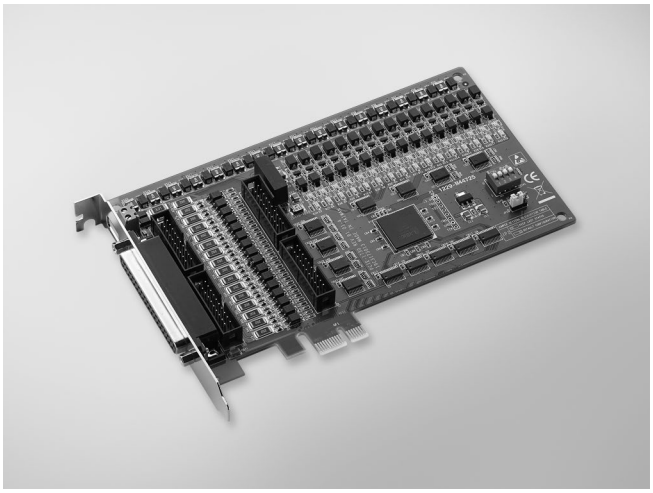
PCIE-1730

32-ch TTL and 32-ch Isolated Digital I/O PCI Express Card



Features

- 32-ch isolated DI/O (16-ch digital input, 16-ch digital output)
- 32-ch TTL DI/O (16-ch digital input,16-ch digital output)
- High output driving capacity
- Interrupt handling capability
- 2 x 20-pin connectors for isolated DI/O channels and 2 x 20-pin connectors for TTL DI/O channels
- D-type connector for isolated input and output channels
- High-voltage isolation on output channels (2,500 V_{DC})

Introduction

PCIE-1730 offers isolated digital input channels as well as isolated digital output channels with isolation protection up to 2,500 V_{DC}, which makes them ideal for industrial applications where high-voltage isolation is required. There are also 32 TTL digital I/O channels on PCIE-1730.

Specifications

Digital Input

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
Logic 1: 2.0 V min.
- **Interrupt Capable Ch.** 2 (DI0, DI8)

Isolated Digital Input

- **Channels** 16
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 10 V min. (30 V max.)
- **Interrupt Capable Ch.** 2 (IDI0, IDI8)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 50 µs
- **Input Resistance** 2.7 kΩ @ 1 W

Digital Output

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.5V max.
Logic 1: 2.4V min.
- **Output Capability** Sink: 24mA @ 0.5V
Source: 15mA @ 2.4V

Isolated Digital Output

- **Channels** 16
- **Output Type** Sink type (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 500 mA max./channel
- **Opto-Isolator Response** 50 µs

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37 female connector
4 x 20-pin box header
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical:3.3 V @ 280 mA, 12 V @ 330 mA
Max.: 3.3 V @ 420 mA, 12 V @ 400 mA
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **PCIE-1730** 32-ch Isolated Digital I/O PCIe Card

Accessories

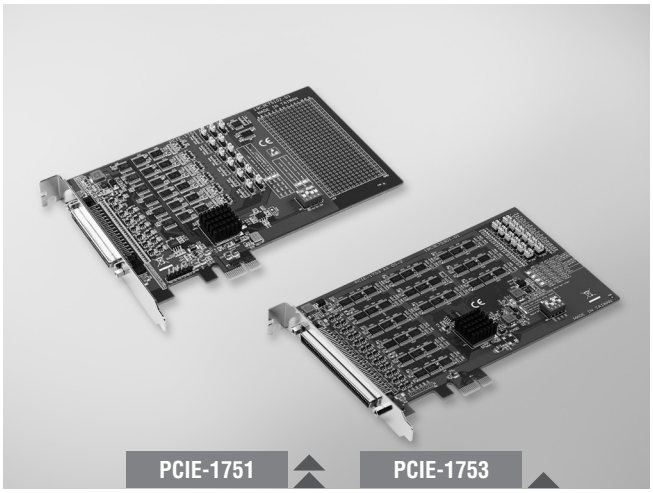
- **PCL-10120-1E** 20-pin Flat Cable, 1 m
- **PCL-10120-2E** 20-pin Flat Cable, 2 m
- **ADAM-3920** 20-pin DIN-rail Flat Cable Wiring Board
- **PCLD-782** 16-ch Isolated DI Board w/ 1m 20-pin Flat Cable
- **PCLD-885** 16-ch Power Relay Board w/ 20p & 50p Flat Cables
- **PCLD-785** 16-ch Relay Board w/ One 1m 20-pin Flat Cable
- **ADAM-3937** DB37 DIN-rail Wiring Board
- **PCL-10137-1E** DB37 Cable, 1 m
- **PCL-10137-2E** DB37 Cable, 2 m
- **PCL-10137-3E** DB37 Cable, 3 m

