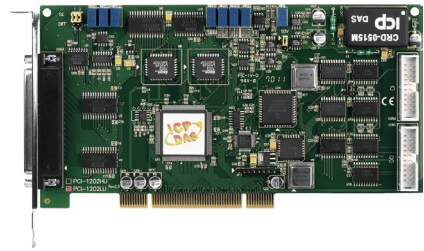


## PCI-1202LU/PCI-1202HU

Universal PCI, 32-channel, 12-bit, 110 or 44 kS/s  
Multifunction Board (1 K word FIFO)



### Features

- Universal PCI (3.3 V/5 V) Interface
- Supports Card ID (SMD Switch)
- 2-channel, 16-bit Analog Output
- 16-channel 5 V/TTL Digital Output
- 16-channel 5 V/TTL Digital Input
  - Pull-high and Pull-low Resistors for DI Channels
- 32 Single-ended/16 Differential Analog Input Channels
  - 12-bit, 110 kS/s or 44 kS/s AD Converter
  - Built-in MagicScan Controller
  - Internal Trigger: Software-trigger, Pacer-trigger
  - External Trigger: Post-trigger, Pre-trigger, Middle-trigger
- High-speed data transfer rate up to 2.1 M words/sec.

### Introduction

The PCI-1202 series is a family of high performance data acquisition boards that feature continuous gap-free data acquisition in DOS at 110 kHz for low gain or 44 kHz for high gain. The PCI-1202 family has the same hardware architecture as the PCI-1802, and provides 32-channel single-ended or 16-channel differential Analog Inputs. As with the PCI-1802 family, the PCI-1202 series features both the Magic Scan and Continuous Capture functions.

The PCI-1202LU/HU Universal PCI card supports both the 3.3 V and the 5 V PCI bus. The PCI-1202LU/HU cards are fully compatible with PCI-1202L/H cards and are designed as direct replacements without requiring any modification to the software or the driver, with the main difference being the addition of DI pull-high/low resistors and a Card ID switch on the PCI-1202LU/HU.

The PCI-1202LU/8K and PCI-1202HU/8K cards are equipped with an 8K-sample hardware FIFO that reduces data overflow issues in multi-tasking environments such as Windows and Linux.

### Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
AI_0	01	20 AI_16
AI_1	02	21 AI_17
AI_2	03	22 AI_18
AI_3	04	23 AI_19
AI_4	05	24 AI_20
AI_5	06	25 AI_21
AI_6	07	26 AI_22
AI_7	08	27 AI_23
AI_8	09	28 AI_24
AI_9	10	29 AI_25
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 Da2 out
Da1 out	18	37 D.GND
Ext_Trg	19	

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

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

### Software

#### Drivers

- 32/64-bit Windows XP/2003/2008/Vista/7/8
- 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-1202LU	PCI-1202HU
<b>Analog Input</b>		
Channels	32 Single-ended/16 Differential	
AD Conversion	12-bit, 8.5 $\mu$ s Conversion Time	
Accuracy	0.1% of FSR $\pm$ 1 LSB @ 25 $^{\circ}$ C, $\pm$ 10 V	
FIFO Size	1024 Samples	
Sampling Rate	110 kS/s	44 kS/s
<b>Analog Output</b>		
Channels	2	
Resolution	12-bit	
Accuracy	0.06% of FSR $\pm$ 1 LSB @ 25 $^{\circ}$ C, $\pm$ 10 V	
Output Driving	$\pm$ 5 mA	
Output Range	$\pm$ 5 V, $\pm$ 10 V	
<b>Digital I/O</b>		
Channels	DI	16, 5 V/TTL
	DO	16, 5 V/TTL
Input Voltage	Logic 0: 0.8 V Max.; Logic 1: 2.0 V Min.	
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	
<b>Timer/Counter</b>		
Channels	3	
Resolution	16-bit	
Input Frequency	10 MHz Max.	
Reference Clock	Internal: 8 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	300 mA @ +5 V	
Operating Temperature	0 $^{\circ}$ C to +60 $^{\circ}$ C	
Humidity	5 to 85% RH, Non-condensing	

### Ordering Information

PCI-1202LU CR	Universal PCI, 32-channel 12-bit, 110 kS/s Low Gain, Multifunction DAQ Board (1 K word FIFO) (RoHS). Includes one CA-4002 D-sub connector.	PCI-1202LU/8K CR	Universal PCI, 32-channel 12-bit, 110 kS/s Low Gain, Multifunction DAQ Board (8 K word FIFO) (RoHS). Includes one CA-4002 D-sub connector.
PCI-1202HU CR	Universal PCI, 32-channel 12-bit, 44 kS/s High Gain, Multifunction DAQ Board (1 K word FIFO) (RoHS). Includes one CA-4002 D-sub connector.	PCI-1202HU/8K CR	Universal PCI, 32-channel 12-bit, 44 kS/s High Gain, Multifunction DAQ Board (8 K word FIFO) (RoHS). Includes one CA-4002 D-sub connector.