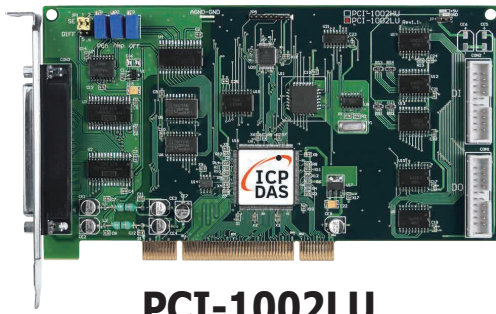




PCI-1002LU

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

PCI-1002HU

Universal PCI, 44 kS/s, 32-ch, 12-bit AI
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	20 AI_16	DO 0	01	DO 1
AI_1	02	21 AI_17	DO 2	03	DO 3
AI_2	03	22 AI_18	DO 4	05	DO 5
AI_3	04	23 AI_19	DO 6	07	DO 7
AI_4	05	24 AI_20	DO 8	09	DO 9
AI_5	06	25 AI_21	DO 10	10	DO 11
AI_6	07	26 AI_22	DO 12	12	DO 13
AI_7	08	27 AI_23	DO 14	14	DO 15
AI_8	09	28 AI_24	GND	16	GND
AI_9	10	29 AI_25	+5 V	18	+12 V
AI_10	11	30 AI_26			
AI_11	12	31 AI_27			
AI_12	13	32 AI_28			
AI_13	14	33 AI_29			
AI_14	15	34 AI_30			
AI_15	16	35 AI_31			
A.GND	17	36 N.C.			
N.C.	18	37 D.GND			
Ext_Trg	19				

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 10/11
- ☒ Linux
- ☒ DASyLab

Sample Programs

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

Applications

- Laboratory automation
- Production test
- Sensor interface

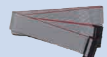
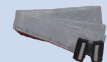
Ordering Information

PCI-1002LU CR	Universal PCI, 110 kS/s, 32-ch, 12-bit AI Multifunction Board (RoHS) Includes one CA-4002 D-Sub connector
PCI-1002HU CR	Universal PCI, 44 kS/s, 32-ch, 12-bit AI Multifunction Board (RoHS) Includes one CA-4002 D-Sub connector
PCI-1002LU/S CR	Universal PCI, 110 kS/s, 32-ch, 12-bit AI Multifunction Board (RoHS) Includes one CA-3710 D-Sub cable
PCI-1002HU/S CR	Universal PCI, 44 kS/s, 32-ch, 12-bit AI Multifunction Board (RoHS) Includes one CA-3710 D-Sub cable

Hardware Specifications

Model	PCI-1002LU	PCI-1002HU
Hardware		
Connector	Female DB37 x 1 , 20-pin box header x 2	
Analog Input		
Channels	32 single-ended/16 differential	
Range	Gain: 1, 2, 4, 8 Bipolar Range: ±10 V, ±5 V, ±2.5 V, ±1.25 V	Gain: 1, 10, 100, 1000 Bipolar Range: ±10 V, ±1 V, ±0.1 V, ±0.01 V
Resolution	12-bit	
Accuracy	0.01% of FSR ±1 LSB @ 25 °C, ±10 V	
Sampling Rate	110 kS/s. Max.	44 kS/s. Max.
Input Impedance	10 MΩ/6 Pf	
Overvoltage Protection	Continuous ±35 Vp-p	
Zero Drift	±4 ppm/°C of FSR	
Trigger Mode	Software, Internal programmable pacer, External (5 V/TTL)	
Data Transfer	Polling, Interrupt	
Digital Input		
Channels	16	
Type	5 V/TTL	
ON Voltage Level	2.0 V Min.	
OFF Voltage Level	0.8 V Max.	
Response Speed	1.0 MHz (Typical)	
Trigger Mode	Static Update	
Digital Output		
Channels	16	
Type	5 V/TTL	
Operation Mode	Static Update	
Load Voltage	Logic 0: 0.4 V Max. Logic 1: 2.4 V Min.	
Load Current	Sink: 2.4 mA Source: 0.8 mA	
Response Speed	1.0 MHz (Typical)	
Timer/Counter/Frequency		
Channels	3 (Independent x 1/Internal pacer x 1/External pacer x 1)	
Type	5 V/TTL	
Resolution	16-bit	
Input Frequency	10 MHz Max.	
Reference Clock	Internal: 4 MHz	
PC Bus		
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Data Bus	16-bit	
Power		
Consumption	960 mA @ +5 V	
Mechanical		
Dimensions (mm)	105 x 188 x 22 (W x L x D)	
Environment		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

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-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)
	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)

PEX-1002L/PEX-1002H PCI-1002HU/PCI-1002LU

