FMC233

FMC Quad ADC 16-bit @ 1 GSPS and Quad DAC 16-bit @ 2.8 GSPS

FMC233

Key Features

- Quad ADC 16-bit @ 1.0 GSPS (ADS54J60) or 16-bit @ 500 MSPS (ADS54J69)
- Quad DAC 16-bit @ 2.8 GSPS (DAC39J84)
- FPGA Mezzanine Card (FMC) per VITA 57.1
- Excellent dynamic performance
- All I/O (including the RF) are mounted on the back side for expansion to an RF front end module

Benefits

- High dynamic range for versatility
- Ideal for Radar and Antenna Arrays, Broadband Wireless, Communication Test Equipment, Microware Receivers, SDR
- Compatible with a broad range of Xilinx- and Altera-based FMC carriers from VadaTech and others
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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FMC233

The FMC233 is an FPGA Mezzanine Card (FMC) per VITA 57 specification. The board has quad ADC (the ADC chips are dual channels) and quad DAC (the DAC chip is quad channel).

The FMC233 utilizes TI ADS54J60 (option for ADS54J69) providing 16-bit conversion rates of up to 1.0 GSPS and a DAC DAC39J84 providing 16-bit conversion rates of up to 2.8 GSPS.

All I/O are mounted on the back side of the FMC to allow an RF front end module to be mounted to the carrier. This allows a full integrated RF front end with the FMC on a single module. Please contact VadaTech Sales for the detail specification.
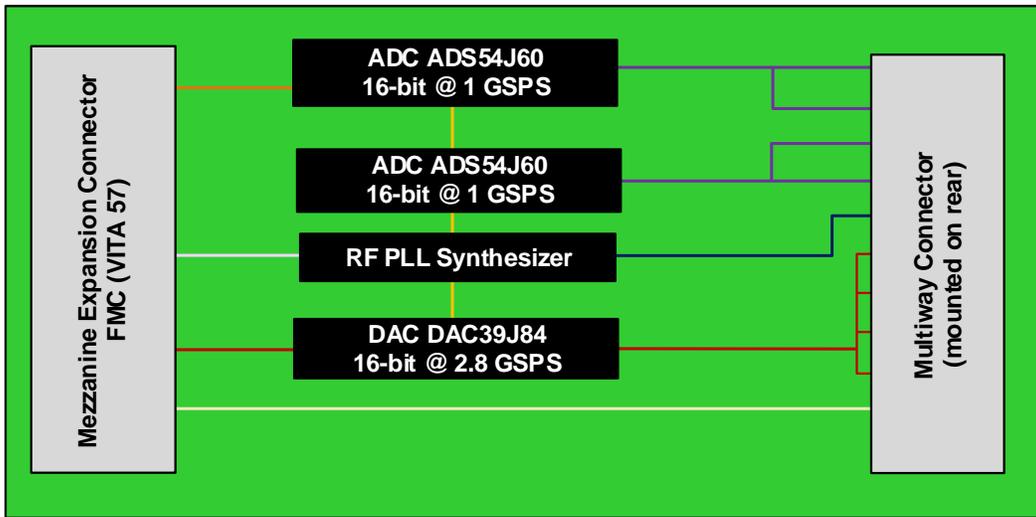

Figure 1: FMC233

Block Diagram

Figure 2: FMC233 Functional Block Diagram

Specifications

Architecture		
Physical	**Dimensions**	Single Module
		Width: 2.71" (69 mm)
		Depth: 3.01" (76.5 mm)
Type	**FMC**	Quad ADC and DAC, Single FMC
Standards		
FMC	**Type**	ANSI/VITA 57.1 - 2008
Configuration		
Power	**FMC233**	~10W
Environmental	**Temperature**	See Ordering Options (air flow requirements >400 LFM)
		Storage Temperature: –40° to +85°C
	Vibration	1G to 5-500 Hz on each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	Via back to the RF front end module
	LEDs	Status
Software Support	**Operating System**	Agnostic
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, 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

FMC233 – AB0-000-G0J

A = ADC		G = FMC Board Spacing
0 = ADS54J60 (1 GSPS) 1 = ADS54J69 (500 MSPS)		0 = 10 mm (per VITA 57 specification) 1 = 17.5 mm*
B = DAC (DAC39J84)		
0 = No DAC 1 = DAC		
		J = Conformal Coating
		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 = Extended Industrial (–40° to +70°C), No coating 4 = Extended Industrial (–40° to +70°C), Humiseal 1A33 Polyurethane 5 = Extended Industrial (–40° 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

- 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

FMC109

- FPGA Mezzanine Card (FMC) per VITA 57
- Single module
- Quad SPF/SPF+ cages for quad ports

Contact

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