrap register Revision            | Revision            | Integer |       |                                   |         |
| Xml Manifest Size                        | Bootstrap register XmlManifestSize     | XmlManifestSize     | Integer |       |                                   |         |
| Xml Manifest Selector                    | Bootstrap register XmlManifestSelector | XmlManifestSelector | Integer |       |                                   |         |
| Xml Version                              | Bootstrap register XmlVersion          | XmlVersion          | Integer |       |                                   |         |
| Xml Schema Version                       | Bootstrap register XmlSchemaVersion    | XmlSchemaVersion    | Integer |       |                                   |         |
| Xml Url Address                          | Bootstrap register XmlUrlAddress       | XmlUrlAddress       | Integer |       |                                   |         |
| lidc Pointer                             | Bootstrap register lidcPointer         | lidcPointer         | Integer |       |                                   |         |

Table 12 – Support category parameters

| ▼ Support           |           |                          |
|---------------------|-----------|--------------------------|
| Standard            | 0x0       | <input type="checkbox"/> |
| Revision            | 0x20000   | <input type="checkbox"/> |
| XmlManifestSize     | 1         | <input type="checkbox"/> |
| XmlManifestSelector | 0         | <input type="checkbox"/> |
| XmlVersion          | 65540     | <input type="checkbox"/> |
| XmlSchemaVersion    | 65537     | <input type="checkbox"/> |
| XmlUrlAddress       | 535821312 | <input type="checkbox"/> |
| lidcPointer         | 0         | <input type="checkbox"/> |

Figure 11 – Support category in Vision Point App

## 12 CoaXPress

The CoaXPress section describes the bootstrap registers to determine the configuration parameters of connection, as described in JIIA CXP-001-2013 (CoaXPress Standard) document. The CoaXPress parameters are summarized in the following table.

| Parameter                                  | Description   | Gen<i>Cam name                             | Type                   | Possible values  |                | Remarks  |
|--|---|--|------------------------|--|----------------|--|
|  |   |  |                        | Value  | Gen<i>Cam name |  |
| <b>Gen&lt;i&gt;Cam Category: CoaXPress</b> |   |  |                        |  |                |  |
| CXP Versions Supported                     | Bootstrap register. The bitmask indicates all version(s) of the CoaXPress specification supported by the Device | VersionsSupported                          | Integer                |  |                | If CXP 2.0 is not implemented ( <b>CoaXPress_Revision_2_0_NotImplemented</b> ) this parameter become "RO" for debugging purposes |
| CXP Version Used                           | Currently selected version of the CoaXPress specification used to communicate between the Device and Host       | VersionUsed                                | Enumeration            | 0x00010 CXP 1.0<br>000<br>0x00010 CXP 1.1<br>001<br>0x00020 CXP 2.0<br>000 |                |  |
| Low Speed timeout                          | Low Speed timeout. 8ns resolution, units in microseconds(us). Default value is 800ms                            | LowSpeedTimeout                            | Integer                | Min: 0<br>Max: 34359738  |                | Depends on <b>CoaXPress_Revision_2_0_Implemented</b>   |
| Heartbeat period                           | Heartbeat period. 8ns resolution, units in microseconds(us). Default value is 10ms                              | HeartbeatPeriod                            | Float                  |  |                | Depends on <b>CoaXPress_Revision_2_0_Implemented</b>   |
| Device Link ID                             | Bootstrap register DeviceLinkID   | DeviceLinkID                               | Integer                |  |                |  |
| Master Host Link ID                        | Bootstrap register MasterHostLinkID   | MasterHostLinkID                           | Integer                |  |                |  |
| Control Packet Data Size                   | Bootstrap register ControlPacketDataSize  | ControlPacketDataSize                      | Integer                |  |                |  |
| Stream Packet Data Size                    | Bootstrap register StreamPacketDataSize   | StreamPacketDataSize                       | Integer                |  |                |  |
| Link Config                                | Bootstrap register LinkConfig   | LinkConfig                                 | Enumeration (Selector) |  |                | See Table 14<br>Values depend on <b>TwelveG_IsImplemented</b>  |
| Link Config Default                        | Bootstrap register LinkConfigDefault  | LinkConfigDefault                          | Enumeration (Selector) |  |                | See Table 14<br>Values depend on <b>TwelveG_IsImplemented</b>  |
| Test Mode                                  | Bootstrap register TestMode   | TestMode                                   | Integer                |  |                |  |
| Test Error Count Selector                  | Bootstrap register TestErrorCountSelector   | TestErrorCountSelector                     | Integer (Selector)     |  |                |  |
| TestErrorCount                             | Bootstrap register TestErrorCount   | TestErrorCount [TestErrorCountSelector]    | Integer                |  |                |  |
| TestPacketCountTx                          | Bootstrap register TestPacketCountTx  | TestPacketCountTx [TestErrorCountSelector] | Integer                |  |                |  |
| TestPacketCountRx                          | Bootstrap register TestPacketCountRx  | TestPacketCountRx [TestErrorCountSelector] | Integer                |  |                |  |
| Image 1 Stream ID                          | Image 1 Stream ID   | Image1StreamID                             | Integer                |  |                |  |

