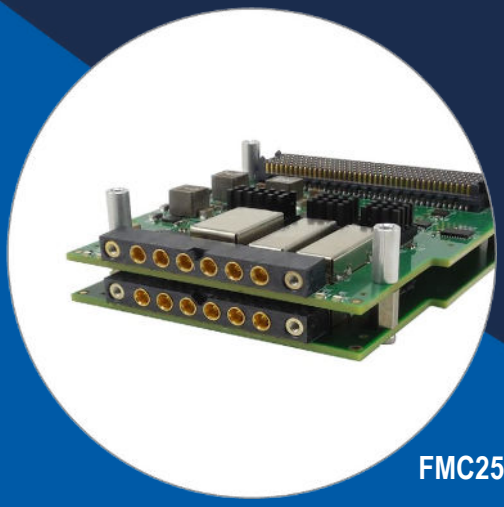
FMC255

High-Speed High-Density DAC with 8 ADC, FMC



FMC255

Key Features

- Dual LTC2107 ADC 16-bit at 210 MSPS
- Single LTC2000-16 DAC 16-bit at 1.25 GSPS
- Dual AD9653 ADC 16-bit at 125 MSPS (total of six channel routed to the front)
- Front-panel clock and trigger inputs
- I/O via Ganged Micro RF connector

Benefits

- High-density signal conversion module
- Compact industry standard form factor
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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FMC255

The FMC255 is a high-density ADC/DAC module.

Two LTC2107 each provide a single channel ADC, 16-bit at 210 MSPS, Dual AD9653 for total of six additional ADC, 16-bit at 125 MSPS and a single LTC2000-16 provides a single channel DAC, 16-bit at 1.25 GSPS. Clock source can be via the front panel.

The Module does not follow the VITA57 height constrain. It has an additional Daughter card that mates to the FMC module to allow it to accommodate the six ADC channels. For example, on the AMC FPGA FMC Carriers, it requires a full-height AMC panel to accommodate all the I/Os. The Carrier must have a monolithic panel (the FMC255 does not come with an FMC panel) to cover the FMC255 I/O envelope.

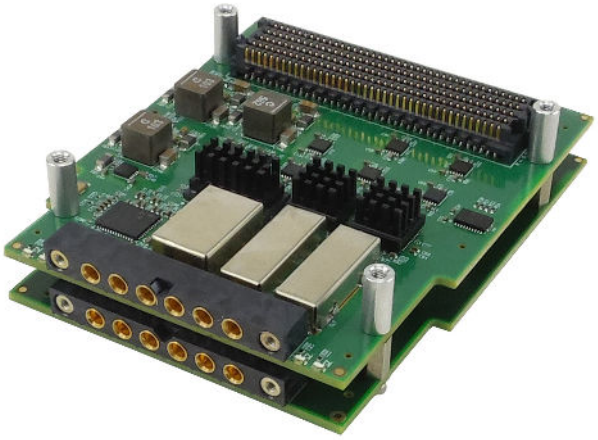
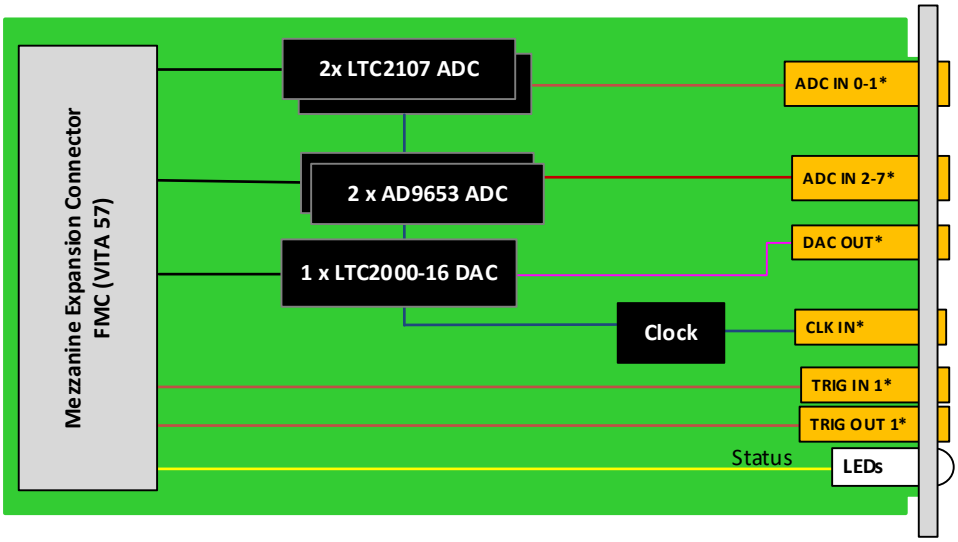


Figure 1: FMC255

Block Diagram



*All I/O are via high density RF connector

Figure 2: FMC255 Functional Block Diagram

Specifications

Architecture		
Physical	**Dimensions**	Single module
		Width: 2.71” (69 mm)
		Depth 3.01” (76.5 mm)
Type	**FMC ADC/DAC**	Dense ADC/DAC Combination
Standards		
FMC	**Type**	ANSI/VITA 57.1 - 2008
Configuration		
Power	**FMC255**	TBD
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s^2 (1G), 5 to 500 Hz on each axis
	Shock	Operating 30Gs each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	High Density RF I/O connector
	LEDs	User defined
Software Support	**Operating System**	Not applicable
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 ISO9001:2015 and AS9100D standards	
Warranty	Two (2) years, see VadaTech Terms and Conditions	

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), 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

FMC255 – A00-000-00J

A = LTC2107 Front End RF Input		
0 = 5MHz < FIN < 70MHz 1 = 70MHz < FIN < 180MHz 2 = Reserved		
		J = Temperature Range and Coating
		0 = Commercial (–5° to +45°C), No coating 1 = Commercial (–5° to +45°C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +45°C), Humiseal 1B31 Acrylic 3 = Reserved 4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic

Related Products

AMC516

- AMC FPGA carrier for FMC per VITA 57
- Xilinx Virtex-7 690T FPGA in FFG-1761 package with optional P2040
- Supported by DAQ Series™ data acquisition software

AMC530

- Altera Stratix IV Device EP4S100Gx in 1517 pin count (40 mm x 40 mm)
- Onboard PLL for buffering/multiplying and jitter cleaner
- Three banks of QDR-II+ each 72-bit wide

FMC210

- FPGA Mezzanine Card (FMC) per VITA 57
- Single ADC EV10AS150B @ 2.6 GSPS
- 5 GHz Full Power Input Bandwidth (–3dB)

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