

Features

- 8 analog inputs A/D converter
- 16-bit resolution
- Simultaneously sampling
- High throughput 200 ksps
- 8 Channels SE or 4 pseudo differentials inputs
- True bipolar inputs
- Voltage ranges: ± 5 V, ± 10 V
- Analog Input Clamp Protection
- 1M Ω Analog input impedance
- Programmable 2nd order Anti-alias Filter
- Over-sampling capability with digital filter
- 8Kx16 dual-ported SRAM
- PCI Express compliant



MADC-1816 offers simultaneously sampling A/D architecture with 8 single-ended or 4 differential analog input channels. All channel features programmable gain 1 or 2 and can program to handle analog input with a single-ended or differential configuration.

The acquisition can be started by the host or by an on-board sequencer that uses a channel list to specify which channel to acquire. A local 8Kx16 but dual ported SRAM stores the acquisition data. Memory pointers can be selected to limit the number of scans gathered, as well as the control of interrupt generation.

The 16-bit A/D converters can provide a global acquisition and conversion time of $\leq 5\mu\text{sec}$ per sample per channel.

The board offers a programmable digital filter: using ± 5 V range, the -3 dB frequency is typically 15 kHz. With the ± 10 V range, the -3 dB frequency is typically 23 kHz.

Applications

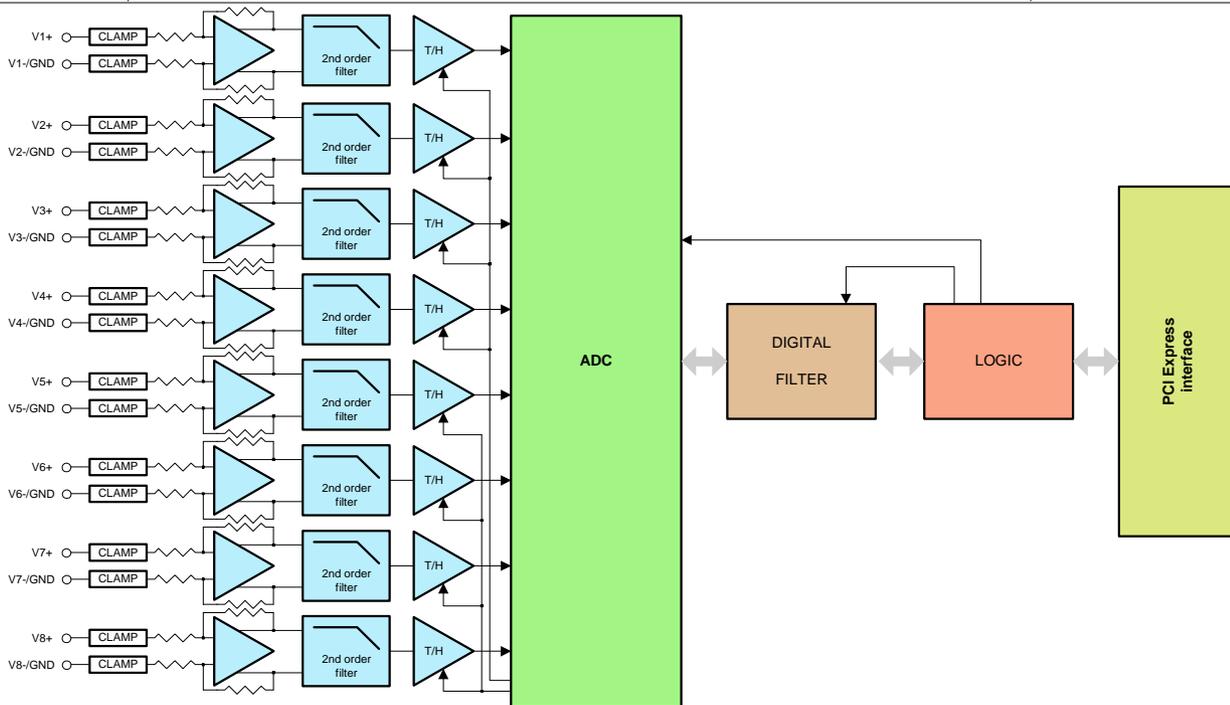
This board is optimally suited for the following application domains:

- Process control
- Industrial control
- Precision instrumentation
- Data acquisition systems (DAS)
- Multi-axis positioning systems

Software

Both Linux and Windows drivers are available.





Analog Acquisition Specification

- 16-bit, charge redistribution SAR, A/D converter
- Hardware factory-calibrated and tested to ensure SNR and THD are within specifications
- Gain, offset, and linearity are also factory-calibrated
- Throughput 200 KSPS
- INL: ± 0.5 LSB Max with no missing code
- 95.5 dB SNR, -107 dB THD
- Analog input voltage ranges, bipolar: ± 10 V, ± 5 V
- 7 kV ESD rating on analog input channels
- No pipeline delay

Environmental

Industrial	-40 to +85°C
Airflow requirement	5 CFM
Non-operating	-60 to +120°C
Relative Humidity	5 to 90 % (non-cond.)
Altitude	0 to 10,000 ft
Vibration	0.5G, 20-2000 Hz rand
Shock	20G, 11 msec, ½ sine
MTBF	>250,000 hours

Mechanical specification

Size	Mini PCIe card 30 mm x 50.95 mm
I/O	On front panel
Weight	TBD

Power Requirements

+3.3V	TBD A typ
-------	-----------

ACTIS Computer SA

42 Route de Satigny
CH – 1217 Meyrin, Switzerland
Tel: +41 (22) 706 1830
Fax: +41 (22) 794 4391

ACTIS Computer Inc

1898 E. Southern Ave.
Tempe, Arizona 85282, USA
Tel: (480) 838 1799
Fax: (480) 838 4477

ADVISE Engineering

57 bis Boulevard des Alpes
38240 Meylan, France
Tel: +33 (7) 61 10 10 20

For ordering information, please visit our web site at www.actis-computer.com