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THE POWER OF VISION

FMC215 – FMC ADC 12-bit @ 4.0 GSPS and DAC 12-bit @ 4.5 GSPS

FMC, High Speed ADC and DAC

Photo Coming Soon

KEY FEATURES

- FPGA Mezzanine Card (FMC) per VITA 57
- TI ADC12J4000 ADC
  - Usable output bandwidth of 800 MHz at 4x decimation and 4000 MSPS
  - Usable output bandwidth of 100 MHz at 32x decimation and 4000 MSPS
  - Bypass Mode for full Nyquist output bandwidth
- E2V EV12DS400
  - –3 dB Analog output Bandwidth of 7 GHz
  - 1st Nyquist NPR = 47.5 dB, 9.4 Bit Equivalent at Fs = 4.5 GSPS
  - 2nd Nyquist NPR = 42 dB, 8.5 Bit Equivalent at Fs = 4.5 GSPS
  - 3rd Nyquist NPR = 39 dB, 8 bit Equivalent at Fs = 4.5 GSPS
- Excellent dynamic performance
- Front panel interface includes CLK In, Trig In, Analog In/Out, and GPIO
- Ultra Low-Noise wide-band PLL
- On-chip delay locked loops (DLLs) optimize timing between different clock domains.
- RoHS compliant

Benefits of Choosing VadaTech

- Extensive range of FMC's and FMC carriers available from VadaTech
- High dynamic range for versatility in video/broadcast requirements
- Ideal for Broadband communications systems, Wireless infrastructure, LTE, ATE, RADAR/Jamming
- Strong mil/aero support
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

The FMC215 is an FPGA Mezzanine Module per VITA 57 specification that provides a single ADC at 4 GSPS and a single DAC at 4.5 GSPS. The module is suitable for signal capture and low-latency feedback applications such as COMINT/SIGINT, radar, jamming, research and instrumentation.

The FMC215 utilizes TI ADC12J4000 ADC providing 12-bit conversion at rates of 1.0 to 4.0 GSPS with a full-power input bandwidth of 3.2 GHz and offering configurable DDC (digital down conversion). The E2V EV12DS400 DAC provides 12-bit conversion at rates of up to 4.5 GSPS with output bandwidth up to 7 GHz.

The FMC215 has a trigger input which is routed to the FMC connector as well as to the ADC. The analog input/output, clock input and trigger inputs are routed via SSMC connectors.

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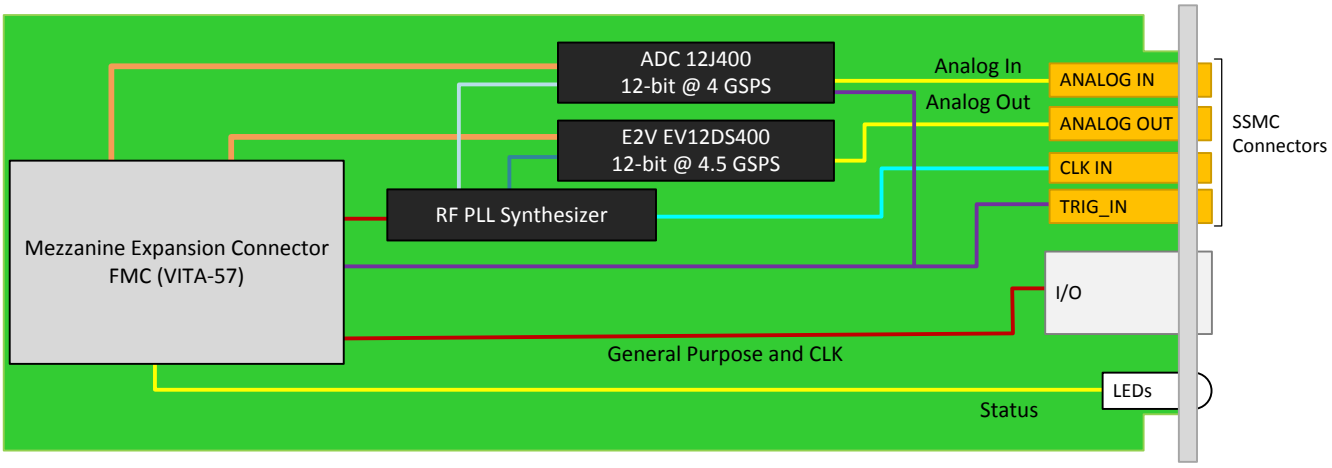
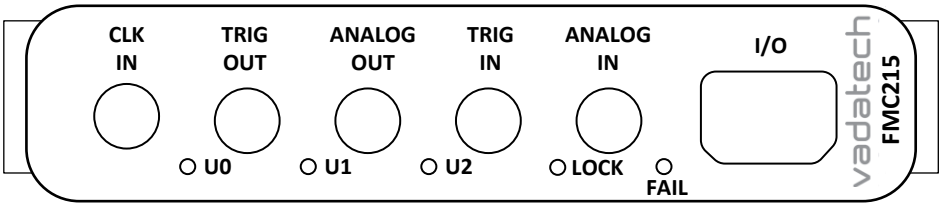
BLOCK DIAGRAM



FRONT PANEL



SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module
		Width 2.71" (69 mm)
		Depth 3.01" (76.5 mm)
Type	FMC	Single port ADC and single port DAC
		Single FMC slot
Standards		
FMC	VITA-57	ANSI/VITA 57.1-2008
Configuration		
Power	FMC215	6 W
Environmental	Temperature	Operating Temperature: -5° to 55° C (air flow requirements >400 LFM) Industrial and extended versions available
		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	5x SSMC and DisplayPort
	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

FMC215 – A00 – 000 – G0J

A = Front Panel TrigIn / TimeStamp
0 = TrigIn
1 = Timestamp

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

J = Temperature Range and Coating
0 = Commercial (–5° to +55° C), No coating
1 = Commercial (–5° to +55° C), Humiseal 1A33 Polyurethane
2 = Commercial (–5° to +55° C),Humiseal 1B31 Acrylic
3 = Industrial (–20° to +70° C), No coating
4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane
5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic
6 = Extended (–40° to +85° C), Humiseal 1A33 Polyurethane**
7 = Extended (–40° to +85° C), 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

AMC516 Virtex-7 FPGA

AMC532 Altera FPGA

FMC210 ADC 10-bit 2.6 GSPS

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