PCI-730/726/725

Low Cost | High Performance

DESCRIPTION

The **PCI-730, PCI-726** and **PCI-725** are low cost yet high performance data acquisition boards for the PCI-bus. 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-730/726/725 features 16 single-ended or 8 differential 14-bit analog input channels with an overall sampling speed of 100KHz. Compared to other data acquisition boards, our board features four 14-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-730/726/725 is our free data acquisition package, WaveView for Windows which allows the user to start sampling as soon as the card is plugged in.

FEATURES

- 16 Single-Ended or 8 Differential A/D Channels
- 14 bit Analog Resolution
- 100kHz A/D Sampling Rate
- ±2.5, ±5, ±10V Voltage Range
- 4x 14 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

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
EXT_TRIGGER	25	12	-VDD
		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

Specifications

ANALOG INPUTS (A/D)		
Input Characteristics		
Input Channels:	16 SE or 8 Differential	
Input Ranges:	± 2.5V, ±5V, ±10V	
Maximum Working Voltage:	± 11V relative to module ground	
Resolution:	14-bit (1 in 16384)	
Input Coupling:	DC	
A/D Conversion Characteristics		
Max sampling rate:	100KHz	
Relative Accuracy:	± 2 LSB maximum	
A/D FIFO buffer size:	2048 samples	
Acquisition Modes:	Triggered Interrupt	
Input Impedance:	1M Ohm	
System Noise:	1 LSB	
ANALOG OUTPUT (D/A)		
No of Channels:	4x 14-bit	
Output Ranges:	± 10V	
Full Scale Error:	± 2 LSB	
Settling Time:	1mS to 0.1% of full scale	
	2mS to 0.015% of full scale	
Output Drive:	± 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)	
PCI Interface		
Compliant:	PCI 2.2 Master & Slave	
	3.3V or 5.0V compatible with auto-detect	
	Auto selected	
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	

