



## PCI-1002LU

Universal PCI, 110 kS/s, 32-ch, 12-bit Analog Input  
Multifunction Board

## PCI-1002HU

Universal PCI, 44 kS/s, 32-ch, 12-bit Analog Input  
Multifunction Board

### Introduction

The PCI-1002LU/HU card is designed as an easy replacement for the PCI-1002L/H without requiring any modification to the software or the driver.

The PCI-1002LU/PCI-1002HU is an AD board that supports both the 3.3 V and the 5 V PCI bus and features low gain Analog Input at 110 kS/s or high gain at 44 kS/s. The PCI-1002LU/PCI-1002HU provides 32 single-ended or 16 differential 12-bit Analog Input channels, 16 Digital Input channels, and 16 Digital Output channels. The pull-high/low resistors allow the DI status to be predefined instead of remaining floating if the DI channels are disconnected or interrupted.

### Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
AI_0	01	AI_16	DO 0	01	DO 1
AI_1	02	AI_17	DO 2	03	DO 3
AI_2	03	AI_18	DO 4	05	DO 5
AI_3	04	AI_19	DO 6	07	DO 7
AI_4	05	AI_20	DO 8	09	DO 9
AI_5	06	AI_21	DO 10	10	DO 11
AI_6	07	AI_22	DO 12	12	DO 13
AI_7	08	AI_23	DO 14	14	DO 15
AI_8	09	AI_24	GND	16	GND
AI_9	10	AI_25	+5 V	18	+12 V
AI_10	11	AI_26			
AI_11	12	AI_27			
AI_12	13	AI_28			
AI_13	14	AI_29			
AI_14	15	AI_30			
AI_15	16	AI_31			
A.GND	17	N.C.			
N.C.	18	D.GND			
Ext_Trigger	19				

### Ordering Information

<b>PCI-1002LU CR</b>	Universal PCI, 110 kS/s, 32-ch, 12-bit Analog Input Multifunction Board (RoHS) Includes one CA-4002 D-Sub connector
<b>PCI-1002HU CR</b>	Universal PCI, 44 kS/s, 32-ch, 12-bit Analog Input Multifunction Board (RoHS) Includes one CA-4002 D-Sub connector

### Features

- Universal PCI (3.3 V/5 V) Interface
- 32 Single-ended/16 Differential Analog Input Channels
  - 12-bit, 110 kS/s or 44 kS/s AD Converter
  - Internal Pacer-trigger
- 16-channel 5 V/TTL Digital Output
- 16-channel 5 V/TTL Digital Input
  - Pull-high and Pull-low Resistors for DI Channels
- Supports Card ID (SMD Switch)



### Software

#### Drivers

- 32/64-bit Windows XP/2003/2008/7/8/10
- Linux
- DASYLab

#### Sample Programs

- DOS Lib and TC/BC/MSC Demo
- LabVIEW Toolkit
- VB/VC/Delphi/BCB/VB.NET/C#.NET/VC.NET/MATLAB Demo

### Hardware Specifications

Model	PCI-1002LU	PCI-1002HU
<b>Analog Input</b>		
Channels	32 Single-ended/16 Differential	
A/D Converter	12-bit, 8 μs Conversion Time	
Accuracy	0.01% of FSR ±2 LSB @ 25 °C, ±10 V	
Sampling Rate	110 kS/s	44 kS/s
<b>Digital Inputs</b>		
Channels	16	
Compatibility	5 V/TTL	
Input Voltage	Logic 0: 0.8 V Max., Logic 1: 2.0 V Min.	
Response Speed	1.0 MHz (Typical)	
<b>Digital Outputs</b>		
Channels	16	
Compatibility	5 V/TTL	
Output Voltage	Logic 0: 0.4 V Max., Logic 1: 2.4 V Min.	
Output Capability	Sink: 2.4 mA @ 0.8 V, Source: 0.8 mA @ 2.0 V	
Response Speed	1.0 MHz (Typical)	
<b>Timer/Counter</b>		
Channels	3	
Resolution	16-bit	
Input Frequency	10 MHz Max.	
Reference Clock	Internal: 4 MHz	
<b>General</b>		
Bus Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1, 20-pin Box Header x 2	
Power Consumption	800 mA @ +5 V	
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

<b>PCI-1002LU/S CR</b>	Universal PCI, 110 kS/s, 32-ch, 12-bit Analog Input Multifunction Board (RoHS) Includes one CA-3710 D-Sub cable
<b>PCI-1002HU/S CR</b>	Universal PCI, 44 kS/s, 32-ch, 12-bit Analog Input Multifunction Board (RoHS) Includes one CA-3710 D-Sub cable

## Accessories

	CA-2002 CR	20-pin flat cable, 20 cm x 2 (RoHS)
	CA-2010 CR	20-pin flat cable, 1 M (RoHS)
	CA-2020 CR	20-pin flat cable, 2 M (RoHS)
	CA-3710 CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°)) (RoHS)
	CA-3710D CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°)) (RoHS)
	CA-3715DM-H CR	DB-37 Male-Male Cable, 1.5 M, 180° (RoHS)
	CA-3730DM-H CR	DB-37 Male-Male Cable, 3.0 M, 180° (RoHS)
	CA-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
	DB-1825 CR	Analog Input Screw terminal Board (RoHS)
	DB-16P CR	Isolated Digital Input Daughter Board (RoHS)
	DB-16R CR	Relay Output Daughter Board (RoHS)
	DN-20/DN-20-381 CR	20-pin DIN-RAIL mounting I/O connector board (RoHS)
	DN-37/DN-37-381 CR	I/O Connector Block with DIN-Rail Mounting and 37-Pin D-Sub Connector (RoHS)
	2AB125R CR	Resistor DIP 125R 0.1% 1/4W MF 50PPM (1PCS) (RoHS)

