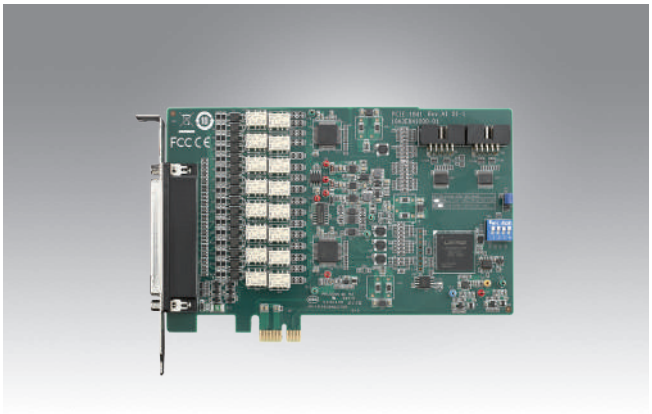
# PCIE-1841
# PCIE-1841L

## 16/8-ch, 18-bit, 1MS/s/ch Simultaneous Analog Input PCI Express DAQ Card



## Features

- 16/8-ch simultaneous sampling up to 1 MS/s
- 18-bit resolution
- Software selectable low-pass filter
- Wide input range up to 40 Vpp (±20 V range)
- Support both voltage and current measurement
- Multiple selectable trigger modes

## Specifications

### Analog Input

- **Channels** 16/8 differential
- **Analog-to-digital converter (ADC) resolution** 18 bits
- **Input range** ±20 V, ±12.5 V, ±10 V, ±5 V, or ±20 mA, software configurable per channel
- **Maximum input voltage** ±20 V
- **Input common-mode voltage range**
  - ±20 V range ±10 V
  - ±12.5 V range ±6.25 V
  - ±10 V range ±5 V
  - ±5 V range ±2.5 V
- **Over-voltage protection** ±30 V
- **Input coupling** DC
- **Input impedance**
  - Voltage input 1 MΩ
  - Current input 500 Ω
- **Analog low-pass filter**
  - -3 dB bandwidth 22.5 kHz or 250 kHz, software configurable per channel
- **Acquisition type** Instant or buffered, software configurable

### Buffered Acquisition

- **Enabled channel combination** Each channel can be enabled/disabled independently by software
- **Sample rate** 1 MHz max., for all channels, simultaneous sampling, software configurable
- **On-board FIFO Size** 8192 Samples

### Absolute accuracy

- **Voltage input**
  - Operating temperature within ±5°C of last Auto-calibration temperature ±0.01% of full-scale range max.
  - Over full operating temperature range ±0.05% of full-scale range max.
- **Current input**
  - Operating temperature within ±5°C of last Auto-calibration temperature ±0.1% of full-scale range max.
  - Over full operating temperature range ±0.5% of full-scale range max.

### DC Performance[2]

- **Idle channel noise** 275 µVRMS
- **ENOB** 17.14 bits

### AC Performance[2]

- **SNR** 88.36 dB
- **THD** -103.09 dB
- **THD+N** -85.29 dB
- **SFDR** 101.95 dB
- **Dynamic Range** 94.71 dB
- **Crosstalk** -104.13 dB

### Trigger

- **Number of triggers** 2
- **Trigger action** Start, delay to start, stop, or delay to stop
- **Trigger delay range** 0 ~ 16,777,215 samples
- **Sample number** 0 ~ 16,777,215 samples

### Analog Trigger[1]

- **Channel** 2 (start and stop)
- **Source** One of the analog input channels, software configurable
- **Threshold level** Full scale of analog input range, software configurable
- **Hysteresis** 1/256 of analog input range, software configurable
- **Polarity** Rising edge or falling edge, software configurable

### Digital Trigger[1]

- **Source** 2 external pins
- **Input logic level** Logic high 2.0 V min.<br>Logic low 0.8 V max.
- **Working voltage** -0.25 V ~ 5.25 V
- **Polarity** Rising edge or falling edge, software configurable
- **Input protection voltage** -0.5 V ~ 6.5V

### Mechanical

- **Connector Type** DB-62 connector
- **Dimension** 175 x 100mm (6.9" x 3.93")
- **Weight** 0.12 kg

### Environment

- **Operating temperature** 0 °C to 60 °C (-4 °F to 140 °F)
- **Storage temperature** -40 °C to 70 °C (-40 °F to 158 °F)
- **Operating humidity** 10% to 90% RH, non-condensing
- **Storage humidity** 5% to 95% RH, non-condensing

### Certification

- **EMC** CE, FCC

## Ordering Information

- **PCIE-1841-A** 16-ch, 18-bit, 1MS/s/ch, simultaneous sampling card
- **PCIE-1841L-A** 8-ch, 18-bit, 1MS/s/ch, simultaneous sampling card

## Accessories

- **ADAM-3962-AE** DB-62 Wiring Terminal, DIN-rail Mount
- **PCL-10162-1E** DB-62 Shielded Cable, 1m
- **PCL-10162-3E** DB-62 Shielded Cable, 3m
- **1700030423-01** 10 pin Flat Cable for MDSI synchronization, 10cm

(1) Total 2 triggers available, trigger mode and type selectable between analog/digital triggers
(2) For detailed information, please refer to user manual



Last updated: 13-Oct-2023