

## Vision Point

# Vision Point Software and SDK

### Innovative Approach

Vision Point is the leading, cutting-edge and user friendly software environment for cameras and Frame Grabbers control and configuration, as well as video acquisition, recording and playback. You can gain the benefits of this comprehensive and easy-to-use software, no matter which camera you use with any Frame Grabbers manufactured by KAYA Instruments.

Accelerate your vision solutions with the Vision Point application, which includes GUI, SDK and API that are followed by a rich set of documentation, examples and reference designs.

Vision Point is natively integrated with most of the modern Machine Vision standard tools, which are used worldwide, such as MVTec Halcon, Matlab, Labview, Cognex etc.

Both Windows and Linux users can experience this powerful and reliable software package, including a concise and intuitive GUI.

The digital video recorder capabilities of the Vision Point software package achieve the industry's highest performance of up to 40Gbps recording of uncompressed digital streams for long periods of time. In line compression allows even longer recording times.

### Key Features:

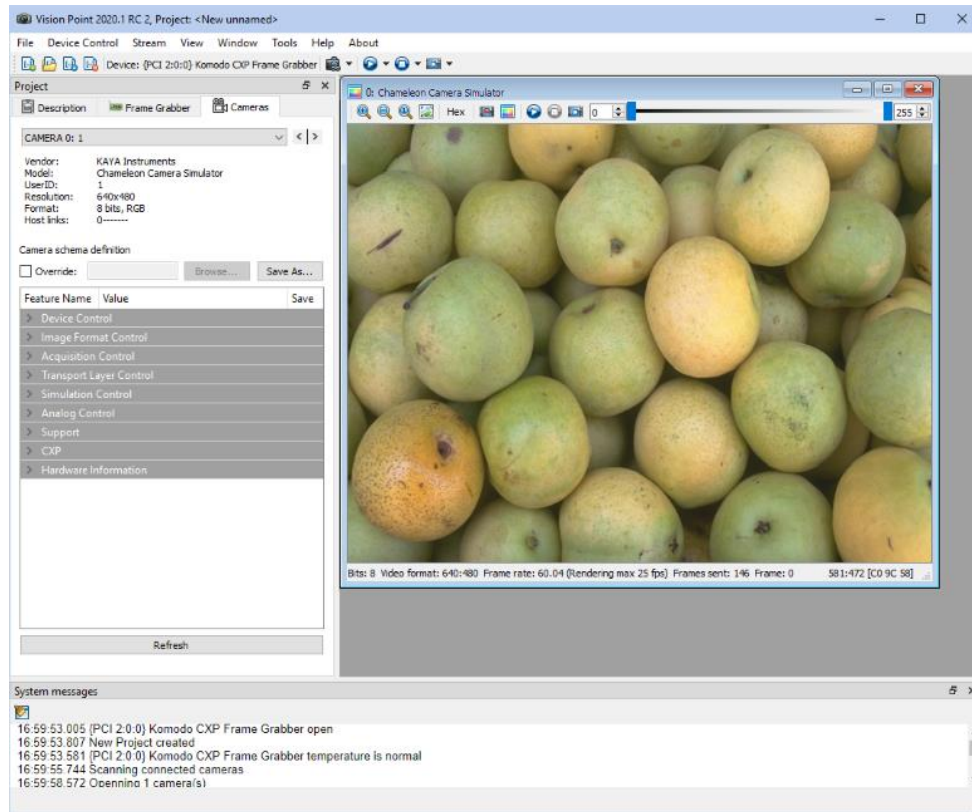
- Full control and configuration of the parameters of cameras and Frame Grabbers
- Image & video capture, calibration and analysis
- Automatic monitoring and management of PoCXP for CoaXPress cameras
- Cross functionality for all KAYA products
- Acquisition and playback of video streams from and to PC RAM
- Windows 10 and Linux OS support
- 32/64bit OS Support
- Direct GPU/Direct GMA Support
- ANSI C SDK
- Python binding
- .NET support
- Matab/Labview/Halcon/GenTL/Cognex support
- Support of configuration of cameras using GenAPI
- Support of configuration of Frame Grabbers using GenAPI
- Direct physical address DMA support
- Cyclic and Queued buffer modes
- Saving and loading Frame Grabber and camera configuration to/from a project file

### Applications:

- Manufacturing lines (Industry)
- Optical inspection
- Motion analysis
- Sports
- Life Science
- Defense

## Vision Point GUI

KAYA's Vision Point GUI is a high-level application that provides a way to connect, calibrate, control and capture images from your camera. Vision Point provides outstanding features: It supports multi-stream and provides multi-camera live rendering, camera initialization and controls. Configuring Frame Grabbers in Vision Point, capturing recordings and replaying them cannot be simpler. Interactive interfacing to various cameras is also possible, as well as interactive live view of video streams and conversion between video stream standards.



System calibration and debug tools are of the most advanced parts of the software. Users can quickly save images and image sequences to a file. Besides the highly-efficient color pattern decoding, the trigger control and encoder control are available for our users' convenience. The Vision Point App also provides interactive and highly configurable camera simulation interface for the Chameleon camera simulators. A large numbers of customers are already very satisfied with the Vision Point GUI worldwide.

## Vision Point SDK and API

The Vision Point SDK enables developers to enrich the application with advanced and custom functionalities based on specific requirements. The SDK provides essential features such as Frame Grabber and Camera Gen<i>cam configuration and GenTL producer. There is a flexible buffer management system including cyclic buffers, queued buffers and direct GPU buffers. Users can experience exceptional features of the image processing, such as Bayer de-mosaicking, Color correction, flat field correction, Gain/Offset and many more. Furthermore the Vision Point SDK offers other important features such as video frames time-stamping, video de-interlacing, camera trigger, GPIO control, built-in encoders and etc.

A high level API can be used with the KAYA Instruments' Frame Grabbers in order to connect, configure and capture a video stream of data from up to 8 channels with up to 8 video streams on each channel. The API can be also used with the Chameleon Camera Simulator by KAYA Instruments so as to configure the camera simulation interface on the highest level. This simulator is capable of generating CoaXPress video streams and test patterns of up to 4 CoaXPress links at various speeds and topologies.

## Compatibility

**KAYA Instruments** creates and maintains compatibility and interfaces for the most common and advanced vision image processing libraries and applications.

Major support is available for **MVTec Halcon**, **National Instruments' LabVIEW** and **MathWorks' MATLAB**.

❖ Supported vision standards:



❖ Supported vision libraries:



❖ Supported operating systems:



*Please check our website for an up-to-date list of other supported libraries and software package*

## Contact Us

Please feel free to contact our team with any question or further inquiry at [info@kayainstruments.com](mailto:info@kayainstruments.com) – we will be happy to provide assistance and consultation.

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