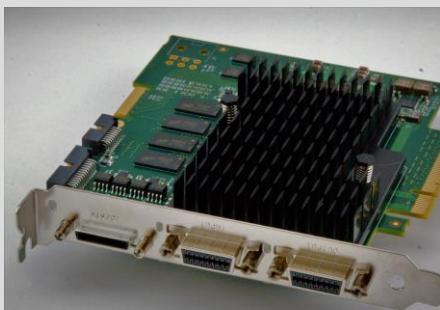# XTIUM™ 2 CLHS PX8 LC
A High-Performance Frame Grabber for PCIe Gen3 Platform

Key Features

- Half-length PCI Express Gen 3.0 x8 Board
- CameraLink® HS compliant
- Supports acquisition rates up to 5.0 · GB/sec
- Host transfers up to 6.8 GB/sec
- Data forwarding for distributed image processing
- Field proven optical(AOC) and copper(CX4) cabling
- Microsoft® Windows® 7 & 10 (32/64-bit), WOW64 and Linux[1]
- Fully supported by Sapera Vision Software SDKs
- FCC, CE, KC and EU & China ROHS compliant

Feature Rich Image Acquisition
Cost Free Data-Forwarding for Distributed Image Processing

Building on the field proven Teledyne DALSA's Xtium family of frame grabbers, the Xtium™ 2 CLHS PX8 LC features CameraLink HS standard on the PCI Express™ Gen 3.0 platform. The Xtium2-CLHS supports Active Optical Cable (AOC) and industry standard CX4 cables. This single cable, single slot solution supports up to 4-CLHS lanes, each operating at 10-Gbs, to acquire images at 5.0GB/s and transfer them using PCIe x8 slots at a sustained speed above 6.8GB/s to the host memory.

The Xtium2-CLHS PX8 LC supports the X-protocol that uses 64/66-bit encoding for data transmission to deliver image packets with over 96% efficiency. When combined with 4 data-lanes on an AOC cables, the Xtium2 CLHS PX8 LC can deliver images at maximum input data rate at cable lengths beyond 100 meters.

In addition, with its integrated data forwarding capabilities, the Xtium2 CLHS PX8 LC can redistribute incoming data across up to 6 and higher computers in real-time without any additional hardware.

Free Acquisition and Control Software Libraries

Xtium2 series of frame grabbers are fully supported by Sapera™ LT-an image acquisition and control software development toolkit (SDK) for Teledyne DALSA's cameras and frame grabbers. Hardware independent in nature, Sapera LT offers a rich software development ecosystem for machine vision OEMs and system integrators. Sapera LT supports image acquisition from cameras and frame grabbers based on industry standards including GigE Vision™, CameraLink™, CameraLink HS™ and CoaXpress™. Sapera LT SDK is offered at no extra charge.

Fully Supported By Sapera Vision SDK

When combined with Xtium2 series of frame grabbers, the Sapera Processing standard tools run-time licenses are offered at no additional charge. Sapera Processing is at the heart of Sapera Vision Software Package delivering a suite of image processing and analysis functions. These functions include over 400 image processing primitives, barcode tool, pattern matching tools both area-based and edge-based, OCR, color, 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 tool, blob analysis and lens correction tools.

Xtium2-CLHS Specifications[2]

Card	• **Part Number: OR-A8S0-PX840**
	• Half-length PCIe x8 card
	• PCIe Rev 3.0 compliant
Acquisition	• Area scan and line scan
	• Acquisition rate up to 5.0GB/s
	• Host transfer up to 6.8GB/s
CLHS	• CLHS 1 to 4 lane configurations
	• Single AOC or CX4 cable input from camera
	• Support for CLHS acquisition trigger modes 1 through 4
Features	• Image Cropping
	• Horizontal and vertical image flip
	• Data forwarding across multiple boards and PC for distributed image processing
	• Multiple board synchronization grab from multiple camera and multiple frame
Resolution	• Horizontal size: 16 bytes to 16 Kbytes
	• Vertical size: 1 line to 16 million lines
On-Board Memory Buffer	• 512 MB image buffer
Pixel Format	• Mono8, Mono10, Mono12 and Mono16
Controls	• Comprehensive event notification
	• Timing control logic for camera trigger, line scan direction and strobe signals
	• Camera control through GenCP/SFNC
Connectors	• 1 x CX4 thumbscrew connector for incoming data from camera
	• 1 x CX4 thumbscrew connector for data forwarding
	• DH60-27P for Board Trigger, Strobe and General I/Os (main bracket)
	• 16-pin connector on the board for Board Sync and/or other usage
LED	• 2 LEDs to report CLHS compliance link status Camera input/ Data-forwarding output
	• 1 LED Board status
Certification	• FCC Class A
	• CE, KC
	• EU & China RoHS
Software	• Supported by Sapera Vision SDK packages
	• Sapera LT and CamExpert
	• Sapera Essential
	• Microsoft Windows 7, Windows 10 32/64-bit, WOW64 and Linux[1]
Temperature and storage	• 10°C (50°F) to 50°C (122°F)
	• Relative Humidity – up to 90% (non-condensing)
Dimensions	• 11.11cm (4.375") length x 9.96cm (3.9240") height

1 Contact Teledyne DALSA sales for availability
2 Specifications subject to change without notice

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