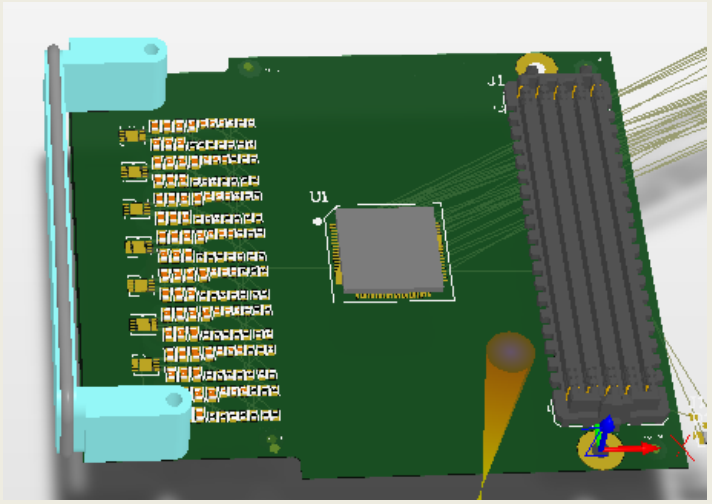
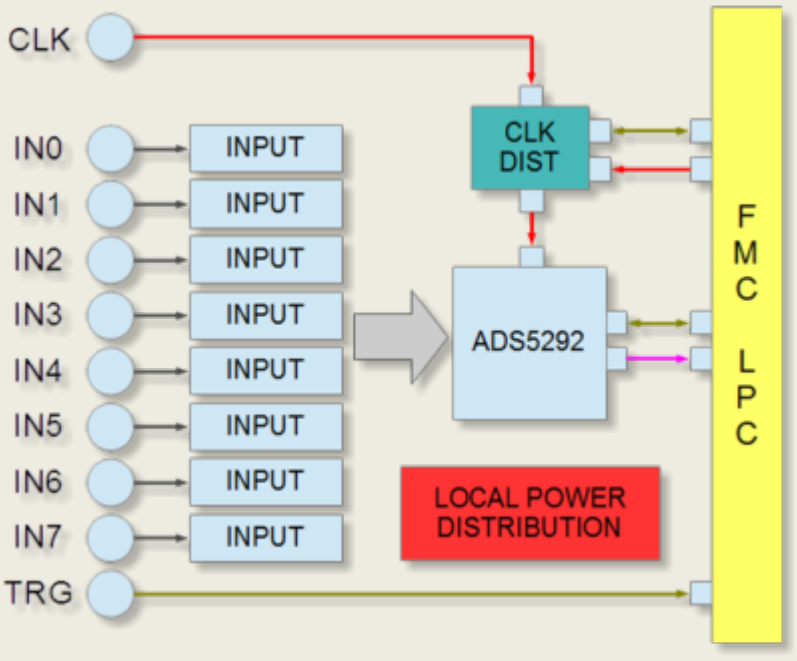
EFMC-D081 eight channel 80MHz digitizer

General Description:

The EFMC-D081 is an octal channel A/D FMC daughter card. The card is equipped with eight 12 bit A/D channels, which can be clocked either by an externally supplied sample clock or FMC clock. In addition there is one trigger input for customized sampling control. The EFMC-D081 daughter card is mechanically and electrically compliant to FMC standard (ANSI/VITA 57.1).It has a low-pin-count (LPC) connector and front panel I/Os. The design is based on Texas Instruments' ADS5292 - octal channel 12bit 80MSPS ADC. The analog signals are DC coupled connecting to MMCX (SSMC is an option) coax connectors on the front panel. The EFMC-D081 allows flexible control over clock source, analog input gain, and offset correction through serial communication interface. Furthermore the card is equipped with power supply and temperature monitoring.

Block Diagram:





eicSys GmbH, Sylvesterallee 2, 22525 Hamburg
Tel. 040-53339984; email: contact@eicsys.eu

Description		
Architecture		
Physical	Dimensions	69 x 76.5 mm FMC – VITA57.1
Standards	FPGA Mezzanine Card	IPMI Version 2.0, MMC V1.0 compatible
Compatibility	Compatible AMC products	Class D1.0 ERTM-D102; EAMC-FMC500
Configuration		
Electrical Properties	Power Consumption	<50 Watts
Dataconverter	Texas Instruments, ADS5292 analog to digital converter: **Maximum Sample Rate: 80 MSPS Resolution: 12Bit**	
Connectivity		
Frontpanel	Front panel inputs – MMCX (SSMC special option): • 8 x analog channel • 1 x clock • 1 x trigger	
Clock Distribution	The board is equipped with dedicated clock distribution unit. The reference clock can be sourced from a front panel connector or FMC connector. The clock is distributed to all crucial elements of the system.	
Communication Links	Standard connection to LPC FMC connector: • LVDS lines for data, • COMC for control signals For LVDS lines the expected transfer rate is 960 Mbps/pair (480 Mbps/pair DDR). The user must ensure that FMC carrier used in the application is capable of receiving such data stream.	
Other Features		
Onboard	Voltage and current monitor Clock monitoring	With current monitoring Yes, readout via IPMI Yes, readout via IPMI IPMI management control
Environmental	Operating temperature Storage temperature Relative humidity Weight	0 – 50°C -40 – 85°C 5 to 90%, non-condensing 0.2 kg

Developed by

eicSys GmbH **Hamburg**

eicSys GmbH, Sylvesterallee 2, 22525 Hamburg
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