RCX C-Link

Remote camera extender for Camera Link over fiberoptic

Description

The RCX C-Link is a remote camera extender for Camera Link over fiberoptic cable. The camera can be tens, hundreds, or thousands of meters from the host, depending on the transceiver.

The extender, similar in size to a Camera Link cable connector, attaches directly to the MDR26 connector on the back of the camera. A fiberoptic cable then attaches to an SFF or SFP transceiver on the back of the module.

Triggering / serial is provided via Camera Link, or externally via an optional Lemo power connector. The Lemo can be used either for triggering and single serial, or for dual serial (one via Camera Link and one via an independent port). It also can be used for resync (required for full mode).

Module pairs can be used to create a long-range fiberoptic connection to an EDT or third-party Camera Link framegrabber. Alternatively, an EDT direct-from-fiber (FOX) framegrabber can be used, eliminating the need for modules at the computer end.

Line and frame triggering are supported over camera control lines, and all camera modes (base, dual base, medium, full, extended) are supported.

Features

Extender adapts Camera Link data to a fiberoptic interface

Attaches to the device's MDR26 connector, replacing Camera Link cables

Can join with a second module to form a fiberoptic extension cord

Allows remote operation – camera can be tens, hundreds, or thousands of meters from the host computer, depending upon transceivers

Provides electrical isolation of camera from host

Supports line & frame triggering over camera control (CC) lines

Provides an optional Lemo power connector for more options (external triggering, single or dual serial, full-mode resync)

Supports data rates up to 240 MB/s (base mode) or up to 750 MB/s (full mode)

Can connect directly to an EDT FOX board

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	Fiber operates at 1.25 or 2.5 Gb/s, passing video data at up to 120 or 240 MB/s for base mode, or up to 750 MB/s for full mode	
Data Format (I/O)	Camera Link	
Camera Link Compliance	Modes	Base, dual base, medium, full, extended full — common configurations
		NOTE: All modes except base mode require specially configured module pairs.
	Pixel clock rate	20–80 MHz; for extended full mode, up to 72 MHz maximum
	Serial	9600 to 115,200 baud
	Control	CC1 - CC4
	Connector	One MDR26
EU Compliance	CE	EMC directive 2004/108/EC and low voltage directive 73/23/EEC
Laser Safety	Class 1 (for EDT-supplied transceivers)	
Noise	0 dB	
Transceiver	One fiberoptic SFF or optional SFP (duplex LC, CWDM, or bidirectional), In duplex LCs, available wavelengths and cables include:	

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 SFFs or SFPs are available in various wavelengths; contact EDT.

Triggering / Serial	Via Camera Link, or externally via optional 7-pin Lemo power connector	
Power	Consumption	Less than 3 W at 4.75 to 18 V DC
	Supply	4.75 to 18 V DC
	Connector (standard)	2-conductor Switchcraft 712RA; mate to Switchcraft 760K
	Connector (optional)*	7-pin Lemo ECG.0B.307.CLV; mate to FGG.0B.307.CLAD.56
	* The optional Lemo connector provides external control either for triggering and single serial, or for dual serial (one via Camera Link and one via an independent port). It also provides resync (required for full mode framegrabber-end modules).	
Cabling	Cabling is purchased separately; consult EDT for options.	
	Fiber connection polish	Standard physical contact (PC)
	Camera Link adapter	Can be used if obstacles prevent the module from plugging into the camera
	Resync (medium or full mode only)	40 MHz for camera input of 20 to 40 MHz
		66.6 MHz for camera input of 41 to 66.6 MHz
		80 MHz for camera input of 66.7 to 80 MHz
Physical	Weight	4 oz. typical
	Dimensions	2.4 x 1.6 x 0.75 in.
Environmental	Temperature (operating / non-operating)	10° to 40° C (extended -40° to 60° C) / -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	Computer system requirements are framegrabber-dependent; for details, see the user's guide for your framegrabber.	
	Software for updating extender firmware using an EDT framegrabber is included with EDT framegrabber products.	

Ordering Options

- Mode: **Base** / medium / full / extended
- Transceiver: [see options above]
- Power — supply (AC input): **110** / 220 V
- Power — connector: **Switchcraft** / Lemo
- Cabling: See options above
- Environmental: Extended temperature

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