

PCIE-1730 PCIE-1730H

32-Ch TTL, 32-Ch Isolated Digital I/O PCIe Card

32-Ch TTL, 32-Ch Isolated Digital I/O PCIe Card with Digital Filter and Interrupt Function



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
- Selectable digital filter time
- D-type connector for isolated input and output channels
- High-voltage isolation on output channels (2,500 V_{DC})

Introduction

PCIE-1730/1730H feature 32 TTL digital I/O channels and 32 digital I/O channels with up to 2,500 V_{DC} isolation protection, making them ideal for industrial applications that require high-voltage isolation. For PCIE-1730H, all signals can be used as interrupt request signals and to disable/enable the interrupt function for every channel, as well as to support the input signal edge, which generates interrupts. All PCIE-1730 digital input channels have a digital filter to prevent inaccurate recognition of input signals that contain noise or chattering.

Specifications

Digital Input

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
Logic 1: 2.0 V min.
- **Interruptible Channels** PCIE-1730: 2 (IDIO, IDI8)
PCIE-1730H: 16

Isolated Digital Input

- **Channels** 16
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 10 V min. (30 V max.)
- **Interruptible Channels** PCIE-1730: 2 (IDIO, IDI8)
PCIE-1730H: 16
- **Isolation Protection** 2,500 V_{DC}
- **Response Time** 100µs
- **Input Resistance** 2.7 kΩ @ 1 V
- **Digital Filter Time (PCIE-1730H only)**

Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time
9 (09h)	64µsec	15 (0Fh)	4.096msec
10 (0Ah)	128µsec	16 (10h)	8.192msec
11 (0Bh)	256µsec	17 (11h)	16.384msec
12 (0Ch)	512µsec	18 (12h)	32.768msec
13 (0Dh)	1.024msec	19 (13h)	65.536msec
14 (0Eh)	2.048msec	20 (14h)	131.072msec

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
- **Response Time** 100µs

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37, female
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

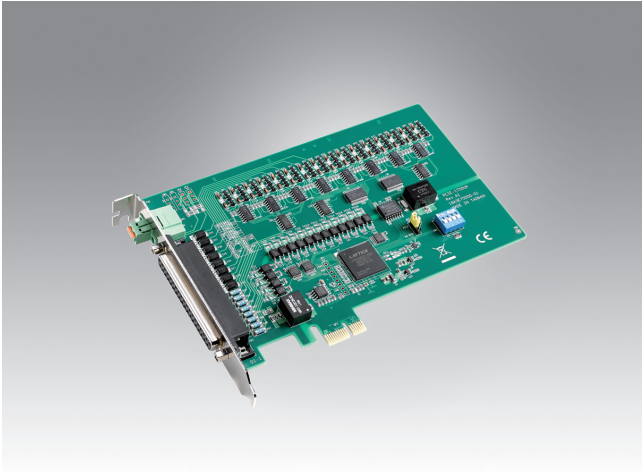
- **PCIE-1730-BE** 32-ch TTL and 32-ch isolated digital I/O PCIe card
- **PCIE-1730H-BE** 32-ch TTL and 32-ch isolated digital I/O PCIe card with digital filter and interrupt function

Accessories

- **PCL-10120-1E** 20-pin flat cable, 1 m
- **PCL-10120-2E** 20-pin flat cable, 2 m
- **ADAM-3920-AE** 20-pin DIN rail flat cable wiring board
- **PCLD-782-BE** 16-ch isolated DI board w/1 m, 20-pin flat cable
- **PCLD-885-AE** 16-ch power relay board w/20-pin and 50-pin flat cables
- **PCLD-785-BE** 16-ch relay board w/1 m, 20-pin flat cable
- **ADAM-3937-BE** 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

PCIE-1750U

32-ch Isolated Digital I/O with universal output PCI Express Card



Features

- 16-ch isolated digital input
- 16-ch isolated digital output for both PNP(source)/ NPN (sink) type
- High output driving capacity
- DO type selectable by software
- High isolation voltage (2,500 V_{DC})

Introduction

PCIE-1750U provide 32 isolated DI/O with 2500V_{DC} protection. Featured with software-configurable DO-polarity, users can apply either NPN(sink type) or PNP(source type) to the DO channels according to the application scenarios. The high sink current capability ensures this card to be applied on industrial automation environments.

