

# PCIE-1840 PCIE-1840L

4-Ch, 16-Bit, 125 MS/s Digitizer

4-Ch, 16-Bit, 80 MS/s Digitizer

NEW



## Features

### PCIE-1840

- 4 simultaneous analog inputs, up to 125 MHz, 16-bit resolution
- 500 MHz time-interleaved sampling

### PCIE-1840L

- 4 simultaneous analog inputs, up to 80 MHz, 16-bit resolution
- 320 MHz time-interleaved sampling

### PCIE-1840/PCIE-1840L

- Non-stop data streaming capabilities
- 2 GB of onboard memory
- 1M or 50 Ohm selectable input impedance
- Built-in tunable anti-aliasing filter
- AC/DC coupling support

## Introduction

PCIE-1840/1840L is a 16-bit resolution digitizer that provides up to 2 GB of onboard sample memory, true ENOBs of up to 11.4 bits, and sampling rates of up to 125 per second. PCIE-1840/1840L divides the input voltage range into 65,536 digitization levels and can support 1 or 2 digitizing channels (up to 250/500 MSPS).

## Specifications

### Analog Input

- Channels** 4 x single ended, simultaneous
- Resolution** 16 bits
- Max. Sampling Rate** 125 MS/s (PCIE-1840)  
80 MS/s (PCIE-1840L)
- Memory Size** 2 GB
- Overvoltage Protection** 30 V<sub>p-p</sub>
- Input Impedance** 50 Ω / 1M Ω  
For 1 MΩ: AC/DC coupling
- Sampling Modes** Software and external clock
- Trigger Modes** Start, Delayed Start  
Stop, Delayed Stop
- Input Range** 0.2 / 0.4 / 1 / 2 / 4 / 10 /  
20 V<sub>pp</sub> (input Impedance must be 1 MΩ)
- Time Interleaved Sampling** - 4 channels combined,  
500 MPS max. (PCIE-1840)  
320 MPS max. (PCIE-1840L)  
- 2 channels combined,  
250 MPS max. (PCIE-1840)  
160 MPS max. (PCIE-1840L)  
- Configured automatically by setting sampling rate

### General

- Bus Type** PCI Express Gen2 x4
- I/O Connectors** 4 x BNC (for analog input)  
1 x HDMI (for external clock and trigger)
- Dimensions (L x H)** 175 x 100 mm (6.9" x 3.9")
- Power Consumption** Under test
- Operating Temperature** 0 ~ 50 °C (32 ~ 122 °F)
- Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- Storage Humidity** 5 ~ 95% RH, non-condensing

## Pin Assignments

DGND	1	REF_CLK_IN+
REF_CLK_OUT+	2	REF_CLK_IN-
REF_CLK_OUT-	3	DGND
DGND	4	DTRG0
TRIGOUT0	5	DTRG1
TRIGOUT1	6	DGND
N/A	7	N/A
N/A	8	N/A
N/A	9	DGND
N/A	10	N/A
N/A	11	DGND
N/A	12	N/A
N/A	13	N/A
N/A	14	DGND
N/A	15	N/A
N/A	16	DGND
N/A	17	N/A
N/A	18	DGND
N/A	19	N/A

## Ordering Information

- PCIE-1840-AE** 4-ch, 16-bit, 125 MS/s digitizer
- PCIE-1840L-AE** 4-ch, 16-bit, 80 MS/s digitizer
- PCLD-8840-AE** 20-pin DIN rail HDMI cable wiring board for PCIE-1802 and PCIE-1840
- PCL-10119-1E** HDMI cable
- PCL-1010B-1E** BNC coaxial cable, 1 m