

PCI DV FOX + RCX / RCX C-Link



Description

The PCI DV FOX is EDT's second-generation fiber optic interface for use with digital cameras. One to four cameras can be remotely located up to 10 km with the extended range option. The PCI DV FOX occupies one PCI slot of the host computer. Each camera must have its own fiber optic interface through which it can communicate with the PCI DV FOX in the host computer. An EDT RCX module converts the Camera Link or LVDS/RS-422 signals from most digital cameras to fiber optic cable. Alternately, this fiber optic interface may be incorporated in the camera. Contact EDT for more information.

The PCI DV FOX contains a field-programmable gate array. This gate array can be updated from the host computer to accommodate new camera types.

The block diagrams show the PCI DV FOX being used with the RCX C-Link module in example configurations. These are only a few examples; many more combinations are possible.

Two RCX modules can be used as a fiber optic extension cord to EDT or other frame grabbers. In this configuration, digital camera data submitted to one RCX module is replicated at the output of a second module. See the specific data sheets for more details.

Features

- Interfaces digital video cameras to PCI local bus through fiber optic connections
- Allows remote location of camera, up to 10 km from host computer
- Provides electrical isolation of the camera from the host computer
- Single PCI local bus slot supports up to four cameras simultaneously
- Supports 8- to 16-bit color or monochrome and 24-bit RGB resolution
- Aggregate data rates to 200 megabytes per second sustained as supported by the host
- Four-channel DMA to host main memory
- Programmable mode, exposure time, and triggering
- Remote modules available for Camera Link, LVDS, and RS-422

Applications

- Intelligent traffic systems
- Manufacturing/Inspection
- Security
- Remote scientific monitoring
- Medical
- Nuclear
- Multimedia
- Astronomy

Cameras Supported

Virtually all AIA format RS-422 or LVDS cameras that supply line-valid and frame-valid signals and a continuous pixel clock. See www.edt.com/cameras for an up-to-date list of cameras we've tested.

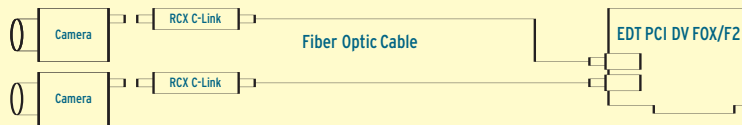
Software

Device Drivers for Solaris 2.7+ (Intel and SPARC platform), Windows NT/XP/2000/-2003, Red Hat Linux 9.0, Red Hat Enterprise v3-v4, SuSE Linux 9.1-10, are included with the board. Mac OS X and VxWorks drivers are also available.

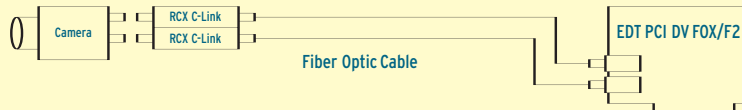
Support

EDT provides engineer-to-engineer customer support, from phone consultation to custom design of hardware, firmware, or software. Technical support is also available through the Technical Information section of our web site.

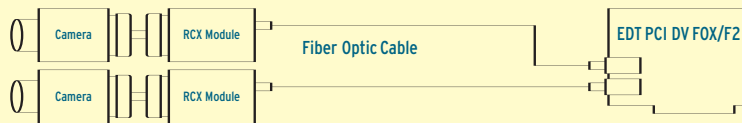
Single or Multiple Base-Mode Camera Link to PCI DV FOX Fiber Optic Frame Grabber



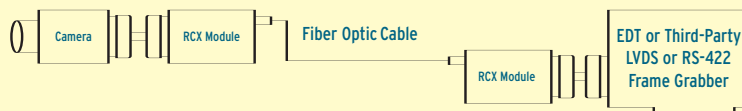
Medium-Mode Camera Link to Fiber Optic Frame Grabber



Single or Multiple LVDS or RS-422 Cameras with RCX to PCI DV FOX Fiber Optic Frame Grabber



Single LVDS or RS-422 Camera with RCX Pair Extension Cord



Ordering

Ordering options are listed below. To order, contact our sales department or your distributor. Be sure to specify which cable will be needed (if any).

PCI DV FOX

Module option: RCX C-Link for Camera Link or RCX for LVDS/RS-422

Fiber optic inputs: 1, 2, or 4

Other option: extended range

Specifications

Video Interface	The separate RCX modules from EDT interface to AIA digital cameras of up to 24 data bits through an AMP 787169-7 high density 68-pin connector* (RS-422 and LVDS modules) or an MDR 26-pin connector (RCX C-Link). *Manufactured by AMP Inc. 1-800-522-6752 EDT manufactures cables for a wide variety of cameras. For a complete list, see our Digital Video cable list.	
PCI Board	Single PCI local bus slot PCI 2.1s 6 MHz (can operate in 133 MHz PCI-X slot or standard 33 MHz PCI slot) 32 bits (can operate in 32- or 64-bit slot)	
Laser Safety	Class 1	
850 nm VCSEL Transceiver	Fiber Type 62.5/125 mm MMF	Distance 300 m
1300 nm Laser Transceiver	Fiber Type 8/125 mm SMF 62.5/125 mm MMF	Distance 10 km 550 m
Fiber Optic Cables and Transceivers	When ordering, choose either the 850 nm transceiver for low cost or the 1300 nm transceiver for long distances, with LC connectors. Fiber optic cables are not included in the PCI DV FOX as shipped. See our cable list for optional fiber optic cables available from EDT.	
Power	3 A at 3.3 V from host computer PCI bus	
Physical	Dimensions Weight	3.8" x 5.05" 3.3 oz.
Environment	Temperature Humidity	Operating: 10° to 40° C Non-operating: -20° to 60° C Operating: 20 to 80% non-condensing at 40° C Non-operating: 95% non-condensing at 40° C
RCX Module (Camera Link)	See the separate data sheet for specifications on the RCX C-Link module.	
RCX Module (LVDS and RS-422)	See the separate data sheet for specifications on the LVDS and RS-422 modules.	
System Requirements	Intel, AMD, SPARC, or PowerPC computer with 66 MHz PCI Bus or faster (will run in 33 MHz slot with reduced performance)	

Contact

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