FMC211 – FMC ADC 10-bit @ 2.6 GSPS Module

10-bit ADC @ 2.6 GSPS

KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA 57
- ADC EV10AS150B 10-bit @ 2.6 GSPS
- 5 GHz full power input bandwidth (–3dB)
- True single core architecture (no calibration required)
- Full-scale Analog input Voltage Span 500 mVpp
- Ultra-low jitter wideband PLL synthesizer
- Option for Direct RF clock sampling or reference clock input
- Trig In/Out
- The ADC RF input can be differential or single ended
- GPIO
- 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 FMC211 is an FPGA Mezzanine Card per VITA 57 specification with a high speed ADC. The module utilizes the e2v EV10AS150B device which has a high linearity ADC.

The FMC211 has an ultra-low jitter wideband PLL Synthesizer for sampling. It allows the RF input signal to be differential or single ended. With a singled ended signal, there is a Balun with a frequency range from 500 KHz to 6 GHz. The module could also be ordered with differential input, which does not have the Balun installed.

The PLL can receive its reference clock from the FMC carrier or via the REF CLK In port via the front panel. Alternatively, there is an order option for the direct sampling clock to be connected to the ADC via the front panel REF CLK In, bypassing the PLL.

The Module has 4 GPIO as differential input/output. The Differential input/output can be configured as single ended.

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BLOCK DIAGRAM

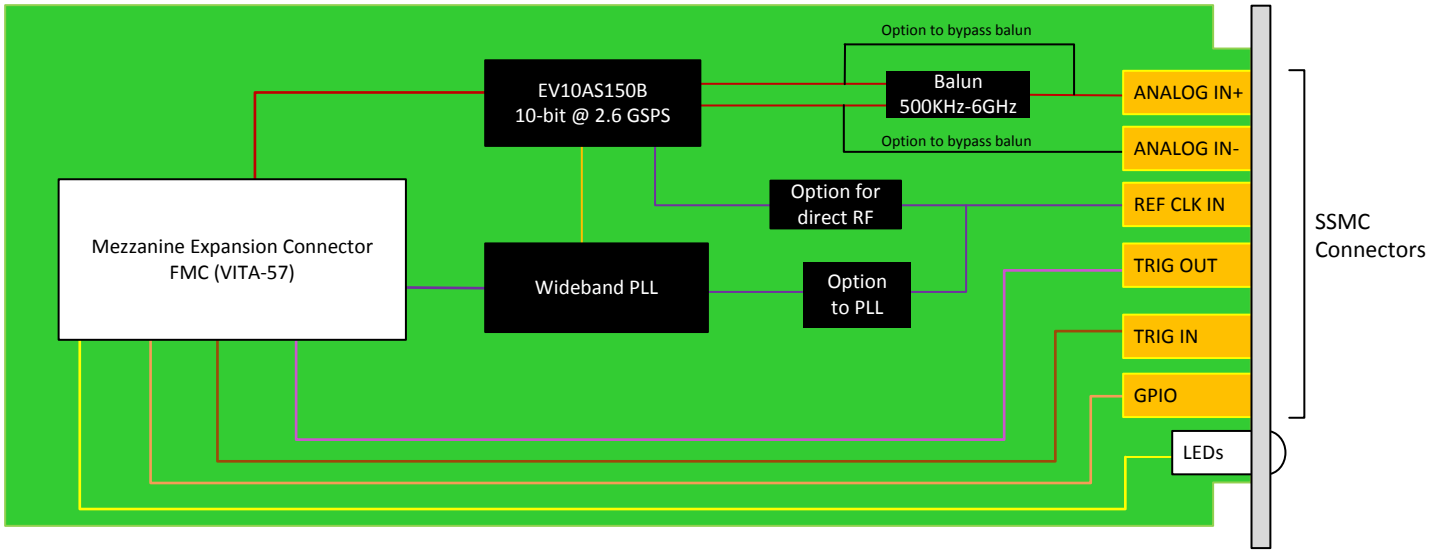

Figure 1: Block Diagram

FRONT PANEL

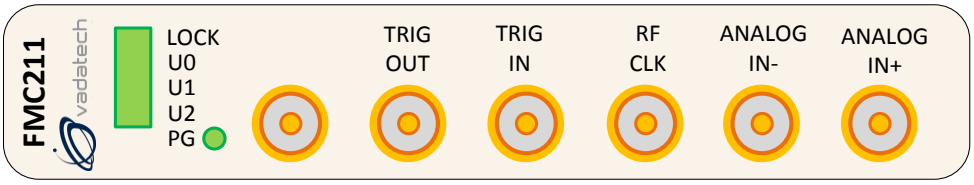

Figure 2: Front Panel

SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module
		Width 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
		Weight: 0.15 lbs (0.068 kg)
Type	FMC	Analog to Digital Converter (ADC) EV10AS150B
		FMC connector
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC211	8W
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	6x SSMC Front Panel Connector and mini-display port
	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

FMC211 – AB0 – 000 – GHJ

A = RF Input to ADC
0 = Singed ended
1 = Differential

B = RF Sampling clock
0 = Via on-board wideband PLL
1 = Direct RF Sampling

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

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

RELATED PRODUCTS

AMC516 Virtex-7 FPGA

AMC532 Stratix-V FPGA

FMC109 Quad SFP+ FMC

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