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THE POWER OF VISION

FMC High-speed ADC 10-bit @ 2.5 GSPS Module – FMC210

10-bit ADC @ 2.5 GSPS

KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA-57
- Single module
- Single ADC @ 2.6 GSPS
- 5 GHz Full Power Input Bandwidth (–3dB)
- True single core architecture (no calibration required)
- External Interleaving:
  - Gain Adjust
  - Offset Adjust
  - Sampling Delay Adjust
- Full scale Analog input Voltage Span 500 mVpp
- All front panel input/outputs are via MMCX:
  - Analog Input
  - Reference clock
  - Trig in/out
  - General purpose I/O
- Super low phase noise RF PLL Synthesizer
- RoHS compliant

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 FMC210 is an FPGA Mezzanine Card per VITA 57 specification with a high speed ADC.

The ADC converter utilizes the e2v part number EV10AS150B device which has a high linearity ADC. The module has a super low phase noise RF PLL Synthesizer for sampling.

The ADC device has single Tone Performance in 1st Nyquist (–1 dBFS): ENOB = 8.0 bit, SFDR = –57 dBFS at 2.6 GSPS, Fin = 495 MHz and ENOB = 7.9 bit , SFDR = –57 dBFS at 2.6 GSPS, Fin = 1295 Mhz, with the single Tone Performance in 2nd Nyquist (–3 dB): ENOB = 7.9 bit, SFDR = –59 dBFS at 2.6 GSPS, Fin = 2,595 MHz

Low bit error rate of 10 to -12 at 2.6 GSPS with no missing codes at 2.6 GSPS, 1st and 2nd Nyquist.

VadaTech can modify this product to meet special customer requirements. Contact us to discuss your application.

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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.

BLOCK DIAGRAM

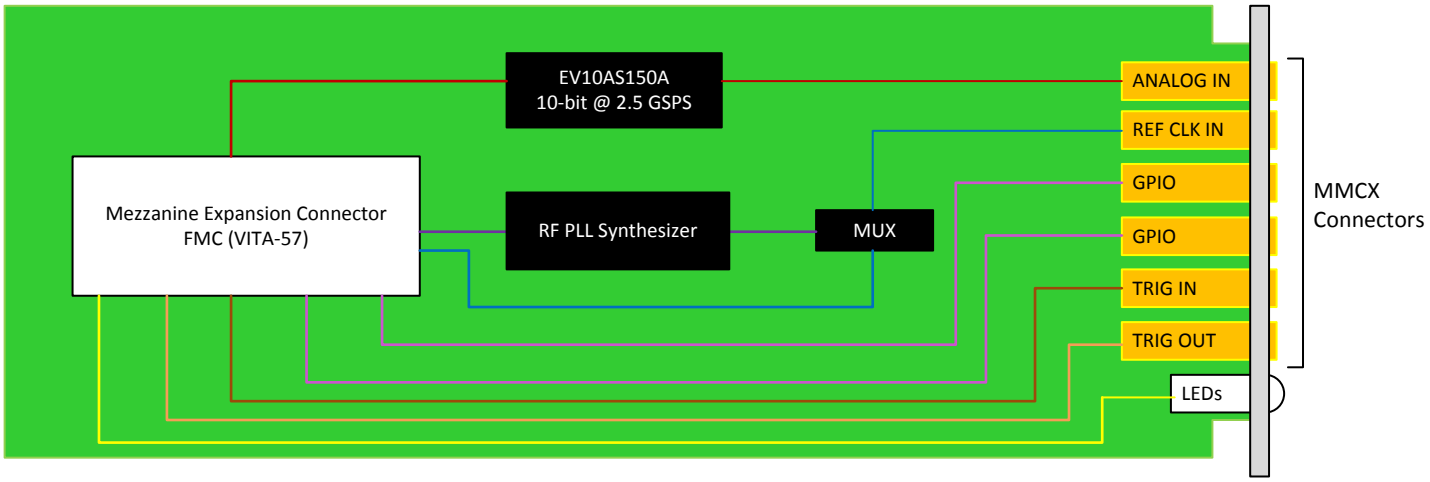
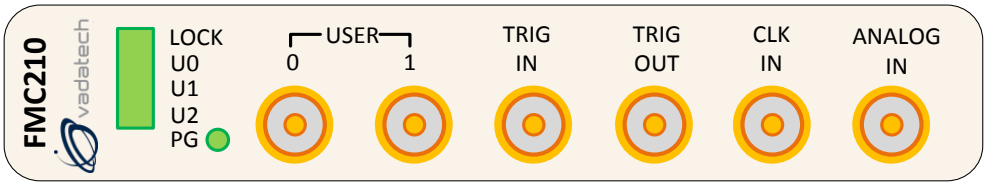


Figure 1: Block Diagram

FRONT PANEL



SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module
		Width 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
Type	FMC	Analog to Digital Converter (ADC)
		FMC connector
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC210	10W
Environmental	Temperature	Operating Temperature: 0° to 65° C (air flow requirements >400 LFM))
		Storage Temperature: –40° to +90° 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	6x MMCX Front Panel Connector
	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	
Trademarks and Disclaimer	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice	

ORDERING OPTIONS

FMC214 – AB0 – 000 – 0HJ

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

B = Input Clock*
0 = 10 MHz
1 = 100 MHz

H = Operating Temperature
0 = Commercial
1 = Industrial

J = Conformal Coating
0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

*Please call VadaTech for other PLL Synthesizer Frequencies and input clocks.

RELATED PRODUCTS

AMC518 Zynq FPGA

AMC519 Artix FPGA

FMC223 14-bit @ 2.5 GSPS DAC

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