

FMC221

FMC High-speed DAC 14-bit at 2.5 GSPS Module



FMC221

Key Features

- FPGA Mezzanine Card (FMC) Per VITA-57
- AD9739 DAC 14-bit 2.5GSPS
- Dynamic performance
 - 8 QAM carriers @ 400 MHz IF -71 dBc
 - 16 QAM carriers @ 400 MHz IF -68 dBc
 - 32 QAM carriers @ 400 MHz IF -65 dBc
 - 72 QAM carriers @ 600 MHz IF -61 dBc
- Single tone NSD @ 2.4 GSPS
 - 166 dBm / Hz @ 100 MHz IF
 - 162 dBm / Hz @ 1 GHz IF
- 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



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The FMC221 is an FMC per VITA 57 specification. The FMC221 has a single DAC 14-bit at 2.5 GSPS. The DAC converter utilizes the Analog Devices AD9739.

The FMC221 is designed for synthesizing of broadband signals, with enhanced linearity and band flatness performances.

Module provides a Clock input so the sampling rate could be synchronized to an external device. It also provides TRIG IN/OUT with two GPIO.



Figure 1: FMC221

Block Diagram

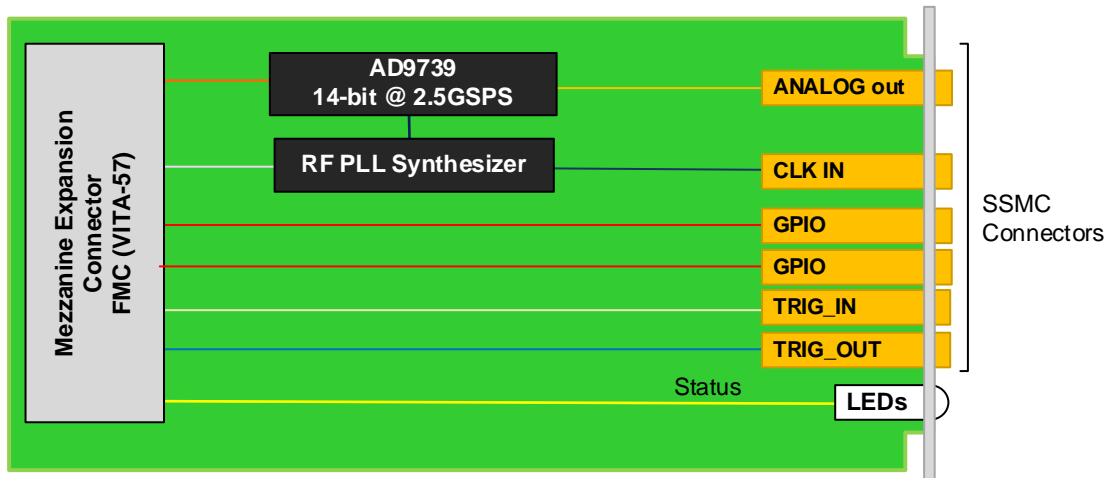


Figure 2: FMC221 Functional Block Diagram

Specifications

Architecture		
Physical	Dimensions	Single module
		Width: 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
Type	FMC	Single AD9739 DAC
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC221	~4 W
Environmental	Temperature	See ordering options (air flow requirements >400 LFM) and environmental spec sheet
		Storage Temperature: -40° to +85°C
	Vibration	1 G, 5 to 500 Hz on each axis
	Shock	30 Gs each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	Interface Connectors	SSMC
		LEDs
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

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

FMC221 – 000 – 000 – G0J

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

Related Products

AMC592



- AMC FPGA carrier for FMC per VITA 57
- Xilinx UltraScale™ XCKU115 FPGA
- Supported by DAQ Series™ data acquisition software

FMC214



- Dual complete transceiver signal chain solution using Analog Devices AD9361 transceiver
- Frequency range 70 MHz to 6 GHz with instantaneous bandwidth from 200 kHz to 56 MHz
- MIMO transceiver is Time Domain Duplex (TDD) and Frequency Domain Duplex (FDD) compatible

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

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