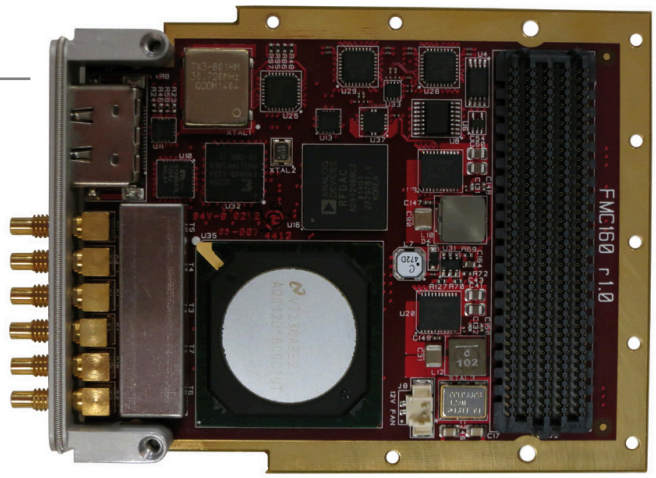


FMC160: FMC VITA 57.1 Compliant

Single channel 12-bit 3.6Gsps A/D and 14-bit 5.7Gsps D/A

FEATURES:

- One ADC12D1800: Single channel 12-bit 3.6Gsps
- One AD9129: Single channel 14-bit D/A up to 5.7 Gsps (2.85Gsps without 1:2 interpolation) - LVDS
- VITA 57.1-2010 compliant
- Conduction Cooled - Standard Option
- Single ended AC-coupled analog signals
- 6 MMCX/SSMC connectors available from the front panel
- 4 LVTTL signals available from an HDMI connector on the front panel
- 4 Xilinx MGT available from an HDMI connector on the front panel
- Clock Source, Sampling Frequency through SPI communication busses
- Flexible clock tree enables:
  - on board VCO: 2200MHz - 4400MHz
  - external reference clock
  - external sampling clock
- Power-down modes to switch off unused functions for system power savings
- Mil-I-46058c Conformal Coating Compliant (optional)
- HPC (high-pin count) compatible
- LVDS IO signaling X

The FMC160 provides one 12-bit A/D channel at 3.6Gsps and one 14-bit D/A channel at 5.7Gsps (2.85Gsps direct RF synthesis) clocked by either an internal clock source (optionally locked to an external reference) or an externally supplied sample clock. In addition, a trigger input for customized sampling control is available to users. The FMC160 daughter card is mechanically and electrically compliant to the FMC standard (ANSI/VITA 57.1).

The HPC (high-pin count)-compatible FMC160 has front panel I/O and can be used in a conduction-cooled environment. The design is based on Texas Instruments' ADC12D1800 Analog-to-Digital converter and Analog Devices' AD9129 Digital-to-Analog converter. The analog signals are AC coupled connecting to MMCX or SSMC coax connectors on the front panel.

The FMC160 allows flexible control on clock source 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 in order to reduce system level power consumption. It is well suited for low power applications such as airborne where the highest level of performance is required while ensuring that mission range does not get affected.

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

FMC160: FMC VITA 57.1 Compliant *Single channel 12-bit 3.6Gsps A/D and 14-bit 5.7Gsps D/A*

Specifications

Application

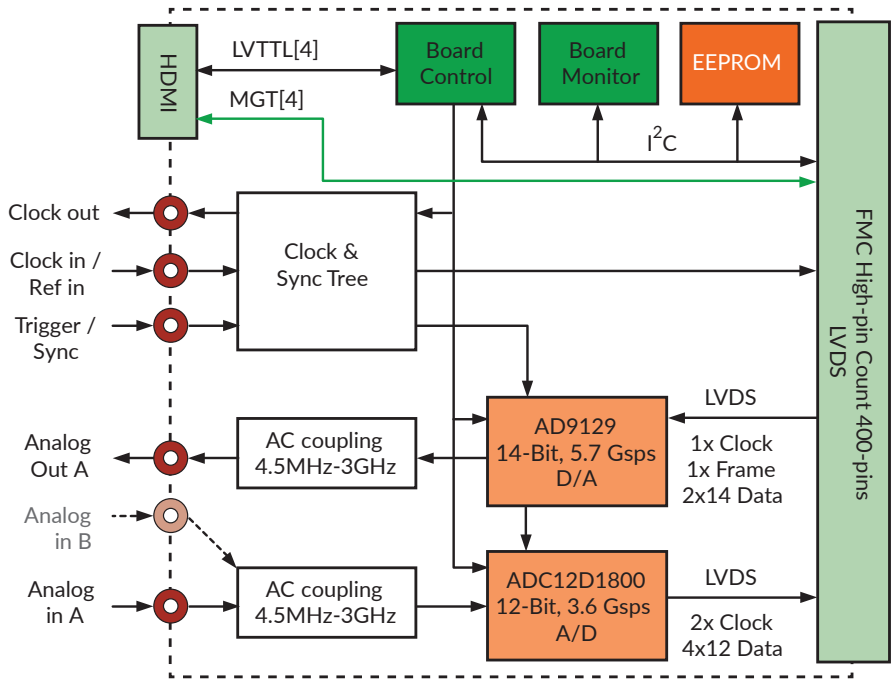
- Direct RF Down Conversion
- Software defined radio (SDR)
- RADAR/SONAR
- Ultra Wideband Satellite Digital Receiver
- Medical equipment
- Aerospace and test instrumentation

Support

- Stellar IP available for this product. A simple way to design FPGA firmware with automated code and bitstream generation.
- Can be used on any VITA 57.1 compliant carrier card
- For support, please visit our support forum www.abaco.com/forum

AS9100 Certified

Block diagram



Ordering information

Build your part number online on the product page http://www.abaco.com

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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