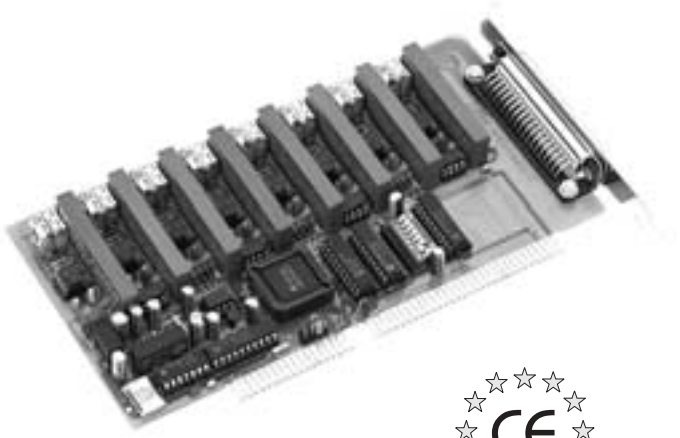

Isolated Data Acquisition Board Model AD 1285

Highlights

- 8 Analog Inputs With Sample & Hold
- 1500 V Channel To Channel Isolation
- 8 Bit / 12 Bit Resolution, 4.4/8.8µs
- 8/16 Bit Read/Write Acces
- FIFO-RAM 32 x 16 Bit
- Programmable Acquisition Times
- Meets EMV-Specifications

General

The data acquisition board model AD 1285 is an ISA-bus based data acquisition board with 8 analog input channels.
Main feature of this board is the 1500 V of channel-to-channel and channel-to-system isolation, eliminating trouble some ground loops and protecting the data acquisition system from damage caused by accidental contact with external high voltages.

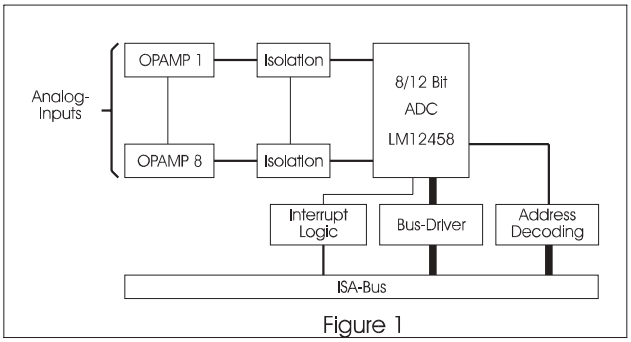

Figure 1

The block diagram of the data acquisition board model 1285 is shown in figure 1.
Each input is supplied with a filter. Additional each analog input is provided with an separate amplifier. By this way the model AD1285 can be delivered for measuring voltages from some mV to 125 V.
The analog-to-digital converter combines sample-and-hold and self-calibrating (correcting linearity and zero errors) modes.
The max. scanning rate is 88 k samples/s (optional 140). Up to 32 consecutive conversions, using two's complement format, can be stored in an 32-word (16-bit wide) FIFO data buffer.
An 8-word RAM can store the conversion sequence for up to eight acquisitions through the eight-input multiplexer.
The analog-to-digital converter can also operate with 8-bit resolution in a supervisory "watchdog" mode that compares an input signal against two programmable limits.

Programmable acquisition times and conversion rates are possible through the use of internal clock-driven timers.

Adressing

The BASE address is switch selectable and can be located anywhere up to $3FE_h$. Only 3 I/O addresses are used. This allows installing multiple boards in the same host at the same time.

Software

A disk is included with programming examples for Basic, Turbo Pascal, C, Visual Basic, 16 Bit DLL for Windows 3.1x, and 32 Bit DLL for Windows 95.

Technical Specifications

Analog Inputs	: 8 x differential 1500 V Channel-to-Channel And Channel-to-System Isolation
Interrupt	: IRQ 10, 11, 12 or 15
Voltage Isolation	: 1500 V
Resolution	: 8 Bit / 12 Bit
Conversion Time	: 4.4 / 8.8 µs
Optional	: 2.6 / 4.2 µs
Input Ranges	
Standard Ranges	:+/-2,5 V, +/-5 V, +/-10 V
Optional, Current Ranges	: 0 - 20 mA, 4 - 20 mA
Optional	: Customer Defined
FIFO	: 32 x 16 Bit
Supply Voltage	: +5 V, max. 0,5 A
Connector	: DB37-male
EMV	: EMV-conform with 89/336/EWG
Operating Temperature	: 0 - 50 °C
Storage Temperature	: - 25 to +85 °C
Dimensions	: 192 x 100 mm

Ordering Information

AD 1285/XXXXXXXX

Channel 7	Channel 0 bis 7:
Channel 6	0 =Without Channel
Channel 5	1 =Voltage: +/-10 V
Channel 4	2 =Voltage: +/-5 V
Channel 3	3 =Voltage: +/-2,5 V
Channel 2	4 =Current: 0 - 20 mA
Channel 1	5 =Current: 4 - 20 mA
Channel 0	