

# FMC212

Dual ADC 12-bit @ 1.5 GSPS and  
Dual DAC 16-bit @ 2.8 GSPS, FMC



FMC212

## Key Features

- Dual ADC 12-bit @ 1.5 GSPS (EV12AS200AZP)
- The ADC has Full power input Bandwidth at 1.5 GSPS is 2.3 GHz and very low latency < 5 Clock Cycles
- Dual DAC 16-bit @ 2.8 GSPS (TI DAC39J82)
- FPGA Mezzanine Card (FMC) per VITA 57
- Front panel interface includes RF CLK In, Trig In/Out

## Benefits

- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



**vadatech**  
THE POWER OF VISION



# FMC212

The FMC212 is an FPGA Mezzanine Card per VITA 57 specification with high-speed dual ADC and dual DAC.

The ADC is based on the e2v EV12AS200AZP that provides two analog inputs with 12-bit resolution at 1.5 GSPS.

The DAC is based on the TI DAC39J82 that provides two analog outputs with 16-bit resolution at 2.8 GSPS.

The module has a wideband PLL for RF sampling clock. The wideband PLL has RF reference clocking which can come from the FMC carrier or from the front panel via the Ref CLK In Port.



Figure 1: FMC212

# Block Diagram

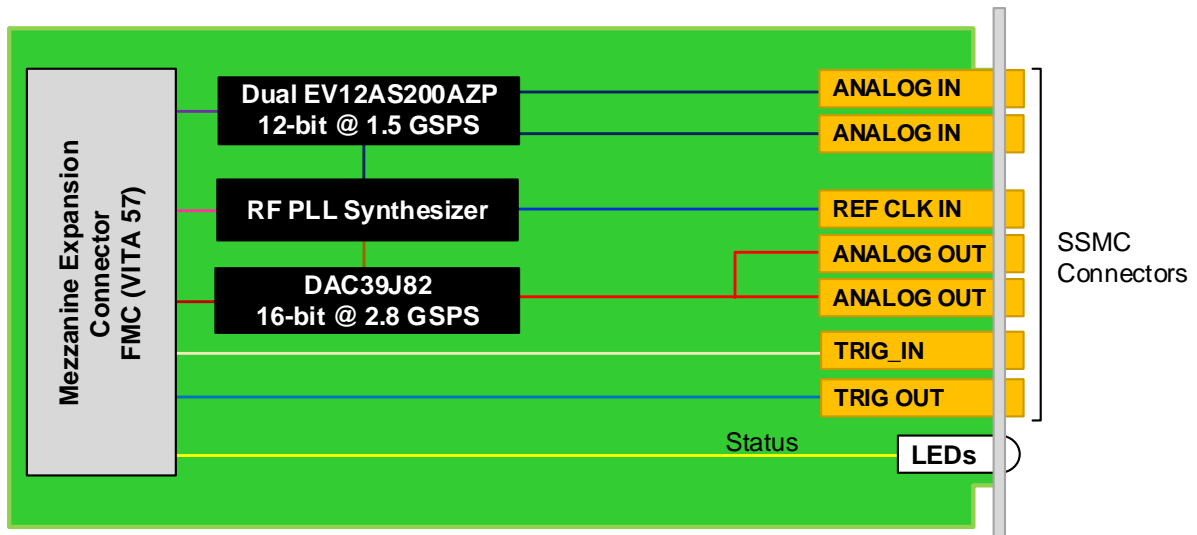


Figure 2: FMC212 Functional Block Diagram

# Front Panel

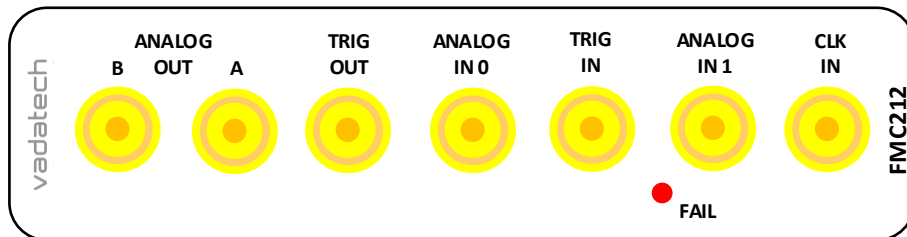


Figure 3: FMC212 Front Panel

# Specifications

Architecture	
<b>Physical</b>	<b>Dimensions</b> Single module Width: 2.71" (69 mm) Depth 3.01" (76.5 mm)
<b>Type</b>	<b>FMC</b> Dual ADC and dual DAC
Standards	
<b>FMC</b>	<b>VITA 57</b> ANSI/VITA 57.1-2008
Configuration	
<b>Power</b>	<b>FMC212</b> ~8W
<b>Environmental</b>	<b>Temperature</b> See <a href="#">Ordering Options</a> Storage Temperature: -40° to +85°C <b>Vibration</b> 1G, 5 to 500 Hz on each axis <b>Shock</b> 30Gs each axis <b>Relative Humidity</b> 5 to 95% non-condensing
<b>Front Panel</b>	<b>Interface Connectors</b> 7x SSMC <b>LEDs</b> Status
Other	
<b>MTBF</b>	MIL Hand book 217-F@ TBD hrs
<b>Certifications</b>	Designed to meet FCC, CE and UL certifications, where applicable
<b>Standards</b>	VadaTech is certified to both the ISO9001:2015 and AS9100D standards
<b>Warranty</b>	Two (2) years, see <a href="#">VadaTech Terms and Conditions</a>

## 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

## FMC212 – A00-000-G0J

A = DAC Output Bandwidth		G = FMC Board Spacing
0 = 250 MHz to ~1.4 GHz 1 = 4.5 MHz to ~350 MHz		0 = 10 mm (per VITA 57 specification) 1 = 17.5 mm*
		<b>J = Temperature Range and Conformal Coating</b> 0 = Commercial (–5° to +55°C), No coating 1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic 3 = Industrial (–20° to +70°C), No coating 4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic 6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane** 7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic**

**Notes:**

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

\*\*Conduction cooled; temperature is at edge of module. Consult factory for availability.

## 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

AMC532



- Single module, mid-size or full-size
- AMC FPGA based on Altera Stratix® V (5SGXEA) in F1932 package
- VITA 57.1 FMC HPC Connector (compatible with LPC)

FMC109



- FPGA Mezzanine Card (FMC) per VITA-57
- Quad SPF/SPF+ cages for Quad Ports
- Re-driver on all four Ports for a better signal quality

# 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, Wenhua 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](mailto:info@vadatech.com) | [www.vadatech.com](http://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



**vadatech**  
THE POWER OF VISION

## Trademarks and Disclaimer

The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

© 2019 VadaTech Incorporated. All rights reserved.  
DOC NO. 4FM737-12 REV 01 | VERSION 1.5 – DEC/19