PCI-822LU/PCI-826LU

Universal PCI, 250 kS/ s, 32-ch 12-bit or 16-bit A/D, 2-ch 16-bit D/A and 32-ch Programmable DIO Multi-function Board

CE FC RoHS

Features ▶▶▶▶

- Universal PCI (3.3 V/5 V) interface
- 12-bit 250 kS/s high-speed A/D for PCI-822LU
- Programmable low gain: 1, 2, 4, 8
- 32-ch programmable DIO
- Card ID function
- 32-ch S.E./16-ch Diff. analog input
- 16-bit 250 kS/s high-speed A/D for PCI-826LU
- Built-in MagicScan controller
- D/I with pull-high and pull-low jumpers
- 8K-sample hardware FIFO
- Supports software-trigger and pacer-trigger
- 2-ch 16-bit analog output
- DO with status read back function

☑ Introduction

The PCI-822LU/826LU is a multi-function card that providing high-speed analog and digital I/O functions. It features a continuous, 250 kS/ s 12-bit or 16-bit resolution A/D converter, 8K-sample hardware FIFO, 2-ch 16-bit D/A converter, and 32-ch programmable digital I/O with DO read back. The PCI-822LU/826LU provides either 32-CH single-ended or 16-CH differential analog inputs which are jumper selectable, and is equipped with a high speed PGA featuring programmable gain (1, 2, 4 or 8).

The PCI-822LU/826LU has a Card ID switch for users to recognize the board by the ID via software when using two or more PCI-822LU/826LU cards in one computer. The pull-high/low jumpers of the card allow user to predefine the DI status instead of floating when the DI channels are unconnected or broken.

The A/D channel scan function of the PCI-822LU/826LU is so amazing, we call it MagicScan. The MagicScan controller takes out most works of getting A/D value such as selecting channel, setting gain, settling time, triggering A_{DC} and getting data. With the built-in MagicScan and interrupt features, it is effectively off-loading your system 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 totally. The PCI-822LU/826LU is suitable for high end applications.

☑ Software

- DOS Lib and TC/BC/MSC sample program (with source codes)
- Supports 32-bit and 64-bit Windows XP/2003/Vista/7
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes

☑ Hardware Specifications

Models	PCI-822LU	PCI-826LU
Analog Input		
Channels	32 S.E/ 16 Diff.	
Resolution	12-bit	16-bit
Sampling Rate	250 kS/s. max.	
FIFO Size	8192 samples	
Accuracy	0.1 % of FSR ±1 LSB @ 25 °C, ± 10 V	
Analog Output		
Channels	2	
Resolution	16-bit	
Accuracy	± 6 LSB	
Output Driving	± 5 mA	
Output Range	±5 V, ±10 V, 0 ~ 10 V, 0 ~ 5 V	
Slew Rate	8.33 V/µs	
Programmable Digital I/O		
Channels	32	
Compatibility	5 V/TTL	
Output Capability	Sink: 2.4 mA @ 0.8 V; Source: 0.8 mA @ 2.0 V	
General		
Bus Type	3.3 V/5 V Universal PCI, 32-bit	
Card ID	Yes (4-bit)	
Connectors	Female DB-37 x 1, 20-pin box header x 2	
Power Consumption	800 mA @ +5 V	
Operating Temperature	0 °C ~ +60 °C	
Humidity	5 ~ 85% RH, non-condensing	

☑ Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
AI_0	01	
AI_1	02	20 AI_16
AI_2	03	21 AI_17
AI_3	04	22 AI_18
AI_4	05	23 AI_19
AI_5	06	24 AI_20
AI_6	07	25 AI_21
AI_7	08	26 AI_22
AI_8	09	27 AI_23
AI_9	10	28 AI_24
AI_10	11	29 AI_25
AI_11	12	30 AI_26
AI_12	13	31 AI_27
AI_13	14	32 AI_28
AI_14	15	33 AI_29
AI_15	16	34 AI_30
A.GND	17	35 AI_31
Da1 out	18	36 Da2 out
Ext_Trg	19	37 D.GND

CON3

Pin Assignment	Terminal No.	Pin Assignment
PB 0	01	02 PB 1
PB 2	03	04 PB 3
PB 4	05	06 PB 5
PB 6	07	08 PB 7
PB 8	09	10 PB 9
PB 10	11	12 PB 11
PB 12	13	14 PB 13
PB 14	15	16 PB 15
GND	17	18 GND
+5V	19	20 +12V

CON1

Pin Assignment	Terminal No.	Pin Assignment
PA 0	01	02 PA 1
PA 2	03	04 PA 3
PA 4	05	06 PA 5
PA 6	07	08 PA 7
PA 8	09	10 PA 9
PA 10	10	12 PA 11
PA 12	12	14 PA 13
PA 14	14	16 PA 15
GND	16	18 GND
+5V	18	20 +12V

CON2

☑ Ordering Information

PCI-822LU CR	Universal PCI, 250 kS/ s, 32-ch 12-bit Analog Input, 2-ch 16-bit Analog Output and 32-ch Programmable DIO (RoHS) Includes one CA-4002 D-Sub connector
PCI-826LU CR	Universal PCI, 250 kS/ s, 32-ch 16-bit Analog Input, 2-ch 16-bit Analog Output and 32-ch Programmable DIO (RoHS) Includes one CA-4002 D-Sub connector