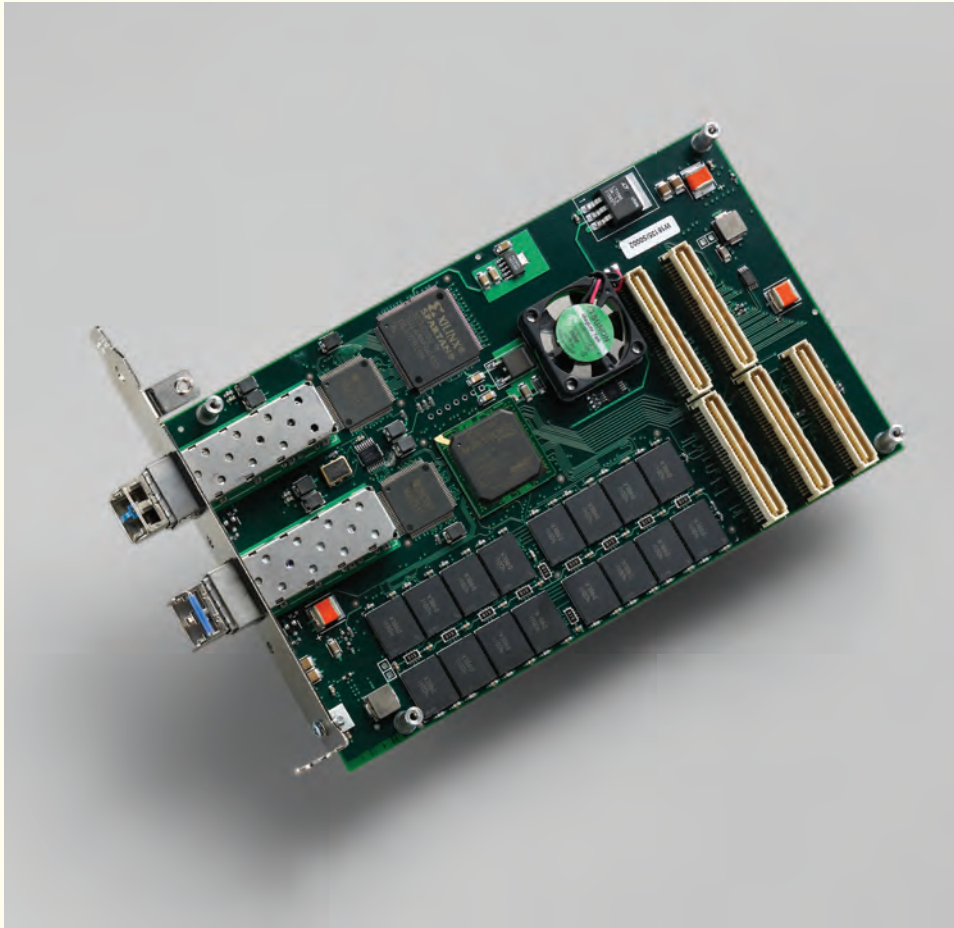


OCM

Optical carrier multi-rate interface for up to OC48/STM16/1GbE



Description

The OCM is a mezzanine board that pairs with an EDT main board (for PCI or PCI Express) to support 1GbE (optical or electrical), OC3/12/48 (STM1/4/16), or both.

The OCM has two volt-controlled crystal oscillators (VCXOs), either programmable or settable to multiple frequencies. It also has two small form pluggable (SFP) transceivers. Each SFP supports 1GbE (electrical or optical) or OC3/12 (STM1/4), and one also supports OC48 (STM16). The board has up to 2 GB of DRAM for snapshot recording and data buffering.

EDT provides FPGA configuration files so you can input and output raw data, detect to a SONET/SDH frame, or descramble a framed signal. Custom configuration files can be requested.

The main board supplies 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 DMA, programmable FPGA resources, and memory

Channel 0: One SFP for 1GbE (optical or electrical) or OC3/12/48 (STM1/4/16), 155.52, 622.08, or 2488.32 Mb/s – 1310 nm

Channel 1: One SFP for 1GbE (optical or electrical), OC3/12 (STM1/4), or OC3/12/48 (STM1/4/16), 155.52, 622.08, or 2488.32 Mb/s – 1310 nm

FPGAs: Two programmable (one Xilinx Spartan 3 XC3S200 and one Xilinx Virtex II Pro XC2VP4)

DRAM: Up to 2 GB (DDR) for snapshot recording and data buffering

Clocks: Two settable or programmable VCXOs (one per channel), 10 to 215 MHz

Applications

Telecommunications network monitoring

Ethernet monitoring

SONET/SDH to ethernet conversion

Specifications

Product Type	OCM is an optical carrier multi-rate mezzanine board (with oscillators for up to OC48/STM16/1GbE; it requires a main board).		
FPGA Resources	Two programmable FPGAs (plus FPGA resources on main board): Channel 1 One Xilinx Spartan 3 XC3S200 Channel 0 One Xilinx Virtex II Pro XC2VP4), plus FPGA on main board		
Memory	SRAM	0	
	DRAM (DDR)	0 or optional 512 MB or 2 GB; 2 GB is needed for snapshot recording at rates of OC48/STM16 or faster with PCI SS or PCI GS main board	
Clocks	Two VCXOs (one per channel, for internal reference)	Either can be set to 125, 155.52, 156.25, or 166.62857 MHz or programmed to any frequency from 10 to 215 MHz	
Data Rates	Dependent on such factors as data format, main board, and system variables.		
Data Format (I/O)	Channel 0	1GbE (electrical or optical) or SONET OC3/12/48 (SDH STM1/4/16)	
	Channel 1	1GbE (electrical or optical) or SONET OC3/12 (SDH STM1/4) or optional OC3/12/48 (STM1/4/16)	
Transceivers	Two SFPs are included, supporting the data formats shown below.		
	<u>CHANNEL 0</u> (SFP)	<u>Optical 1310 nm</u> OC3/12/48 (STM1/4/16) or 1GbE (1000 Base-LX)	<u>Electrical</u> 1GbE (1000 Base-T)
	Output power	-9.5 to -3 dBm	-
	Center wavelength	1270 to 1360 nm	-
	Sensitivity	-18 dBm	-
	Maximum input power	0 dBm	-
	Connector	LC	RJ45
	<u>CHANNEL 1</u> (SFP)	<u>Optical 1310 nm</u> OC3/12 (STM1/4)	<u>Optical 1310 nm</u> OC3/12/48 (STM1/4/16) or 1GbE (1000 Base-LX) <u>Electrical</u> 1GbE (1000 Base-T)
	Output power	-15 to -8 dBm	-9.5 to -3 dBm
	Center wavelength	1270 to 1360 nm	1270 to 1360 nm
	Sensitivity	-28 dBm	-18 dBm
	Maximum input power	0 dBm	0 dBm
	Connector	LC	LC
Connectors	One RJ45 or LC on each transceiver as shown above		
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

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503-690-1243 (fax)
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Ordering Options

- Main board: PCI SS / PCI GS / PCIe8 LX
- DRAM: **0** / 512 MB / 2 GB
- Transceivers: (options above)

Bold is default. For more options, see main board detail. **Ask** about custom options.