ISA Analog Input Board

ISO-AD32

32-channel 12-bit 200KS/s isolated analog input board



Features

- 32 single-ended or 16 differential input channels
- 500VDC photo-isolation protection
- 12-bit resolution
- Maximum 200KHz sampling rate
- Built-in 1K bytes FIFOs
- Single-ended or differential input selectable
- Auto channel scan / gain scan
- Command set programming
- Gap-free A/D conversion

Functional Description

The ISO-AD32H/L (H for high gain; L for low gain) is a bus-type isolated 12-bit A/D board for PC/AT compatible computers. The isolation inputs can operate up to 500Vrms of common-mode voltage.

The ISO-AD32H/L features a 200KHz 12-bit analog-to-digital converter, on board 1 K bytes FIFO buffer, 32 single-ended or 16 differential analog input channels.

The analog input allows auto-channel /gain scan. This board supports gap-free A/D conversion at 200KHz sampling rates for single channel or 100KHz sampling rates for channel scanning.

The "Hands-Off" design permits all board parameters (channel selection, gain, input type, operating mode) to be performed in software. Once installed, user will never have to worry again.

The innovative design improve several drawbacks of the conventional isolated A/D card. Such as:

1. The speed is faster; up to 200KHz
2. The sampling rate can be programmable
3. On board FIFOs buffer support gap-free A/D conversion and work well under DOS and Windows environment
4. High channel count input can be implemented in half size board.

Applications

- Data acquisition
- Waveform analysis
- Harsh environment operation
- Signal isolation

Specifications

Analog Input

- Number of channels: 32 single-ended/16 differential
- Resolution: 12-bit
- ADC conversion rate: 200KS/s max
- Input impedance: 10,000MΩ II 6pF
- Over voltage protection: ±35V
- Accuracy: 0.01% of reading ±1 bit
- Linearity: ±1 bit
- On chip sample & hold
- Zero drift: ±25ppm/ °C of F.S. max

ISO-AD32H Input Range

Gain	Bipolar(V)	Unipolar(V)	Sampling Rate (Max.)
0.5	±10	X	125KS/s
1	±5	0~10	125KS/s
5	±1	X	80KS/s
10	±0.5	0~1	80KS/s
50	±0.1	X	10KS/s
100	±0.05	0~0.1	10KS/s
500	±0.01	X	1KS/s
1000	±0.005	0~0.01	1KS/s

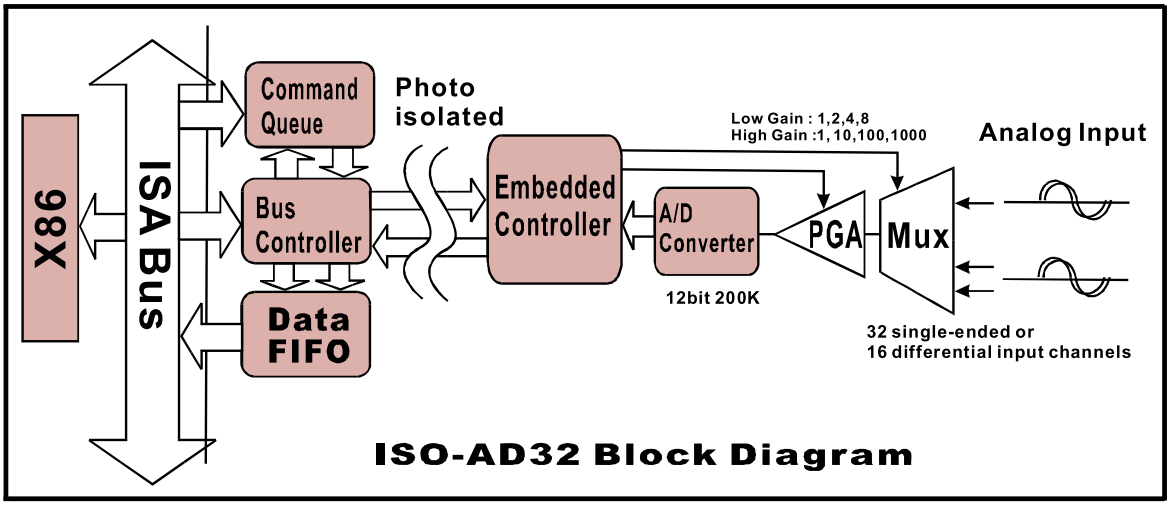
ISO-AD32L Input Range

Gain	Bipolar(V)	Unipolar(V)	Sampling Rate (Max.)
0.5	±10	X	200KS/s
1	±5	0~10	200KS/s
2	±2.5	0~5	200KS/s
4	±1.25	0~2.5	200KS/s
8	±0.625	0~1.25	200KS/s

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ISO-AD32 Block Diagram

General Specifications

- I/O connector: one 37-pin D-Sub female
- Power requirements: +5V @ 850 mA
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 70°C
- Dimensions: 173 mm x 122 mm

Ordering Information

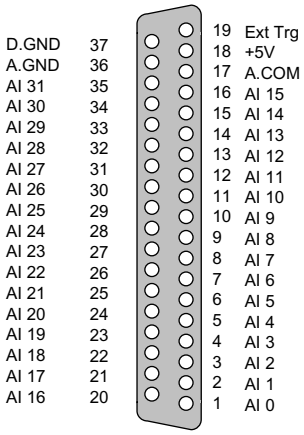
Standard

ISO-AD32H: 32-channel 12-bit 125KS/s high gain isolated analog input board
ISO-AD32H/S: ISO-AD32H with DN-37
ISO-AD32L: 32-channel 12-bit 200KS/s low gain isolated analog input board
ISO-AD32L/S: ISO-AD32H with DN-37

Optional

DN-37: 2x37-pin connector DIN-rail mounting terminal board
DB-1825: General screw terminal board
DB-37: 37-pin D-sub directly connector terminal board

Pin Assignment



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