FMC VITA 57.1 Compliant

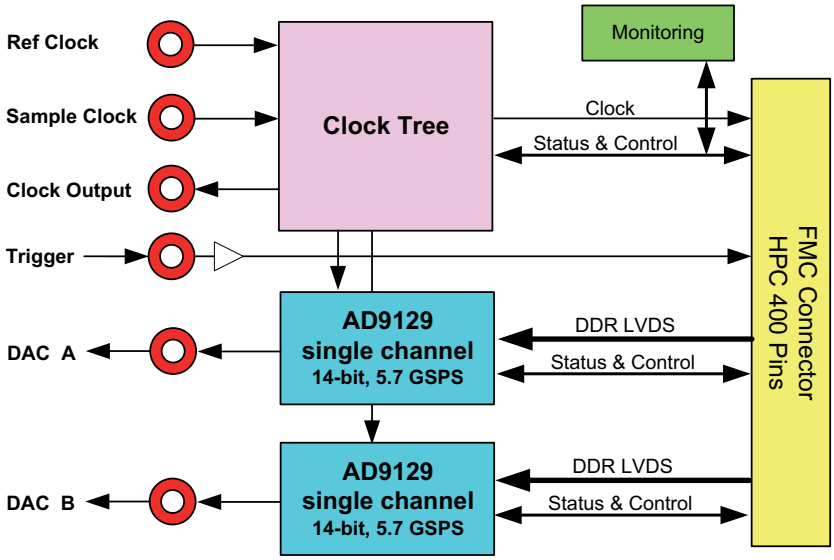
Dual 14-bit 5.7Gsps D/A

Description

The FMC230 is a dual channel DAC FMC with a very wide band. The two 14-bit D/A channels operate at 5.7Gsps (2.85Gsps direct RF synthesis) and are 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 FMC230 daughter card is mechanically and electrically compliant to the FMC standard (ANSI/VITA 57.1).

The FMC230 has a high-pin count connector, front panel I/O, and can be used in a conduction cooled environment. The design is based on Analog devices' AD9129 single channel 14-bit 5.7Gsps Digital-to-Analog converter. The analog signals are AC coupled connecting to MMCX or SSMC coax connectors on the front panel.

The FMC230 allows flexible control on clock source and D/A features 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.



Features

- Two AD9129: 2-channel 14-bit D/A up to 5.7 Gsps (2.85Gsps without 2:1 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
- Clock Source, Sampling Frequency, and Calibration through an SPI communication busses
- Flexible clock tree enables:
  - onboard VCO: 2300MHz - 2650MHz
  - 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 Connector
- LVDS IO signaling

Support

- Stellar IP available for this product. A simple way to design FPGA firmware with automated code and bitstream generation
- Reference firmware design (VHDL)
- KC705 reference design soon available
- VC707 reference design soon available
- Fully supported on the 3U cPCI FC6301 and 3U VPX VP680
- Can be used on any VITA 57.1 compliant carrier card
- Reference ISE project for Virtex-7 and Kintex-7
- For support, please visit our support forum *4dsp.com/forum*

www.4dsp.com/FMC230

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FMC230

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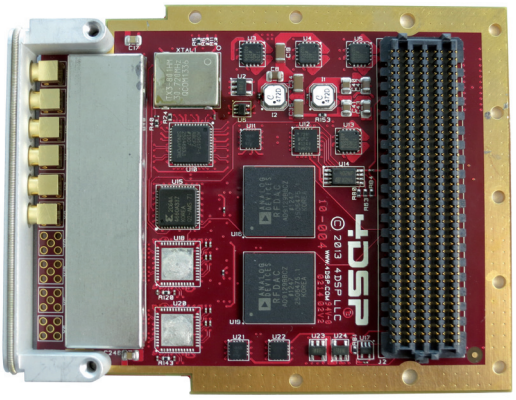
Application

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



Ordering information

Build your part number online on the product page
http://www.4dsp.com/part_num/fmc15x.html?id=230

	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

Talk to us about your algorithmic requirements, 4DSP 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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