

FMC221 – FMC High-speed DAC 14-bit at 2.5 GSPS Module

FMC DAC, 14-bit @ 2.5 GSPS



KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA-57
- Single FMC size
- Single AD9739 DAC 14-bit at 2.5 GSPS
- 2 Vpp differential Analog output swing
- Programmable DSP clock
- 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
- Connection via MMCX
 - Analog out
 - Reference clock input
 - TRIG input
 - TRIG output
 - GPIO

Benefits of Choosing VadaTech

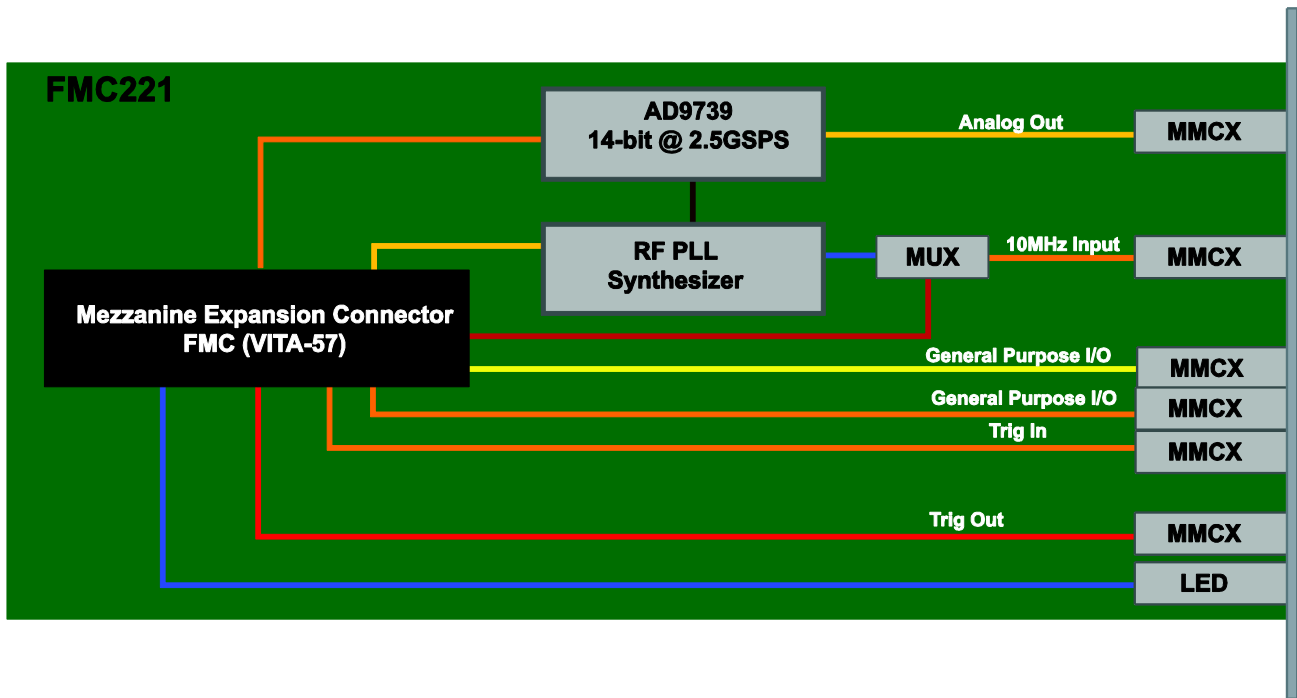
- Array of FMC's and FMC carriers available from VadaTech
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

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

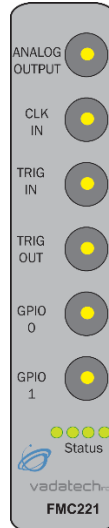
The FMC221 is designed for synthesizing of broadband signals, with enhanced linearity and band flatness performances. The Analog output can be programmed for +/- 1V.

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BLOCK DIAGRAM



FRONT PANEL



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SPECIFICATIONS

Architecture		
Physical	Dimensions	Single FMC
		Width 2.71" (69 mm) Depth 3.01" (76.5 mm)
Type	FMC	Single AD9739 DAC, FMC slot
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC221	4 W
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
	Shock	30Gs each axis
	Relative Humidity	5 to 95 percent, non-condensing
Front Panel	Interface Connectors	MMCX
	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 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

FMC221 – AB0 – D00 – GHJ

COMMON CONFIGURATIONS

FMC221-100-000-000

A = RF PLL Synthesizer*

0 = 1.8 GHz for sampling at 1.8 GSPS
1 = 2.5 GHz for sampling at 2.5 GSPS
2 = 1.28 GHz for sampling at 1.28 GSPS
3 = 2.0 GHz for sampling at 2.0 GSPS
4 = 2.1 GHz for sampling at 2.1 GSPS
5 = 1.6 GHz for sampling at 1.6 GSPS

B = Input Clock

0 = 10 MHz
1 = 100 MHz

D = Input Impedance

0 = 75Ω Input Impedance
1 = 50Ω Input Impedance

G = FMC Board Spacing

0 = 10 mm (per VITA-57 specification)
1 = 17.5 mm **

H = Operating Temperature

0 = Commercial
1 = Industrial

J = Conformal Coating

0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

* Contact VadaTech for more information on other PLL synthesizer frequencies and input clocks

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

RELATED PRODUCTS



**AMC515 Virtex-7
FPGA**



**AMC532 Altera
FPGA**



**FMC210
ADC 10-bit 2.6 GSPS**

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