Last updated : 5-May-2015

PCIE-1751
PCIE-1753

48-ch Digital I/O and 3-ch Counter PCI Express Card

96-ch Digital I/O PCI Express Card



FCC CE RoHS COMPLIANT 2002/95/EC

Features

- Emulates mode 0 of 8255 PPI (every port with nibble)
- Buffered circuits for higher driving capacity than the 8255
- Interrupt handling capability
- Timer/Counter interrupt capability
- Supports both dry and wet contact
- Keeps the I/O port setting and DO state after system reset
- BoardID switch
- Pattern match interrupt function for DI
- "Change of state" interrupt function for DI
- Programmable digital filter function for DI
- Output status read back

Introduction

The PCIE-1751 offers 48-bit digital I/O and the PCIE-1753 offers 96-bit digital I/O for PCI Express. the channels are divided into six 8-bit and twelve 8-bit I/O ports separately . Users can configure each 4-channel per port (nibble) as input or output via software. The PCIE-1751 also provides three 32-bit counters.

Specifications

Digital Input

- **Channels** 48 (shared with output) (PCIE-1751)
  96 (shared with output) (PCIE-1753)
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2 V min.
- **Interrupt Capable Ch.** 6 (PCIE-1751)
  12 (PCIE-1753)

Digital Output

- **Channels** 48 (shared with output) (PCIE-1751)
  96 (shared with output) (PCIE-1753)
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.4 V max.
  Logic 1: 2.4 V min.
- **Output Capability** Sink: 24mA @ 0.4 V
  Source: 15mA @ 2.4 V

Counter/Timer (PCIE-1751 only)

- **Channels** 3
- **Resolution** 3 x 32-bit counter
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Reference Clock** Internal: 20K / 200K / 2M / 20MHz
  External Clock Frequency: 10 MHz
  External Voltage Range: 5 V/TTL

General

- **Bus Type** Universal PCI Express
- **I/O Connectors** 1 x 68-pin SCSI female connector (PCIE-1751)
  1 x 100-pin SCSI female connector (PCIE-1753)
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3 V @ 850 mA
  Max.: 3.3V @ 2A (PCIE-1751)
  Typical: 3.3V @ 1 A
  Maximum: 3.3 V @ 3 A (PCIE-1753)

Note: The maximum power consumption includes power consumption for +5 V output (on pin 34 and pin 68, with 0.5 A for PCIE-1751, on pin 50 and pin 100, with 0.5 A for PCIE-1753)

- **Operating Temperature** 0~60°C (32~140°F)
- **Storage Temperature** -20 ~ 85°C (-4 ~ 158°F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

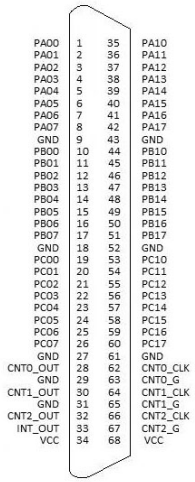
Ordering Information

- **PCIE-1751** 48-ch Digital I/O and 3-ch Counter PCI Express
- **PCIE-1753** 96-ch Digital I/O PCI Express Card

