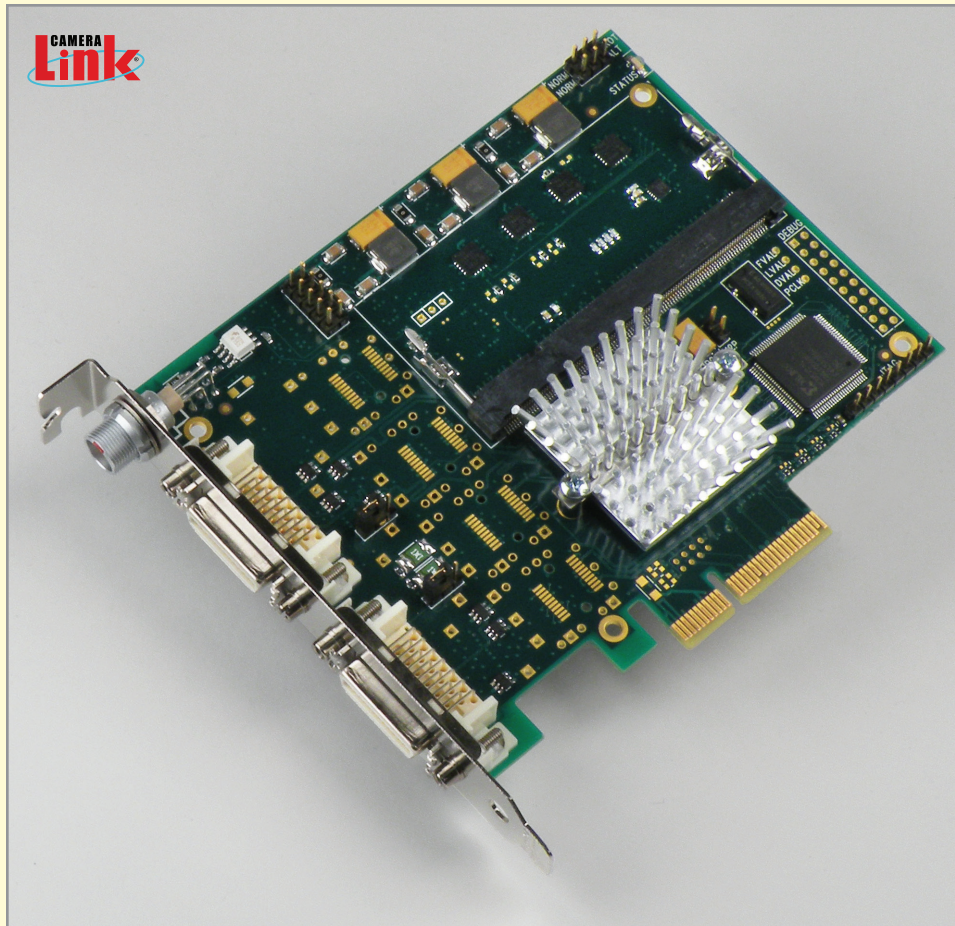a HEICO company

PCIe4 DVa C-Link
PCIe x4 digital video ("A" series) Camera Link interface

Description

The PCIe4 DVa C-Link is a PCIe x4 Camera Link interface that provides uncompressed image capture for digital video. It has two MDR26 connectors to support one full- or medium-mode or up to two base-mode cameras.

The board fits in a 4-, 8-, or 16-lane PCIe slot. Images of any resolution are captured and displayed, in real time, via DMA to the host computer; speed, resolution, and buffers are limited only by host bandwidth and memory. Optional 1 GB DDR2 provides snapshot recording and frame buffering.

Line and frame triggering are supported over camera control lines, while onboard UART provides serial control. External triggering and timecode input (IRIG-B) are enabled by the provided Berg or the optional Lemo connector.

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 interface fits in a 4-, 8- or 16-lane PCIe slot

Supports one full-, one medium-, or up to two base-mode cameras

Provides frame storage and buffering via optional 1 GB DDR2

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 lines

Offers optional timecode input (IRIG-B) for precise timestamping

Supports data rates up to 680 MB/s

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

Product Type	PCIe4 DVa C-Link is a PCIe x4 digital video ("A" series) Camera Link interface.	
Memory	FIFO	Up to several lines of data
	DDR2 (SODIMM)	0 or optional 1 GB
Data Rates	Peak / typical	680 MB/s / 680 MB/s (or maximum supported by host)
Data Format (I/O)	Camera Link input; timecode input (IRIG-B)	
Camera Link Compliance	Modes (depending on configuration)	Base, dual base, medium, full
	Pixel clock rate (in increments of 0.25 MHz)	Base–medium mode, 20–85 MHz; full mode, 30–85 MHz
	Serial	Via API or serial DLL (9600 to 115,200 baud)
	CC1 - CC4	Discretely programmable for steady-state, trigger, and timed pulse
	Connectors	Two MDR26 for data and control
EU Compliance	CE	Contact EDT
	RoHS	Contact EDT
	WEEE	Contact EDT
PCI Express Compliance	PCIe version	PCIe 1.1
	Direct memory access (DMA)	Yes
	Number of lanes	4
Noise	0 dB	
MTBF	Estimated at 200,000 hours	
Triggering	Via CC lines, or externally via connector (opto-coupled Berg or optional 7-pin Lemo – mate to FGG.0B.307.CLAD.56)	
Connectors	Two MDR26 Camera Link	For data and control
	One opto-coupled Berg	For external triggering, timecode input (IRIG-B), or both
	One optional 7-pin Lemo	For external triggering, timecode input (IRIG-B), or both
Cabling	Cabling is purchased separately; consult EDT for options.	
Physical	Weight	3.5 oz. typical
	Dimensions	4.8 x 4.8 x 0.7 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 must have a PCI Express bus (4, 8, or 16 lanes). Software is included for Windows and Linux, with limited support for Mac OS X and VxWorks; for versions, see www.edt.com.	

Ordering Options

- Memory - DDR2 (SODIMM): **0** / 1 GB
- Connector: **Berg (included)** / Lemo (optional),
  for external triggering, IRIG-B input, or both

Bold is default. **Ask about custom options.**