FMC259

24 TX/RX Fiber MTP/MPO, FMC+

FMC259

Key Features

- 24 full duplex transceivers on FMC+ module
- Supports link lengths up to 70 m (option for 100 m)
- Multi-rate capability, options up to 28.1 Gb/s per channel
- Total bi-directional bandwidth >1,344 Gb/s
- On board Ultra-low Jitter Clock generator with two independent PLL

Benefits

- Extremely compact fiber I/O
- Array of FMC's and FMC carriers available from VadaTech
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from the industry leader
- AS9100 and ISO9001 certified company

vadatech
THE POWER OF VISION

FMC259

The FMC259 is an FPGA Mezzanine Module per VITA 57.4 (FMC+) specification. The FMC259 has dual Board-Mount Optical Assemblies, each providing 24 channel full-duplex transceivers with Clock Data Recovery and front-panel fiber I/O via MTP/MPO.

Transceivers are available in two speed grades,10.6 Gb/s and 28.1 Gb/s per channel, both with multi-rate capability. The 10.6 Gb/s can drive 100 m over OM3 MM Fiber and 28.1 Gb/s can drive 100 m over OM4 MM Fiber.

The module has an on board Ultra-Low Jitter Clock Generator with two independent, fractional PLL. The clocking allows synchronization to an external clock input or on board. Six clocks are routed to the GBT's on the FMC+ pinouts and two are routed to CLK0 and CLK1 for a total of 8 clock outputs.

The Module has LEDs in Green/Yellow to allow for LNK/ACT, debugging or as defined by user.

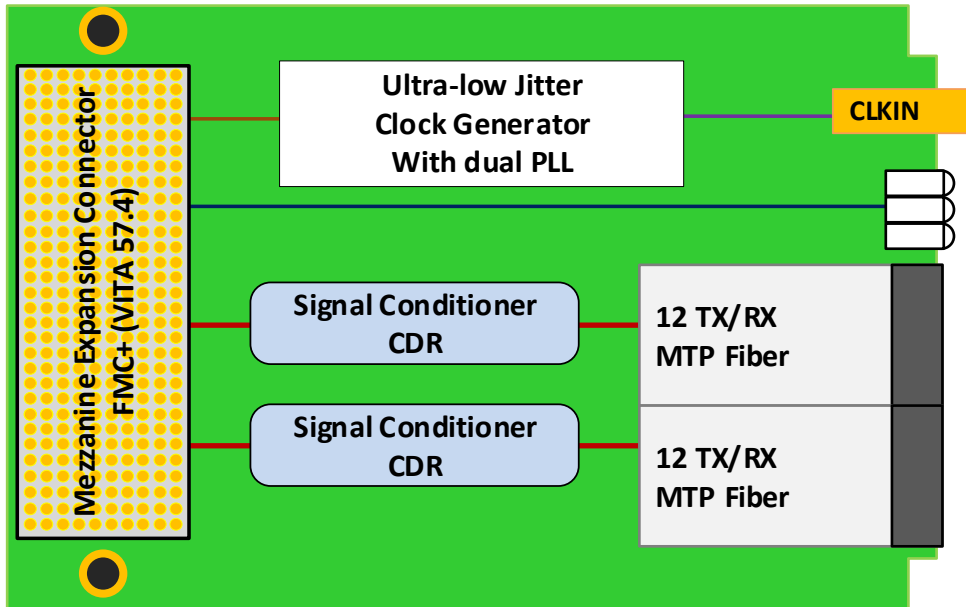*Figure 1: FMC259*

Block Diagram

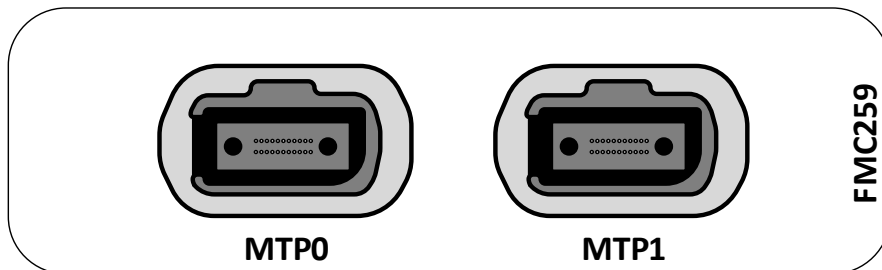*Figure 2: FMC259 Functional Block Diagram*

Front Panel

Figure 3: FMC259 Front Panel

FMC259 – 24 TX/RX Fiber MTP/MPO, FMC

Specifications

Architecture		
Physical	**Dimensions**	Single Module
		Width 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
Type	**FMC**	24 channel fiber transceiver
Standards		
FMC	**VITA 57**	ANSI/VITA 57.4
Configuration		
Power	**FMC259**	15W with CDR enabled
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s^2 (1G), 5 to 500 Hz on each axis
	Shock	Operating 30G on each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	2x MTP/MPO
	LEDs	TBD
Software Support	**Operating System**	Agnostic
Other		
MTBF		MIL Hand book 217-F@ TBD hrs
Certifications		Designed to meet FCC, CE and UL certifications, where applicable
Standards		VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards
Warranty		Two (2) years, see VadaTech Terms and Conditions

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

Ordering Options

FMC259 – AB0-000-G0J

A = Transceiver Speed		G = FMC Board Spacing
0 = 10.6 Gb/s (>480Gb/s total bi-directional) 1 = 28.1 Gb/s (>1344Gb/s total bi-directional)		0 = 10 mm (per VITA 57 specification) 1 = 17.5 mm*****

B = Link Distance for 28.1 Gb/s		
0 = 70 Meter 1 = 100 Meter******		

		J = Temperature Range and Coating
		0 = Commercial, No coating 1 = Commercial, Humiseal 1A33 polyurethane 2 = Commercial, Humiseal 1B31 acrylic 3 = Industrial, No coating 4 = Industrial, Humiseal 1A33 polyurethane 5 = Industrial, Humiseal 1B31 acrylic

Notes: *****For use with carriers that require higher mating clearance, such as VadaTech AMC595. Requires full size AMC.

    **Apply only to the 28.1 Gb/s with minimum order qty required (OM4 MM Fiber). The 10.6 Gb/s can drive 100 m by default over OM3 MM Fiber.

Related Products

AMC516

- AMC FPGA carrier for FMC per VITA 57
- Xilinx Virtex-7 690T FPGA in FFG-1761 package with optional P2040
- Supported by DAQ Series™ data acquisition software

AMC530

- Altera Stratix IV Device EP4S100Gx in 1517 pin count (40 mm x 40 mm)
- On board PLL for buffering/multiplying and jitter cleaner
- Three banks of QDR-II+ each 72-bit wide

FMC210

- FPGA Mezzanine Card (FMC) per VITA 57
- Single ADC EV10AS150B @ 2.6 GSPS
- 5 GHz Full Power Input Bandwidth (–3 dB)

Contact

VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014

Phone: +1 702 896-3337 | Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhu Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR

Phone: +44 2380 016403

info@vadatech.com | www.vadatech.com

Choose VadaTech

We are technology leaders

- First-to-market silicon
- Constant innovation
- Open systems expertise

We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited

XILINX.

ALLIANCE PROGRAM
CERTIFIED

vadatech
THE POWER OF VISION