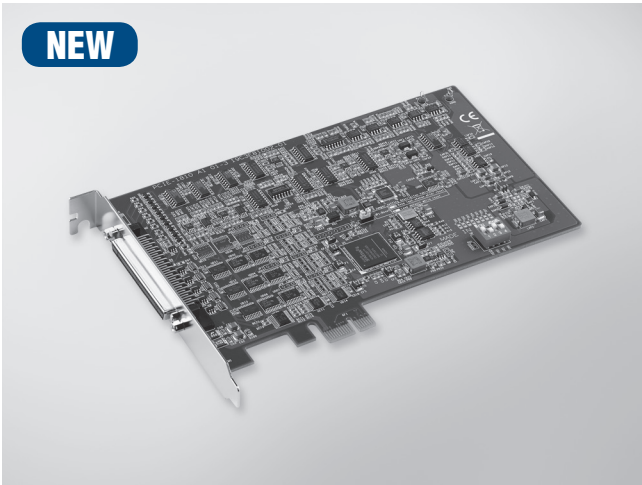


# PCIE-1810

800 kS/s, 12-bit, 16-ch PCI Express  
Multifunction DAQ Card

**NEW**



FCC CE 

## Features

- 16 analog inputs, up to 800 kS/s, 12-bit resolution
- 2 analog outputs, up to 500 kS/s, 12-bit resolution
- Support for digital trigger and analog trigger
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4k samples)
- Automatic channel/gain scanning

## Introduction

The PCIE-1810 is a multifunction PCI Express card that includes digital I/O, analog I/O and counter functions. It also features a 800 kS/s 12-bit A/D converter and supports analog trigger for A/D data acquisition.

## Specifications

### Analog Input

- **Channels** Single-ended 16-ch  
Differential 8-ch
- **Resolution** 12 bits
- **Sample Rate** Single Channel 800 kS/s max.  
Multi-Channel 500 kS/s max.

Note: The sampling rate for each channels will be affected by used channel number. For example, if 4 channels of PCIE-1810 are used, the sampling rate is 500k/4 = 125 kS/s per channel.

- **Trigger Reference** Digital Trigger,  
Analog Trigger
- **Trigger Mode** Start trigger, Delay to Start trigger  
Stop trigger, Delay to Stop trigger
- **FIFO Size** 4k samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Modes** Software and external clock
- **Input Range** Software programmable

| Gain                                 | 0.5  | 1      | 2     | 4       | 8        |
|--------------------------------------|------|--------|-------|---------|----------|
| <b>Bipolar</b>                       | ±10V | ±5     | ±2.5  | ±1.25   | ±0.625   |
| <b>Unipolar</b>                      | N/A  | 0 ~ 10 | 0 ~ 5 | 0 ~ 2.5 | 0 ~ 1.25 |
| <b>Absolute Accuracy (% of FSR)*</b> | 0.1  | 0.1    | 0.2   | 0.2     | 0.4      |

### Analog Output

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** 500 kS/s max.
- **Output Range** Software programmable

| Internal Reference        | Unipolar                       | 0 ~ 5 V<br>0 ~ 10 V        |
|---------------------------|--------------------------------|----------------------------|
|                           | Bipolar                        | -5 V ~ 5 V<br>-10 V ~ 10 V |
| <b>External Reference</b> | 0 ~ +x V @ -x V (-10 ≤ x ≤ 10) |                            |

- **Slew Rate** 20 V/μs
- **Driving Capability** 5 mA
- **Operation Mode** Static update, Waveform generation
- **Accuracy** INLE: ± 1 LSB, DNLE: ± 1 LSB

### Digital I/O

- **Channels** 24
- **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: 15 mA @ 0.8 V  
Source: 15 mA @ 2.0 V

### Counter

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Pulse Generation** Yes
- **Timebase Stability** 50 ppm

### General

- **Form factor** PCI Express x 1
- **Triggering** 12 bits Analog x 2 / Digital x 2
- **I/O Connector** 68-pin SCSI female connector
- **Dimensions (L x W)** 167 x 100 mm
- **Power Consumption** Typical: 3.3 V @ 488 mA  
12 V @ 112 mA  
Max.: 3.3 V @ 2.25 A  
12 V @ 390 mA
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F) (refer to IEC 60068-2-1, 2)
- **Storage Temperature** -40 ~ 70°C (-40 ~ 158°F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 60068-2-3)

## Ordering Information

- **PCIE-1810** 800 kS/s, 12-bit Multifunction Card

### Accessories

- **PCL-10168H-1E** 68-pin SCSI Shielded Cable with Noise Rejecting, 1 m
- **PCL-10168H-2E** 68-pin SCSI Shielded Cable with Noise Rejecting, 2 m
- **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