PMC DV FOX

PMC digital video ("no A" series) fiberoptic interface for Camera Link

Description

The PMC DV FOX is a PMC fiberoptic interface that provides long-range uncompressed image capture for Camera Link cameras. It supports one medium- or up to two base-mode cameras up to 100 kilometers from the host computer, depending on transceivers.

The board pairs with one or more EDT extenders (RCX C-Link) to convert data to fiberoptic cable, via one or optional two SFF fiberoptic transceivers.

The board fits in any PMC bus 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.

Line and frame triggering are supported over camera control lines. 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

Fiberoptic interface fits in a PMC bus

Supports one medium- or up to two base-mode cameras via one or more EDT extenders (RCX C-Link)

Captures and displays images in real time, via DMA to host computer

Allows remote operation — up to 100 km from host, depending on transceivers

Provides electrical isolation of camera from host

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 220 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

Memory	FIFOs for up to several lines of data; no frame memory	
Data Rates	Peak	Up to 220 MB/s
	Typical	190 MB/s or maximum supported by host
Data Format (I/O)	Camera Link input; timecode input (IRIG-B)	
Camera Link Compliance (with RCX C-Link module)	Modes	Base, dual base, medium − common configurations
	Pixel clock rate	20−80 MHz
	Serial	Via API or serial DLL (9600 to 115,200 baud)
	CC1 − CC4	Discretely programmable for steady-state, trigger, and timed pulse
PCI Compliance	PCI version	PCI 2.3
	Direct memory access (DMA)	Yes
	Clock rate / data width	66 MHz / 32 bits
PMC Compliance	P1386.1	
Laser Safety	Class 1 (for EDT-supplied transceivers)	
Noise	0 dB	
MTBF	Estimated at 200,000 hours	

Transceivers	One or optional two (SFF), with duplex LCs. The fiber connections use standard physical contact (PC) polish. EDT provides SFPs for these wavelengths and cables:

Wavelength	Cable	Range at 1.25 Gb/s	Range at 2.5 Gb/s
850 nm	62-μ MMF	300 meters	150 meters
850 nm	50-μ MMF	500 meters	250 meters
1310 nm	9-μ SMF	10 kilometers	5 kilometers

For longer ranges (10 to 100+ kilometers): CWDM and bidirectional transceivers are available in various wavelengths; contact EDT.

Triggering	CC lines supported via fiber, or externally via opto-coupled Berg or optional 7-pin Lemo ECG.0B.307.CLV (mate to FGG.0B.307.CLAD.56)	
Connectors	In addition to transceivers (above), connectors include:	
	One opto-coupled Berg	For external triggering, IRIG-B timecode input, or both
	One optional Lemo	For external triggering, IRIG-B timecode input, or both
Cabling	Cabling is purchased separately; consult EDT for options.	
	Fiber connection polish	Standard physical contact (PC)
Physical	Weight	2.9 oz. typical
	Dimensions	6.0 x 2.9 in.
Environmental	Temperature (operating / non-operating)	10° to 40° C (extended -40° to 60° C, 33 MHz bus only) / -40° to 60° C
	Humidity (operating / non-operating)	20% to 80%, non-condensing at 40° C / 95%, non-condensing at 40° C
System and Software	System must have a PMC bus, 66 MHz or faster (33 MHz will work, but at reduced data rates). Software is included for Windows and Linux; for versions, see edt.com.	

Ordering Options

- Transceivers: **1** / 2 [see options above]
- Connector: **Berg (included)** / Lemo (optional), for external triggering, IRIG-B input, or both
- Environmental: Extended temperature

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