Specifications

Isolated Digital Input

- **Channels** 16
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 10 V min. (30 V max.)
- **Interruptible Channels** 2 (IDIO, IDI8)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 100 μ s
- **Input Resistance** 3.37K Ω @ 1W
- **Input current** 3.4mA @ 12 V_{DC}
7.13mA @ 24 V_{DC}

Isolated Digital Output

- **Channels** 16
- **Output Type** Sink type (NPN) or Source type (PNP), software-configurable
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 350 mA max./channel
- **Opto-Isolator Response** 100 μ s

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37, female
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3V @ 255mA, 12V @ 30mA
Max.: 3.3V @ 280mA, 12V @ 60mA
- **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-1750U** 32-ch Isolated Digital I/O with universal output PCI Express Card

Accessories

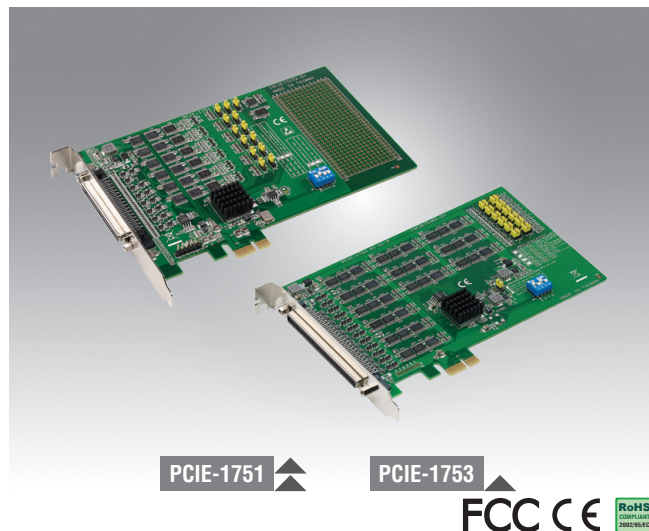
- **ADAM-3937-BE** DB37 DIN rail wiring board
- **PCL-10137-1E** DB37 cable, 1 m
- **PCL-10137-2E** DB37 cable, 2 m
- **PCL-10137-3E** DB37 cable, 3 m

PCIE-1751

PCIE-1753

48-Ch Digital I/O, 3-Ch Counter PCI Express Card

96-Ch Digital I/O PCI Express Card



Features

- Emulates Mode 0 of the Intel® 8255 PPI chip (every port with nibbles)
- Buffered circuits for a higher driving capacity compared to the Intel® 8255 PPI chip
- Interrupt handling capability
- Timer/counter interrupt capability
- Supports both dry and wet contact
- Retains I/O port settings and D0 configuration after system reset
- Board ID 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

PCIE-1751 is a 48-channel digital I/O card for the PCI Express bus. The channels are divided into six 8-bit I/O ports. Users can configure 4 channels per port (nibbles) to serve as input or output channels via software. PCIE-1751 also provides three 32-bit counters. PCIE-1753 is a 96-channel digital I/O card that emulates Mode 0 of the Intel® 8255 PPI chip. However, the buffered circuits offer a higher driving capability than that of the 8255 PPI chip. The 96 I/O channels are divided into twelve 8-bit I/O ports: A0, B0, C0, A1, B1, C1, A2, B2, C2, A3, B3 and C3. Users can configure every port to serve as input or output ports via software.

Specifications

Digital Input

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

Digital Output

- **Channels** PCIE-1751: 48 (shared with input)
PCIE-1753: 96 (shared with input)
- **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** PCIE-1751: 1 x 68-pin SCSI, female
PCIE-1753: 1 x 100-pin SCSI, female
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: PCIE-1751: 5 V @ 400 mA
PCIE-1753: 3.3 V @ 850 mA
Max.: PCIE-1751: 5 V @ 2.63 A
PCIE-1753: 3.3V @ 2.7 A

Note: Maximum power consumption includes the consumption for a +5 V output.

- **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-1751-AE** 48-ch digital I/O and 3-ch counter PCI Express card
- **PCIE-1753-AE** 96-ch digital I/O PCI card

Accessories

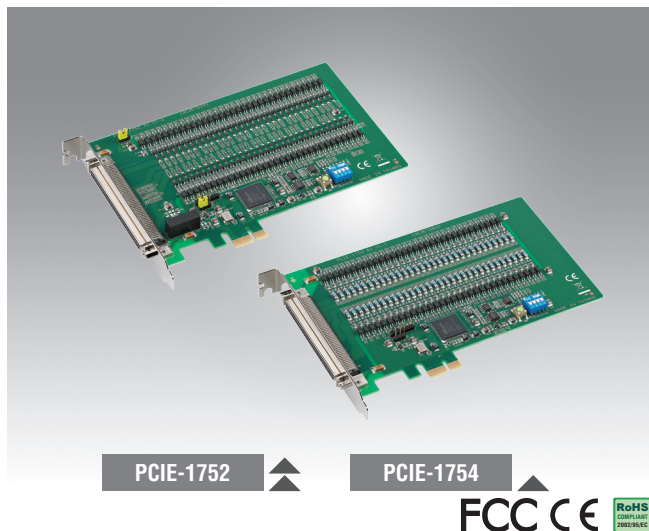
- **PCL-10168-1E** 68-pin SCSI shielded cable, 1 m
- **PCL-10168-2E** 68-pin SCSI shielded cable, 2 m
- **PCL-10268-1E** 100-pin to 2 x 68-pin SCSI cables, 1 m
- **PCL-10268-2E** 100-pin to 2 x 68-pin SCSI cables, 2 m
- **ADAM-3968-AE** 68-pin DIN rail SCSI wiring board
- **ADAM-3968/20-AE** 68-pin SCSI to 3 x 20-pin box header board
- **ADAM-3968/50-AE** 68-pin SCSI to 2 x 50-pin box header board
- **PCLD-8751-AE** 48-ch isolated digital input board
- **PCLD-8761-AE** 24-ch replay/ isolated digital input board
- **PCLD-8762-AE** 48-ch relay board

