

FMC222

Dual DAC 14-bit @ 2.5 GSPS, FMC



FMC222

Key Features

- FPGA Mezzanine Card (FMC) per VITA 57
- Dual DAC 14-bit @ 2.5 GSPS (AD9739)
- 2 V_{pp} 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
- Trig In/Out

Benefits

- 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 FMC222 is an FPGA Mezzanine Module per VITA 57 specification. The FMC222 has dual DAC 14-bit at 2.5 GSPS. The DAC converter utilizes the Analog Devices AD9739.

The unit is designed for synthesizing of broadband signals, with enhanced linearity and band flatness performances. The two DAC are capable of synchronization with incoming data between the two.

The analog output can be programmed for +/- 1V.



Figure 1: FMC222

Block Diagram

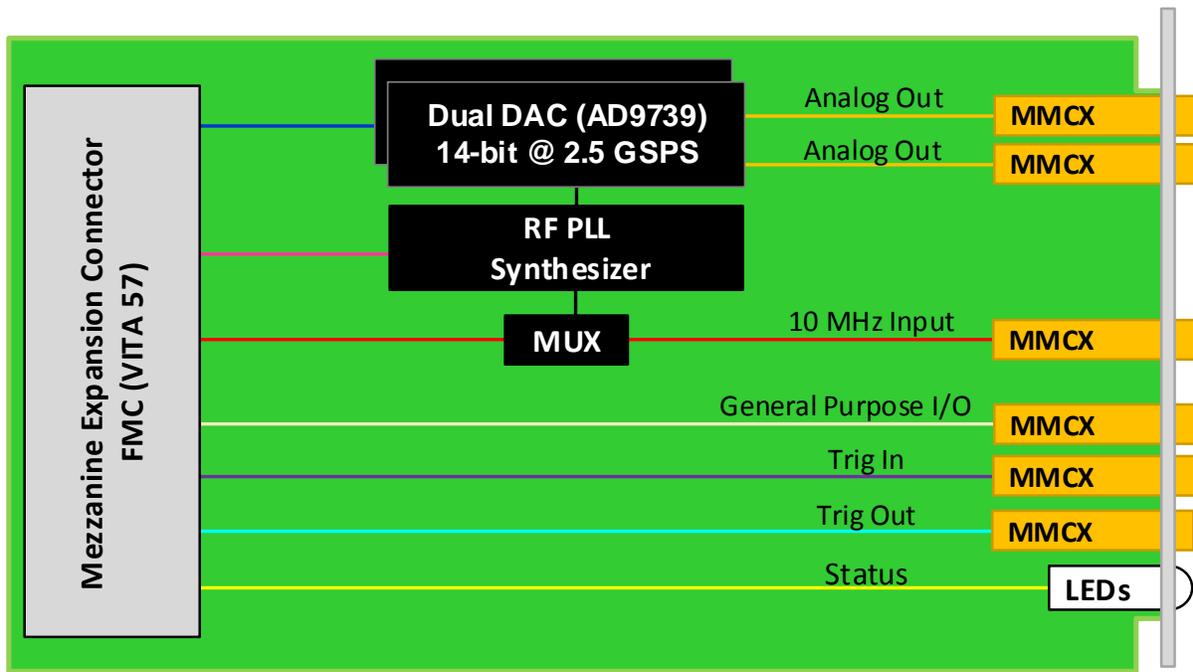


Figure 2: FMC222 Functional Block Diagram

Front Panel

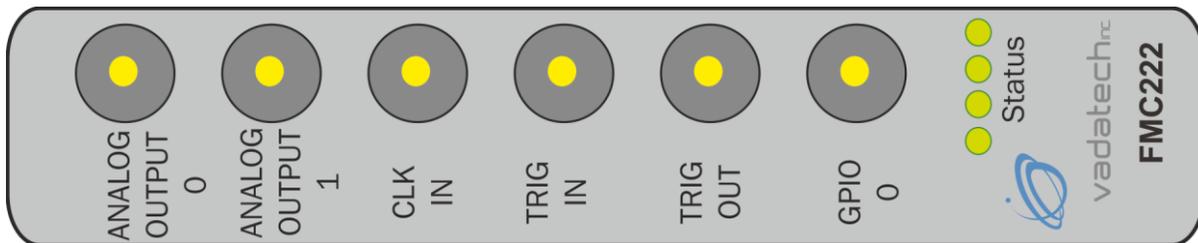


Figure 3: FMC222 Front Panel

Specifications

Architecture	
Physical	Dimensions Single module Width: 2.71" (69 mm) Depth 3.01" (76.5 mm)
Type	FMC Dual DAC Single FMC slot
Standards	
FMC	Type ANSI/VITA 57.1 - 2008
Configuration	
Power	FMC222 ~6W
Environmental	Temperature See Ordering Options Storage Temperature: -40° to +85°C
	Vibration Operating 9.8 m/s ² (1G), 5 to 500 Hz on each axis
	Shock Operating 30Gs each axis
	Relative Humidity 5 to 95% non-condensing
Front Panel	Interface Connectors 6x MMCX
	LEDs Status
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 ISO9001:2015 and AS9100D standards
Warranty	Two (2) years, see VadaTech Terms and Conditions

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of 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

FMC222 – AB0-D00-GHJ

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	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**
B = Input Clock 0 = 10 MHz 1 = 100 MHz		H = Operating Temperature 0 = Commercial 1 = Industrial
		J = Conformal Coating 0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Notes:

*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



- AMC FPGA carrier for FPGA Mezzanine Card (FMC) per VITA 57
- AMC Ports 4-11 are routed to FPGA (protocols such as PCIe, SRIO, XAUI, etc. are FPGA programmable)
- Xilinx Virtex-7 XC7V2000T in 1925 package

AMC530



- Altera Stratix IV Device EP4S100Gx in 1517 pin count (40mm x 40mm)
- Onboard PLL for buffering/multiplying and jitter cleaner
- AMC Ports 2-3 and 4-11 are routed to FPGA (protocols such as PCIe, SRIO, XAUI, etc. are FPGA programmable)

FMC210



- FPGA Mezzanine Card (FMC) per VITA 57
- Single ADC EV10AS150B @ 2.6 GSPS
- 5 GHz Full Power Input Bandwidth (–3dB)

Contact

VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014

Phone: +1 702 896-3337 | Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhua Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR

Phone: +44 2380 016403

info@vadatech.com | www.vadatech.com

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