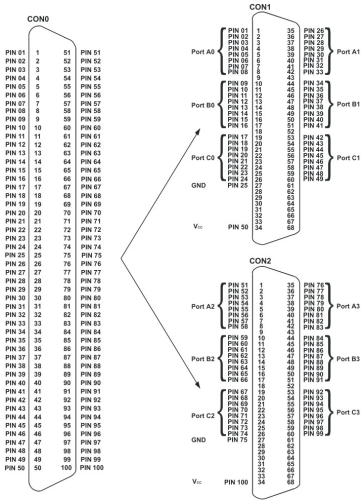
Accessories

- **PCL-10168-1E** 68-pin SCSI Shielded Cable, 1 m (PCIE-1751 only)
- **PCL-10168-2E** 68-pin SCSI Shielded Cable, 2 m (PCIE-1751 only)
- **PCL-10268-1E** 100-pin to Two 68-pin SCSI Cables, 1 m (PCIE-1753 only)
- **PCL-10268-2E** 100-pin to Two 68-pin SCSI Cables, 2 m (PCIE-1753 only)
- **ADAM-3968** 68-pin DIN-rail SCSI Wiring Board
- **ADAM-3968/20** 68-pin SCSI to 3 20-pin Box Header Board
- **ADAM-3968/50** 68-pin SCSI to 2 50-pin Box Header Board
- **PCLD-8751** 48-ch Isolated Digital Input Board
- **PCLD-8761** 24-ch Replay/ Isolated Digital Input Board
- **PCLD-8762** 48-ch Relay Board

Pin Assignment



PCIE-1751 Pin Assignments

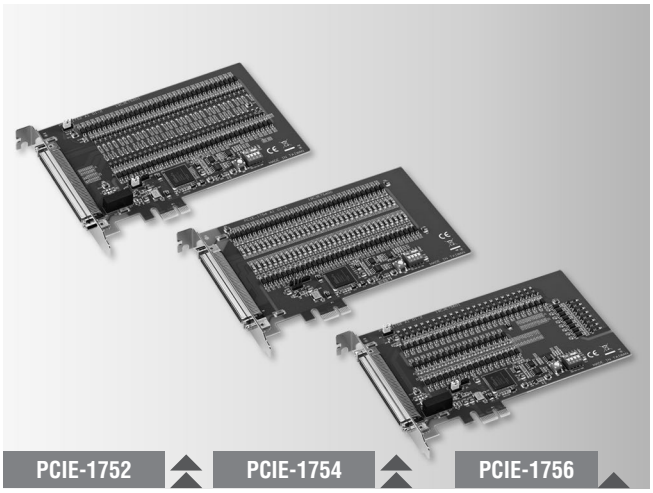


PCIE-1753 Pin Assignments

Date updated: 21-Sep-2015

PCIE-1752
PCIE-1754
PCIE-1756

64-ch Isolated Digital Output PCI Express Card
64-ch Isolated Digital Input PCI Express Card
64-ch Isolated Digital I/O PCI Express Card



Features

PCIE-1752/1756

- Wide output range (5 ~ 40 V_{DC})
- High sink current on isolated output channels (500mA max./ch)
- 2,000 V_{DC} ESD protection
- High-voltage isolation (2,500 V_{DC})
- Interrupt handling capability

PCIE-1754/1756

- Wide input range (10 ~ 30 V_{DC})
- Either +/- voltage input for DI by group
- High over-voltage protection (70 V_{DC})
- High-voltage isolation (2,500 V_{DC})
- Output status read-back
- Keeps the output settings and values after system hot reset
- Channel-freeze function

Introduction

The Advantech PCIE-1752, PCIE-1754 and PCIE-1756 series products offer 64 isolated digital input and output channels with 2,500 V_{DC} isolation protection. They feature a wide input range (10 ~ 30 V_{DC}), wide output range (5 ~ 40 V_{DC}) and high sink current (500mA max./channel) can make PCIE-1752/1754/1756 series products easily used in industrial automation control systems. With the help of the latest Advantech driver - DAQNavi, users can perform the configuration and setting easily and efficiently in the programming.