PCIE-1752

PCIE-1754

64-Ch Isolated Digital Output PCI Express Card

64-Ch Isolated Digital Input PCI Express Card



Features

PCIE-1752

- 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

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

Introduction

PCIE-1752 and PCIE-1754 are isolated DI/O cards that offer 64 isolated digital input/output channels with up to 2,500 V_{DC} isolation protection. Featuring a wide input (10 ~ 30 V_{DC})/output (5 ~ 40 V_{DC}) range and high sink current (500mA max./channel), PCIE-1752 and PCIE-1754 are ideal for use in industrial automation control systems. With Advantech's DAQNav driver package, users can adjust the configuration settings easily and efficiently.

Specifications

Isolated Digital Input

- **Channels** PCIE-1754: 64
- **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
- **Interruptible Channels** PCIE-1754: 4
- **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
- **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
- **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
- **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-AE** 64-ch isolated digital output PCI Express card
- **PCIE-1754-AE** 64-ch isolated digital input PCI Express card

Accessories

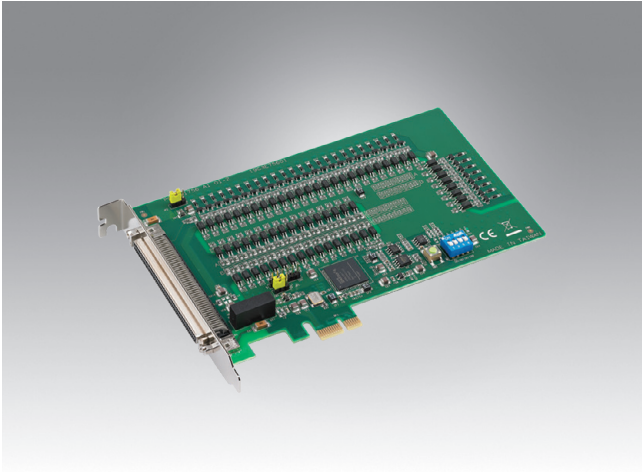
- **PCL-10250-1E** 100-pin SCSI to 2 x 50-pin SCSI cable, 1 m
- **PCL-10250-2E** 100-pin SCSI to 2 x 50-pin SCSI cable, 2 m
- **ADAM-3951-BE** 50-pin DIN rail wiring board w/LED indicators
- **PCL-101100M-3E** 100-pin SCSI to 100-pin SCSI cable, 3 m
- **ADAM-39100-BE** 100-pin DIN rail wiring board

PCIE-1756

PCIE-1756H

64-Ch Isolated Digital I/O PCIe Card

64-Ch Isolated Digital I/O PCIe Card with Digital Filter and Interrupt Function



Features

- 32-ch isolated digital input
- 32-ch isolated digital output with wide output range (5 ~ 40 V_{DC})
- Interrupt handling capability
- Software-selectable digital filter time for all DI channels (PCIE-1756H only)
- Output status read back
- Retains the output settings and values after system hot reset

Introduction

PCIE-1756 and PCIE-1756H are isolated DI/O cards that offer 64 isolated digital input/output channels with up to 2,500 V_{DC} isolation protection. Featuring a wide input (10 ~ 30 V_{DC})/output (5 ~ 40 V_{DC}) range and high sink current (500mA max./channel), PCIE-1756 and PCIE-1756H are ideal for use in industrial automation control systems. For PCIE-1756, all signals can be used as interrupt request signals and to disable/enable the interrupt function for every channel, as well as to support the input signal edge, which generates interrupts. All PCIE-1756H digital input channels have a digital filter to prevent inaccurate recognition of input signals that contain noise or chattering.

Specifications

Isolated Digital Input

- **Channels** 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
- **Interruptible Channels** PCIE-1756: 2 (ID10, ID116)
PCIE-1756H: 32
- **Isolation Protection** 2,500 V_{DC}
- **Overvoltage Protection** 70 V_{DC}
- **ESD Protection** 2,000 V_{DC}
- **Opto-Isolator Response** 50 µs
- **Digital Filter Time (PCIE-1756H only)**

Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time
				14 (0Eh)	2.048msec
				15 (0Fh)	4.096msec
		9 (09h)	64µsec	16 (10h)	8.192msec
		10 (0Ah)	128µsec	17 (11h)	16.384msec
		11 (0Bh)	256µsec	18 (12h)	32.768msec
		12 (0Ch)	512µsec	19 (13h)	65.536msec
		13 (0Dh)	1.024msec	20 (14h)	131.072msec

