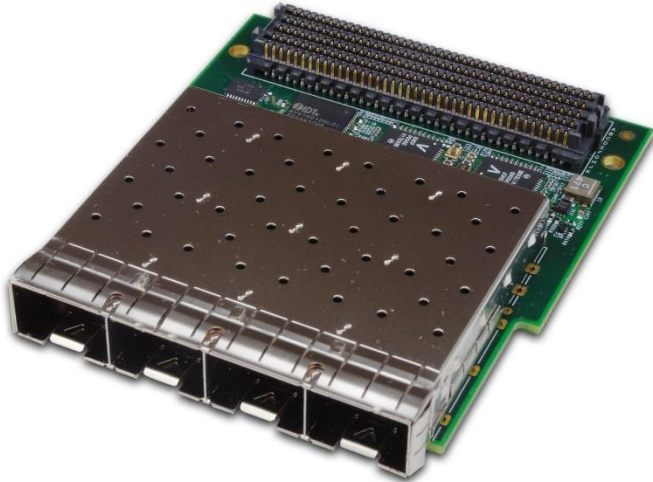


## FMC109 – FMC QUAD SFP/SFP+ for GbE/10GbE

Quad SFP/SFP+, GbE/10GbE



### KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA-57
- Single module
- Quad SPF/SFP+ cages for quad ports
- Re-driver on all four ports for a better signal quality
- RoHS compliant

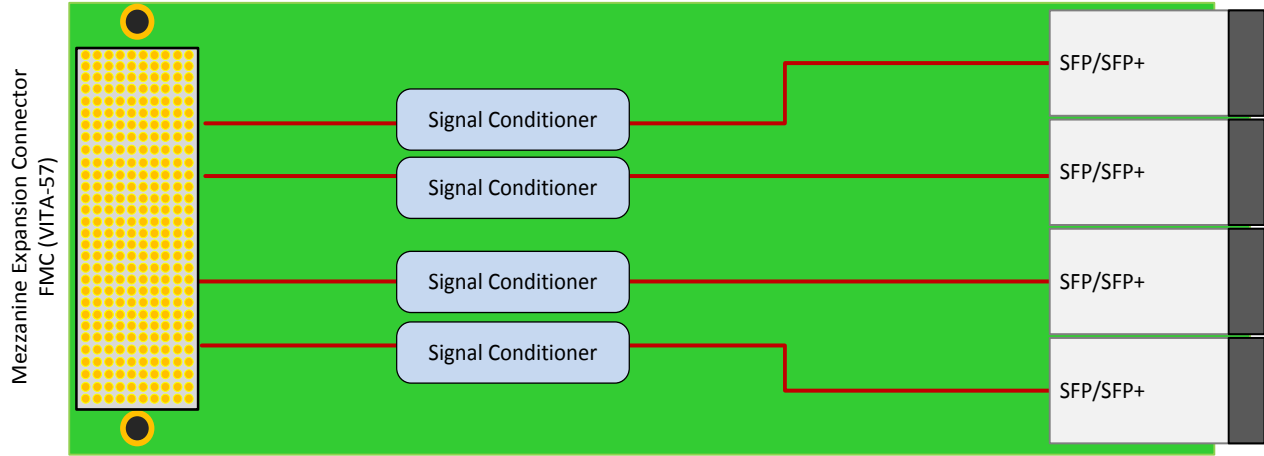
### Benefits of Choosing VadaTech

- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The FMC109 is an FPGA Mezzanine Module per VITA 57 specification. The FMC109 has quad SFP/SFP+ cages which allows for Quad GbE/10GbE to be routed to appropriate FMC pins. The FMC109 has quad re-driver on board to allow long copper cables for the SFP+ vs. fiber to reduce total system cost.

**Note: The Carrier must have no component on the top side for 46 mm for this module to fit property. All VadaTech FMC Carriers provide this clearance. Further this module requires the Carrier board front panel to be modified. When ordering any of the VadaTech FMC Carriers, VadaTech will provide the modified front panel at no extra cost. The FMC109 is shipped without any FMC panel.**

## BLOCK DIAGRAM



## SPECIFICATIONS

Architecture		
<b>Physical</b>	Dimensions	Single module Width: 2.71" (69 mm) Depth: 3.011" (76.5 mm)
<b>Type</b>	FMC	Four port GbE, 10 GbE Single FMC slot
Standards		
<b>FMC</b>	VITA57	ANSI/VITA 57.1-2008
Configuration		
<b>Power</b>	FMC109	GbE/10 GbE module dependant
<b>Environmental</b>	Temperature	Operating temperature: –5° to 55° C (air flow requirement of >400 LFM, industrial versions also available (See <a href="#">environmental spec sheet</a> ) Storage temperature: –40° to +85° C
	Vibration	Operating 9.8 m/s <sup>2</sup> (1G), 5 to 500 Hz
	Shock	30Gs on each axis
	Relative Humidity	5 to 95 percent, non-condensing
<b>Front Panel</b>	Interface Connectors	Quad SFP/SFP+ connectors
	LEDs	None
Other		
<b>MTBF</b>	MIL Handbook 217-F@TBD Hrs	
<b>Certifications</b>	Designed to meet FCC, CE and UL certifications where applicable	
<b>Compliance</b>	PICMG 3.0 Rev 3.0, RoHS 2 and NEBS Level 3.	
<b>Standards</b>	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
<b>Warranty</b>	Two (2) years	

## INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and  $\mu$ TCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.

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# FMC109 – FMC QUAD SFP/SFP+ for GbE/10GbE

## ORDERING OPTIONS

### FMC109 – ABC – D00 – 0HJ

**A = SFP/SFP+ Transceiver First Port**

- 0 = None
- 1 = 10GBASE-SR
- 2 = Reserved
- 3 = 10GBASE-LRM
- 4 = 10GBASE-LR
- 5 = Copper 1000Base-TX
- 6 = Fiber 1GbE SX
- 7 = Fiber 1GbE LX

**B = SFP/SFP+ Transceiver Second Port**

- 0 = None
- 1 = 10GBASE-SR
- 2 = Reserved
- 3 = 10GBASE-LRM
- 4 = 10GBASE-LR
- 5 = Copper 1000Base-TX
- 6 = Fiber 1GbE SX
- 7 = Fiber 1GbE LX

**C = SFP/SFP+ Transceiver Third Port**

- 0 = None
- 1 = 10GBASE-SR
- 2 = Reserved
- 3 = 10GBASE-LRM
- 4 = 10GBASE-LR
- 5 = Copper 1000Base-TX
- 6 = Fiber 1GbE SX
- 7 = Fiber 1GbE LX

**D = SFP/SFP+ Transceiver Fourth Port**

- 0 = None
- 1 = 10GBASE-SR
- 2 = Reserved
- 3 = 10GBASE-LRM
- 4 = 10GBASE-LR
- 5 = Copper 1000Base-TX
- 6 = Fiber 1GbE SX
- 7 = Fiber 1GbE LX

**G = FMC Board Spacing**

- 0 = 10 mm (per VITA-57 specification)
- 1 = 17.5 mm \*

**H = Operating Temperature**

- 0 = Commercial (-5° to +55° C)
- 1 = Industrial (-20° to +70° C)

**J = Conformal Coating**

- 0 = None
- 1 = Humiseal 1A33 Polyurethane
- 2 = Humiseal 1B31 Acrylic

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

## RELATED PRODUCTS



**EXP200 Express  
Chassis Platform**



**AMC517 Kintex-7  
FPGA Carrier for FMC**



**AMC532 Stratix-V  
FPGA Carrier for FMC**

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