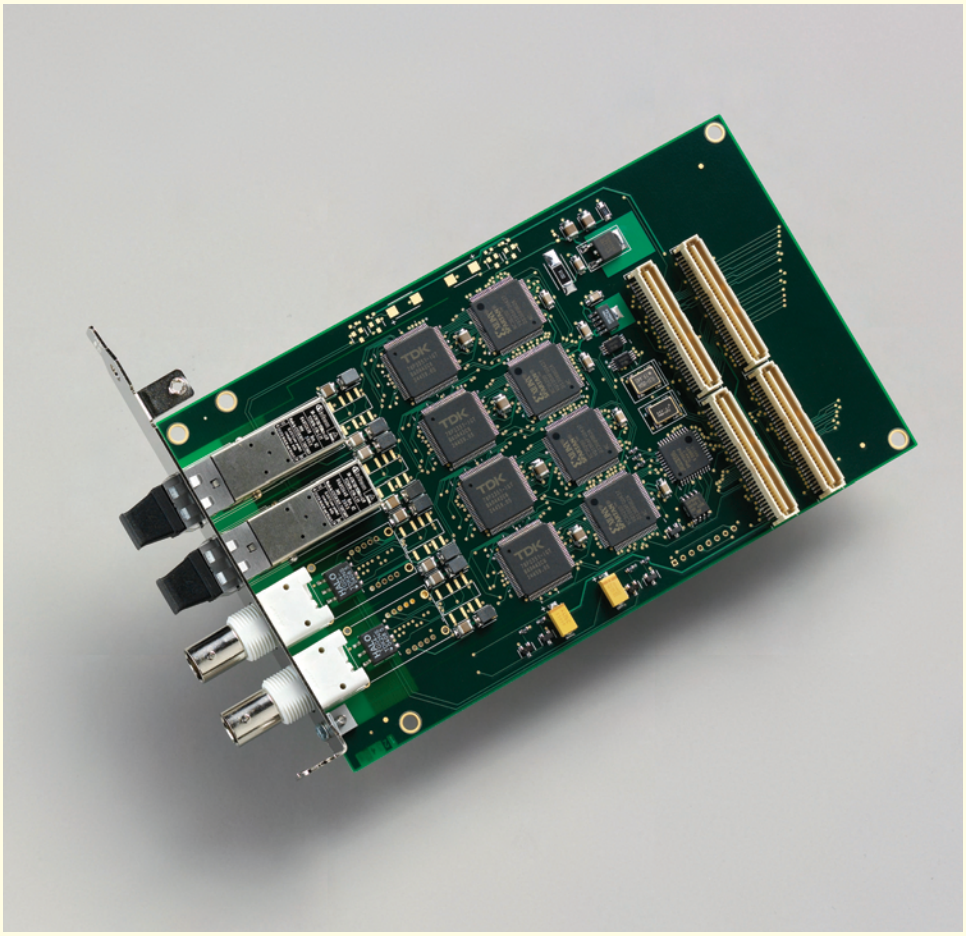
edt
a HEICO company

HRC

High-rate communication interface for E4, STS3, and OC3/STM1



Description

The HRC is a mezzanine board that pairs with an EDT main board (for PCI or PCI Express) for high-speed data transfer. It supports both electrical signals (E4 or STS3) and optical signals (OC3/STM1) in various combinations.

The board has four connector slots; each supports either an electrical BNC 75-Ω CMI coaxial interface, or an optical LC 1310 nm NRZ single-mode transceiver. The BNCs can be set by programmable control as either input or output; if bidirectional operation is required, a maximum of two channels will be usable.

EDT provides FPGA configuration files to support framing and descrambling for OC3/STM1 framed data. Custom configuration files can be requested.

The main board supplies high-speed DMA, plus additional memory and programmable FPGA resources.

Features

Mezzanine board – pairs with an EDT main board (in a PCI, PCI-X, or PCIe bus), which adds high-speed DMA, programmable FPGA resources, and memory

Channels 0, 1, 2, 3 each support electrical (E4 or STS3) or optical (OC3/STM1):
- Electrical via unidirectional BNCs (75-W CMI coaxial G.703)
- Optical via bidirectional LCs (1310 nm NRZ single-mode SFF)

Applications

Telecommunications network monitoring

Telecommunications data recording

Specifications

Product Type	HRC is a high-rate communication mezzanine board for OC3/STM1, STS3, or E4; it requires a main board.				
FPGAs and Memory	Programmable FPGA and memory resources are provided by the main board.				
Data Rates	Data rates are dependent on data format and main board.				
Data Format (I/O)	Channels 0, 1, 2, 3		Any combination below of electrical (STS3 or E4), optical (OC3/STM1), or both		
Transmitters/Receivers	Four transmitters/receivers are included (each either electrical or optical), supporting the data formats and specifications shown below.				
	CHANNELS 0, 1, 2, 3		**Electrical: E4 or STS3**	**Optical: OC3/STM1**	
	(each can be either electrical or optical)		**75 Ω**	**1310 nm**	
	Output power		–	-15.0 to -8.0 dBm	
	Center wavelength		–	1260 to 1360 nm	
	Maximum sensitivity (average power)		–	-29.0 dBm	
	Minimum saturation (average power)		–	-0.80 dBm	
	Connector		BNC, unidirectional (CMI coaxial G.703)	LC, bidirectional (NRZ single-mode SFF)	
Connectors	Four, as shown above, in any of these combinations:				
	Connector Type	**Combination 1**	**Combination 2**	**Combination 3**	**Combination 4**
	BNC	Four	Three	Two	–
	LC	–	One	Two	Four
Cabling	Consult EDT for purchase options.				
Physical	Weight		3.5 oz. typical		
	Dimensions		6.6 x 4.2 x 0.5 in. (with a main board)		
Environmental	Temperature		Operating 0° to 40° C Non-operating -40° to 70° C		
	Humidity		Operating 1% to 90%, non-condensing at 40° C Non-operating 95%, non-condensing at 45° C		
System and Software	For details on system requirements and EDT-provided software driver packages, see specifications for your EDT main board.				

Support

EDT offers engineer-to-engineer customer support, from phone consultation to custom design of hardware, firmware, and software. Contact us for options and details.

Contact

Engineering Design Team (EDT), Inc.
1400 NW Compton Drive, Suite 315
Beaverton, Oregon 97006
800-435-4320 / 503-690-1234 (phone)
503-690-1243 (fax)
www.edt.com

Ordering Options

- Main board: PCI SS / PCI GS / PCIe8 LX
- Transmitters/receivers: 4 (options above)
- Connectors: 4 (options above)

For more options, see main board datasheet.
Ask about custom options.