Isolated Digital Output

- **Channels** 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
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** 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-1756-BE** 64-ch isolated digital I/O PCIe card
- **PCIE-1756H-BE** 64-ch isolated digital I/O PCIe card with digital filter and interrupt function

Accessories

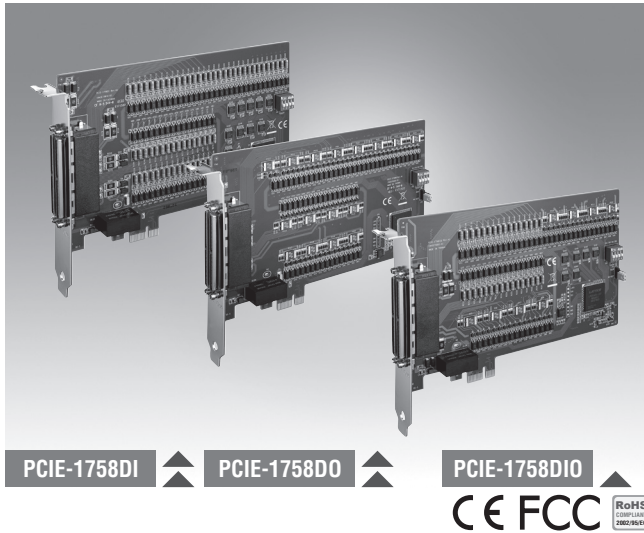
- **PCL-10250-1E** 100-pin SCSI to 2 x 50-pin SCSI cable, 1 m
- **PCL-10250-2E** 100-pin SCSI to 2 x 50-pin SCSI cable, 2 m
- **ADAM-3951-BE** 50-pin DIN rail wiring board w/ LED indicators
- **PCL-10250R-1E** SCSI100 Pin Type to SCSI 50 Pin Ribbon, 1m
- **PCL-10250R-2E** SCSI100 Pin Type to SCSI 50 Pin Ribbon, 2m
- **ADAM-3951R-AE** Screw-Terminal Board w/ Ribbon connector

PCIE-1758DI PCIE-1758DO PCIE-1758DIO

128-ch Isolated Digital Input PCI Express Card

128-ch Isolated Digital Output PCI Express Card

128-ch Isolated Digital I/O PCI Express Card



Specifications

Isolated Digital Input

- **Channels** PCIE-1758DI: 128
PCIE-1758DIO: 64
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 10 V min. (30 V max.)
- **Interrupt Capable Ch.** PCIE-1758DI: 128
PCIE-1758DIO: 64
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 100 µs
- **Input Resistance** 3.6KΩ@1W

Isolated Digital Output

- **Channels** PCIE-1758DO: 128
PCIE-1758DIO: 64
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 350mA max./channel @25 °C
250mA max./channel @60 °C
- **Opto-isolator Response** 100 µs

General

- **Bus Type** PCI Express x1
- **I/O Connectors** 1 x mini-SCSI female connector
- **Dimensions (L x H)** 168 mm x 100 mm (6.6" x 3.9")
- **Power Consumption**

	PCIE-1758DI	PCIE-1758DO	PCIE-1758DIO
Typical	3.3 V @ 270mA 12 V @ 30mA	3.3 V @ 250mA 12 V @ 25mA	3.3 V @ 250mA 12 V @ 20mA
Max.	3.3 V @ 400mA 12 V @ 260mA	3.3 V @ 450mA 12 V @ 235mA	3.3 V @ 425mA 12 V @ 250mA

- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F) (IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 70°C (-4 ~ 158°F)
- **Storage Humidity** 5 ~ 95% non-condensing

Features

PCIE-1758DO and PCIE-1758DIO

- 128 isolated digital output channels (64 channels for PCIE-1758DIO)
- High-voltage isolation on output channels (2,500 V_{DC})
- Wide output range (5 ~ 40 V_{DC})
- High-sink current for isolated output channels (350 mA max./channel)
- BoardID™ switch
- Digital output value retained after hot system reset

PCIE-1758DI and PCIE-1758DIO

- 128 isolated digital input channels (64 channels for PCIE-1758DIO)
- Wide input range (10 ~ 30 V_{DC})
- High ESD protection (2,500 V_{DC})
- Digital Filter function
- BoardID™ switch
- Interrupt handling capability for each channel

Ordering Information

- **PCIE-1758DI-AE** 128-ch Isolated DI PCI Express Card
- **PCIE-1758DO-AE** 128-ch Isolated DO PCI Express Card
- **PCIE-1758DIO-AE** 128-ch Isolated Digital I/O PCI Express Card

Accessories

- **PCL-101100S-1E** 100-pin Mini-SCSI Cable, 1 m
- **PCL-101100S-2E** 100-pin Mini-SCSI Cable, 2 m
- **PCL-101100S-3E** 100-pin Mini-SCSI Cable, 3 m
- **ADAM-39100-BE** 100-pin DIN-rail SCSI Wiring Board

