FMC213 – FMC High-speed Quad ADC 16-bit @ 250 MSPS, DAC 14-bit @ 5.7 GSPS
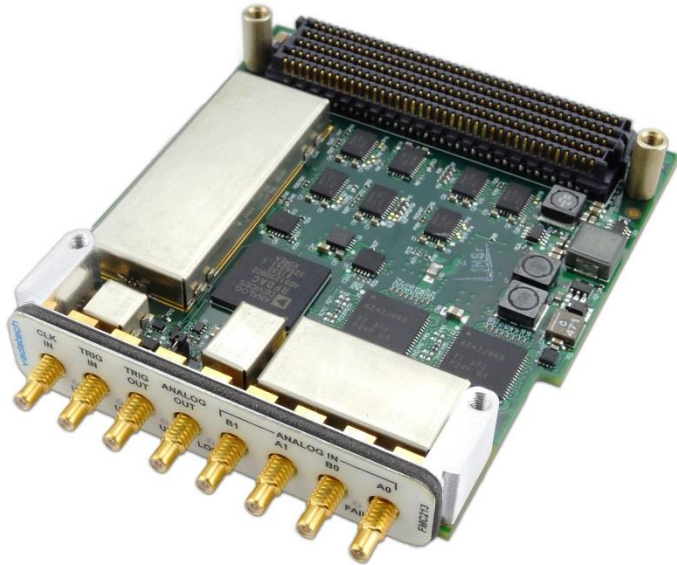
KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA 57
- Quad ADC based on ADS42JB69:
    - JESD204B compliant
    - Analog Front end bandwidth 900MHz
    - 16-Bit Resolution @ 250 MSPS
- DAC based on AD9129:
    - Single DAC 14-bit @ 5.7 GSPS
    - Direct RF Synthesis @ 2.8 GSPS Data Rate
- RF front panel reference 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 FMC213 is an FPGA Mezzanine Card per VITA 57 specification with a high speed quad ADC and a single DAC.

The ADC converter utilizes the two TI part number ADS42JB69 (JESD204B) dual channel 16-bit @ 250 MSPS and the DAC is based on Analog Devices part number AD9129 14-bit @ 5.7 GSPS.

The module has a wide-band PLL which can take its reference clock via the front panel, FMC Carrier or the on board reference.
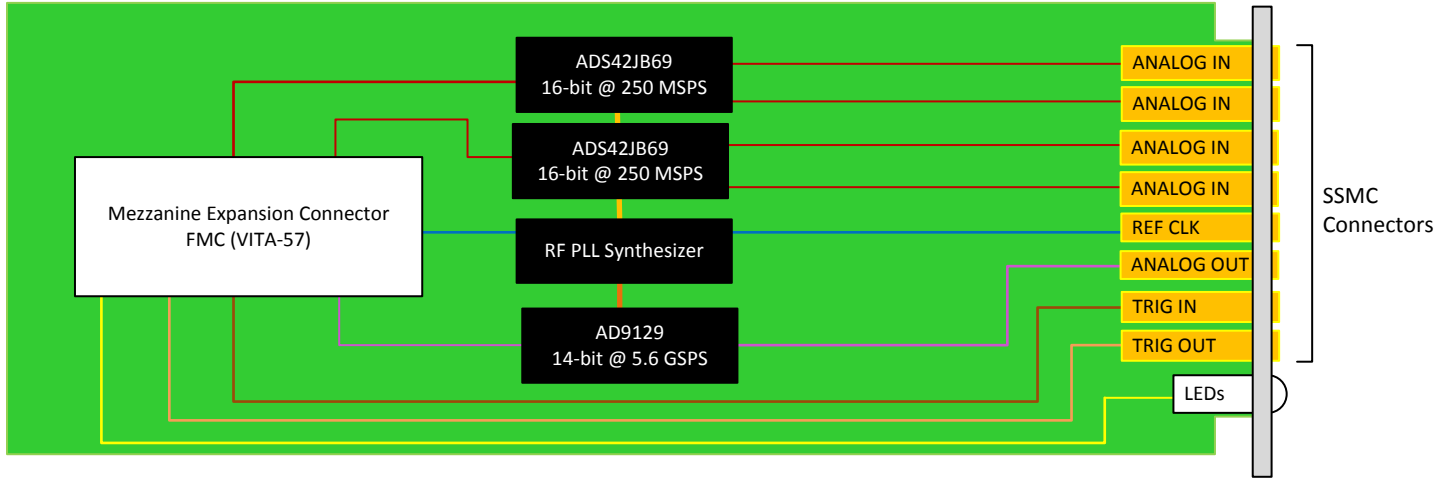
BLOCK DIAGRAM

Figure 1: Block Diagram

SPECIFICATIONS

Architecture			
Physical	Dimensions	Single module	
		Width 2.71" (69 mm)	
		Depth 3.01" (76.5 mm)	
Type	FMC	Quad Analog to Digital Converter (ADC) and single Digital to Analog Converter (DAC)	
		FMC connector	
Standards			
FMC	VITA-57	ANSI/VITA 57.1-2008	
Configuration			
Power	FMC213	6 W	
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	8 SSMC 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		

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

FMC213 – A00 – 000 – G0J

A = Analog Front End Filter for ADC
1 = Frequency input of less than 250MHZ
2 = Frequency input of greater than 250MHz

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

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