

PCI-730/726/725E

NEW

Analog & Digital I/O Boards

Low Noise | High Performance



Features

- 16 Single-Ended or 8 Differential A/D Channels
- 16 bit Analog Resolution
- 100kHz A/D Sampling Rate
- $\pm 10V$ Voltage Range
- 4x 16 bit D/A Channels (PCI-730)
- 24 (3x 8) DIO Channels (PCI-730/726)
- 3x 16 bit Counter/Timers (User) (PCI-730/726)
- 3 Interrupt Sources (PCI-730/726)
- 2048 FIFO buffer with programmable word count
- DB25M (A/D & D/A); IDC40 (DIO) Connectors
- Windows98/ME/2000/XP OS Support (NT on request)
- Linux OS Support
- WaveView for Windows Data Acquisition & Logging Software
- Labview, Testpoint and VEE Pro Drivers

Description

The **PCI-730E**, **PCI-726E** and **PCI-725E** are 16-bit data acquisition boards for the PCI-bus. Unlike other 16-bit products on the market, these feature extremely low noise performance,

They are multi-function I/O boards which feature both analog and digital I/O on the same board. Designed with university students in mind, the boards feature industry standard low cost connectors. This makes for easy connectivity, as the user does not have to purchase expensive SCSI cables or connectors.

Extremely compact, the PCI-730/726/725E features 16 single-ended or 8 differential 16-bit analog input channels with an overall sampling speed of 100KHz. Compared to other data acquisition boards, our board features four 16-bit analog output channels instead of the industry standard two. These are ideal for laboratory use as voltage references.

Typical applications include analog input streaming, voltage measurements, voltage reference outputs, analog and digital data logging, digital I/O for control of relays, frequency counter for event logging and much more.

Included with the PCI-730/726/725E is our free data acquisition package, WaveView for Windows which allows the user to start sampling as soon as the card is plugged in.

Specifications

ANALOG INPUTS (A/D)

Input Characteristics

Input Channels:	16 SE or 8 Differential
Input Ranges:	$\pm 10V$
Maximum Working Voltage:	$\pm 11V$ relative to module ground
Resolution:	16-bit
Input Coupling:	DC

A/D Conversion Characteristics

Max sampling rate:	100KHz
Relative Accuracy:	± 3 LSB maximum
A/D FIFO buffer size:	2048 samples
Input Impedance:	1M Ohm

ANALOG OUTPUT (D/A)

No of Channels:	4x 16-bit
Output Ranges:	$\pm 10V$
Full Scale Error:	± 2 LSB
Settling Time:	1mS to 0.1% of full scale 2mS to 0.015% of full scale
Output Drive:	$\pm 10V @ 5mA$
Power On State:	0V

DIGITAL I/O (DIO)

No of TTL I/O lines:	24
Logic Levels:	Input Low Voltage: -0.5V to 0.8V Input High Voltage: 2.0V to 5.0V Output High Voltage Min: 2.4V Output Low Voltage Max: 0.45V Maximum Output Current: 2mA

DIGITAL TRIGGER

Trigger Source:	External Trigger
Compatibility:	TTL
Pulse Width:	100nS

COUNTER/TIMERS

Number of Counters:	3 (16-bit resolution) (82C54/TTL)
Clock Source: Jumper Selectable	Scaled Internal up to 8MHz (External)
Gate Source: Jumper Selectable	Software Controlled (External)

External Interface

Connector Types:	DB25M (A/D & D/A), IDC40 (DIO & C/T)
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PCI Interface

Compliant:	PCI 2.2 Master & Slave 3.3V or 5.0V compatible with auto-detect Auto selected
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Environmental / Physical

Dimensions:	142 x 98.5mm
Rel. Humidity:	0% to 90% (non-condensing)
Operating Temp:	0°C to 70°C
Power Requirements	+5V @ 1.2A typ



Supplied with Internal Cable for Digital I/O (IDC40 to DB37)

View Adaptors & Cables on pg.35-40

View Software on pg.30-34

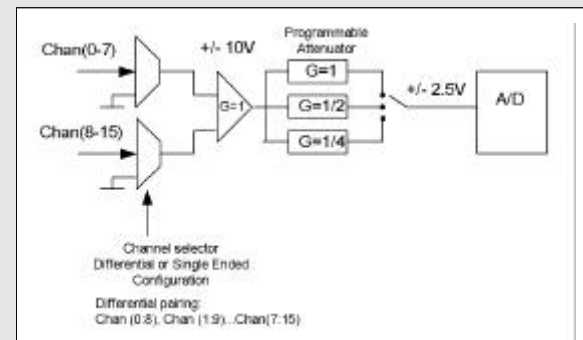
PCI Data Acquisition Boards

DB-25M

CH1	14	1	CH0
CH3	15	2	CH2
CH5	16	3	CH4
CH7	17	4	CH6
CH9	18	5	CH8
CH11	19	6	CH10
CH13	20	7	CH12
CH15	21	8	CH14
DAC0	22	9	AGND
DAC2	23	10	DAC1
+VDD	24	11	DAC3
-VDD	25	12	-VDD
EXT_TRIGGER	26	13	NOT USED

IDC-40M

PA0	1	2	PA1
PA2	3	4	PA3
PA4	5	6	PA5
PA6	7	8	PA7
PB0	9	10	PB1
PB2	11	12	PB3
PB4	13	14	PB5
PB6	15	16	PB7
PC0	17	18	PC1
PC2	19	20	PC3
PC4	21	22	PC5
PC6	23	24	PC7
DGND	25	26	NOT USED
CLK0	27	28	NOT USED
COUT0	29	30	GATE0
GATE1	31	32	CLK1
CLK2	33	34	COUT1
COUT2	35	36	GATE2
+5V	37	38	DGND
DGND	39	40	DGND



PCI-730 Analog Input Channel Functional Diagram