PCI-7442/7443/7444

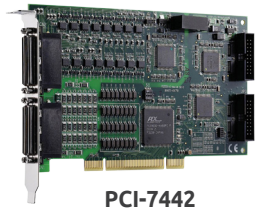
High-density 128-CH Isolated DIO/DI/DO Cards

Features

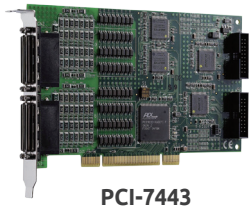
- Supports universal 32-Bit 3.3 V and 5 V PCI bus, plug-and-play
- High-density, opto-isolated digital input and/or digital output
  - PCI-7442: 64-CH digital input and 64-CH digital output
  - PCI-7443: 128-CH digital input
  - PCI-7444: 128-CH digital output
- 1250 VRMS isolation voltage
- Programmable Change-of-State (COS) detection for all digital input channels
- Voltage protection of up to 28 V for isolated input
- Dry contact input (PCI-7442 only)
- Up to 300 mA high-output driving capability for all output channels
- 250 mA sink current on isolated output channels
- Digital output status read back function
- Digital output value retained after hot system reset
- Programmable power-up DO initial status
- Programmable safety DO status functions when WDT interruption occurs
- Watchdog timer counter prevents system crashes (PCI-7442/PCI-7444 only)
- 32-CH programmable TTL I/O function
- Board ID feature

Introduction

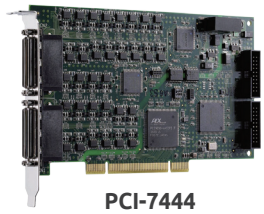
Responding to the industry"s need for high-density digital input/output modules, the ADLINK PCI-7442/7443/7444 DIO card series delivers up to 128 opto-isolated channels for a wide range of demanding PCI-based applications. The PCI-7442/7443/7444 series comes with 64 (PCI-7442) or 128 (PCI-7443) opto-isolated digital inputs and 64 (PCI-7442) or 128 (PCI-7444) opto-isolated digital outputs. With a 1250 VRMS (excluding cables) channel-to-system isolation protection, these cards are shielded from damage caused by accidental contact with external voltage while promoting simple ground connections. All input channels are identical non-polarity with each line isolated and suited to collect digital inputs even at high-noise environments. Featuring a Change-of-State (COS) interrupt function, the PCI-7442/PCI-7443 instantly generates an interrupt request to the PCI controller when it detects a sharp change in the logical state of any of its digital inputs.



PCI-7442



PCI-7443



PCI-7444

Supported Operating System

- Windows 7/8 x64/x86, Linux

Driver and SDK

- LabVIEW, MATLAB, C/C++, Visual Basic, Visual Studio.NET

Software Utility

- AD-Logger

Terminal Boards & Cables

- **DIN-68S-01**
  Terminal Board with One 68-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included.)
- **ACL-10568NF-1**
  68-pin SCSI-VHDCI flat cable

Ordering Information

- **PCI-7442**
  64-CH Isolated DI and 64-CH Isolated DO card
- **PCI-7443**
  128-CH Isolated DI card
- **PCI-7444**
  128-CH Isolated DO card

Specifications

Isolated Digital Input

- Number of channels
  - 64 (PCI-7442)
  - 128 (PCI-7443)
- Maximum input range: 28 V, non-polarity
- Digital logic levels: 0 V to 28 V, non-polarity
  - Input high voltage: 5 V to 28 V
  - Input low voltage: 0 V to 1.5 V
- Input resistance: 4.7 kΩ @ 0.5 W
- ESD protection CKT switch (forward)
- Isolation voltage: 1250 VRMS channel-to-system
- Interrupt sources: 64/128-channel Change-of-State (COS)
- Data transfer: programmed I/O

Isolated Digital Output

- Number of channels:
  - 64 (PCI-7442)
  - 128 (PCI-7444)
- Output type: open drain Power MOSFET driver
- Output range: 5 V to 40 V
- Sink current: 250 mA for all channel @ 100% duty (300 mA max.)
- Isolation voltage: 1250 VRMS channel-to-system
- Data transfer: programmed I/O

Isolation +5 V Power Supply (PCI-7442/7444 only)

- Output Voltage: +5 V
- Output Current: 100 mA max. (@ 40˚C)

Safety Functions (PCI-7442/7444 only)

- Programmable power-up DO status
- Watchdog timer
  - Base clock available: 10 MHz, fixed
  - Counter width: 32-Bit

General Specifications

- I/O connector: 68-pin Dual port VHDCI female
- Operating temperature: 0˚C to 60˚C (32˚F to 140˚F)
- Storage temperature: -20˚C to 80˚C (-4˚F to 176˚F)
- Relative humidity: 5% to 95%, non-condensing
- Power requirements

Device	+5 V
PCI-7442	800 mA typical
PCI-7443	550 mA typical
PCI-7444	800 mA typical

- Dimension: 175 mm x 107 mm (6.82” x 4.17”)