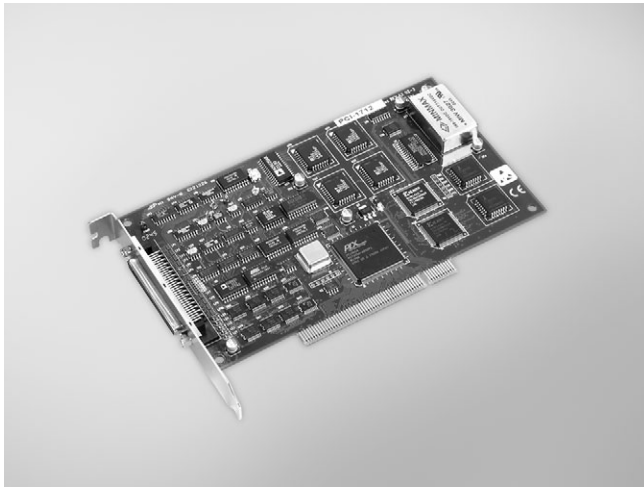


# PCI-1712/L

1 MS/s, 12-bit, 16-ch PCI  
Multifunction Card



## Features

- 16 single-ended or 8 differential or a combination of analog inputs
- 12-bit A/D converter, with up to 1 MHz sampling rate
- Programmable gain
- Automatic channel/gain scanning
- Onboard FIFO memory (AI: 1,024 samples AO: 32,768 samples)
- Two 12-bit analog output channels with continuous waveform output function (PCI-1712 only)
- 16-ch digital input and 16-ch digital output
- Three 16-bit programmable multifunction counter/timers on 10 MHz
- Auto-calibration (AI/AO)
- PCI-Bus mastering data transfer
- Pre-, post-, about- and delay-trigger data acquisition modes for analog input channels
- Flexible triggering and clocking capabilities

## Specifications

### Analog Input

- **Channels** 16 single-ended/ 8 differential (software programmable)
- **Resolution** 12 bits
- **Max. Sampling Rate** Multi-channel, single gain: 1 MS/s  
Multi-channel, multi gain: 600 kS/s  
Multi-channel, multi gain, unipolar/bipolar: 400 kS/s
- **FIFO Size** 1,024 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 100 M $\Omega$ /10 pF (Off), 100 M $\Omega$ /100 pF (On)
- **Sampling Modes** Software, onboard programmable pacer and external
- **Trigger Modes** Pre-trigger, post-trigger, delay-trigger and about-trigger
- **Input Range** (V, software programmable)

	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
<b>Unipolar</b>	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
<b>Bipolar</b>	$\pm 10$	$\pm 5$	$\pm 2.5$	$\pm 1.25$	$\pm 0.625$
<b>Accuracy (% of FSR <math>\pm 1</math>LSB)</b>	0.1	0.1	0.2	0.2	0.4

### Analog Output (PCI-1712 only)

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** 1 MS/s
- **FIFO Size** 32,768 samples
- **Output Range** (V, software programmable)

Internal Reference	Bipolar	$\pm 5, \pm 10$
	Unipolar	0 ~ 5, 0 ~ 10
External Reference		0 ~ +x V @ +x V (-10 $\leq x \leq$ 10)
		-x ~ +x V @ +x V (-10 $\leq x \leq$ 10)

- **Slew Rate** 20 V/ $\mu$ s
- **Driving Capability** 10 mA
- **Output Impedance** 0.1 W max.
- **Operation Mode** Software polling, continuous output and waveform output
- **Accuracy** INLE:  $\pm 1$  LSB  
DNLE:  $\pm 1$  LSB (monotonic)

### 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: 0.8 V max.  
Logic 1: 2.0 V min.
- **Output Capability** Sink: 8.0 mA @ 0.8 V  
Source: -0.4 mA @ 2.0 V

### Pacer/Counter

- **Channels** 3
- **Resolution** 16 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Reference Clock** Internal: 10 MHz, 1 MHz, 100 kHz, 10 kHz  
External Frequency: 10 MHz max.

### General

- **Bus Type** PCI V 2.2
- **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, 12 V @ 600 mA  
Max.: 5 V @ 1.0 A, 12 V @ 700 mA
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 85° C (-4 ~ 185° F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

## Ordering Information

- **PCI-1712** 1 MS/s, 12-bit High-speed Multifunction PCI Card
- **PCI-1712L** 1 MS/s, 12-bit High-speed Multi. PCI Card w/o AO

### Accessories

- **PCLD-8712** DIN-rail Wiring Board for PCI-1712/L
- **PCL-10168-1** 68-pin SCSI Shielded Cable, 1 m
- **PCL-10168-2** 68-pin SCSI Shielded Cable, 2 m
- **ADAM-3968** 68-pin DIN-rail SCSI Wiring Board