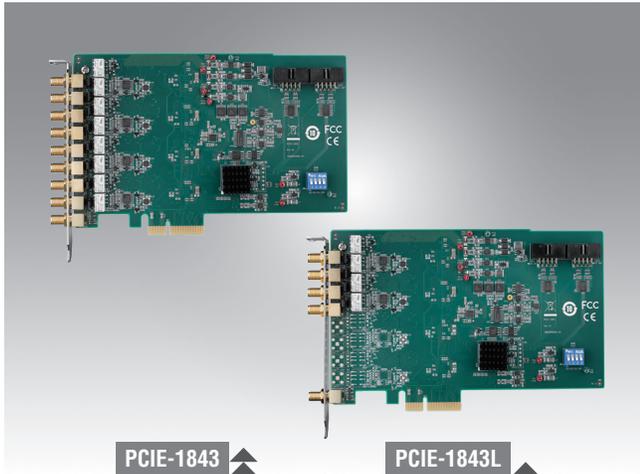


# PCIE-1843

# PCIE-1843L

## 8/4-ch, 14-bit, 20MS/s/ch Simultaneous Analog Input PCI Express DAQ Card



### Features

- 8 or 4 x Simultaneously Analog Inputs, up to 20 MS/s
- 14-bit resolution
- Supports digital and analog triggers
- Wide input range up to 20 Vpp ( $\pm 10$  V range)
- Onboard FIFO memory (65,536 samples)

### Specifications

#### Analog Input

- **Channels** 8/4 single-ended
- **Analog-to-digital converter (ADC) resolution** 14 bits
- **Input range**  $\pm 10$  V,  $\pm 5$  V,  $\pm 2.5$  V, or  $\pm 1$  V, software configurable per channel
- **Maximum input voltage** 10.1 V
- **Over-voltage protection**  $\pm 15$  V
- **Input coupling** DC
- **Input impedance** 50  $\Omega$  or 1 M $\Omega$ , configured by on-board jumper per channel
- **Analog low-pass filter** -3 dB bandwidth 5 MHz
- **Acquisition type** Instant or buffered, software configurable

#### Buffered Acquisition

- **Enabled channel combination** Each channel can be enabled/disabled independently by software
- **Sample rate** 20 MHz max. per channel
- **On-board FIFO Size** 65,536 Samples

#### Absolute accuracy

- Operating temperature within  $\pm 5^\circ\text{C}$  of last Auto-calibration temperature  $\pm 0.2\%$  of full-scale range max. Over full operating temperature range  $\pm 1\%$  of full-scale range max.

#### Trigger

- **Number of triggers** 1
- **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

- **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

- **Source** 1 external pins
- **Input logic level** Logic high 2.0 V min.  
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** SMA
- **Dimension** 167 x 111 mm
- **Weight** PCIE-1843: 161g  
PCIE-1843L: 130g

#### Environment

- **Operating temperature** 0  $^\circ\text{C}$  to 60  $^\circ\text{C}$  (32  $^\circ\text{F}$  to 140  $^\circ\text{F}$ )
- **Storage temperature** -20  $^\circ\text{C}$  to 70  $^\circ\text{C}$  (-4  $^\circ\text{F}$  to 158  $^\circ\text{F}$ )
- **Operating humidity** 10% to 90% RH, non-condensing
- **Storage humidity** 5% to 95% RH, non-condensing

#### Certification

- **EMC** CE, FCC

### Ordering Information

- **PCIE-1843-A** 8-ch, 14-bit, 20MS/s/ch, simultaneous sampling card
- **PCIE-1843L-A** 4-ch, 14-bit, 20MS/s/ch, simultaneous sampling card

### Accessories

- **1700030423-01** 10-pin flat cable for MDSI synchronization, 10 cm