

FMC110 high pin count FMC ADC DAC

12-bit ADC & 16-bit DAC - 1 Gsps

The FMC110 is a dual channel A/D and dual channel D/A FMC daughter card. The FMC110 provides two channels of 12-bit A/D @ 1 Gsps and two channels of 16-bit D/A @ 1 Gsps enabling simultaneous sampling at a maximum rate of 1 Gsps. The sample clock can be supplied externally through a coaxial connection or supplied by an internal clock source (optionally locked to an external reference). Additionally a trigger input for customized sampling control is available. The FMC110 daughter card is mechanically and electrically compliant to FMC standard (ANSI/VITA 57.1). The high-pin count (HPC)-compatible card has front

panel I/O and can be used in a conduction-cooled environment as well as a conventionally (air) cooled environment. The FMC110 allows flexible control on clock source, sampling frequency, and calibration through an serial communication bus. The FMC110 card is equipped with power supply and temperature monitoring with several power-down modes to switch off unused functions, reducing system level power and heat, 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 = 0.04g ² /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 = 0.04g ² /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 g 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 g ² /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

FEATURES:

- Dual - A/D - D/A Channel Operation
 - 2-channels 12-bit 1.0 Gsps A/D
 - 2-channels 16-bit 1.0 Gsps D/A
- VITA 57.1-2010 compliant
- Conduction Cooled - Standard Option
- LVDS and 1.65V to 3.3V IO signalling
- Single ended AC-coupled analog input
- Clock Source, Sampling Frequency, and Calibration through an SPI communication bus
- Flexible clock tree enables:
 - internal clock
 - external clock
 - internal clock with external reference
- Mil-I-46058c Conformal Coating Compliant (optional)
- 6 Front panel SSMC connectors
- 4 Rocket I/O pairs and 4 LVTTTL lines available on the front panel

FMC110 high pin count FMC ADC DAC 12-bit ADC & 16-bit DAC - 1 Gsps

Specifications

Application

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

Support

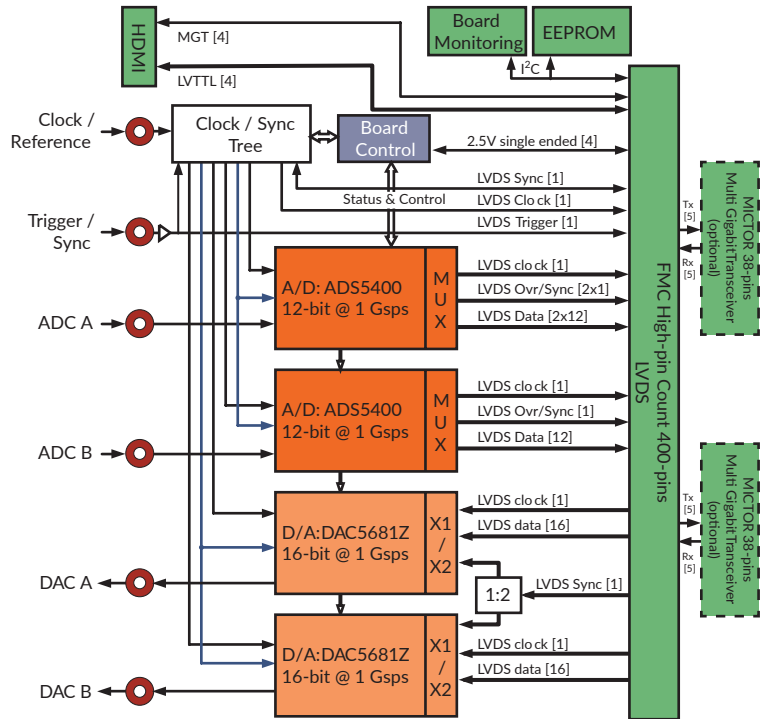
- Stellar IP available for this product. A simple way to design FPGA firmware with automated code and bitstream generation
- ML605 reference design available
- User Manual
- Reference firmware design (VHDL)
- Reference ISE project for Virtex-6

Support

- User Manual
- Reference firmware design (VHDL)
- Reference ISE project for Virtex-6
- Email support (support@abaco.com)

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.



WE INNOVATE. WE DELIVER. YOU SUCCEED.

Americas: 866-OK-ABACO or +1-866-652-2226 Asia & Oceania: +81-3-5544-3973

Europe, Africa, & Middle East: +44 (0) 1327-359444

Locate an Abaco Systems Sales Representative visit: abaco.com/products/sales

abaco.com @AbacoSys

©2016 Abaco Systems. All Rights Reserved. All other brands, names or trademarks are property of their respective owners. Specifications are subject to change without notice.

