

# I/O Cards

## PCI-1800LU/PCI-1800HU

Universal PCI, 16-ch, 12-bit, 330 or 44 kS/s  
Multi-function Board



### Features ▶▶▶

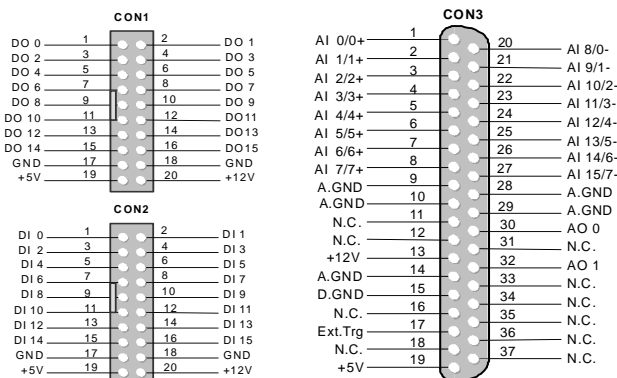
- Universal PCI (3.3 V/5 V) interface
- 330 or 44 kS/s A/D converter
- 16-ch 5 V TTL D/I
- 16-ch 5 V TTL D/O
- External: Post-trigger, Pre-trigger and Middle-trigger
- D/I with pull-high and pull-low function
- Drop-in replacement for the PCI-1800L/1800H
- 12-bit, 16 S.E/8 Diff. Analog inputs
- 1 K-sample hardware FIFO
- Built-in MagicScan controller
- Internal: Software-trigger and Pacer-trigger
- Data transfer rate is up to 2.1 M words/s (max.)
- Two 12-bit independent programmable DAC, 2 MHz throughput per channel (max.)

### Introduction

PCI-1800LU/HU card has a universal PCI interface supporting both 3.3 V and 5 V PCI bus. They feature a continuous A/D acquisition function of up to 330 kHz for low gain (44 kHz for high gain) under DOS and offer two 12-bit D/A output channels, 16 digital input channels and 16 digital output channels. The PCI-1800LU/HU provides 16 single-ended or 8 differential inputs. In addition, an amazing A/D channel scan function called "MagicScan" is provided for users to easily implement multi-channel analog data acquisition applications. The specific MagicScan controller takes out most works of getting A/D value such as selecting channel, setting gain, settling time, triggering ADC and getting data. Even in channel scan mode, it can have different gain code for each channel, and the sampling rate can still reach 330 kS/s totally. The PCI-1800LU/HU is suitable for high end applications.

The PCI-1800LU/HU has a Card ID switch with which users can recognize the board by the ID via software when using two or more PCI-1800LU/HU 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.

### Pin Assignments



### Software

- DOS Lib and TC/BC/MSC sample program (with source codes)
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes
- DLL and OCX SDK for 32-bit and 64-bit Windows XP/2003/Vista/2008/7
- Supports LabVIEW and Linux

### Hardware Specifications

Models	PCI-1800LU	PCI-1800HU
<b>Analog Input</b>		
Channels	12-bit, 16 S.E/8 Diff.	
Accuracy	0.01% of FSR $\pm$ 1 LSB @ 25 °C, $\pm$ 10 V	
FIFO Size	1024 samples	
Sampling Rate	330 kS/s	44 kS/s
<b>Analog Output</b>		
Channels	12-bit, 2	
Accuracy	0.06% of FSR $\pm$ 1 LSB @ 25 °C, $\pm$ 10 V	
Output Range	Bipolar: $\pm$ 5 V, $\pm$ 10 V	
Output Driving	$\pm$ 5 mA	
Slew Rate	8.33 V/ $\mu$ s	
<b>Digital Input</b>		
Channels	16-ch, 5 V/TTL	
Input Voltage	Logic 0: 0.8 V max., Logic 1: 2.0 V min.	
Response Speed	2.0 MHz (Typical)	
<b>Digital Output</b>		
Channels	16-ch, 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	2.0 MHz (Typical)	
<b>General</b>		
Bus Type	Universal PCI, 3.3 V and 5 V, 33 MHz, 32-bit, Plug and Play	
Connectors	Female DB-37 x1, 20-pin box header x 2	
Power Consumption	300 mA @ +5 V	
Operating Temperature	0 °C ~ +60 °C	
Storage Temperature	-20 °C ~ +70 °C	
Humidity	5 ~ 85% RH, non-condensing	

### Ordering Information

PCI-1800LU CR	Universal PCI, 16-ch, 12-bit, 330 kS/s. Low Gain Multi-function DAQ Board. (RoHS) Includes one CA-4002 D-Sub connector.
PCI-1800HU CR	Universal PCI, 16-ch, 12-bit, 44 kS/s. High Gain Multi-function DAQ Board. (RoHS) Includes one CA-4002 D-Sub connector.