FMC250

FMC:

FMC Dual ADC 12-bit 2.6 GSPS, Single DAC 16-bit 12 GSPS

FMC250

Key Features

- Dual AD9625 ADC 12-bit at 2.6/2.5/2.0 GSPS

- 8 JESD204B lanes from each ADC is routed to the FMC+ connector

- Single DAC AD9164/AD9162 16-bit 12 GSPS

- FPGA Mezzanine Card (FMC+) per VITA 57.4

- Excellent dynamic performance

- Front panel interface includes CLK In, Trig In and Trig Out

Benefits

- Ideal for Broadband communications systems, Wireless infrastructure, LTE, ATE, RADAR / Jamming

- 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
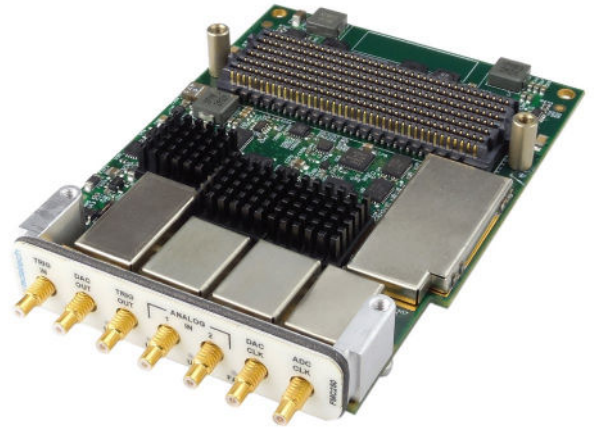
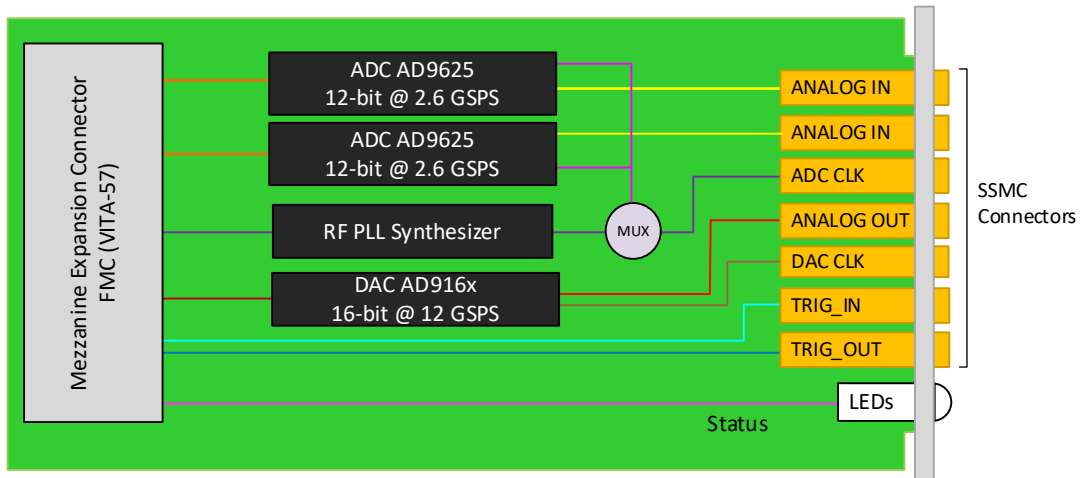- AS9100 and ISO9001 certified company

FMC250

The FMC250 is an FPGA Mezzanine Card (FMC+) per VITA 57.4 specification. The board has dual ADC and single DAC.

The FMC250 utilizes dual AD9625 ADCs providing 12-bit conversion rates of up to 2.6 GSPS and a single DAC (AD9162 or AD9164) providing 16-bit conversion rates of up to 12 GSPS.
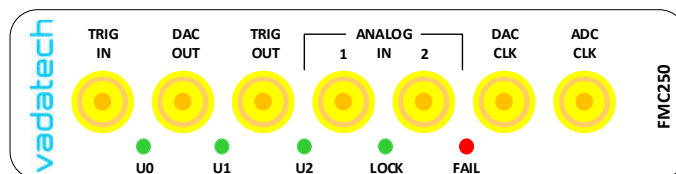
The analog input, digital output, clock and trigger interfaces of the FMC250 are routed via SSMC connectors. The internal clock frequency is programmable and the clock is capable of locking to an external reference.

Block Diagram

Front Panel

Specifications

Architecture		
Physical	**Dimensions**	Width: 2.71" (69 mm)
		Depth: 3.70" (94 mm)
Type	**FMC**	Dual port ADC with single DAC
Standards		
FMC	**VITA-57**	ANSI/VITA 57.4
Configuration		
Power	**FMC250**	~10 W
Environmental	**Temperature**	Operating temperature: -5° to 45° C (55°C for limited time, performance restrictions may apply), industrial and extended versions also available (See environmental spec sheet)
		Storage Temperature: –40° to +90°C
	Vibration	1G, 5 to 500 Hz on each axis
	Shock	30Gs on each axis
	Relative Humidity	5 to 95 per cent, non-condensing
Front Panel	**Interface Connectors**	7x SSMC: Analog Out, dual Analog In, Trig In, Trig Out, Clk In and Clk Ext
	LEDs	Status and user defined (total 5)
Software Support	**Operating System**	Linux (consult VadaTech for other options)
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

FMC250 – ABC-000-G0J

A = RF Sampling Clock		G = FMC Board Spacing
0 = Direct RF Sampling at fixed 2.0 GSPS 1 = Direct RF Sampling 2 = Via on Board PLL		0 = 10 mm (per VITA-57 specification) 1 = 17.5 mm *

B = ADC Sampling		
0 = 2.0 GSPS 1 = 2.5 GSPS 2 = 2.6 GSPS		

C = DAC		J = Temperature Range and Coating**
0 = AD9164 1 = AD9162		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

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

** Edge of module for conduction cooled boards, consult factory for availability

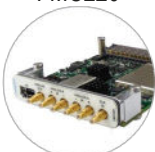# Related Products

AMC595

- Xilinx Ultra Scale XCVU440 w/ QorIQ PPC2040
- 8 GB of DDR-4 (single bank of 64-bits)
- FMC support (with special connector)

FMC229

- Quad DAC 16-Bit @ 2.8 GSPS With Quadrature Modulator
- Single DAC39J84
- On board dual Wideband Quadrature Modulator

FMC220

- Analog Devices AD9234 dual 1 GSPS ADC
- The Analog inputs for the ADC are DC coupled
- Analog Devices AD9162/9164 6 GSPS RF DAC Supported by DAQ Series™ data acquisition software

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