edt
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VisionLink F4 XMC

Camera Link frame grabber for XMC

Description

The VisionLink F4 XMC is a Camera Link frame grabber for XMC with two SDR26 connectors for up to two cameras in base mode, or one camera in medium to extended full mode (up to 850 MB/s total in a PCIe Gen2 slot).

The single width XMC board is compliant to VITA 42.0, 42.3 standards.

Image capture and display is in real time via DMA to the host computer, with onboard region-of-interest (ROI) control.

Line and frame triggering are supported internally via standard camera control (CC) lines, or externally (opto-coupled) via external connector. Similarly, IRIG-B123 timecode input is available via the external connector. Standard Camera Link serial communication also is supported.

Provided with the board are drivers for supported operating systems and a software development kit that includes C language libraries, examples, utilities, image capture and display GUI, camera configuration files, and Camera Link standard DLL for camera control.

Features

- Camera Link PCIe x4 interface fits single width XMC carrier board
- Provides two SDR26 connectors for one or two base mode cameras, or one medium to extended full mode camera
- Supports data rates up to 850 MB/s total in a PCIe Gen2 slot
- Captures and displays images in real time, via DMA to host computer
- Provides onboard region-of-interest control
- Supports line and frame triggering over camera control (CC) lines
- Supports external trigger inputs via external connector
- Includes IRIG-B123 timecode input via external connector
- Heat chamber testing optional

Applications

- Astronomy / biology / microscopy
- Aerial mapping / traffic systems
- Commercial film / multimedia
- Medical and nuclear imaging
- Remote scientific monitoring
- Manufacturing / inspection
- Machine vision / robotics
- Security / surveillance
- Scanning / archiving

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Specifications

Data Rates	Peak / typical	850 MB/s in a PCIe Gen2
Data Format (I/O)	Camera Link input; timecode input (IRIG-B123)	
Camera Link Compliance	Version	2.0
	Modes	Base through extended full
	Pixel clock rate	20-85 MHz
	Serial	Via API or serial DLL (9600 to 115,200 baud)
	Control	C1–CC4, discretely programmable for steady-state, trigger, and timed pulse
	Connectors	SDR26 for data and control
EU Compliance	TBD	
PCI Express Compliance	PCIe version	2
	Direct memory access (DMA)	Yes
	Number of lanes	4
	Backpanel	Single Width XMC
Noise	0 dB	
MTBF	TBD	
Triggering	Via CC lines, or external (opto-coupled) via MINI-IO TE 2294417-1	
Connectors	**Type**	**Purpose**
	Two SDR26 Camera Link	Data and control
	MINI IO TE 2294417-1	External trigger inputs and IRIG-B123 timecode input
Cabling	SDR26 standard Camera Link, purchased separately; consult EDT for options.	
Physical	Weight	2.1 oz. typical
	Dimensions	with backpanel, 152.48mm x 74mm x 12.7mm
Environmental	Temperature (operating / non-operating)	0° to 40° C / -40° to 80° C (No heat chamber testing)
	Temperature (operating / non-operating)	-40° to 70° C / -40° to 80° C (Heat chamber testing)
	Humidity (operating / non-operating)	1% to 90%, non-condensing at 40° C / 95%, non-condensing at 45° C
System and Software	System: Requires a standard XMC carrier Software: Drivers for Windows and Linux, with included software development kit, examples, and utilities. See EDT website for detailed system requirements and supported OS versions.	

Ordering Options

Part number	**Description**
019-15839	VisionLink F4 XMC, no heat chamber testing
Optional	VisionLink F4 XMC, heat chamber testing

Short VITA 42.3

P15, P16		
PCIe		
Standard		
16 Lane	Link 0	2.5 Gbaud