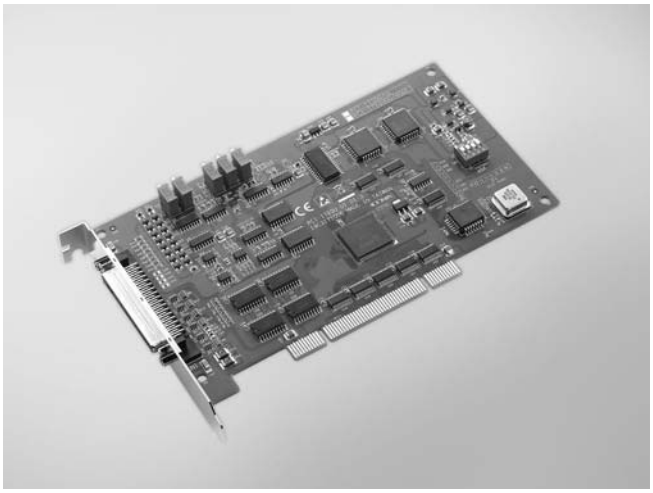
PCI-1710U/UL
PCI-1710HGU

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 COMPLIANT 2002/95/EC

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

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

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.
- **Output Capability** Sink: 8.0 mA @ 0.8 V
Source: 0.4 mA @ 2.0 V

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

Last updated : 5-May-2015