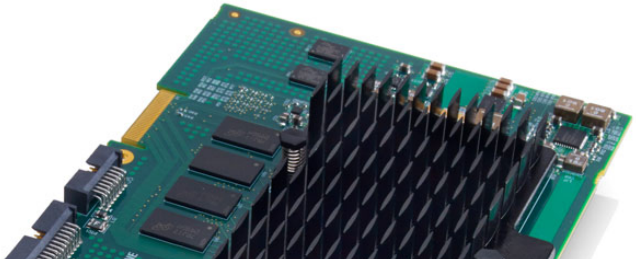
Built to Support the Next Generation of Machine Vision Cameras

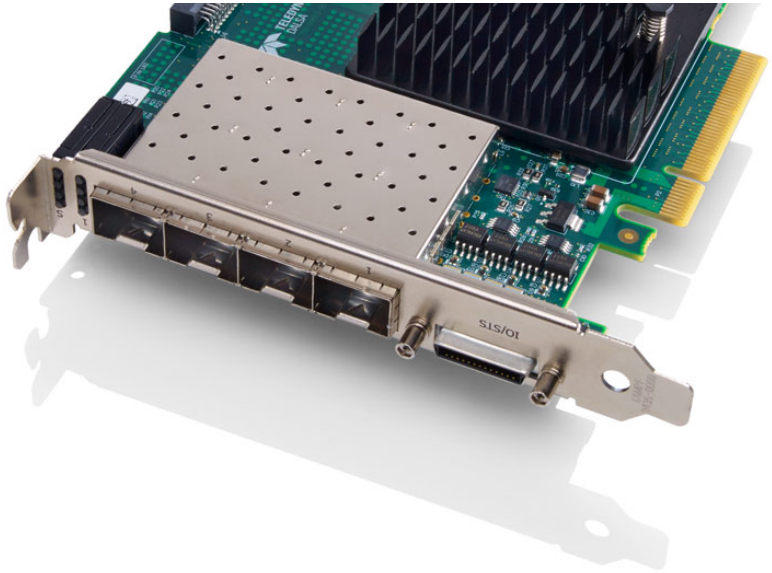
The Linea ML brings leading edge CMOS technology that is faster than ever, with affordable multiline architecture that enables the newest, most powerful inspection techniques including HDR, color and multispectral analysis, and multi-field imaging (single-pass bright/darkfield). With a native fiber optic interface for easy, low-cost long distance cabling, Linea ML opens new horizons in inspection.

Together, Xtium2 and Linea ML enable the newest and most demanding vision applications.



The Next Generation of Frame Grabbers

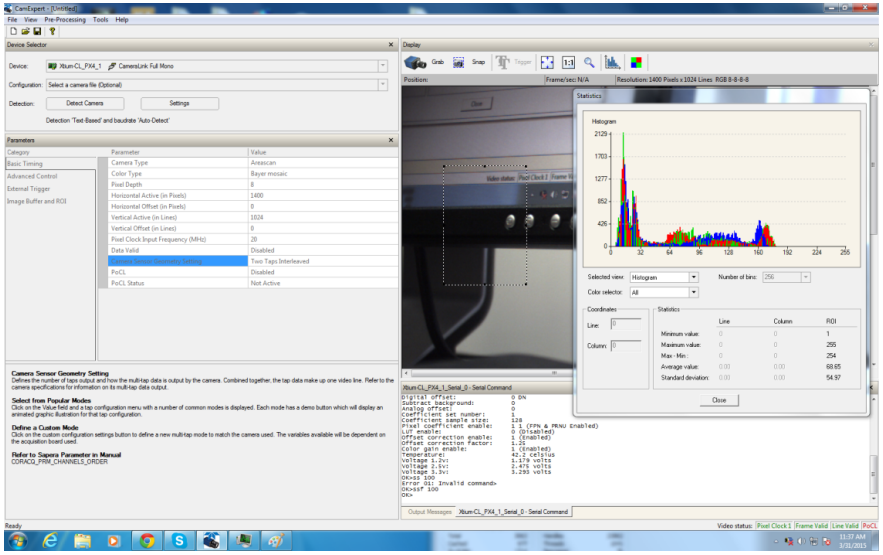
Building on the field proven capabilities of Teledyne DALSA's

