

FMC216

ADC 12-bit @ 2.6 GSPS and
DAC 14-bit @ 5.6 GSPS, FMC



FMC216

Key Features

- ADC AD9625
 - 8 JESD204B lanes from the ADC is routed to the FMC
 - 12-bit at 2.6 GSPS
 - Wide full power bandwidth supports IF sampling of signals up to 2 GHz
- DAC AD9129
 - 14-bit at 5.6 GSPS
- FPGA Mezzanine Card (FMC) per VITA 57
- Excellent dynamic performance
- Front panel interface includes CLK In, Trig In and Trig Out

Benefits

- High dynamic range for versatility in video / broadcast requirements
- 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



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FMC216

The FMC216 is an FPGA Mezzanine Card (FMC) per VITA-57 specification. The FMC216 utilizes AD9625 ADCs providing 12-bit conversion rates of up to 2.6 GSPS and a DAC AD9129 providing 14-bit conversion rates of up to 5.6 GSPS.

The analog input/output, clock and trigger interfaces of the FMC216 are routed via SSMC connectors. The internal clock frequency is programmable and the clock is capable of locking to an external reference.



Block Diagram

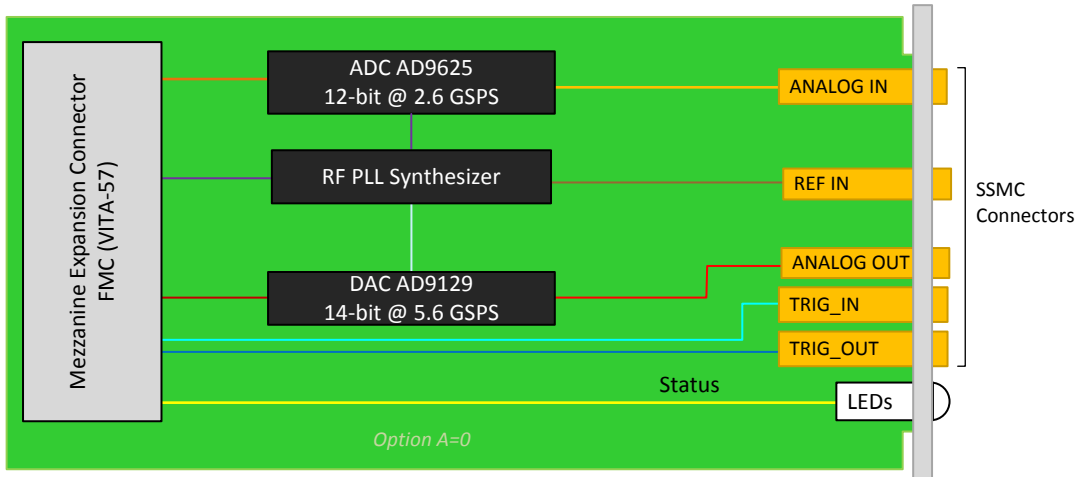


Figure 1: Functional Block Diagram for Option A=0

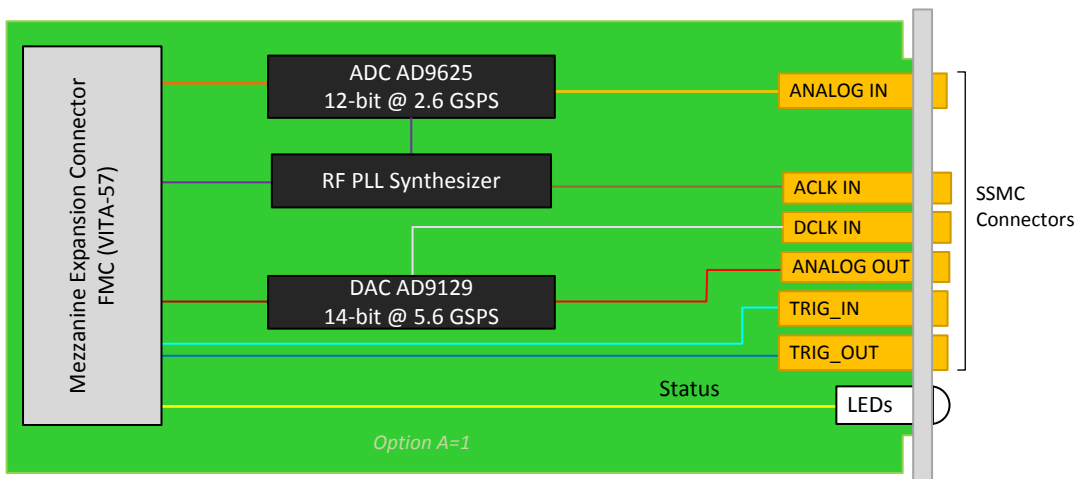


Figure 2: Functional Block Diagram for Option A=1

Front Panel

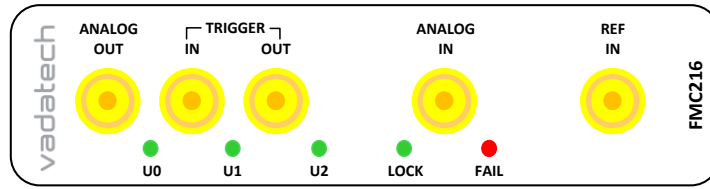


Figure 3: FMC216 Front Panel for option A=0

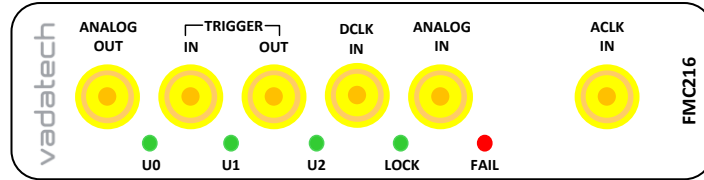


Figure 4: FMC216 Front Panel for Option A=1

Specifications

Architecture		
Physical	Dimensions	Single module
		Width: 2.71" (69 mm) Depth 3.01" (76.5 mm)
Type	FMC	ADC with DAC and Single FMC
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC216	~8W
Environmental	Temperature	Operating temperature: -5° to 55° C (air flow requirements >400 LFM)
		Storage Temperature: -40° to +85°C
	Vibration	1G, 5 to 500 Hz on each axis
Front Panel	Shock	30Gs each axis
	Relative Humidity	5 to 95 per cent, non-condensing
	Interface Connectors	6x SSMC
Software Support	LEDs	User defined and Status
	Operating System	Agnostic
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 μ TCA 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

FMC216 – AB0 – 000 – G0J

A = RF Sampling Clock 0 = Via on Board PLL 1 = Direct RF Sampling		G = FMC Board Spacing 0 = 10 mm (per VITA-57 specification) 1 = 17.5 mm *
B = ADC Speed 0 = 2.6 GSPS 1 = 2.5 GSPS 2 = 2.0 GSPS		
		J = Temperature Range and 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 = 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.

** Conduction cooled, temperature is at edge of module. 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)

VPX592



- 3U FPGA carrier for FPGA Mezzanine Card (FMC) per VITA-46 and VITA-57
- Xilinx Kintex UltraScale™ XCKU115 FPGA
- High-performance clock jitter cleaner

FMC229



- FPGA Mezzanine Card (FMC) per VITA 57
- Single DAC39J84
- On board dual Wideband Quadrature Modulator

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