Specifications

Isolated Digital Input

- **Channels** PCIE-1754: 64
PCIE-1756: 32
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 10 V min. (30 V_{DC} max.)
- **Input Current** 10 V_{DC} @ 2.97 mA
20 V_{DC} @ 6.35 mA
30 V_{DC} @ 9.73 mA
- **Interrupt Capable Ch.** PCIE-1754: 4
PCIE-1756: 2
- **Isolation Protection** 2,500 V_{DC}
- **Overvoltage Protection** 70 V_{DC}
- **ESD Protection** 2,000 V_{DC}
- **Opto-Isolator Response** 50 µs

Isolated Digital Output

- **Channels** PCIE-1752: 64
PCIE-1756: 32
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 500 mA max./channel
- **Opto-isolator Response** 50 µs

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x 100-pin SCSI female connector
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** **PCIE-1752**
Typical: 3.3 V @ 485 mA
Max.: 3.3 V @ 530 mA; 12V @ 90 mA
PCIE-1754
Typical: 3.3 V @ 285 mA
Max.: 3.3 V @ 330 mA
PCIE-1756
Typical: 3.3 V @ 385 mA
Max.: 3.3 V @ 430 mA; 12V @ 55 mA
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature** -20 ~ 70°C (-4 ~ 158°F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **PCIE-1752** 64-ch Isolated Digital Output PCI Express Card
- **PCIE-1754** 64-ch Isolated Digital Input PCI Express Card
- **PCIE-1756** 64-ch Isolated Digital I/O PCI Express Card

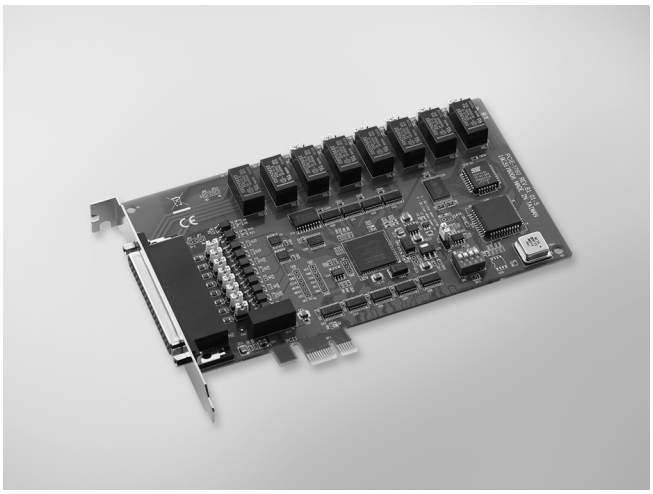
Accessories

- **PCL-10250-1E** 100-pin SCSI to Two 50-pin SCSI Cable, 1 m
- **PCL-10250-2E** 100-pin SCSI to Two 50-pin SCSI Cable, 2 m
- **ADAM-3951** 50-pin DIN-rail Wiring Board w/ LED Indicators
- **PCL-101100M-3E** 100-pin SCSI to 100-pin SCSI Cable, 3 m
- **ADAM-39100** 100-pin DIN-rail Wiring Board

Last updated : 5-May-2015

PCIE-1760

8-ch Relay and 8-ch Isolated Digital Input PCI Express Card



Features

- 8 opto-isolated digital input channels with counter/timer function
- 8 relay actuator output channels
- 2 opto-isolated PWM outputs
- LED indicators to show activated relays
- Jumper selectable dry contact/wet contact input signals
- Up event counters for DI
- Programmable digital filter function for DI
- Pattern match interrupt function for DI
- "Change of state" interrupt function for DI
- BoardID switch

Introduction

PCIE-1760 relay actuator and isolated digital input card is a PC add-on card for the PCI Express bus. It meets the PCI Express standard Rev. 1.0. It provides 8 opto-isolated digital inputs with isolation protection of 2,500 V_{DC} for collecting digital inputs in noisy environments, 8 relay actuators that can be used as a on/off control devices or small power switches, and 2 isolated PWM (Pulse Width Modulation) outputs for custom applications.

