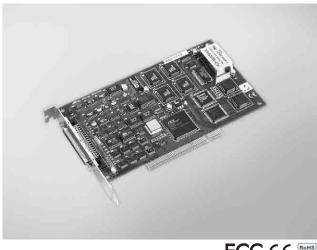


# 1 MS/s, 12-bit, 16-ch PCI Multifunction **DAQ Card**



# FCC ( E ROHS

# **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
- Flexible triggering and clocking capabilities

# **Specifications**

### **Analog Input**

Channels 16 single-ended/ 8 differential (software programmable)

Resolution

 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 MΩ/10 pF (Off), 100 MΩ/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                          | ±10 | ±5     | ±2.5 | ±1.25   | ±0.625   |
| Absolute Accuracy<br>(% of FSR)* | 0.1 | 0.1    | 0.2  | 0.2     | 0.4      |

<sup>\* ±1</sup> LSB is added as the derivative for absolute accuracy

## **Analog Output (PCI-1712 only)**

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

| Internal Reference | Bipolar  | ±5 V, ±10 V   |  |  |
|--------------------|----------|---|--|--|
|                    | Unipolar | 0 ~ 5 V, 0 ~ 10 V   |  |  |
| External Reference |          | $0 \sim +x \lor @ +x \lor (-10 \le x \le 10)$<br>-x \sim +x \forall @ +x \forall (-10 \le x \le 10) |  |  |

Slew Rate 20 V/µs **Driving Capability** 10 mA **Output Impedance**  $0.1~\Omega$  max.

Operation Mode Static update, waveform generation

Accuracy INLE: ±1 LSB DNLE: ±1 LSB

### 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

Sink: 8.0 mA @ 0.8 V

Output Capability

Source: 0.4 mA @ 2.0 V

## **Pacer/Counter**

Channels 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**  $0 \sim 60^{\circ}\text{C} (32 \sim 140^{\circ}\text{F})$ 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

