

XTIUM™ 2 CLHS FX8 LC

A High-Performance Frame Grabber for PCIe Gen3 Platform

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 LC features fiber optic cabling for the CameraLink HS interface on the PCI Express™ Gen 3.0 platform. The Xtium2 CLHS FX8 LC boards feature CLHS X-protocol for high efficiency transmission, support up to two bidirectional SFP+ modules to deliver aggregate acquisition bandwidth of 2.5 GB/s and can reach cable lengths beyond 300 meters¹ - all in a compact, half-length, single slot solution.

The Xtium2-CLHS series 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 LC 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.

Key Features

- Half-length PCI Express Gen 3.0 x8 Board
- CameraLink® HS compliant
- Aggregate acquisition rates up to 2.5 GB/sec
- Host transfers up to 6.8 GB/sec
- Support up to four 2 CLHS lanes
- 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

Free Acquisition and Control Software Libraries

Xtium2 series of frame grabbers support 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™. Sapera LT is available free of charge from Teledyne DALSA website.

Fully Supported By Sapera Vision SDK

When combined with Xtium2 series of frame grabbers, the standard Sapera Processing standard tools run-time license is 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	<ul style="list-style-type: none"> • Half-length PCIe x8 card • PCIe Rev 3.0 compliant
Acquisition	<ul style="list-style-type: none"> • Area scan and line scan • Acquisition rate up to 2.5GB/s
CLHS	<ul style="list-style-type: none"> • Up to 2 CLHS lane configurations • Up to 42 fiber cables • Support for CLHS acquisition trigger modes 1 through 4
Features	<ul style="list-style-type: none"> • Image Cropping • Horizontal and vertical image flip • Multiple board synchronization grab from multiple camera and multiple frame
Resolution	<ul style="list-style-type: none"> • Horizontal size: 64 bytes to 16 Kbytes • Vertical size: 1 line to 16 million lines
On-Board Memory Buffer	<ul style="list-style-type: none"> • 512 MB image buffer
Pixel Format	<ul style="list-style-type: none"> • Mono8, Mono10, Mono12 and Mono16 • RGB 8; RGB+Y 8-bit/color/pixel
Controls	<ul style="list-style-type: none"> • Comprehensive event notification • Timing control logic for camera trigger, line scan direction and strobe signals • Camera control through GenCP/SFNC
Connectors	<ul style="list-style-type: none"> • 2 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	<ul style="list-style-type: none"> • 4 LEDs to report CLHS compliance link status • 1 LED Board status
Certification	<ul style="list-style-type: none"> • FCC Class A • CE, KC • EU & China RoHS
Software	<ul style="list-style-type: none"> • Supported by Sopera LT and CamExpert • Microsoft Windows 7, Windows 10 32/64-bit, WOW64 and Linux²
Temperature and storage	<ul style="list-style-type: none"> • 10°C (50°F) to 50°C (122°F) • Relative Humidity – up to 90% (non-condensing)
Dimensions	<ul style="list-style-type: none"> • 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