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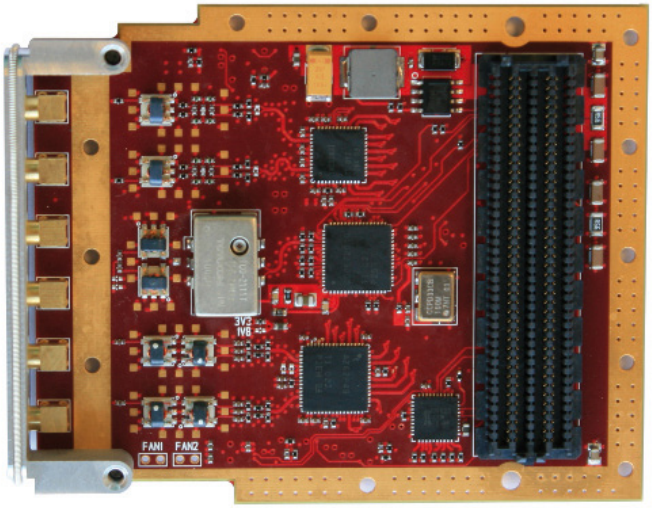
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FMC150
Dual 14-bit A/D & Dual 16-bit D/A

Dual 14-bit A/D & Dual 16-bit D/A

FEATURES:

- Quad Channel Operation
  - 2-channels 14-bit A/D up to 250 Msps
  - 2-channels 16-bit D/A up to 800 Msps
- VITA 57.1-2010 compliant
- Conduction Cooled - Standard Option
- Single ended AC-coupled analog signals
- 6 MMCX/SSMC connectors available from the front panel
- Clock Source, Sampling Frequency, and Calibration settings through SPI communication busses
- Flexible clock tree enables:
  - internal clock source (VCXO)
  - external sampling or reference clock
- Power-down modes to switch off unused functions for system power savings
- Mil-I-46058c Conformal Coating Compliant (optional)
- LPC (low-pin count) compatible
- LVDS and 1.65V to 3.3V IO signalling

The FMC150 is a dual channel A/D and dual channel D/A FMC daughter card. The card provides two 14-bit A/D channels and two 16-bit D/A channels which can be clocked by an internal clock source (optionally locked to an external reference) or an externally supplied sample clock. In addition there is one trigger input for customized sampling control. The FMC150 daughter card is mechanically and electrically compliant with FMC standard (ANSI/VITA 57.1).

The LPC (low-pin count)-compatible FMC150 has front panel I/O and can be used in conduction-cooled environment. The design is based on TI's ADS62P49 dual channel 14-bit 250Msps ADC and TI's DAC3283 dual channel 16-bit 800Msps DAC. The analog signals are AC coupled connecting to MMCX or SSMC coax connectors on the front panel.

The FMC150 allows flexible control on clock source, analog input gain, and offset correction through serial communication busses. Furthermore the card is equipped with power supply and temperature monitoring and offers several power-down modes to switch off unused functions, reducing system level power and heat and is well suited for software defined radio (SDR), battery or other low power source applications. This is ideal for applications such as airborne where power demand effects mission range and on-station mission time.

ANSI/VITA 47	Air-cooled		Conduction-cooled	
	EAC4	EAC6	ECC1	ECC4
Operating temperature	0C to +55C	-40C to +70C	0C to +55C	-40C to +85C
Storage temperature	-40C to +85C	-50C to +100C	-40C to +85C	-55C to +105C
Humidity	95%	95%	95%	95%
Operating vibration	5Hz to 100Hz PSD = 0.04g2/Hz 100 Hz to 1000 Hz PSD = 0.04 gs^2/Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave	5Hz to 100H PSD = 0.04g2/Hz 100 Hz to 1000 Hz PSD = 0.04 gs^2/Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave	5 Hz to 100 Hz PSD increasing at 3 dB/ octave 100 Hz to 1000 Hz PSD = 0.1 g2/Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave	5 Hz to 100 Hz PSD increasing at 3 dB/ octave 100 Hz to 1000 Hz PSD = 0.1 g2/Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave
Operating shock	20g, 11 millisecond, half-sine or 20g, 11 millisecond, terminal sawtooth shock pulses in all three axes	20g, 11 millisecond, half-sine or 20g, 11 millisecond, terminal sawtooth shock pulses in all three axes	40g, 11 millisecond shock half-sine or 40g, 11 millisecond, terminal sawtooth shock pulses in all three axes	40g, 11 millisecond shock half-sine or 40g, 11 millisecond, terminal sawtooth shock pulses in all three axes
Operating altitude	-1500 ft to 60,000 ft (with airflow)	-1500 ft to 60,000 ft (with airflow)	-1500 ft to 60,000 ft	-1500 ft to 60,000 ft
Conformal coating	Optional	Optional	Optional	Optional

abaco SYSTEMS

FMC150 Dual 14-bit A/D & Dual 16-bit D/A *Dual 14-bit A/D & Dual 16-bit D/A*

Specifications

Application

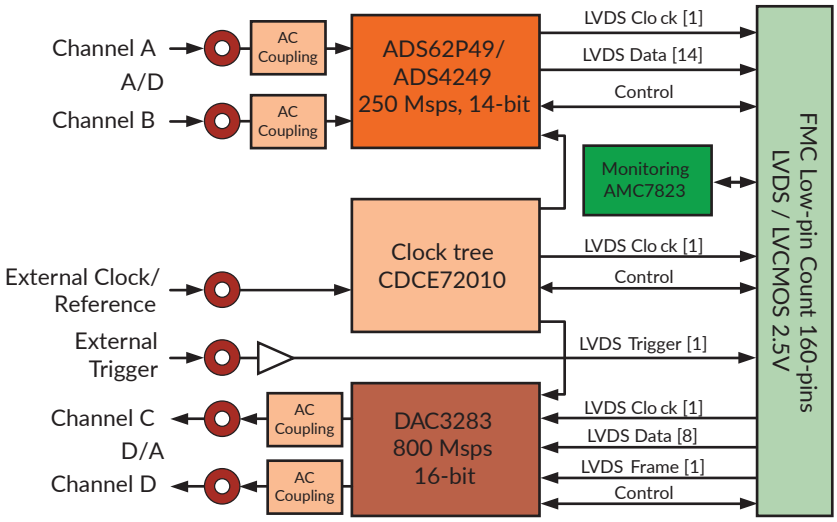
- Direct RF Down Conversion
- Software defined radio (SDR)
- RADAR/SONAR
- Ultra Wideband Satellite Digital Receiver
- Medical equipment
- Aerospace and test instrumentation

Support

- Stellar IP available for this product. A simple way to design FPGA firmware with automated code and bitstream generation.
- Reference firmware design (VHDL)
- Reference designs available for multiple FPGA carriers
- User Manual

AS9100 Certified

Block diagram



Ordering information

Talk to us about your algorithmic requirements, Abaco Systems is a full-service firmware and software development house. We are a specialist at high performance FFT and Video Processing. Check with us, we may have IP Cores that meet requirements for your application, right off the shelf.

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