Feature Details

Interrupt Function (PCIE-1758DI/ PCIE-1758DIO)

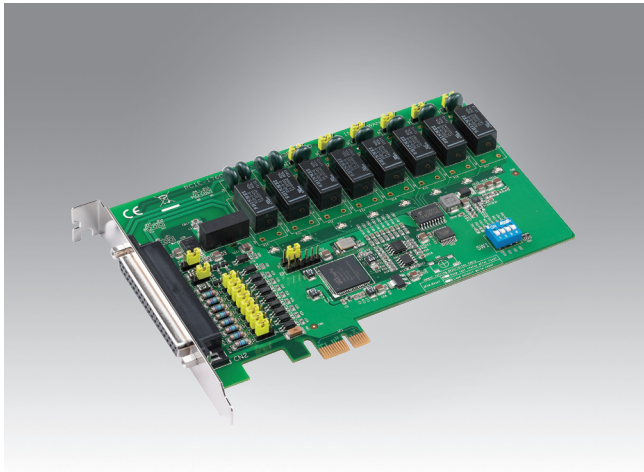
PCIE-1758DI and PCIE-1758DIO provide an interrupt function for every digital input channel. You can disable/enable the interrupt functions, and select trigger type by setting the Rising Edge Interrupt Registers or Falling Edge Interrupt Registers of the card. When the interrupt request signals occur, software will service these interrupt requests by ISR. The multiple interrupt sources provide the card with more flexibility.

Digital Filter Function (PCIE-1758DI/ PCIE-1758DIO)

The digital filter function is used to eliminate glitches on input data and reduce the number of changes to examine and process. The filter blocks pulses that are shorter than the specified timing interval and passes pulses that are twice as long as the specified interval. Intermediate-length pulses that are longer than half of the interval, but less than the interval, may or may not pass the filter.

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/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
- Board ID switch

Introduction

The PCIE-1760 relay actuator and isolated digital input card is a PC add-on card for the PCI Express bus that satisfies the PCI Express (Revision 1.0) standard. PCIE-1760 features 8 opto-isolated digital inputs with up to 2,500 V_{DC} isolation protection for collecting digital inputs in noisy environments, 8 relay actuators that can be used as 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 a single red LED that indicates the on/off status. Each isolated input supports both dry and wet contact to enable easy interfacing with other devices when no voltage is present in the external circuit.

Specifications

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 3.0V max.
Logic 1: 10V min. (30V max.)
- **Interruptible Channels** 1
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 50 μ s
- **Input Resistance** 3.2K Ω @1W

Counter/Timer

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 1KHz
- **Isolation Protection** 2,500 V_{DC}
- **PWM Channels** 2
- **Digital Noise Filter** PWM High Period : 100 μ s ~ [(2³²-1) x 50] μ s,
deviation: $\pm$ 60 μ s
PWM Low Period : 100 μ s ~ [(2³²-1) x 50] μ s,
deviation: $\pm$ 60 μ s

Relay Output

- **Channels** 8
- **Relay Type** 2 x Form C, and 6 x Form A
- **Contact Rating** 125V_{AC}@0.5A, 30V_{DC}@1A
62.5VA, 30W
- **Operate/Release Time** 5 / 3.5 ms max
- **Resistance** <100m Ω initially
- **Life Expectancy (Electrical)** 200,000@0.5A, 125V_{AC}
500,000@1.0A, 30V_{DC}

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37, female
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: +3.3V@390mA, +12V@30mA
Max.: +3.3V@490mA, +12V@60mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 85 °C (-4 ~ 185 °F)
- **Storage Humidity** 5 ~ 95 % RH, non-condensing

Ordering Information

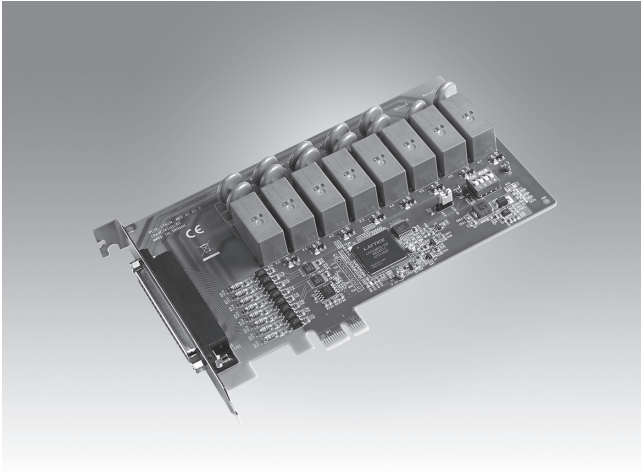
- **PCIE-1760-AE** 8-ch relay/IDI PCIe card w/10-ch counter/timer

Accessories

- **PCL-10137-1E** DB37 cable, 1 m
- **PCL-10137-2E** DB37 cable, 2 m
- **PCL-10137-3E** DB37 cable, 3 m
- **ADAM-3937-AE** DB37 DIN rail wiring board

PCIE-1761H

8-ch Relay and 8-ch Isolated Digital Input w/ digital filter and interrupt PCIe Card



Features

- 8 opto-isolated digital input channels
- 8 relay actuator output channels
- Interrupt handling capability for all DI channels
- Selectable Digital filter time for all DI channels
- Output status readable
- LED indicator to show activated relays
- Selectable Form A or Form C

Introduction

The PCIE-1761H 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.

