FMC212 – FMC Dual ADC 12-bit @ 1.5 GSPS, Dual DAC 16-bit @ 2.8 GSPS

FMC, Dual ADC and Dual DAC

KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA 57
- Dual ADC with EV12AS200AZP
  - 12-bit @ 1.5GSPS
  - Full power input Bandwidth at 1.5GSPS is 2.3GHz
  - Very low latency < 5Clock Cycles
- Dual DAC with TI DAC39J82
  - 16-bit @ 2.8GSPS
  - JESD204B 8 lanes
- On-board wideband PLL
- RF clock input
- Trig In/Out
- RoHS compliant

Benefits of Choosing VadaTech

- Array of FMC's and FMC carriers available from 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 FMC212 is an FPGA Mezzanine Card per VITA 57 specification with a high speed dual ADC and dual DAC.

The ADC is based on the e2v EV12AS200AZP which provides two analog inputs with 12-bit resolution at 1.5 GSPS. The DAC is based on the TI DAC39J82 which 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 its RF reference clocking which can come from the FMC carrier or from the front panel via the Ref CLK In port.
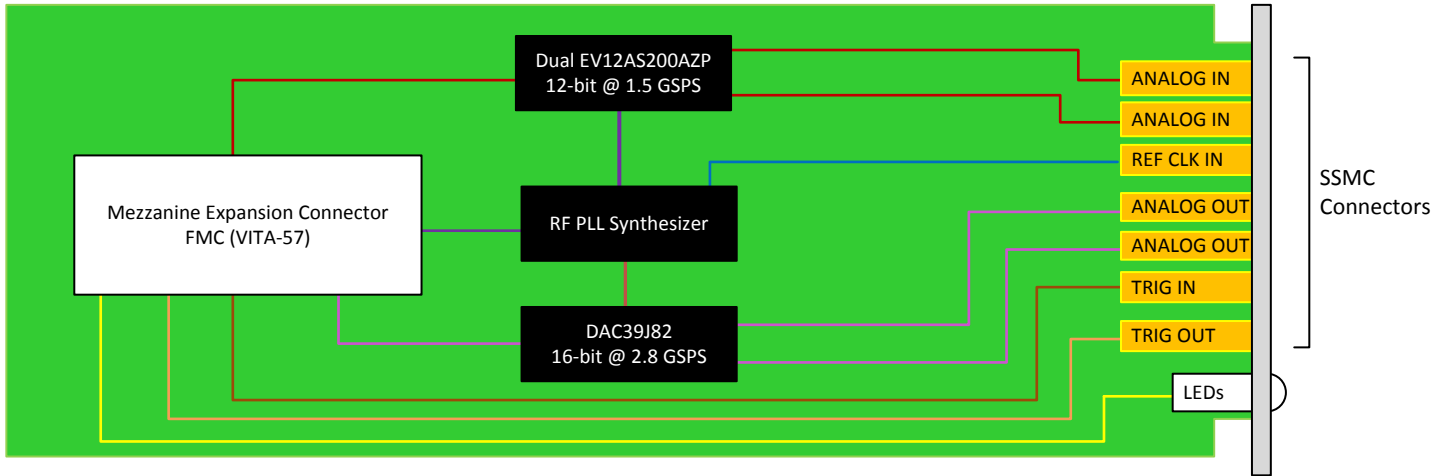
BLOCK DIAGRAM

Figure 1: Block Diagram

SPECIFICATIONS

Architecture			
Physical	Dimensions	Single module	
		Width 2.71" (69 mm)	
		Depth 3.01" (76.5 mm)	
Type	FMC	Dual Analog to Digital Converter (ADC) and dual Digital to Analog Converter (DAC)	
		FMC connector	
Standards			
FMC	VITA-57	ANSI/VITA 57.1-2008	
Configuration			
Power	FMC212	8W	
Environmental	Temperature	Operating Temperature: -5° to 55° C	
		Storage Temperature: –40° to +85° C	
	Vibration	1G, 5 to 500 Hz on each axis	
	Shock	30Gs each axis	
	Relative Humidity	5 to 95 percent, non-condensing	
Front Panel	Interface Connectors		
	LEDs	Status	
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)	
		Humiseal 1B31 Acrylic (Optional)	
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		
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INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and µTCA 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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ORDERING OPTIONS

FMC212 – 000 – 000 – G0J

G = FMC Board Spacing
0 = 10 mm (per VITA-57 specification)
1 = 17.5 mm *

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
6 = Military, Humiseal 1A33 Polyurethane*
7 = Military, Humiseal 1B31 Acrylic*

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

RELATED PRODUCTS

AMC516 Virtex-7 FPGA	**AMC532 Stratix-V FPGA**	**FMC109 Quad SFP+ FMC**

CONTACT US

VadaTech Corporate Office

198 N. Gibson Rd,
Henderson, NV 89014
Email: info@vadatech.com
Telephone: +1 702 896-3337
Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhu Street, Neihu District,
Taipei 114,Taiwan
Email: info@vadatech.com
Telephone: +886-2-2627-7655
Fax: +886-2-2627-7792

VadaTech European Sales Office

VadaTech House, Bulls Copse Road,
Southampton, SO40 9LR
Email: info@vadatech.com
Telephone: +44 2380 016403