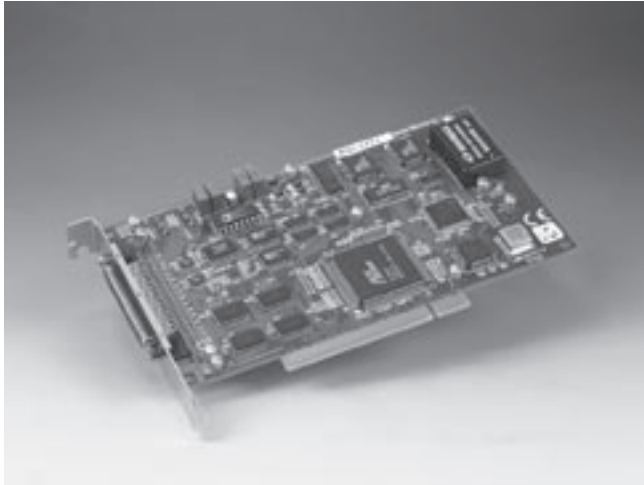


# PCI-1711

# PCI-1711L

**100 kS/s, 12-bit, 16-ch S.E. Input Low-cost Multifunction Card**

**100 kS/s, 12-bit, 16-ch S.E. Input Low-cost Multifunction Card w/o AO function**



## Features

- 16 single-ended analog inputs
- 12-bit A/D converter, with up to 100 kHz sampling rate
- Programmable gain
- Automatic channel/gain scanning
- Onboard FIFO memory (1024 samples)
- Two 12-bit analog output channels (PCI-1711 only)
- 16 digital inputs and 16 digital outputs
- 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 max.
- **FIFO Size** 1024 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

### \*Note:

The sampling rate and throughput depends on the computer hardware architecture and software environment. The rates may vary due to programming language, code efficiency, CPU utilization and so on.

### Analog Output (only for PCI-1711)

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

Internal Reference	Unipolar	0 ~ +5 V, 0 ~ +10 V
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:  $\pm 1/2$  LSB  
DNLE:  $\pm 1/2$  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** SCSI-68P female x 1
- **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)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Storing Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

## Ordering Information

- **PCI-1711** 100 kS/s, 12-bit multifunction card
- **PCI-1711L** 100 kS/s, 12-bit multifunction card without AO
- **PCLD-8710** SCSI-68 wiring terminal w/CJC, DIN-rail mount
- **PCLD-8710BNC** SCSI-68 wiring terminal w/CJC and BNC connectors, DIN-rail mount
  
- **PCL-10168-1** SCSI-68 shielded cable, 1 m
- **PCL-10168-2** SCSI-68 shielded cable, 2 m
- **ADAM-3968** SCSI-68 wiring terminal, DIN-rail mount

## Pin Assignments

AI0	68	34	AI1
AI2	67	33	AI3
AI4	66	32	AI5
AI6	65	31	AI7
AI8	64	30	AI9
AI10	63	29	AI11
AI12	62	28	AI13
AI14	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