For easy monitoring, each relay is equipped with one red LED to show its on/off status. Each isolated input supports both dry contact and wet contact so that it can easily interface with other devices when no voltage is present in the external circuit.

Specifications

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 0 - 3 V_{DC}
Logic 1: 10 - 30 V_{DC}
- **Interrupt Capable Ch.** 8
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 60 µs
- **Input Resistance** 3.2 kΩ 1 W

Counter/Timer

- **Channels** 2
- **Resolution** 32 bits
- **Input Voltage** Logic 0: 0 - 3 V_{DC}
Logic 1: 10 - 30 V_{DC}
- **Max. Input Frequency** Up to 1 kHz
- **Isolation Protection** 2,500 V_{DC}
- **PWM Channels** 2
- **Digital Noise Filter** Effective input period: 1 µs ~ 255 µs (unit: 1 µs)

Relay Output

- **Channels** 8
- **Relay Type** 2 x Form C, and 6 x Form A
- **Contact Rating** 125 V_{AC} @ 0.5 A, 30 V_{DC} @ 1 A
- **Operate/Release Time** 5 / 3.5 ms max
- **Contact Resistance** < 100 mΩ initially
- **Life Expectancy (Electrical)** 3 x 10^5 cycles min.: 2 A @ 30 V_{DC}, 1 A @ 125 V_{AC}
10^6 cycles min.: 1 A @ 30 V_{DC}, 0.5 A @ 125 V_{AC}

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37 female connector
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: +3.3 V @ 390 mA +12 V @ 30 mA
Max.: +3.3 V @ 490 mA +12V @ 60 mA
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature** -20 ~ 70°C (-4 ~ 158°F)
- **Storage Humidity** 5 ~ 95 % RH, non-condensing

Ordering Information

- **PCIE-1760** 8-ch Relay/IDI PCIe Card w/ 2-ch Counter/Timer

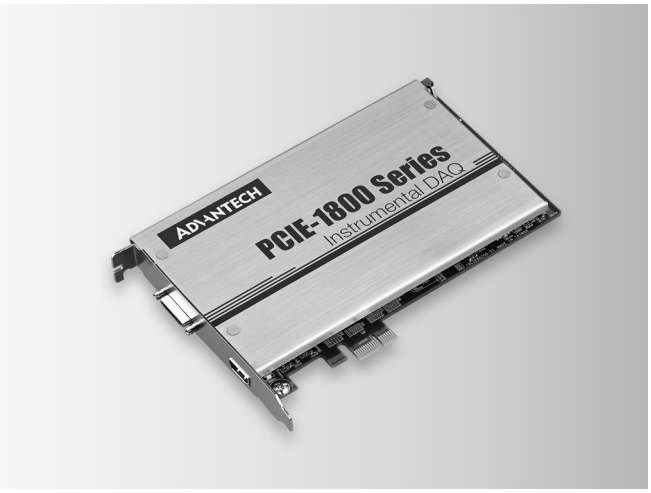
Accessories

- **PCL-10137-1E** DB37 Cable, 1 m
- **PCL-10137-2E** DB37 Cable, 2 m
- **PCL-10137-3E** DB37 Cable, 3 m
- **ADAM-3937** DB37 DIN-rail Wiring Board

Last updated : 30-Oct-2015

PCIE-1802

8-ch, 24-bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card



Features

- 8 simultaneously sampled analog inputs up to 216 kS/s
- 24-bit resolution ADCs with 115 dB dynamic range
- Wide input ranges from ±0.2 V to ±10 V
- Built-in anti-aliasing filter
- Software configurable 4 or 10 mA Integrated Electronic Piezoelectric Excitation (IEPE)
- Software selectable AC/DC coupling
- Full auto-calibration
- Multiple card synchronization

Introduction

The Advantech PCIE-1802 is a 24-bit high-accuracy data acquisition PCI Express module specifically designed for sound and vibration applications. This module has built-in 4 or 10 mA excitation currents for IEPE sensors such as accelerometers and microphones.

