

Xtium-CXP™ PX8



High-Performance CoaXPress™ PCIe Gen2 Frame Grabber Series

The Xtium™-CXP is based on the industry standard PCI Express™ Gen 2.0 expansion bus to deliver high speed access to host memory. The Xtium series offers high performance frame grabbers for CameraLink, CameraLink HS and CoaXPress interface standards. The Xtium-CXP series takes full advantage of PCIe Gen 2.0 platform using PCIe x8 slots to deliver bandwidth up to 25Gbps from four input channels (6.25 Gbps per channel). By enabling maximum sustained throughput and ready-to-use image data, the Xtium series minimizes CPU usage and improves processing times for the host applications. In addition, the Xtium series offers enhanced memory architecture to handle area and line scan, monochrome and color cameras.

The Xtium series support Sapera LT's the Trigger-To-Image (T2IR) framework for the maximum reliability of image acquisition system. The T2IR functions provide critical, real-time details of system events that help track and monitor acquisition, transfer and control processes to ensure reliability of the imaging system. It combines hardware and software functions that can be called from user applications using the Sapera LT libraries or used as a stand-alone utility – Sapera Monitor. To run Sapera Monitor no changes to the user application are required. It offers an intuitive GUI with user selectable events to provide detailed reporting while a user application executes image acquisition and transfer commands. Teledyne DALSA's T2IR helps increase system uptime and lower costs. All T2IR functionality is available free of charge as part of Sapera LT SDK and Xtium series of frame grabbers.

When using Teledyne DALSA's Sapera Processing library, the Xtium series offers free run-time license for Sapera Processing Standard Tools Run-Time (RTL). The Standard Tools RTL includes access to over 350 highly optimized image processing function and tools for Area Based Search, Blob Analysis and image calibration. Sapera LT supports Windows and Linux operating systems and supports multiple programming languages and development environments.

Key Features

- Half-length PCIe Gen2 x8 board
- Supports color and monochrome CXP cameras
- Supports 4, 2 or 1 input channels of up to 6.25Gbps/ch
- Maximum image acquisition input bandwidth up to 2.5GB/s
- Maximum host bandwidth up to 3.4GB/s
- Fully supported by Sapera LT SDK and Trigger-To-Image reliability frame work
- Supports Microsoft® Windows® 7, Windows 8.1, Windows 10 64 and 32-bit O/S

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Specifications:

Features	Description	Features	Description
Board	<ul style="list-style-type: none"> • CoaXpress 1.x compatible • Half-length PCI Express Gen2 x8 	Control	<ul style="list-style-type: none"> • Comprehensive event notification includes start/end of frame/transfer • Camera control signals for external event synchronization • 4-optically isolated inputs can be configurable as Trigger or general purpose inputs; tolerate 5, 12 and 24VDC signals • 8 reconfigurable TTL outputs
Connectors	<ul style="list-style-type: none"> • Camera: 4 x DIN 1.0/2.3 • GPIO: DH60-27 on main bracket 	Communications	<ul style="list-style-type: none"> • Feature based through SaperaLT's CorAcqDevice module.
Acquisition	<ul style="list-style-type: none"> • Up to 2.5GB/s with 1 camera in 4, 2 or 1ch configurations • Supports up to 2 cameras in 2ch, or 4 cameras in 1ch mode¹ 	Encoder Inputs	<ul style="list-style-type: none"> • RS422 quadrature (AB) shaft-encoder inputs for external web synchronization • Up to 20MHz frequency, with built in bi-directional jitter tolerance
Resolution	<ul style="list-style-type: none"> • Horizontal (min/max): 32K/64K bytes • Vertical(min/max): • Area scan: 1 line/65K lines/frame for area-scan cameras • Linescan: 1 line/infinite lines for line-scan cameras • 1GB onboard frame buffer memory 	Power Output	<ul style="list-style-type: none"> • Power-on-reset fused • +24V output @ 800mA • PoCXP 4x 13W; requires PCI Express 6-pin power connector
Pixel Formats	<ul style="list-style-type: none"> • Supports 8, 10, 12, 14 and 16-bit mono or 8, 10 or 12-bit RGB • Bayer 8, 10 and 12-bit/pixel¹ 	Software	<ul style="list-style-type: none"> • Device driver supports: Microsoft® Windows® 7, Windows 8, Windows 10 (32/64-bit) compatible • Fully supported Teledyne DALSA's Sapera Vision Software packages • Application development using C++ and Microsoft .Net languages(C++, C# or Visual Basic)
Temperature	<ul style="list-style-type: none"> • Operating: 10°C (50° F) to 50° C (122° F) • Storage: Relative Humidity: up to 90% (non-condensing) 	Systems Requirements	<ul style="list-style-type: none"> • PCI Express Rev 1.1a or higher (Rev 2.0 recommended) with one x8 slot system with 1024MB or higher system memory
		Dimensions	<ul style="list-style-type: none"> • Dimensions (W x H) 6in. (14cm) x 4in.(10cm)
		Compliance	<ul style="list-style-type: none"> • FCC Class B • CE • China RoHS

¹ Available at the end of Q2, 2017