Introduction

PCIE-1730/1730H feature 32 TTL digital I/O channels and 32 digital I/O channels with up to 2,500 VDC 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 (IDI0, 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 (IDI0, IDI8)
  - PCIE-1730H: 16
- Isolation Protection: 2,500 VDC
- Opto-Isolator Response: 50 μs
- Input Resistance: 2.7 kΩ @ 1 W
- Digital Filter Time (PCIE-1730H only):
  - Setting Data (n): 0 (00h)
  - The filter function is not used.
  - Setting Data (n): 7 (07h)
  - Digital Filter Time: 16 μs
  - Setting Data (n): 14 (0Eh)
  - Digital Filter Time: 2.048 ms
  - Setting Data (n): 1 (01h)
  - Digital Filter Time: 0.25 μs
  - Setting Data (n): 8 (08h)
  - Digital Filter Time: 32 μs
  - Setting Data (n): 15 (0Fh)
  - Digital Filter Time: 4.096 ms
  - Setting Data (n): 2 (02h)
  - Digital Filter Time: 0.5 μs
  - Setting Data (n): 9 (09h)
  - Digital Filter Time: 64 μs
  - Setting Data (n): 16 (10h)
  - Digital Filter Time: 8.192 ms
  - Setting Data (n): 3 (03h)
  - Digital Filter Time: 1 μs
  - Setting Data (n): 10 (0Ah)
  - Digital Filter Time: 128 μs
  - Setting Data (n): 17 (11h)
  - Digital Filter Time: 16.384 ms
  - Setting Data (n): 4 (04h)
  - Digital Filter Time: 2 μs
  - Setting Data (n): 11 (0Bh)
  - Digital Filter Time: 256 μs
  - Setting Data (n): 18 (12h)
  - Digital Filter Time: 32.768 ms
  - Setting Data (n): 5 (05h)
  - Digital Filter Time: 4 μs
  - Setting Data (n): 12 (0Ch)
  - Digital Filter Time: 512 μs
  - Setting Data (n): 19 (13h)
  - Digital Filter Time: 65.536 ms
  - Setting Data (n): 6 (06h)
  - Digital Filter Time: 8 μs
  - Setting Data (n): 13 (0Dh)
  - Digital Filter Time: 1.024 ms
  - Setting Data (n): 20 (14h)
  - Digital Filter Time: 131.072 ms

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

Isolated Digital Output
- Channels: 16
- Output Type: Sink type (NPN)
- Isolation Protection: 2,500 VDC
- Output Voltage:
  - Logic 0: 0.5 V max.
  - Logic 1: 2.4 V min.
- Sink Current: 500 mA max./channel
- Opto-Isolator Response: 50 μs
- Input Resistance: 2.7 kΩ @ 1 W
- Digital Filter Time (PCIE-1730H only):
  - Setting Data (n): 0 (00h)
  - The filter function is not used.
  - Setting Data (n): 7 (07h)
  - Digital Filter Time: 16 μs
  - Setting Data (n): 14 (0Eh)
  - Digital Filter Time: 2.048 ms

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-AE: 32-ch TTL and 32-ch isolated digital I/O PCIe card
- PCIE-1730H-AE: 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: 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