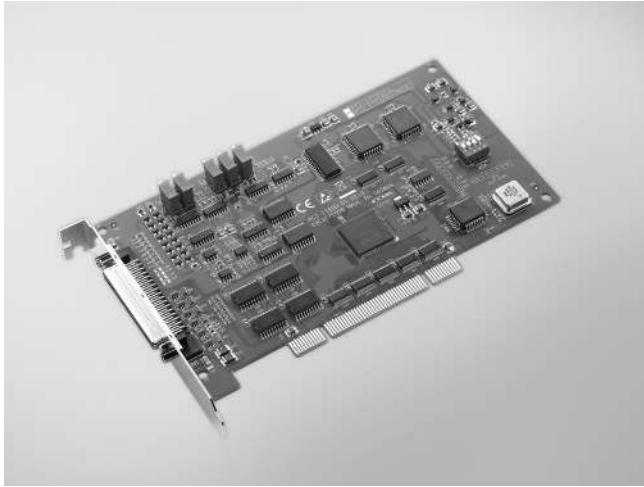


# PCI-1710U/UL

# PCI-1710HGU

**100 kS/s, 12-bit, 16-ch Universal PCI Multifunction DAQ Card**

**100 kS/s, 12-bit, 16-ch Universal PCI Multifunction DAQ Card with High Gain**



FCC CE RoHS

## Specifications

### Analog Input

- Channels: 16 single-ended/ 8 differential (software programmable)
- Resolution: 12 bits
- FIFO Size: 4,096 samples
- Overvoltage Protection: 30Vp-p
- Input Impedance: 1 GΩ
- Sampling Modes: Software, onboard programmable pacer and external
- Input Range (V, software programmable) & Absolute Accuracy

PCI-1710U/UL					
Gain	0.5	1	2	4	8
Bipolar	±10	±5	±2.5	±1.25	±0.625
Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Absolute Accuracy (% of FSR)*	0.1	0.1	0.2	0.2	0.4

PCI-1710HGU								
Gain	0.5	1	5	10	50	100	500	1000
Bipolar	±10	±5	±1	±0.5	±0.1	±0.05	±0.01	±0.005
Unipolar	N/A	0 ~ 10	N/A	0 ~ 1	N/A	0 ~ 0.1	N/A	0 ~ 0.01
Absolute Accuracy (% of FSR)*	0.1	0.1	0.2	0.2	0.4	0.4	0.8	0.8

\* ±1 LSB is added as the derivative for absolute accuracy

### Maximum Sampling Rate

Model	Gain	Max. Sampling Rate
PCI-1710U/UL	0.5, 1, 2, 4, 8	100 kS/s
PCI-1710HGU	0.5, 1	100 kS/s
	5, 10	35 kS/s
	20, 100	7 kS/s
	500, 1000	770 S/s

Note: The sampling rate for each channels will be affected by used channel number. For example, if 4 channels of PCI-1710U are used, the sampling rate is 100k/4 = 25 kS/s per channel.

### Analog Output (PCI-1710U/HGU only)

- Channels: 2
- Resolution: 12 bits
- Output Rate: Static update
- Output Range: (Software programmable)

Internal Reference	Unipolar	0 ~ 5 V 0 ~ 10 V
External Reference		0 ~ +x V @ -x V (-10 ≤ x ≤ 10)

- Slew Rate: 10 V/μs
- Driving Capability: 3 mA
- Operation Mode: Static update
- Accuracy: INLE: ±1 LSB, DNLE: ±1 LSB

## Features

- 16-ch single-ended or 8-ch differential or a combination of analog input
- 12-bit A/D converter, with up to 100 kHz sampling rate
- Programmable gain
- Automatic channel/gain scanning
- Onboard FIFO memory (4,096 samples)
- Two 12-bit analog output channels (PCI-1710U/HGU only)
- 16-ch digital input and 16-ch digital output
- Onboard programmable counter
- BoardID™ switch

### Digital Input

- Channels: 16
- Compatibility: 5 V/TTL
- Input Voltage: Logic 0: 0.8 V max.  
Logic 1: 2.0 V min.

### Digital Output

- Channels: 16
- Compatibility: 5 V/TTL
- Output Voltage: Logic 0: 0.4 V max.  
Logic 1: 2.4 V min.  
Sink: 8.0 mA @ 0.8 V  
Source: 0.4 mA @ 2.0 V
- Output Capability

### Pacer/Counter

- Channels: 1
- Resolution: 16 bits
- Compatibility: 5 V/TTL
- Max. Input Frequency: 1 MHz

### General

- Bus Type: Universal PCI V2.2
- I/O Connector: 1 x 68-pin SCSI female connector
- Dimensions (L x H): 175 x 100 mm (6.9" x 3.9")
- Power Consumption: Typical: 5 V @ 850 mA  
Max.: 5 V @ 1.0 A
- Operating Temperature: 0 ~ 60°C (32 ~ 140°F)
- Storage Temperature: -20 ~ 70°C (-4 ~ 158°F)
- Storage Humidity: 5 ~ 95% RH non-condensing

## Ordering Information

- PCI-1710U: 100 kS/s, 12-bit Multifunction Card
- PCI-1710UL: 100 kS/s, 12-bit Multifunction Card w/o AO
- PCI-1710HGU: 100 kS/s, 12-bit High-gain Multifunction Card

### Accessories

- PCLD-8710: DIN-rail Wiring Board w/ CJC
- PCL-10168-1E: 68-pin SCSI Shielded Cable, 1 m
- PCL-10168-2E: 68-pin SCSI Shielded Cable, 2 m
- ADAM-3968: 68-pin DIN-rail SCSI Wiring Board