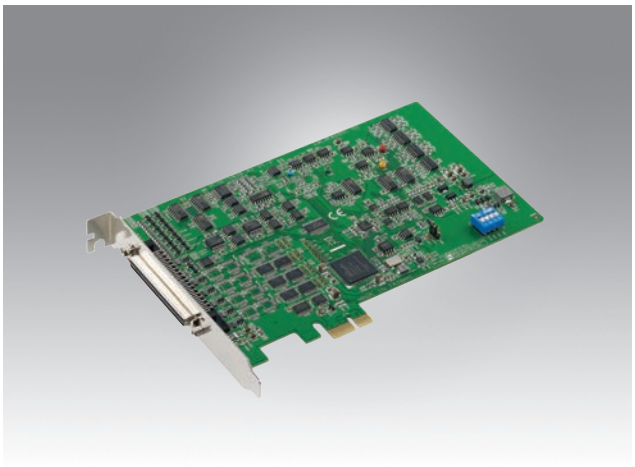
PCIE-1816
PCIE-1816H

500 KS/s, 16-Bit, 16-Ch PCI Express Multifunction DAQ Card

1 MS/s, 16-Bit, 16-Ch PCI Express Multifunction DAQ Card



FCC CE RoHS

Features

PCIE-1816

- 16 analog inputs, up to 1 MS/s, 16-bit resolution

PCIE-1816H

- 16 analog inputs, up to 5 MS/s, 16-bit resolution

PCIE-1816/1816H

- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Supports analog and digital triggers for analog I/O
- Supports waveform generation for analog output
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4,000 samples)

Introduction

PCIE-1816/1816H is a 16-ch (up to 5 MS/s) multifunction DAQ card with integrated digital I/O, analog I/O, and counter functions. PCIE-1816/1816H also features analog and digital triggering support, 2-ch 16-bit analog outputs with waveform generation capability, 24-ch programmable digital I/O lines, and two 32-bit general purpose timer/counters.

Specifications

Analog Input

- **Channels** Single end 16
  Differential 8
- **Resolution** 16 bits
- **Sample Rate** PCIE-1816: Single channel 1 MS/s max. Multiple channels 500 kS/s max.
  PCIE-1816H: Single channel 5 MS/s max. Multiple channels 1 MS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 1M/4 = 250 kS/s per channel.

- **Trigger Reference** Digital and analog triggers
- **FIFO Size** 4,000 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Mode** Software and external clock
- **Input Range** Software programmable

PCIE-1816					
Gain	0.5	1	2	4	8
Bipolar	±10V	±5	±2.5	±1.25	±0.625
Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Absolute Accuracy (% of FSR)*	0.0075	0.0075	0.0075	0.008	0.008

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** 3 MS/s max.
- **Output Range** Software programmable

Internal Reference	**Unipolar**	0 ~ 5 V 0 ~ 10 V
	Bipolar	-5 V ~ 5 V -10 V ~ 10 V
External Reference		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: ± 4 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 x1
- **Triggering** 2 x Analog/2 x digital (16 bits)
- **I/O Connector** 68-pin SCSI, female
- **Dimensions (L x W)** 167 x 100 mm (6.6" x 3.9")
- **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)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **PCIE-1816-AE** 1 MS/s, 16-bit multifunction card
- **PCIE-1816H-AE** 5 MS/s, 16-bit multifunction card

Accessories

- **PCL-10168H-1E** 68-pin SCSI shielded cable with noise rejection, 1 m
- **PCL-10168H-2E** 68-pin SCSI shielded cable with noise rejection, 2 m
- **PCL-10168-1E** 68-pin SCSI shielded cable, 1 m
- **PCL-10168-2E** 68-pin SCSI shielded cable, 2 m
- **ADAM-3968-AE** 68-pin DIN rail SCSI wiring board
- **PCLD-8810E-AE** 68-pin SCSI DIN-rail Wiring Board for PCIE-1800 series
- **PCLD-8811-AE** Low-Pass Active Filter Boar

Last updated: 27-Jun-2018