

XTIUM™ 2 CLHS FX8

A High-Performance Frame Grabber for PCIe Gen3 Platform



Key Features

- Half-length PCI Express Gen 3.0 x8 Board
- CameraLink® HS compliant
- Aggregate acquisition rates up to 5.0 GB/sec
- Host transfers up to 6.8 GB/sec
- Support up to four 4 CLHS lanes
- Capable of supporting Data forwarding² for distributed image processing (2 lanes max)
- Field proven Fiber cabling using SFP+ modules
- Microsoft® Windows® 7 & 10 (32/64-bit), WOW64 and Linux²
- Fully supported by Sapera Vision Software SDKs
- FCC, CE, KC and ROHS compliant

CLHS Frame Grabber with Fiber Optic Interface

Building on the field proven capabilities of Teledyne DALSA's Xtium family of frame grabbers, the Xtium™ 2 CLHS FX8 features fiber optic cabling for the CameraLink HS interface on the PCI Express™ Gen 3.0 platform. The Xtium 2 CLHS FX8 boards feature CLHS X-protocol for high efficiency transmission, support up to four bidirectional SFP+ modules to delivery aggregate bandwidth of 5.0 GB/s and can reach cable lengths beyond 300 meters¹ - all in a compact, half-length, single slot solution.

The Xtium2-CLHS features high-performance on-board, Data Transfer Engine (DTE) to deliver maximum bandwidth without the need for specialized motherboards or chipsets. By enabling maximum sustained throughput and ready-to-use image data, the Xtium2-CLHS FX8 minimizes CPU usage and improves processing times for host applications. In addition, the Xtium2 series features enhanced memory bandwidth to meet the ever-increasing image resolution and faster frame rates of today's camera technology.

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 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™.

Fully Supported By Sapera Vision SDK

When combined with Xtium2 series of frame grabbers, the standard Sapera Processing 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 tool.

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Xtium2-CLHS Specifications³

Card

- **Part Number: OR-A850-FX840**
- Half-length PCIe x8 card
- PCIe Rev 3.0 compliant

Acquisition

- Area scan and line scan
- Acquisition rate up to 5.0GB/s

CLHS

- CLHS 1 to 4 lane configurations
- Up to 4 fiber cables
- Support for CLHS acquisition trigger modes 1 through 4

Features

- Image Cropping
- User programmable 3x3 filter²
- 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: 64 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
- RGB 8; RGB+Y 8-bit/color/pixel

Controls

- Comprehensive event notification
- Timing control logic for camera trigger, line scan direction and strobe signals
- Camera control through GenCP/SFNC

Connectors

- 4 x SFP+ cages with latch
- 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

- 4 LEDs to report CLHS compliance link status
- 1 LED Board status

Certification

- FCC Class A
- CE, KC
- EU & China RoHS

Software

- Supported by Sapera LT and CamExpert
- Microsoft Windows 7, Windows 10 32/64-bit, WOW64 and Linux²

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 Based on preliminary information
² Contact Teledyne DALSA sales for availability
³ Specifications subject to change without notice



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