

## XTIUM™ 2 CLHS FX8 LC

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 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 Linux<sup>2</sup>
- 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 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 meters<sup>1</sup> - 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.

### 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 Specifications<sup>3</sup>

<b>Card</b>	<ul style="list-style-type: none"> <li>• <b>Part Number: OR-A850-FX820</b></li> <li>• Half-length PCIe x8 card</li> <li>• PCIe Rev 3.0 compliant</li> </ul>
<b>Acquisition</b>	<ul style="list-style-type: none"> <li>• Area scan and line scan</li> <li>• Acquisition rate up to 2.5GB/s</li> </ul>
<b>CLHS</b>	<ul style="list-style-type: none"> <li>• Up to 2 CLHS lane configurations</li> <li>• Up to 2 fiber cables</li> <li>• Support for CLHS acquisition trigger modes 1 through 4</li> </ul>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Image Cropping</li> <li>• Horizontal and vertical image flip</li> <li>• Multiple board synchronization grab from multiple camera and multiple frame</li> </ul>
<b>Resolution</b>	<ul style="list-style-type: none"> <li>• Horizontal size: 64 bytes to 16 Kbytes</li> <li>• Vertical size: 1 line to 16 million lines</li> </ul>
<b>On-Board Memory Buffer</b>	<ul style="list-style-type: none"> <li>• 512 MB image buffer</li> </ul>
<b>Pixel Format</b>	<ul style="list-style-type: none"> <li>• Mono8, Mono10, Mono12 and Mono16</li> <li>• RGB 8; RGB+Y 8-bit/color/pixel</li> </ul>
<b>Controls</b>	<ul style="list-style-type: none"> <li>• Comprehensive event notification</li> <li>• Timing control logic for camera trigger, line scan direction and strobe signals</li> <li>• Camera control through GenCP/SFNC</li> </ul>
<b>Connectors</b>	<ul style="list-style-type: none"> <li>• 2 x SFP+ cages with latch</li> <li>• DH60-27P for Board Trigger, Strobe and General I/Os (main bracket)</li> <li>• 16-pin connector on the board for Board Sync and/or other usage</li> </ul>
<b>LED</b>	<ul style="list-style-type: none"> <li>• 4 LEDs to report CLHS compliance link status</li> <li>• 1 LED Board status</li> </ul>
<b>Certification</b>	<ul style="list-style-type: none"> <li>• FCC Class A</li> <li>• CE, KC</li> <li>• EU &amp; China RoHS</li> </ul>
<b>Software</b>	<ul style="list-style-type: none"> <li>• Supported by Sopera LT and CamExpert</li> <li>• Microsoft Windows 7, Windows 10 32/64-bit, WOW64 and Linux<sup>2</sup></li> </ul>
<b>Temperature and storage</b>	<ul style="list-style-type: none"> <li>• 10°C (50°F) to 50°C (122°F)</li> <li>• Relative Humidity – up to 90% (non-condensing)</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• 11.11cm (4.375" ) length x 9.96cm (3.9240") height</li> </ul>