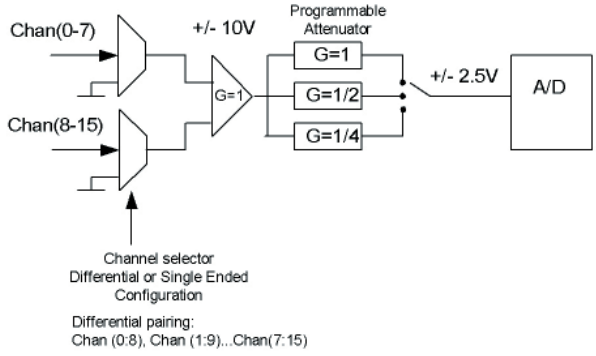
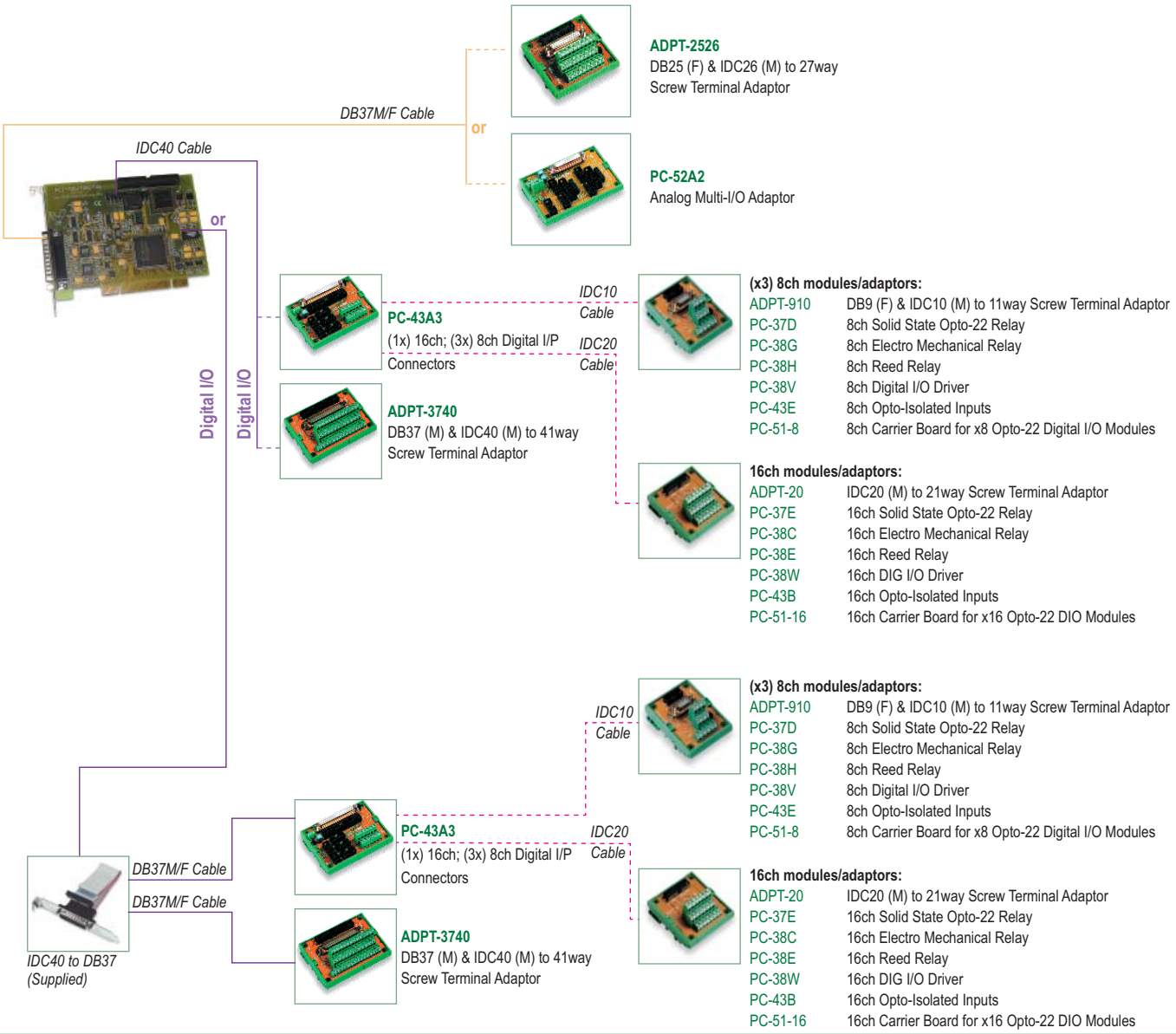


Figure 1 PCI-730 Analogue Input Channel Functional Diagram

Optional Accessories Diagram



Ordering Information

Supplied with EDR Enhanced Software and Internal Cable with PC bracket (IDC40 to DB37)

PCI-730	100kHz 16 Channel 14-bit A/D, 24 DIO, Counters & 4x 14-bit DACs
PCI-726	100kHz 16 Channel 14-bit A/D, 24 DIO & Counters
PCI-725	100kHz 16 Channel 14-bit A/D

Optional Accessories

OPTION 1:

ADPT-2526	DB25 (F) & IDC26 (M) to 27way Screw Terminal Adaptor
DB25M/F	DB25 (M) to DB25 (F) Screened Cable

OPTION 2:

ADPT-3740	DB37 (M) & IDC40 (M) to 41way Screw Terminal Adaptor
DB37F/F	DB37 (F) to DB37 (F) Screened Cable

FREE WaveView for Windows Software

WaveView for Windows is a new Microsoft® Windows™ based data acquisition package supporting our PCI range of personal computer plug-in cards. The software is extensively configurable and easy to use.

The WaveView for Windows software package is used for collecting and analyzing data. Two modes of operation are supported, scope mode and chart recording. WaveView can also be used as a waveform generation tool, or a digital power supply controller. The software is extensively configurable, easy to use and quick to learn.