

**MAD68****3U CompactPCI® Analog I/O**

- CompactPCI® PICMG 2.0 Rev. 3.0
- 4 analog input channels
- Resolution 16-bit
- Isolation 2 kV to systemA

The MAD68 is a standard single-width (4HP) 32 bit 3U CompactPCI® module and provides 4 channels of 16 bit analog inputs. Nominal ADC sampling rate 84 MHz

It supports immediate and simultaneous load. The sequencer allows update of enabled channels periodically and the sequence timer range extends from 100us to 6.5s.

Digital signal processing module is built on FPGA Kintex UltraScale XCKU040-2FBVA676I from Xilinx. The programmable input voltage range is 0.6...1.2V selectable by software. Each MAD68 is calibrated factory. The calibration information is stored in the Identification-PROM unique of each module. The ADC must be able to be clocked from an external 84 MHz source.

# Technical Data

## Compact PCI Interface

- PICMG 2.0 Rev. 3.0 compliant, 32 Bit address/data/33MHz

## Analog Inputs

- Number of channels: 4
- Resolutions: 16-bit
- Maximum frequency of conversion: 84 MHz
- Basic Accuracy (INL): +/- 1 LSB
- Input Voltage Range: 0.6..1.2V
- Input Current Range: 0.. 20 mA
- Isolation: 2 kV to system

## Features

- FPGA Kintex UltraScale XCKU040-2FBVA676I from Xilinx
- 2 GB DDR3-1600 soldered SDRAM with ECC
- 256 MB QSPI Flash
- JTAG interface for FPGA programming

## Miscellaneous

- CompactPCI J2 are assembled for rear I/O

## Electrical Specifications

- Supply voltage/power consumption:
  - +5V (-3%/+5%), 100mA max.
  - +3.3V (-3%/+5%), 300 mA max.

## Mechanical Specifications

- Dimensions: conforming to CompactPCI specification for 3U boards
- Weight: 200g

## Environmental Specifications

- Temperature range (operation): -40..+85°C
- Temperature range (storage): -40..+85°C
- Relative humidity (operation): max. 95% non-condensing
- Relative humidity (storage): max. 95% non-condensing
- Altitude: -300m to + 3,000m
- Shock: 15g/11ms
- Bump: 10g/16ms
- Vibration (sinusoidal): 2g/10..200Hz
- Conformal coating on request

## MTBF

300 000 h @ 40°C (derived from MIL-HDBK-217F)

## Software Support

- Windows® (Windows® XP, Windows® 7), Linux

# Block Diagram

in the process of development

# Pin Assignment - I/O Connector

in the process of development

# Order Information

## **MAD68-CPCI**

**ADC with programmable operation logic.**

**3U 4HP Compact PCI**

## **MAD68-CPCIS**

**ADC with programmable operation logic.**

**3U 4HP CompactPCI Serial.**

# Contact Information

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