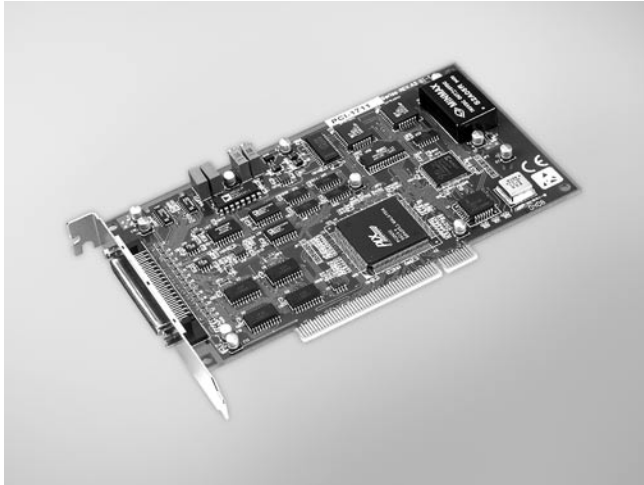


# PCI-1711/L

Entry-level 100 kS/s, 12-bit, 16-ch  
PCI Multifunction Card



## Features

- 16-ch single-ended analog input
- 12-bit A/D converter, with up to 100 kHz sampling rate
- Programmable gain
- Automatic channel/gain scanning
- Onboard FIFO memory (1,024 samples)
- Two 12-bit analog output channels (PCI-1711 only)
- 16-ch digital input and 16-ch digital output
- Onboard programmable counter

## Introduction

PCI-1711 and PCI-1711L are powerful, but low-cost multifunction cards for the PCI bus. PCI-1711 comes with 2 analog output channels, while the PCI-1711L doesn't. Thus, PCI-1711L represents a cost saver for those that do not need analog output.

## Specifications

### Analog Input

- **Channels** 16 single-ended
- **Resolution** 12 bits
- **Max. Sampling Rate** 100 kS/s
- **FIFO Size** 1,024 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 2 M $\Omega$ /5 pF
- **Sampling Modes** Software, onboard programmable pacer, or external
- **Input Range** (V, software programmable)

Bipolar	$\pm 10$	$\pm 5$	$\pm 2.5$	$\pm 1.25$	$\pm 0.625$
Accuracy (% of FSR $\pm 1$ LSB)	0.1	0.1	0.2	0.2	0.4

### Analog Output (PCI-1711 only)

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** Static update
- **Output Range** (V, software programmable)

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

- **Slew Rate** 11 V/ $\mu$ s
- **Driving Capability** 3 mA
- **Output Impedance** 0.81  $\Omega$
- **Operation Mode** Software polling
- **Accuracy** INLE:  $\pm 1$  LSB  
DNLE:  $\pm 1$  LSB

### Digital Inputs

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

### Digital Outputs

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.8 V  
Logic 1: 2.0 V
- **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** 10 MHz
- **Reference Clock** Internal: 10 MHz

### General

- **Bus Type** 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**  
PCI-1711 Typical: +5 V @ 850 mA  
Max: +5 V @ 1.0 A  
PCI-1711L Typical: +5 V @ 700 mA  
Max: +5 V @ 1.0 A

- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

## Ordering Information

- **PCI-1711** Entry-level 100 kS/s, 12-bit Multifunction Card
- **PCI-1711L** Entry-level 100 kS/s, 12-bit Multi. Card w/o AO
- **PCLD-8710** DIN-rail Wiring Board w/ CJC
- **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

## Pin Assignments

A10	68	34	AI1
A12	67	33	AI3
A14	66	32	AI5
A16	65	31	AI7
A18	64	30	AI9
A110	63	29	AI11
A112	62	28	AI13
A114	61	27	AI15
AIGND	60	26	AIGND
*AO0_REF	59	25	AOI_REF*
*AO0_OUT	58	24	AOI_OUT*
*AOGND	57	23	AOGND*
DI0	56	22	DI1
DI2	55	21	DI3
DI4	54	20	DI5
DI6	53	19	DI7
DI8	52	18	DI9
DI10	51	17	DI11
DI12	50	16	DI13
DI14	49	15	DI15
DGND	48	14	DGND
DO0	47	13	DO1
DO2	46	12	DO3
DO4	45	11	DO5
DO6	44	10	DO7
DO8	43	9	DO9
DO10	42	8	DO11
DO12	41	7	DO13
DO14	40	6	DO15
DGND	39	5	DGND
CNT0_CLK	38	4	PACER_OUT
CNT0_OUT	37	3	TRG_GATE
CNT0_GATE	36	2	EXT_TRG
+12V	35	1	+5V

\*: Pins 23~25 and pins 57~59 are not defined for PCI-1711L