All of the input signals can be used as interrupt request signals and also disable or enable the interrupt in each channel and support the edge of the input signals, at which to generate an interrupt. all of PCIE-1761H DI channel has a digital filter to prevent wrong recognition of input signals from carrying noise or a chattering.

Specifications

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 3.0 V max.
Logic 1: 10 V min. (30V max.)
- **Input current** 4.1mA @ 12 V_{DC}
7.7mA @ 24 V_{DC}
- **Over-voltage protect** 70 V_{DC}
- **Interrupt Capable Ch.** 8 (IDIO ~ IDI7)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 100 μ s
- **Input Resistance** 2.7k Ohm @ 1 W
- **Digital Filter Time**

Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time
7 (07h)	16 μ sec	14 (0Eh)	2.048msec
8 (08h)	32 μ sec	15 (0Fh)	4.096msec
9 (09h)	64 μ sec	16 (10h)	8.192msec
10 (0Ah)	128 μ sec	17 (11h)	16.384msec
11 (0Bh)	256 μ sec	18 (12h)	32.768msec
12 (0Ch)	512 μ sec	19 (13h)	65.536msec
13 (0Dh)	1.024msec	20 (14h)	131.072msec

General

- **I/O Connectors** 1 x DB37 female connector
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3V @250mA
Max. : 3.3V @1600mA
- **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-1761H-AE** 8-ch Relay and 8-ch Isolated Digital Input PCIe Card

Accessories

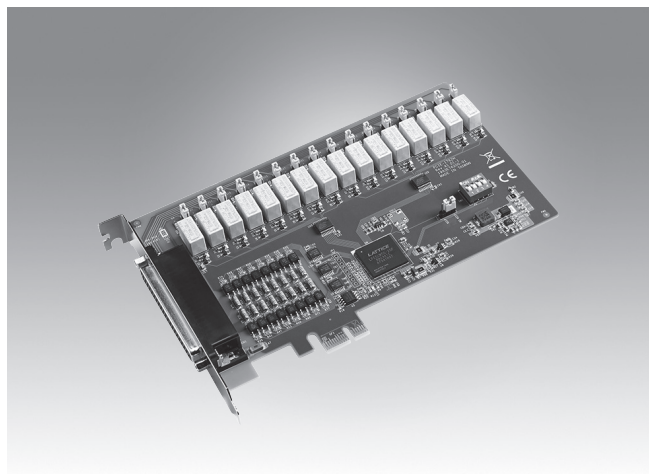
- **PCL-10137-1E** DB37 Cable, 1 m
- **PCL-10137-2E** DB37 Cable, 2 m
- **PCL-10137-3E** DB37 Cable, 3 m
- **ADAM-3937-BE** DB37 DIN-rail Wiring Board

Relay Output

- **Channels** 8
- **Relay Type** 4 x Form C, and 4 x Form A
- **Contact Rating** 2 A @ 250 V_{AC}; 2 A @ 30 V_{DC}
- **Max. Switching Power** 500 VA, 60 W
- **Max. Switching Voltage** 400 V_{AC}; 300 V_{DC}
- **Operating Time** Typical: 7ms
- **Release Time** Typical: 2ms
- **Resistance** Contact: 100 m Ohm max.
- **Breakdown Voltage** 1000 V_{AC}
- **Life Expectancy** 3 x 10⁶ cycles min. @ 2A/ 250V_{AC}

PCIE-1762H

16-ch Relay and 16-ch Isolated Digital Input w/ digital filter & interrupt PCIe Card



Features

- 16-ch digital input and 16-ch relay
- Interrupt handling capability for all DI channels
- Selectable Digital filter time for all DI channels
- Output status readable
- LED indicator to show activated relays
- Selectable Form A or Form B

Introduction

The PCIE-1762H provides 16 opto-isolated digital inputs with isolation protection of 2,500 V_{DC} for collecting digital inputs in noisy environments, 16 relay actuators that can be used as a on/off control devices or small power switches.

All of the input signals can be used as interrupt request signals and also disable or enable the interrupt in each channel and support the edge of the input signals, at which to generate an interrupt. all of PCIE-1762H DI channel has a digital filter to prevent wrong recognition of input signals from carrying noise or a chattering.

