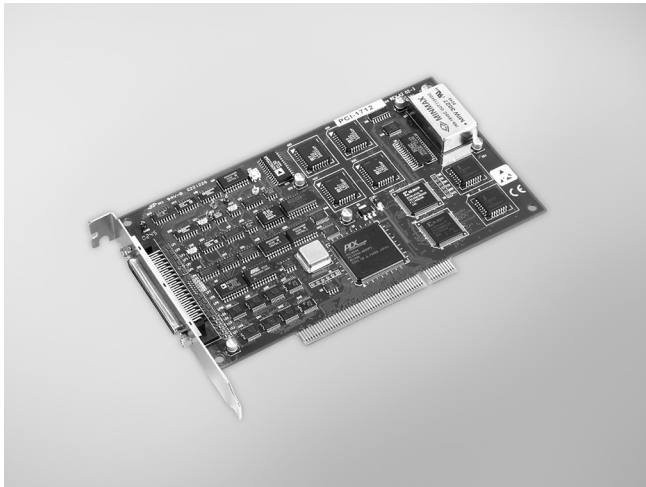


# PCI-1712/L

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



FCC CE RoHS

## 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
- Note: The sampling rate for each channels will be affected by used channel number. For example, if 4 channels are used, the sampling rate is  $600k/4 = 125$  kS/s per channel. (multi gain, without unipolar/bipolar mixed)

- 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) & Absolute Accuracy

Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Bipolar	$\pm 10$	$\pm 5$	$\pm 2.5$	$\pm 1.25$	$\pm 0.625$
Absolute Accuracy (% of FSR)*	0.1	0.1	0.2	0.2	0.4

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

### Analog Output (PCI-1712 only)

- Channels 2
- Resolution 12 bits
- Output Rate 1 MS/s max.
- FIFO Size 32,768 samples
- Output Range (Software programmable)

Internal Reference	Bipolar	$\pm 5$ V, $\pm 10$ V
	Unipolar	0 ~ 5 V, 0 ~ 10 V
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  $\Omega$  max.
- Operation Mode Static update, waveform generation
- Accuracy INLE:  $\pm 1$  LSB  
DNLE:  $\pm 1$  LSB

## 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 or output (programmable)
- 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

### Digital I/O

- Channels 16
- Compatibility 5 V/TTL
- Input Voltage Logic 0: 0.8 V max.  
Logic 1: 2.0 V min.
- 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)
- Storage Temperature -20 ~ 85°C (-4 ~ 185°F)
- Storage Humidity 5 ~ 95% RH non-condensing

## 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-10168-1E 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

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