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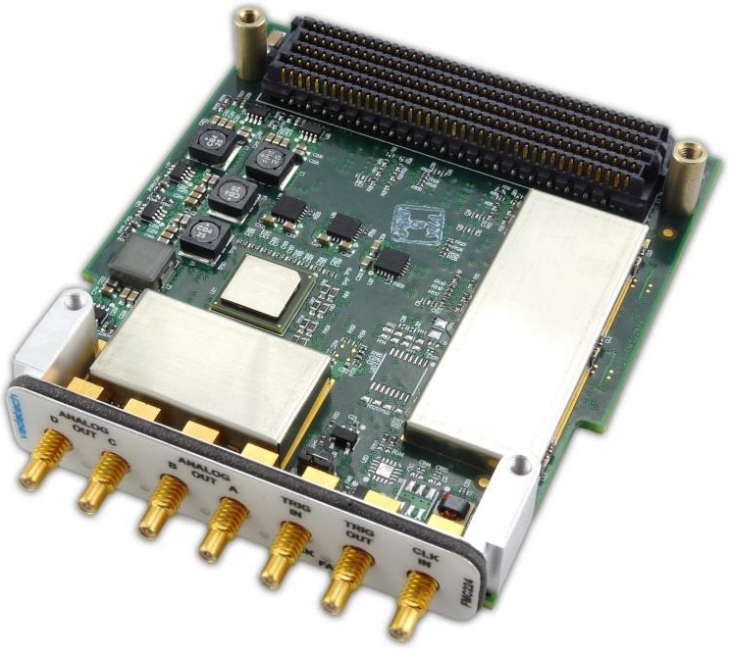
FMC224 – FMC Quad DAC 16-bit @ 2.8 GSPS Module

FMC, Quad DAC 16-bit



KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA 57
- Quad port DAC 16-bit at 2.8 GSPS
  - Based on TI DAC39J84
  - JESD204B
  - Independent 1x-16x Interpolation
  - Independent Complex Mixers with 48-bit NCO/ or +/- xFs/8
  - Sinx/x Correction Filters
  - Digital Summation of Independent Complex Signals
- On board-Wide band PLL
- Trig In/Out
- RoHS compliant

Benefits of Choosing VadaTech

- Array of FMC's and FMC carriers available from VadaTech
- Excellent dynamic and direct RF synthesis performance with minimal loss in output power
- 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 FMC224 is an FPGA Mezzanine Card (FMC) per the VITA 57 specification. The module has a quad port DAC 16-bit at 2.8 GSPS.

The DAC converter utilizes the TI DAC39J84 which is JESD204B compliant. The device includes features that simplify the design of complex transmit architecture. It includes fully by-passable 2x to 16x digital interpolation filters with over 90 dB of stop-band attenuation to simplify the data interface.

The FMC224 allows the RF Clock syntheses to be generated by the on board wide-band PLL or the front panel.

An on-chip 48-bit Numerically Controlled Oscillator (NCO) and independent complex mixer allow flexible and accurate carrier placement.

The module has a wide-band PLL which can take its reference clock via the front panel, FMC Carrier or the on board reference.

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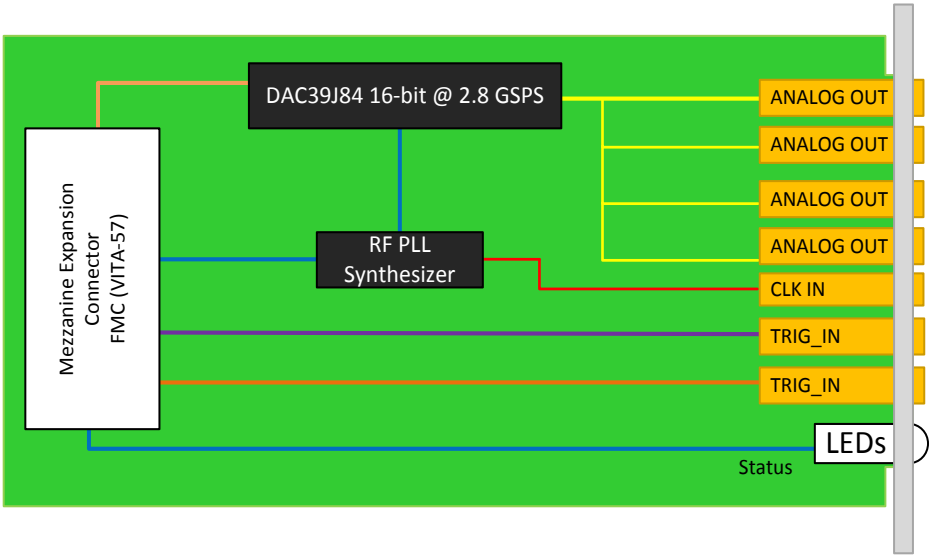
BLOCK DIAGRAM



SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module
		Width 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
Type	FMC	Quad Port DAC
		Single FMC slot
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC224	~4 W
Environmental	Temperature	Operating Temperature: -5° to 55° C
		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	7 SSMC
	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 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.

ORDERING OPTIONS

FMC224 – A00 – 000 – G0J

A = RF Clock synthesis
0 = Via on board PLL
1 = Direct via front panel

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

J = Temperature Range and Coating
0 = Commercial, No coating
1 = Commercial, Humiseal 1A33 Polyurethane
2 = Commercial, Humiseal 1B31 Acrylic
3 = Industrial, No coating
4 = Industrial, Humiseal 1A33 Polyurethane
5 = Industrial, Humiseal 1B31 Acrylic
6 = Military, Humiseal 1A33 Polyurethane**
7 = Military, 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

RELATED PRODUCTS

AMC515 Virtex-7 FPGA

AMC517 Kintex-7 FPGA

FMC210 ADC 10-bit 2.6 GSPS

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