Specifications

Isolated Digital Input

- **Channels** 16
- **Input Voltage** Logic 0: 3.0 V max.
Logic 1: 10 V min. (30V max.)
- **Interrupt Capable Ch.** 16
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 50 μ s
- **Input Resistance** 2.7 k Ohm 1 W
- **Digital Filter Time**

Setting Data(n)	Digital Filter Time	Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time
0 (00h)	The filter function is not used.	7 (07h)	16 μ sec	14 (0Eh)	2.048msec
1 (01h)	0.25 μ sec	8 (08h)	32 μ sec	15 (0Fh)	4.096msec
2 (02h)	0.5 μ sec	9 (09h)	64 μ sec	16 (10h)	8.192msec
3 (03h)	1 μ sec	10 (0Ah)	128 μ sec	17 (11h)	16.384msec
4 (04h)	2 μ sec	11 (0Bh)	256 μ sec	18 (12h)	32.768msec
5 (05h)	4 μ sec	12 (0Ch)	512 μ sec	19 (13h)	65.536msec
6 (06h)	8 μ sec	13 (0Dh)	1.024msec	20 (14h)	131.072msec

General

- **I/O Connectors** 1 x DB62 female connector
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 5 V @ 250 mA
Max.: 5 V @ 620 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-1762H-AE** 16-ch Relay and 16-ch Isolated Digital Input w/ digital filter & interrupt PCIe Card

Accessories

- **PCL-10162-1E** DB62 Cable, 1 m
- **PCL-10162-3E** DB62 Cable, 3 m
- **ADAM-3962-AE** DB62 DIN-rail Wiring Board

Relay Output

- **Channels** 16
- **Relay Type** Form A or Form B (Jumper selectable)
- **Contact Rating** 0.25 A @ 250 V_{AC} , 0.5 A @ 30 V_{DC}
- **Max. Switching Power** 62.5 VA, 15 W
- **Max. Switching Voltage** 250 V_{AC} , 220 V_{DC}
- **Operate Time** Typical: 3 ms, Max.: 5 ms
- **Release Time** Typical: 2 ms, Max.: 4 ms
- **Resistance** Contact: 50 m Ohm max.
- **Life Expectancy** 10⁶ cycles min. @ 0.5A/ 30 V_{DC}

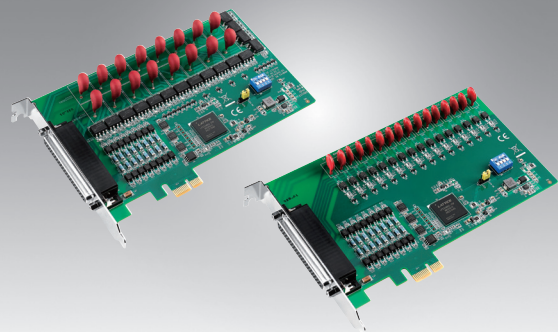
PCIE-1763AH

PCIE-1763DH

16-ch Solid-State Relay Output(for AC) and 16-ch Isolated Digital Input w/ Digital Filter & Interrupt PCIe Card

16-ch Solid-State Relay Output(for DC) and 16-ch Isolated Digital Input w/ Digital Filter & Interrupt PCIe Card

NEW



PCIE-1763AH

PCIE-1763DH



Features

- 16-ch solid-state relay (SSR) output with longer lifetime and higher operating speed compared to electro-mechanical relays
- Zero-crossing (synchronous) trigger for reduced inrush current and electrical noise
- 16-ch photoMOS relay output with longer lifetime and higher operating speed compared to electro-mechanical relays
- Much less contact problems such as arcs, bounce, and noise
- Suitable for both AC and DC applications with frequent ON/OFF switching
- LEDs for output state indication
- 16-ch isolated digital input (IDI) with both dry and wet contact configurations
- Interrupt capability for all IDI channels
- Programmable duration noise filter for all IDI channels

Introduction

The PCIE-1763AH provides 16 solid-state relay (SSR) outputs and 16 isolated digital input. The SSRs are classified to semiconductor relays which do not have moving contact and differ from the conventional electro-mechanical relays in many ways. They are superior to electro-mechanical relays in longer lifetime, higher operating speed, less contact problems such as arcs, bounce, and noise. In addition, the zero-crossing (synchronous) trigger effectively reduces inrush current and electrical noise during SSR turn-on. Therefore, they are most suitable for applications which need conducting high voltage (> 80 VAC) AC loads and frequent ON/OFF switching.

The PCIE-1763DH provides 16 photoMOS relay outputs and 16 isolated digital input. The photoMOS relays are classified to semiconductor relays which do not have moving contact and differ from the conventional electro-mechanical relays in many ways. They are superior to electro-mechanical relays in longer lifetime, higher operating speed, less contact problems such as arcs, bounce, noise, and smaller size. Therefore, they are most suitable for applications which need conducting AC or DC low voltage load (< 60 V) and frequent ON/OFF switching.

The isolated digital inputs accept both dry and wet contact configurations. All channels have interrupt capability and are equipped with programmable duration noise filter.