Specifications

Analog Input

Channels	8 (simultaneously sample, differential or 50 Ω pseudo-differential)
Resolution	24 bits (Delta-sigma)
Max. Sampling Rate	100 S/s to 216 kS/s (with resolution ≤ 363.80 µS/s)
Input Coupling	AC/DC, selectable per channel
AC Cut-Off Frequency	0.727 Hz (-3 dB)
Trigger Modes	Start trigger, Delay to Start trigger Stop trigger, Delay to Stop trigger
Input Range	±0.2, ±0.5, ±1, ±2, ±5, ±10 V
Offset Error	< ±1 mV
Gain Error	< ±0.2 %
Total Harmonic Distortion (THD)	-100 dB
Total Harmonic Distortion Plus Noise (THD+N)	-98 dB
Dynamic Range	115 dB
IEPE Excitation	0, 4, or 10 mA, selectable per channel
Data Transfer	Direct memory access (DMA)
Multiple Card Synchronization	For more than 8 AI channels

Digital Input/Output

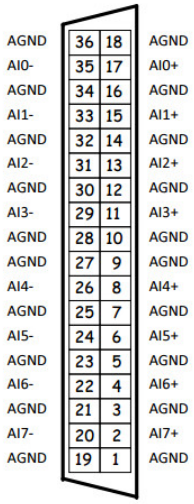
DI Channels	1 (interrupt)
DO Channels	2

General

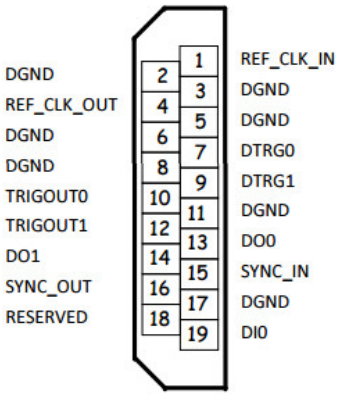
Bus Type	PCI Express x1
I/O Connectors	CN600 36-pin Mini-SCSI (for AI) CN601 HDMI (for clock, trigger, and DI/Os)
Dimensions (L x H)	168 x 99 mm (6.6" x 3.9")
Operating Temperature	0 ~ 60°C (32 ~ 140°F)
Storage Temperature	-40 ~ 70°C (-40 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non-condensing

Pin Assignments

MINI-SCSI



HDMI



Ordering Information

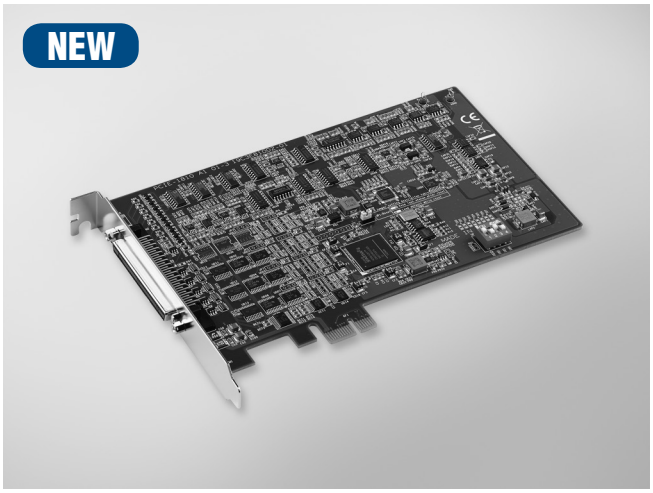
PCIE-1802-AE	8-ch, 24-bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card
PCLD-8840-AE	20-pin DIN-rail HDMI Cable Wiring Board for PCIE-1802 and PCIE-1840
PCL-108BNC-50E	Mini-SCSI to 8-BNC Cable
PCL-10119-1E	HDMI Cable

Last updated :10-December-2015

PCIE-1810

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

NEW



FCC CE RoHS COMPLIANT 2002/95/EC

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 accquisition.

