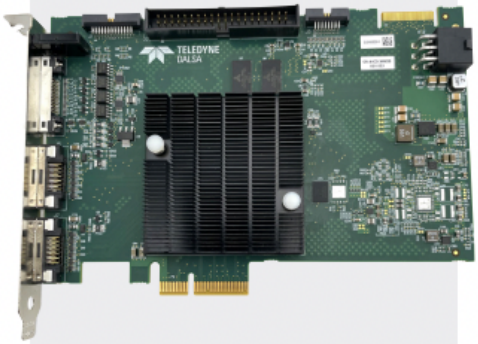
TELEDYNE

Pyramid Imaging

Teledyne DALSA
Industrial Vision Solutions

XTIUM™ 2-CL MX4



KEY FEATURES

- Half-length PCI Express Gen 3.0 x4 Board
- Camera Link Rev 2.1 compliant
- Acquires images from two Base cameras or one Medium, Full or 80-bit camera
- Supports Camera Link operations up to 85 MHz
- Extended cable distance at max data rate
- Enhanced feature set supports advanced Camera Link pixel/tap configurations
- Microsoft® Windows® 10/11 (32/64-bit)[3], Linux Kernel ver. up to 5.15
- Fully supported by Free Sapera LT SDK and the T2IR framework
- FCC, CE, ROHS, China RoHS and KC compliant
- PoCL support for all Camera Link configurations

High-Performance CameraLink® Frame Grabber

Building on the field-proven capability of Teledyne DALSA's Xtium frame grabber series, the Xtium2™-CL MX4 is based on industry standard PCI Express™ (PCIe) Gen 3.0 expansion bus and is fully compatible with PCIe 2.x to deliver high-speed access to host memory. Compliant with the AIA's CameraLink® (CL) standard, the Xtium2-CL MX4 supports area/line-scan color/monochrome cameras. Its flexible front-end supports either two CL Base cameras or one CL Medium, Full, or 80-bit camera.

The Xtium2-CL MX4 is PCIe Gen 3.0 x4 platform ready and supports PCIe Gen 2.x and 1.x slots. The field-proven, on-board Data Transfer Engine (DTE) produces maximum bandwidth with off-the-shelf motherboards or chipsets. By enabling maximum sustained throughput and ready-to-use image data, the Xtium2-CL MX4 minimizes CPU usage and improves processing times for the host applications. In addition, the Xtium2 features enhanced memory architecture, allowing it to handle different sensor tap topologies while sustaining colour decoding at the maximum frame/line rate.

The Xtium2-CL MX4 offers built-in, robust general-purpose input and output signals for external event synchronization, illumination control, in addition to the status notification LEDs. Board to board synchronization allows the Xtium2-CL MX4 to capture images from multiple area or line scan cameras simultaneously.

The Xtium2-CL MX4 offers full compatibility with Xtium-CL MX4 boards feature set, from the onboard connectors cables, to the control features in the SDK. This allows customers to use both boards interchangeably to ensure a consistent supply of boards.

FULLY SUPPORTED BY SAPERA™ VISION SDK

The Xtium2-CL MX4 boards include free Sapera Processing standard tools run-time license (RTL). The Sapera Processing standard tools RTL includes access to image processing functions, area-based (normalized correlation based) template matching tool, blob analysis and lens correction tool.

SPECIFICATIONS[2]

Features	Description
Board	**Part Number: OR-A4C0-XMX00** • Camera Link® Specifications Rev 2.1 compatible • Half-length PCIe board Supports Gen 2.x, Gen 3 ready
Connectors	• Camera – 2xSDR (mini CameraLink) • GPI/O – DH60-27pin on main bracket • GPIO – 16-pin Shrouded header • GPIO 40-pin shrouded header
Acquisition	• Supports: two CameraLink Base or one Medium, Full or 80-bit CameraLink cameras • Acquisition pixel clock rates from 20 MHz to 85 MHz
Resolution	• Horizontal Size (min/max): 8/128K bytes • Vertical Size: Line scan: 1 to 16M lines Area scan: up to 64K lines • 1 GB onboard frame buffer memory
Pixel Format and Tap	• Integrated advanced tap management engine allows independent tap formatting • Supports Camera Link tap configurations for 8, 10, 12, 14 and 16-bit mono or 8, 10 or 12-bit RGB
Configuration	**For Base Cameras in Any of the Following Combinations:** • 3x8-bit/tap, 2x10-bit/tap, 2x12-bit/tap, • 1x14-bit/tap, 1x16-bit/tap, & 1x24-bit/RGB • For Medium camera - 4x8-bit/tap, 4x10-bit/tap, 4x12-bit/tap, 1x30-bit/RGB, & 1x36-bit/tap • For Full—8x 8-bit/tap Camera Link • 10-tap/8-bit and 8-tap/10-bit configurations, 9.1 RGB Deca-mode
Communications	• PC independent serial communications ports provide support for 9600 to 921K baud • Appears as system serial ports enabling seamless interface to host applications

Function	Description
Controls	**Comprehensive Event Notification Includes:** • Start/end of frame/transfer • Camera control signals for external event synchronization • 4-optically isolated inputs can be configurable as trigger or general purpose inputs; tolerate 5, 12 and 24 VDC signals • 10 TTL general purpose/strobe outputs [1]
Encoder Inputs	• User selectable RS422/TTL quadrature encoder input • Up to 5 MHz (tick rate: 20 MHz tick), with built in bi-directional jitter tolerance
Power Output	• Power-on-reset fused • +12V output @ 500 mA • PoCL Base: 4W • PoCL Medium/Full: 8W • Requires PCI Express 6-pin power connector
Software	**Device Driver Supports:** • Microsoft® Windows® 7, Windows 8 and Windows 10 (32/64-bit) compatible • Supports Linux kernel versions up to 5.15[1] • Fully supported Teledyne DALSA's Sapera • Vision Software packages • Application development using C++ and Microsoft • .Net languages(C++, C# or Visual Basic)
System Requirements	• PCI Express PCIe 3.0 (compatible with PCIe revs 1.x and 2.x) with one x4 slot system with 1024 MB or higher system memory
Dimensions	• 6.40" (16.3cm) length x 4.00" (10.1cm) height
Temperature	• 10° C (50° F) to 50° C (122° F) • Relative Humidity: up to 90% (non-condensing)
Compliance	• FCC Class A • CE, UKAC • ROHS, China RoHS, South Korea KC

1 Contact Teledyne DALSA sales for availability
2 Subject to change without prior notice
3 For Windows 7/8 contact Teledyne DALSA sales

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