

FMC101

FMC Dual 10GbE Copper



FMC101

Key Features

- FPGA Mezzanine Card (FMC) per VITA 57
- Single module
- Dual 10GBASE-T, 5GBASE-T, 2.5GBASE-T, 1000BASE-T, 100BASE-TX
- A wide variety of interfaces to MAC XFI/10BASE-KR, USXGMII, 5G/2.5G over XFI, 5000BASE-X, 2500BASE-X and 1000BASE-X (SGMII)

Benefits

- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



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The FMC101 is an FPGA Mezzanine Card per VITA 57 specification. The FMC101 has a dual RJ-45 which can support 10GBASE-T over copper with Category 6, 6A and 7 twisted-pair cable. The module further supports 5GBASE-T, 2.5GBASE-T, 1000BASE-T and 100BASE-TX on standard Category 5e UTP. The module interfaces to the MAC with multiple protocols such as XFI/10GBASE-KR, USXGMII, 5G/2.5G rate over XI, 5000BASE-X, 2500BASE-X and 1000BASE-X (SGMII).

The Module supports transceiver-MAC to magnetics:

- 10GBASE-T IEEE802.3an
- 5GBASE-T IEEE802.3bz
- 2.5GBASE-T IEEE802.3bz
- 1000BASE-T IEEE802.3ab
- 100BASE-TX IEEE 802.3u



Figure 1: FMC101

Block Diagram

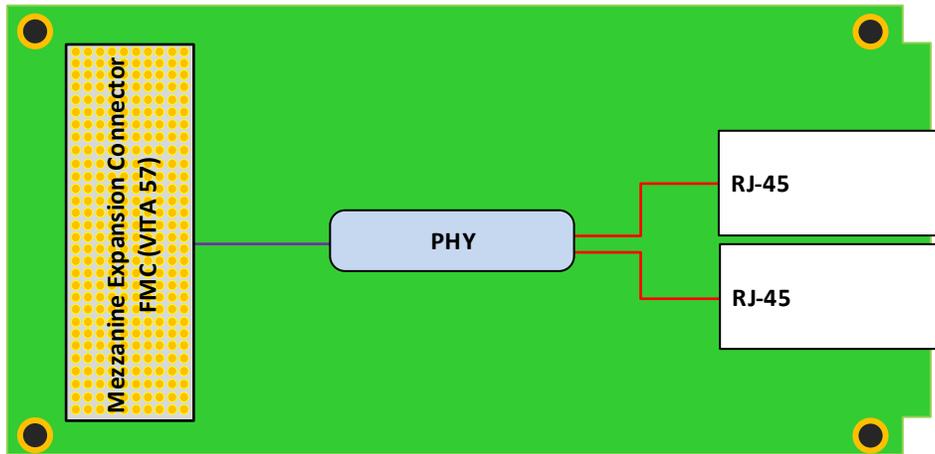


Figure 2: FMC101 Functional Block Diagram

Specifications

Architecture	
Physical	Dimensions Single Module Width: 2.71" (69 mm) Depth: 3.011" (76.5 mm)
Type	FMC Dual Port 10GbE Copper Single FMC slot
Standards	
FMC	Type ANSI/VITA 57.1 – 2008
Configuration	
Power	FMC101 3W
Environmental	Temperature Operating temperature: -5° to 55°C (air flow requirements >400 LFM) See Ordering Options Storage Temperature: -40° to +85°C
	Vibration Operating 9.8 m/s ² (1G), 5 to 500 Hz
	Shock 30Gs each axis
	Relative Humidity 5 to 95% non-condensing
Front Panel	Interface Connectors Dual RJ-45 connectors
	LEDs None
Other	
MTBF	MIL Handbook 217-F@TBD Hrs.
Certifications	Designed to meet FCC, CE and UL certifications, where applicable
Standards	VadaTech is certified to both the ISO9001:2015 and AS9100D 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

FMC101 – 000-000-GHJ

		G = FMC Board Spacing 0 = 10 mm (per VITA 57 specification) 1 = 17.5 mm*
		H = Temperature Range 0 = Commercial (–5° to +55°C) 1 = Industrial (–20° to +70°C)
		J = Conformal Coating 0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Notes:

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

Related Products

AMC517



- AMC FPGA carrier for FMC per VITA 57
- Xilinx Virtex-7 410T FPGA in FFG-900 package with optional P2040
- Supported by DAQ Series™ data acquisition software

AMC532



- AMC FPGA based on Altera Stratix-V (5SGXEA) in F1932 package
- VITA 57.1 FMC HPC Connector (compatible with LPC)
- All FMC LA, HA, HB pairs routed bi-directionally

FMC210



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

Contact

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