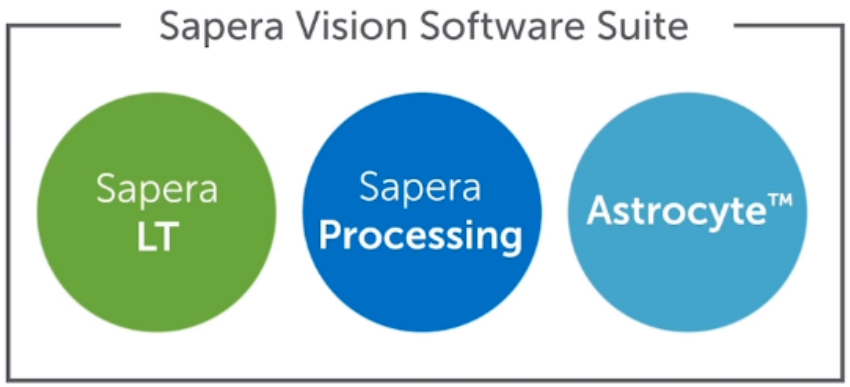


Xtium™ family of frame grabbers, the Xtium™2 CLHS FX8 features fiber optic cabling for the Camera Link HS interface on the PCI Express™ Gen 3.0 platform. The Xtium2 CLHS FX8 boards feature CLHS X-protocol for high efficiency transmission, support up to four bidirectional SFP+ modules to delivery aggregate bandwidth of 4.8 GBytes/s and can reach cable lengths beyond 100 meters - all in a compact, half-length, single slot solution.

Free Acquisition and Control Software Libraries

The Xtium and Xtium2 series of frame grabbers are fully supported by Sapera LT SDK. Sapera LT SDK is an image acquisition and control software development toolkit (SDK) for Teledyne DALSA's cameras and frame grabbers. Hardware independent by nature, Sapera LT offers a rich development ecosystem for machine vision OEMs and system integrators. Sapera LT SDK supports image acquisition from cameras and frame grabbers based on standards including GigE Vision™, Camera Link®, CoaXPress®, and Camera Link HS™.





Fully supported by Sapera™ Vision SDK

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

Specifications

Part Number	OR-A8S0-FX840
Bandwidth	Input CHLS camera: up to 7.6 GB/s in frame grabber memory PCIe bus output: up to 7.0 GB/sec sustained (PCIe payload @ 512 bytes) PCIe bus output: up to 6.8 GB/sec sustained (PCIe payload* @ 256 bytes)

Board Type	PCIe
Host Bus	PCI Express Gen3 x8
Board Interface	Camera Link HS
Connectors	Data input: 4 x SFP+ cages Data forward: shared Camera control I/O: 1 x DH60-27P (main bracket), 1 x 26-pin shrouded header Multi-board sync: 1 x 16-pin shrouded connector
Camera Format	CLHS X-protocol (64 b/66 b encoding): up to 4-lanes @ 10.3125 Gb/s
Transmission Rate	10.3125 Gbps per lane (41.25 Gbps total)
Bits Per Pixel	Mono: 8, 10, 12-bit/pixel RGB: 8-bit/pixel/color (no alignment)
Camera Control	External trigger input, strobe out, quadrature encoder, multi-board sync., camera control through Genicam, bit-error detection and correction
GPIO	4x opto-couple (2 shared with external trigger) 8 LVTTL outputs (1 shared with strobe)
Frame Buffer	512 MB on-board memory (shared with processing functions)
Features	Data-forwarding for distributed image processing, multi-board synchronization: grab images from multiple independent cameras in one image buffer, long cable lengths (fiber), real-time, user selectable image processing, supports T2IR (Trigger2Image Reliability) framework
Software	Sapera LT SDK

OS Support	Windows 11 (64-bit), Windows 10 (64-bit), Windows 10 (32-bit) through WOW64, Linux (64-bit)
Input Camera Port	up to 4 cameras