



PCI-826LU

Universal PCI, 250 kS/s, 32/16-ch 16-bit Analog Input, 2-ch 16-bit Analog Output and 32-ch Programmable DIO

Features

- Supports both +5 V and +3.3 V PCI bus
- Card ID function
- 1. A/D :**
 - 16-bit resolution A/D converter.
 - One A/D converter with maximum 250 k Samples/Sec.
 - 8 K samples hardware FIFO.
 - 32 single-ended/16 differential analog inputs.
 - Two different A/D trigger: software trigger, pacer trigger.
 - Programmable gain control, programmable offset control.
- 2. D/A :**
 - 2-ch 16-bit voltage output
- 3. DI/DO :**
 - 32-ch programmable DI/DO
 - Pull high/pull low function on DI
 - DO status read back
 - High speed data transfer rate



Introduction

PCI-826LU is a high performance multifunction card providing high-speed analog I/O and digital I/O functions. The PCI-826LU card has a universal PCI interface supporting both 3.3 V and 5 V PCI bus. This card features a continuous, 250 k Samples/Sec 16-bit resolution A/D converter, 8 K samples hardware FIFO, 2-ch 16-bit D/A converter, 32-ch programmable digital I/O and DO read back. PCI-826LU provides either 32-ch single-ended or 16-ch differential analog inputs which are jumper selectable. The PCI-826LU is equipped with a high speed PGA featuring programmable gain controls (1, 2, 4, 8).

The PCI-826LU has the Card ID switch and pull-high/pull-low resistors for DI on board. Users can set Card ID on a board and recognize the board by the ID via software when using two or more PCI-826LU cards in one computer. The pull-high/pull-low resistors allow specifying the DI status; when the DI channels are unconnected, the DI status will remain in high or low status without being left floating.

The PCI-826LU provides two programmable trigger methods: software trigger and pacer trigger. The A/D channel scan function of PCI-826LU is so amazing, we call it MagicScan. The MagicScan controller takes out most works of getting A/D value such as select channel, set gain, settling time, trigger ADC and get data. With the built-in MagicScan and interrupt features, it is effectively off-loading your CPU from the job. Even in channel scan mode, it can have different gain code for each channel, and the sampling rate can still reach 250 kS/s total. The PCI-826LU is suitable for the demands of high end applications.

Software

- Toolkit for DOS
- Toolkit for Windows 2000/XP
- Toolkit for Windows 2003/Vista 32-bit

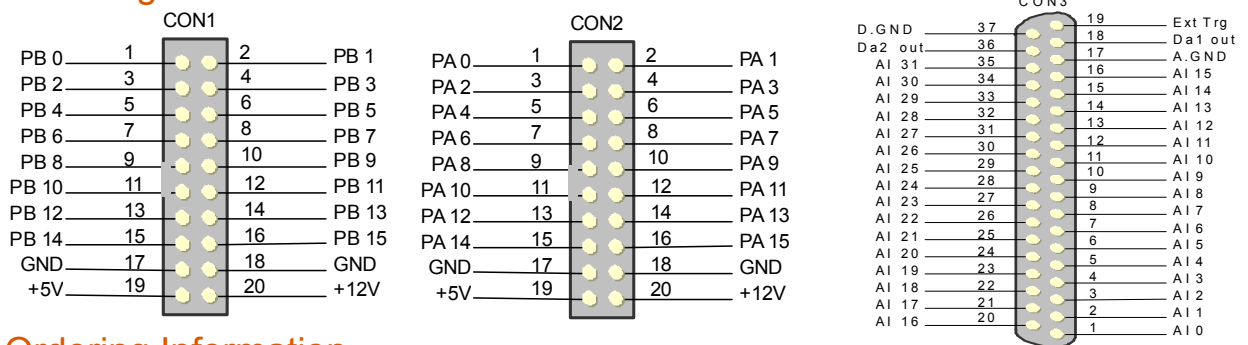
Applications

- High speed data acquisition system
- Process monitor and control.
- Vibration analysis.

Specifications

Analog Input	
Channels	32 single-ended/16 differential
A/D Converter	16-bit, 8 μ s conversion time
Sampling Rate	250 kS/s. max.
FIFO Size	8192 samples
Over voltage Protection	Continuous +/-35 Vp-p
Input Impedance	10,000 M Ω /4pF
Trigger Modes	Software, Pacer
Data Transfer	Polling, Interrupt
Accuracy	0.05 % of FSR $\pm$ 1 LSB @ 25 °C, $\pm$ 10 V
Input Range	Gain: 1, 2, 4, 8/Bipolar(V):+/-10, +/-5, +/-2.5, +/-1.25
Zero Drift	15 ppm/°C of FSR
Analog Output	
Channels	2
Resolution	16-bit
Accuracy	0.06% of FSR $\pm$ 1 LSB @ 25 °C, $\pm$ 10 V
Output Range	-5 V ~ 5 V , -10 V ~ 10 V, 0 ~ 10 V, 0 ~ 5 V
Output Driving	+/- 5 mA
Slew Rate	8.33 V/ μ s
Output Impedance	0.1 Ω max.
Operating Mode	Software
Programmable I/O	
Channels	32
Digital Input	
Compatibility	5 V/TTL
Input Voltage	Logic 0: 0.8 V max./Logic 1: 2.0 V min.
Pull High/Low	Yes
Response Speed	1.0 MHz (Typical)
Digital Output	
Compatibility	5 V/TTL
Output Voltage	Logic 0: 0.4 V (max.)/Logic 1: 2.4 V (min.)
Output Capability	Sink: 0.8 mA @ 0.8 V/Source: -2.4 mA @ 2.0 V
DO Read Back	Yes
Response Speed	1.0 MHz (Typical)
General	
Bus Type	3.3 V/5 V Universal PCI, 32-bit
Data Bus	16-bit
Card ID	Yes(4-bit)
I/O Connector	Female DB37 x 1/20-pin box header x 2
Dimensions (L x W x D)	169 mm x 105 mm x 22 mm
Power Consumption	1 A @ +5 V max.
Operating Temperature	0 ~ 60 °C
Storage Temperature	-20 ~ 70 °C
Humidity	5 ~ 85% RH, non-condensing

Pin Assignments



Ordering Information

PCI-826LU CR

Universal PCI, 250 kS/s, 32/16-ch 16-bit Analog Input, 2-ch 16-bit Analog Output and 32-ch Programmable DIO. (RoHS) Includes one CA-4002 D-Sub connector.

Optional Accessories

CA-3710	DB-37 Male-Male D-sub cable 1 M Cable for Daughter Board (45°)
CA-4002	37-pin Male D-sub connector with plastic cover
CA-2020	20-pin flat cable 2 M.
DN-37	DIN Rail Mounting 37-pin Connector (Pitch=5.08 mm)
DN-20	20-pin DIN-RAIL mounting I/O connector board
DB-1825	Analog input screw terminal board
DB-16P	Isolated digital input daughter board