Table 13 – CoaXPress category parameters

| Value      | Output            | Gen<i>Cam parameter name |
|------------|-------------------|--------------------------|
| 0x00010028 | 1 Link 1.250 Gbps | x1_CXP_1                 |
| 0x00010030 | 1 Link 2.500 Gbps | x1_CXP_2                 |
| 0x00010038 | 1 Link 3.125 Gbps | x1_CXP_3                 |
| 0x00010040 | 1 Link 5.0 Gbps   | x1_CXP_5                 |
| 0x00010048 | 1 Link 6.25 Gbps  | x1_CXP_6                 |
| 0x00010050 | 1 Link 10 Gbps    | x1_CXP_10                |
| 0x00010058 | 1 Link 12 Gbps    | x1_CXP_12                |
| 0x00020028 | 2 Link 1.250 Gbps | x2_CXP_1                 |
| 0x00020030 | 2 Link 2.500 Gbps | x2_CXP_2                 |
| 0x00020038 | 2 Link 3.125 Gbps | x2_CXP_3                 |
| 0x00020040 | 2 Link 5.0 Gbps   | x2_CXP_5                 |
| 0x00020048 | 2 Link 6.25 Gbps  | x2_CXP_6                 |
| 0x00020050 | 2 Link 10 Gbps    | x2_CXP_10                |
| 0x00020058 | 2 Link 12 Gbps    | x2_CXP_12                |
| 0x00040028 | 4 Link 1.250 Gbps | x4_CXP_1                 |
| 0x00040030 | 4 Link 2.500 Gbps | x4_CXP_2                 |
| 0x00040038 | 4 Link 3.125 Gbps | x4_CXP_3                 |
| 0x00040040 | 4 Link 5.0 Gbps   | x4_CXP_5                 |
| 0x00040048 | 4 Link 6.25 Gbps  | x4_CXP_6                 |
| 0x00040050 | 4 Link 10 Gbps    | x4_CXP_10                |
| 0x00040058 | 4 Link 12 Gbps    | x4_CXP_12                |

Table 14 – Link Config selection options

| CXP                                  |                  |                          |
|--------------------------------------|------------------|--------------------------|
| CXP Versions Supported               | 0x7              | <input type="checkbox"/> |
| CXP Version Used                     | CXP 2.0          | <input type="checkbox"/> |
| Low Speed timeout                    | 800,000.000000   | <input type="checkbox"/> |
| Heartbeat period                     | 10,000.000000    | <input type="checkbox"/> |
| CoaXPress_Revision_2_0_IsImplemented | 1                | <input type="checkbox"/> |
| NewSequencer_IsImplemented           | 1                | <input type="checkbox"/> |
| TwelveG_IsImplemented                | 1                | <input type="checkbox"/> |
| PoCXP_IsImplemented                  | 1                | <input type="checkbox"/> |
| SoftwareCommands_IsImplemented       | 1                | <input type="checkbox"/> |
| ConnectionReset                      | 0                | <input type="checkbox"/> |
| DeviceConnectionID                   | 0                | <input type="checkbox"/> |
| MasterHostConnectionID               | 65792            | <input type="checkbox"/> |
| ControlPacketSizeMax                 | 1024             | <input type="checkbox"/> |
| StreamPacketSizeMax                  | 8192             | <input type="checkbox"/> |
| ConnectionConfig                     | 1 Link 6.25 Gbps | <input type="checkbox"/> |
| ConnectionConfigDefault              | 1 Link 6.25 Gbps | <input type="checkbox"/> |
| TestMode                             | 0                | <input type="checkbox"/> |
| > TestErrorCountSelector             | 0                | <input type="checkbox"/> |
| Image1StreamID                       | 1                | <input type="checkbox"/> |

Figure 12 – CoaXPress category in Vision Point App