

## Summary

The AD-48ADM16 offers a mix of up to 48 single ended or 24 differential multiplexed analog input channels. Each channel features programmable gain and can be individually programmed as single-ended or differential.

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 and a local 128 Kbyte dual ported SRAM to store the acquisition data.

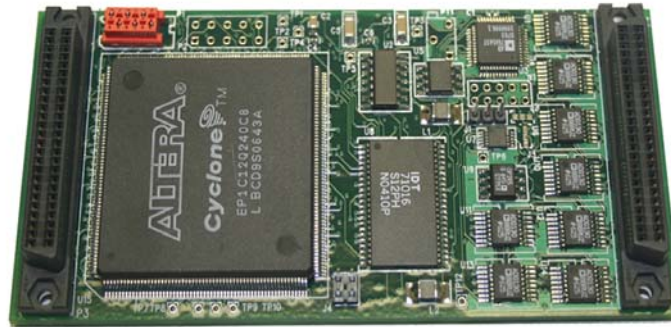
The A/D converter can provide a global acquisition and conversion time of less than 2  $\mu$ s per sample per channel. With channel and/or gain change, the acquisition time increases to less than 8  $\mu$ s.

The programmable internal sample clock offers sampling rates between 2  $\mu$ s and 32 seconds intervals.

Interrupts are associated with a selectable level of data in the sampling memory allowing continuous sampling and optimum reads of the data ram.



## High Density 48 channel, 16 bit A/D Converter



**IP-AD48M-16**

### Features

- Mix of up to 48 single-ended or 24 differential channels
- On-board voltage reference
- Fault and Over-voltage Protected (-40 V, + 55 V) multiplexer
- 1 MSPS 16-bit A/D converter
- Software programmable single-ended (SE) or differential (DIFF) input and gain for each channel
- Input Ranges: -  $\pm$ 10V,  $\pm$ 5V,  $\pm$ 2.5V,  $\pm$ 1.25V using a software programmable gain amplifier
- Additional jumper selectable gain from A/D converter(1-2-4-8)
- Acquisition time  $\leq$  2  $\mu$ s without gain and channel change
- Internal sequencer with channel list for acquisition of selected channels
- 64k x 16 Data dual ported storage SRAM
- DMA capable
- Programmable Interrupt
- Flash EEPROM for gain/offset correction data
- On board input switches for offset or gain calibration

### Applications

- Process Control and Industrial Automation
- Precision Instrumentation

- Automatic Test Equipment

### IP interface

- Compatible with Industry Pack Bus specification
- Identification EEPROM
- 8/32 MHz clock
- 16-bit data

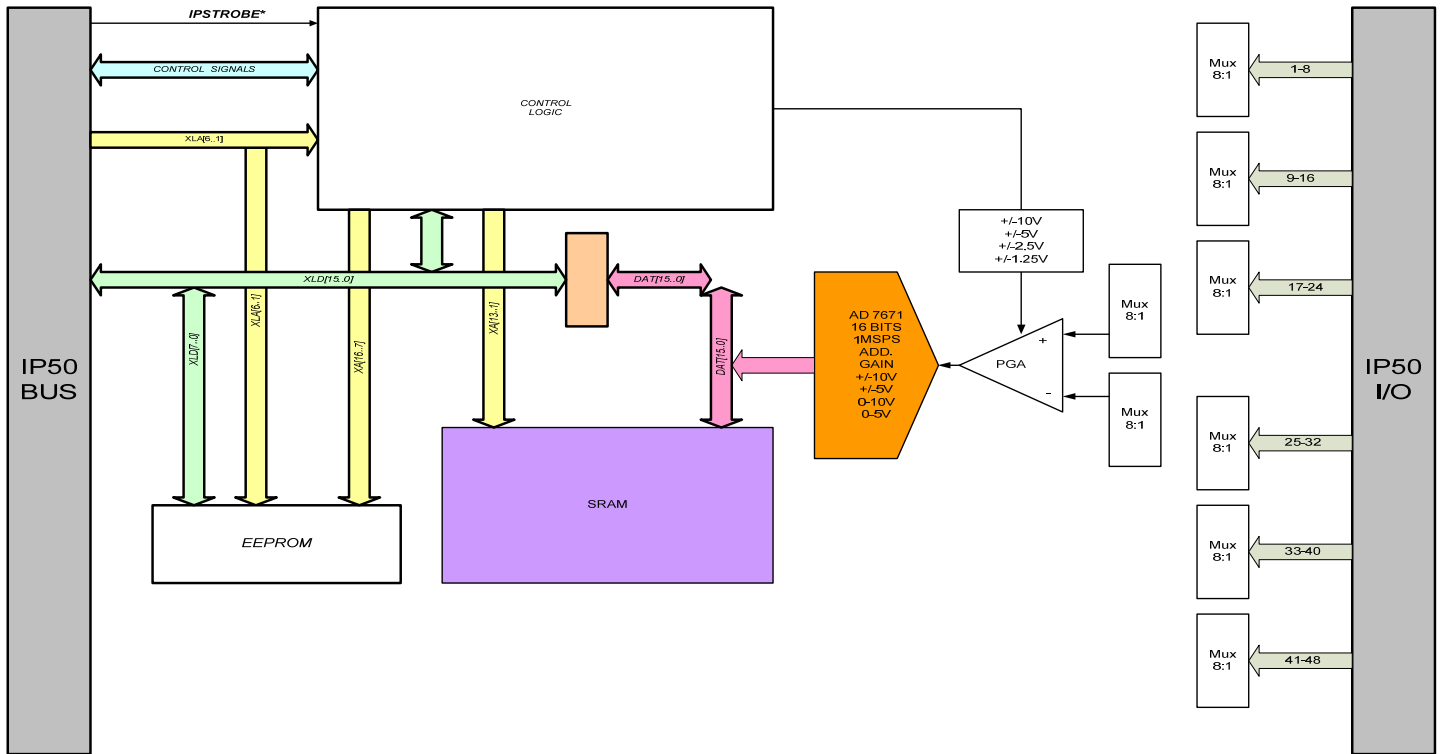
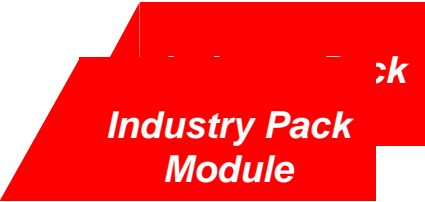
### Operating: Environmental

- Operating temperature  
 Commercial: 0 to +70 °C  
 Optional: -25°C to +80°C
- Non-operating: -40°C to 85 °C
- Airflow requirement: .5 CFM
- Humidity: 5 to 90% (non-condensing.)
- Altitude: 0 to 10'000 ft

### Mechanical: Environmental

- Size: Single size Industry Pack: Vita 4 Type 1 IP  
 1.8" x 3.9"
- Power: tbd
- Vibration: 0.5G RMS  
 20-2000 Hz rand
- Shock: 20 G, 11 ms, 1/2 sine
- Weight: tbd
- MTBF: >110000 hours

# IP-AD48M-16



Functional Block Diagram

<b>ORDERING INFORMATION</b>	
Part Number:	IP-48ADM16 48 channel 16 bit A/D Industry Pack Module IP-8ADM16 8 channel 16 bit A/D Industry Pack Module IP-48ADM16-I Same as above with -40 to +85 C
<b>Optional Accessories</b>	
Part Number:	TB-50-HDR 50 pin terminal block and 1meter flat ribbon cable CBL-50-HDR 50 pin, 1meter flat ribbon cable, IDC header connector

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