

## 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.

## BLOCK DIAGRAM

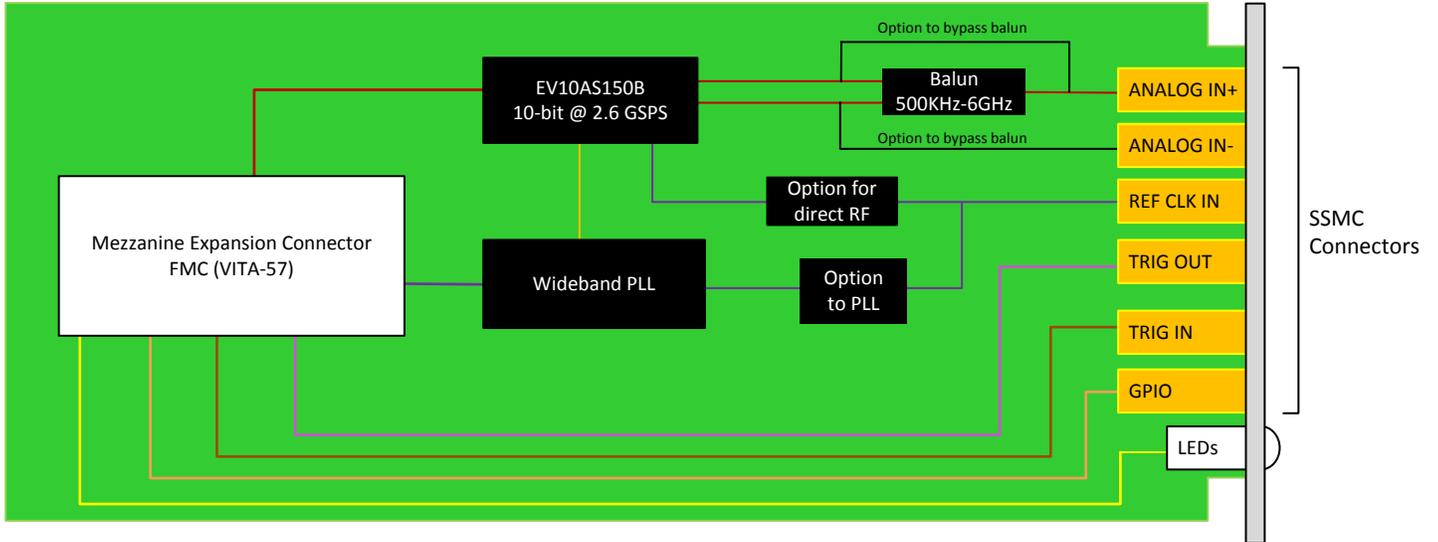


Figure 1: Block Diagram

## FRONT PANEL

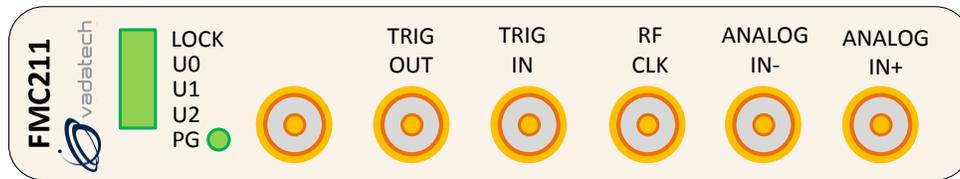


Figure 2: Front Panel

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## 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  $\mu$ 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

### FMC211 – AB0 – 000 – 0HJ

**A = RF Input to ADC**

0 = Single ended  
1 = Differential

**B = RF Sampling clock**

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

**H = Operating Temperature**

0 = Commercial  
1 = Industrial

**J = Conformal Coating**

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

## RELATED PRODUCTS



AMC516 Virtex-7  
FPGA



AMC532 Stratix-V  
FPGA



FMC109 Quad  
SFP+ FMC

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