Specifications

Analog Input

- **Channels** Single-end 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
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)*	0.1	0.1	0.2	0.2	0.4

Analog Output

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** Static- Software Polling
  500 KS/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: ± 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

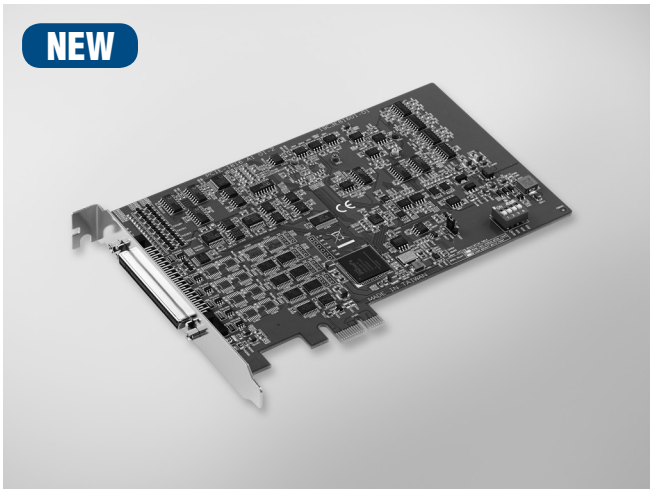
Date updated: 25-Sep-2015

PCIE-1816
PCIE-1816H

1 MS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card

5 MS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card

NEW



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 Trigger for AI/O
- Supports Waveform generation for AO
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4k samples)
- Supports Microsoft Windows 8 (desktop mode only)/7/XP

Introduction

PCIE-1816/1816H is a 16-ch, up to 5 MS/s multi-function DAQ card and integrates digital I/O, analog I/O, and counter functions. The PCIE-1816/1816H also features analog and digital triggering, 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-ch; Differential 8-ch
- **Resolution** 16 bits
- **Sample Rate** PCIE-1816: Single Channel 1 MS/s max., Multi-Channel 500 kS/s max.; PCIE-1816H: Single Channel 5 MS/s max., Multi-Channel 1 MS/s max.

Note: The sampling rate for each channel will be affected by used channel number. For example, if 4 channels of PCIE-1816H are used, the sampling rate is 1M/4 = 250 kS/s per channel.

- **Trigger Reference** Analog Trigger, Digital Trigger
- **FIFO Size** 4k samples
- **Max. Input Voltage** ± 15 V
- **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 x 1
- **Triggering** 16 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)
- **Storage Temperature** -40 ~ 70°C (-40 ~ 158°F)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **PCIE-1816** 1 MS/s, 16-bit Multifunction Card
- **PCIE-1816H** 5 MS/s, 16-bit Multifunction Card

