VisionLink F4
Camera Link 4-lane framegrabber for PCI Express

Description

The VisionLink F4 is a Camera Link PCI Express x4 frame grabber 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 compact board has a half- or full-height backpanel and fits in a 4-, 8-, or 16-lane PCIe slot.

Image capture and display is in real time via DMA to the host computer, with onboard region-of-interest (ROI) control. For FIFO / data buffering, DDR3 memory (128 MB) is included.

Line and frame triggering are supported internally via standard camera control (CC) lines, or externally (opto-coupled) via the included Berg or optional Lemo connector. Similarly, timecode input is available via the included Berg or optional Lemo 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 in a 4-, 8-, or 16-lane PCIe slot

Comes with half- or full-height backpanel

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

Includes 128 MB DDR3 for FIFO / data buffering

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 included Berg or optional Lemo connector

Includes IRIG-B timecode input via included Berg or optional Lemo connector

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

Specifications

Memory	DDR3 (for FIFO / data buffering)	128 MB
Data Rates	Peak / typical	850 MB/s in a PCIe Gen2 slot
Data Format (I/O)	Camera Link input; timecode input (IRIG-B)	
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	Half or full height
Noise	0 dB	
MTBF	TBD	
Triggering	Via CC lines, or external (opto-coupled) via Berg mated to SamTec MTMM 132-03-F-S-126 or Lemo mated to FGG.0B.307.CLAD.56.	
Connectors	**Type**	**Purpose**
	Two SDR26 Camera Link	Data and control
	Berg	External trigger inputs and IRIG-B timecode input
	Optional 7-pin Lemo	External trigger inputs and IRIG-B timecode input
Cabling	SDR26 standard Camera Link, purchased separately; consult EDT for options.	
Physical	Weight	1.4 oz. typical
	Dimensions	3.12 x 2.71 in. (with backpanel, 3.12 x 4.75 x 0.75 in.]
Environmental	Temperature (operating / non-operating)	10° to 40° C / -20° to 60° C
	Humidity (operating / non-operating)	1% to 90%, non-condensing at 40° C / 95%, non-condensing at 45° C
System and Software	System: Requires a PCIe 4-, 8-, or 16-lane slot that is not dedicated to display use only.	
	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
019-15100	Half height backpanel
019-14856	Full height backpanel
019-14857	Full height backpanel, Lemo