Specifications

Solid-State Relay Output (PCIE-1763AH)

▪ Channels	16
▪ Relay type	Solid-state relay SPST (form A)
▪ Load voltage	400 V max. (AC rms)
▪ Load current	1.2 A _{RMS} max.
▪ Peak load current	12 A (1 cycle @ 60 Hz)
▪ On-state voltage drop	2.5 V max.
▪ Off-state leakage current	100 µA max.
▪ Critical rate of rise of off-state voltage	200 V/µs min.
▪ Holding current	25 mA max.
▪ Zero crossing voltage	50 V max.
▪ Turn-on time	100 µs max.
▪ Isolation protection	5000 V _{RMS}

Solid-State Relay Output (PCIE-1763DH)

▪ Channels	16
▪ Relay type	PhotoMOS SPST (form A)
▪ Load voltage	60 V _{DC} max.
▪ Load current	1.2 A max.
▪ Turn-on time	1.0 ms typ.
▪ Turn-off time	0.6 ms typ.
▪ Isolation protection	1,500 V _{DC} max.

Isolated Digital Input

▪ Channels	16
▪ Input voltage	Logic 0: 3 V max. (0 V min.) Logic 1: 10 V min. (30 V max.)
▪ Input resistance	2.7 kΩ

▪ Interrupt capability	All channels
▪ Noise filter	8 µs ~ 131 ms programmable for all channels
▪ Opto-isolator response	50 µs typ./100 µs max.
▪ Isolation protection	2,500 V _{DC} max.

General

▪ Interface	PCI Express x1
▪ I/O Connector type	1 x DB62 female connector
▪ Dimensions	168 x 100 mm (6.6" x 3.9")
▪ Power consumption	Typical: 3.3V @350mA, 12V @350mA Max: 3.3V@ 370mA, 12V @ 1000mA
▪ Operating temperature	0 ~ 60°C (32 ~ 140°F)
▪ Storage temperature	-20 ~ 70°C (-4 ~ 158°F)
▪ Storage humidity	5 ~ 95% RH (non-condensing)
▪ Certifications	CE/FCC

Ordering Information

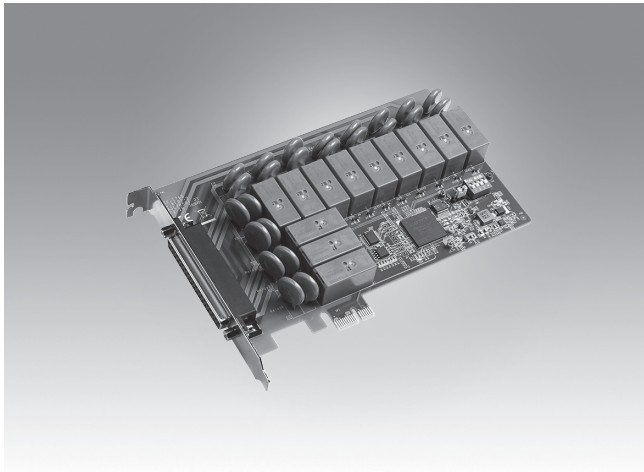
▪ PCIE-1763AH-AE	16-ch Solid-State relay (SSR) output and 16-ch isolated digital input w/ digital filter & interrupt PCIe card
▪ PCIE-1763DH-AE	16-ch Solid-State Relay Output(for DC) and 16-ch isolated digital input w/ digital filter & interrupt PCIe card

Accessories

▪ PCL-10162-1E	DB62 Shielded Cable, 1 m
▪ PCL-10162-3E	DB62 Shielded Cable, 3 m
▪ ADAM-3962-AE	DB62 DIN-rail Wiring Board

PCIE-1765

12-ch Relay PCIe Card



FCC CE

Features

- 12 relay output channels
- LED indicators to show activated relays
- 12 Form C-type relay output channels
- Output status read-back
- Keep relay output values after emergency reboot

Introduction

The Advantech PCIE-1765 is a 12-channel relay actuator with contact rating up to 2A@30V_{DC} current for the PCIe bus. Its 12 on-board SPDT relays are ideal for applications such as device ON/OFF control or small power switched. For easy monitoring, each relay is equipped with one red LED to show its ON/OFF status.

Specifications

Relay Output

- **Channels** 12
- **Relay Type** SPDT, Form C
- **Contact Rating** 2A@250 V_{AC}, 2A@30 V_{DC}
- **Max. switching power** 500VA, 60W
- **Max. switching voltage** 400 V_{AC}, 30 V_{DC}
- **Breakdown voltage** 1000 V_{AC}
- **Operate Time** Typical: 7ms
- **Release Time** Typical: 2ms
- **Resistance** Contact: 100m Ohm max.
- **Life Expectancy** 30 x 10⁶ cycles min. @ 2A/250 V_{AC}

General

- **I/O Connectors** 1 x DB37 female connector
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3V @ 250mA
Max.: 3.3V @ 2500mA
- **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-1765-AE** 12-ch Relay PCIe Card

Accessories

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