Accessories

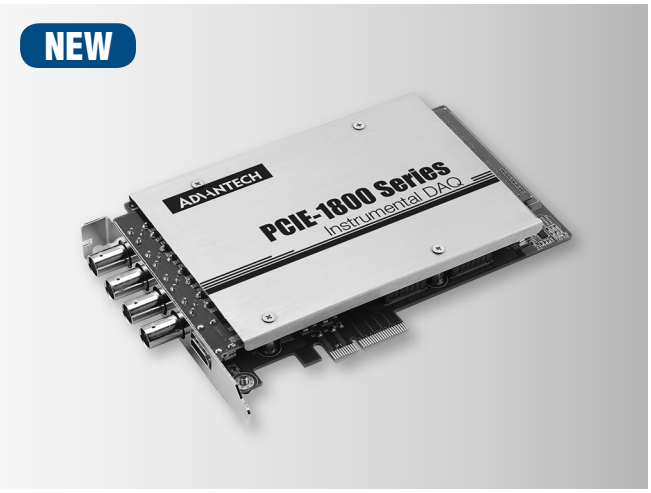
- **PCL-10168H-1E** 68-pin SCSI Shielded Cable with Noise Rejecting, 1 m
- **PCL-10168H-2E** 68-pin SCSI Shielded Cable with Noise Rejecting, 2 m
- **PCLD-8810E-AE** 68-pin SCSI DIN-rail Wiring Board for PCIE-1810 series
- **PCLD-8811-AE** Bandwidth-Configurable filter board
- **ADAM-3968** 68-pin DIN-rail SCSI Wiring Board

Date updated: 26-Nov-2015

PCIE-1840

4-ch 16Bit 125 MS/s Digitizer

NEW



Features

- 4 simultaneous analog inputs, up to 125MHz, 16-bit resolution
- 500MHz Time Interleaved Sampling
- Non-stop data streaming capable
- 2 GB on-board memory
- 1M or 50 Ohm selectable input impedance
- On-Board tunable anti-aliasing filter
- AC/DC Coupling

Introduction

The PCIE-1840 16-bit resolution digitizer divides the input voltage range into 65,536 different digitization levels, it also features sampling rates up to 125M Samples per second, and can be combined into 1 or 2 digitizing channels up to 250 MSPS or 500 MSPS , deep onboard sample memory up to 2 GB, and true ENOBs up to 11.4 bits

Specifications

Analog Input

Channels	4 single-ended , simultaneously
Resolution	16 bits
Max. Sampling Rate	125 MS/s per channel
Memory Size	2GB
Over Voltage Protection	30 Vp-p
Input Impedance	50 Ω / 1M Ω For 1 MΩ: AC Coupling /DC Coupling
Sampling Modes	Software and external clock
Trigger Modes	Start trigger, Delay to Start trigger Stop trigger, Delay to Stop trigger
Input Range	0.2 / 0.4 / 1 / 2 / 4 / 10 / 20 Vpp (input Impedance must be 1 MΩ)
Time Interleaved Sampling	- 4 channels combined, 500 MSPS max. - 2 channels combined, 250 MSPS max. - No time interleaved, 125 MSPS max. - Configured automatically by setting sampling rate

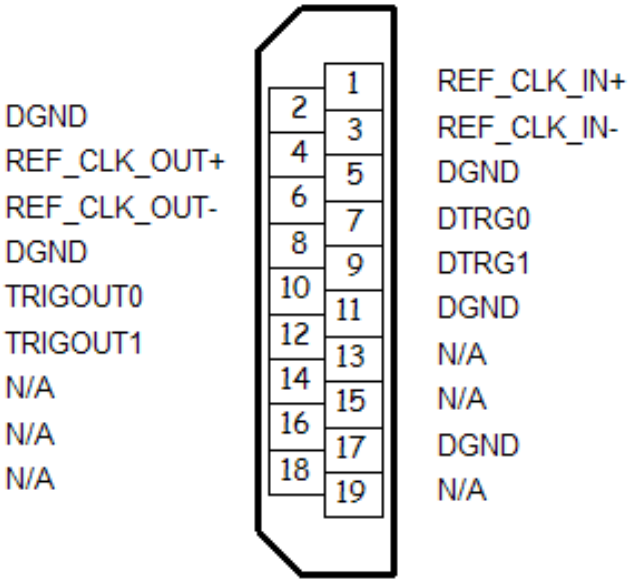
General

Bus Type	PCI Express GEN2 x 4
I/O Connectors	4 x BNC connector (for AI) 1 x HDMI connector (for Ext. 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

Ordering Information

- **PCIE-1840** 4-ch 16Bit 125 MS/s Digitizer

Pin Assignments



Last updated : 01-December-2015