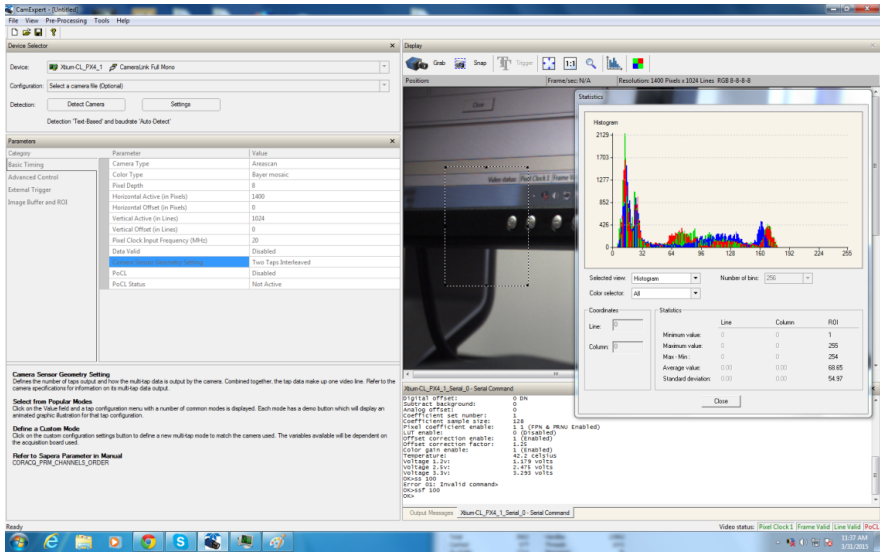
The Next Generation of CXP12 Frame Grabbers

The Xtium2™-CXP PX8 series is based on the industry standard PCI Express™ Gen 3.0 and CoaXPress ver 2.0 to transfers image data to the host memory at maximum acquisition rates. The Xtium2-CXP series takes full advantage of PCIe Gen 3.0 platform using PCIe x8 slots to deliver bandwidth up to 6.4 GB/sec into the host memory while supporting image acquisition from up to 4 CXP12 input channels (12.5 Gbps per channel). The Xtium2 CXP series is available in three configurations:

- **Single** port
- **Dual** port
- **Quad** port (up to 4 x 12.5 Gbs inputs)

By enabling maximum sustained throughput and ready-to-use image data, the Xtium2 series minimizes CPU usage and improves processing times for the host applications. In addition, the Xtium2 series offers enhanced memory architecture to handle area and line scan, monochrome and color cameras. The Xtium2 series offers high performance frame grabbers for Camera Link, Camera Link HS and

CoaXPress interface standards.

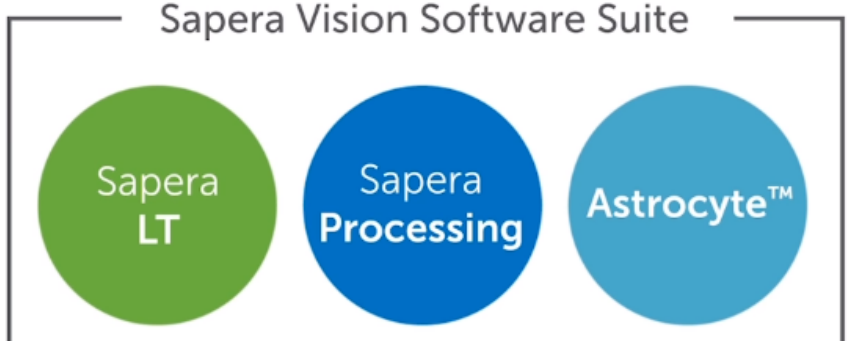


Free Acquisition and Control Software Libraries

The Xtium and Xtium2 series of frame grabbers are fully supported by Sapera LT SDK. Sapera LT SDK is an image acquisition and control software development toolkit (SDK) for Teledyne DALSA's cameras and frame grabbers. Hardware independent by nature, Sapera LT offers a rich development ecosystem for machine vision OEMs and system integrators. Sapera LT SDK supports image acquisition from cameras and frame grabbers based on standards including GigE Vision™, Camera Link®, CoaXPress®, and Camera Link HS™.

Fully supported by Sapera™ Vision SDK

When combined with a compatible Teledyne DALSA frame grabber, standard Sapera Processing run-time licenses are offered at no additional charge. Sapera Processing is at the heart of Sapera Vision Software, delivering a suite of image processing and analysis functions. These functions include



over 400 image processing primitives, barcode tools, pattern matching tools (both area-based and edge-based), OCR, color and blob analysis, measurement, and calibration tools for perspective and lens correction. The standard tools run-time license includes access to image processing functions, area based (normalized correlation based) template matching tools, blob analysis, and lens correction tools.

Specifications

Part Number	**Single:** OR-A8X0-XPX10 **Dual:** OR-A8X0-XPX20 **Quad:** OR-A8X0-XPX40
Bandwidth	Input CXP camera: up to 5.0 GB/s in frame grabber memory PCIe bus output: up to 7.0 GB/sec sustained (PCIe payload @ 512 bytes) PCIe bus output: up to 6.8 GB/sec sustained (PCIe payload* @ 256 bytes)
Board Type	PCIe
Host Bus	PCI Express Gen3 x8
Board Interface	CoaXPress
Connectors	**Single:** Data input: 1 x HD-BNC Data forward: N/A Camera control I/O: 1 x DH60-27P (main bracket) , 1 x 26-pin shrouded

	header Multi-board sync: 1 x 16-pin shrouded connector **Dual:** Data input: 2 x HD-BNC Data forward: N/A Camera control I/O: 1 x DH60-27P (main bracket), 1 x 26-pin shrouded header Multi-board sync: 1 x 16-pin shrouded connector **Quad:** Data input: 4 x HD-BNC Data forward: N/A Camera control I/O: 1 x DH60-27P (main bracket), 1 x 26-pin shrouded header Multi-board sync: 1 x 16-pin shrouded connector
Camera Format	CXP 1.0/1.1/2.0 (CXP12: 12.5 Gbs 8 b/10 b encoding) up 4 independent cameras
Transmission Rate	1 to 12.5 Gbps (50 Gbps total)
Bits Per Pixel	Mono: 8, 10, 12, 14 and 16-bit RGB: 8, 10 or 12-bit/pixel/color Bayer: 8, 10 and 12-bit/pixel
Camera Control	External trigger input, strobe out, quadrature encoder, multi-board sync, camera control through Genicam
GPIO	4x opto-couple (2 shared with external trigger) 8 LVTTL outputs (1 shared with strobe)
Frame Buffer	2048 MB on-board memory (shared with processing functions)

Features	Multi-board synchronization: grab images from multiple independent cameras in one image buffer, real-time, user selectable image processing, supports T2IR (Trigger2Image Reliability) framework
Software	Sapera LT SDK
OS Support	Windows 11 (64-bit), Windows 10 (64-bit), Windows 10 (32-bit) through WOW64, Linux (64-bit)
Input Camera Port	up to 4 cameras