

# RCX LVDS / RS-422



## Description

An EDT RCX module converts the LVDS or RS-422 signals from most digital cameras to fiber optic cable. The EDT RCX module sends the camera data to an EDT PCI DV FOX frame grabber installed in the host computer.

Two RCX modules can be used to form a fiber optic extension cord, with one module at the camera and the other module at the frame grabber. The block diagrams show a few configurations; other combinations are possible.

The RCX module contains a field-programmable gate array that can be updated through the PCI DV FOX to accommodate new camera types.

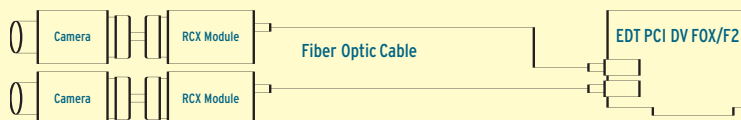
## Applications

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

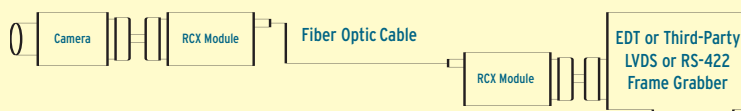
## Features

- Supports 8 to 16 bits per pixel, LVDS or RS-422 signaling
- Sends data to an EDT PCI DV FOX frame grabber
- Two EDT RCX modules can be used as a fiber optic extension cord
- 68-pin connector provides connection to a wide range of AIA cameras
- Data rates up to 130 megabytes per second
- Allows remote location of camera, up to 10 kilometers from host computer
- Provides electrical isolation between camera and host

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



## Specifications

<b>RCX Module Specifications</b>	Fiber Optic Connector Type Laser Safety Indicators Dimensions Weight	LC duplex Class 1 Two LEDs shows the state of the fiber-optic link and onboard electronics 2.7" x 5.6" x 1.3" 10.1 oz.
<b>Video Interface</b>	The EDT RCX module interfaces to AIA digital cameras of up to 16 bits through an AMP 787169-7 high-density 68-pin connector using RS422 or LVDS differential signaling.	
<b>Flash Memory</b>	Can be updated using a program on a host computer operating through an appropriate EDT frame grabber such as the PCI DV FOX	
<b>Fiber Optic Cables and Transceivers</b>	Transceivers 850 nm VCSEL transceiver  1300 nm laser transceiver	850 nm or optional 1300 nm Fiber type: 62.5/125 mm MMF Distance: 300 meters Fiber type: 8/125 mm SMF Distance: 10 kilometers Fiber optic cables are not included
<b>Power Supply</b>	Supply  Power	10 to 32 V DC, 4 W max. EDT provides an AC mains power supply connector Switchcraft 712A, center positive 100-240 V, 50-60 Hz from AC mains, 24 V DC out
<b>Physical</b>	Dimensions Weight Power	2.4" x 4.5" x 1.5" 10 oz. 100-240 V, 50-60 Hz from AC mains, 12 V DC out
<b>Environmental</b>	Temperature  Humidity	Operating: 0° to 40°C Non-operating: -20° to 60°C (extended temperature available) Operating: 20 to 80% non-condensing at 40°C Non-operating: 95% non-condensing at 40°C
<b>System Requirements</b>	Intel, AMD, SPARC, or PowerPC computer with 66 MHz PCI Bus or faster (will run in 33 MHz slot with reduced performance)	

## 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.

## 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).

### RCX

Signal level option: **LVDS** or RS-422  
Transceiver option: **850** or 1300 nm  
Option: extended temperature

**Bold** denotes standard

## Contact

**Engineering Design Team, Inc.**  
1100 NW Compton, Suite 306  
Beaverton, Oregon 97006  
800.435.4320 or 503.690.1234 [phone]  
503.690.1243 [fax]  
info@edt.com or www.edt.com