PCI-7442/7443/7444, PCIe-7442

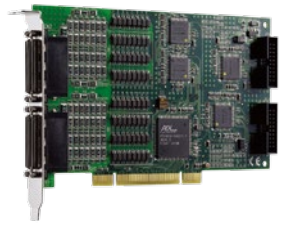
High-density 128-CH Isolated DIO/DI/DO Cards

Features

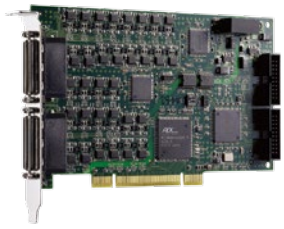
- Support universal 32-Bit 3.3V and 5V PCI bus, plug-and-play. PCI Express x1, Plug and Play
- High-density, opto-isolated digital input and/or digital output
  - PCI/PCIe-7442: 64-CH digital input and 64-CH digital output
  - PCI-7443: 128-CH digital input
  - PCI-7444: 128-CH digital output
- 1250 VRMS isolation voltage
- Programmable Change-of-State (COS) detection for all digital input channels
- Voltage protection for all isolated digital inputs.
- Up to 250mA high capability sink current for all isolated output channels.
- Up to 300mA sink current on each isolated output channel.
- 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/PCIe-7442 PCI-7444 only)
- 32-CH programmable TTL I/O function
- Board ID feature



PCI-7442



PCI-7443



PCI-7444



PCIe-7442

Introduction

Responding to the industry's need for high-density digital input/output modules, the ADLINK PCI-7442/7443/7444, PCIe-7442 DIO card series delivers up to 128 opto-isolated channels for a wide range of demanding PCI-based applications. The PCI-7442/7443/7444, PCIe-7442 series comes with 64 (PCI/PCIe-7442) or 128 (PCI-7443) opto-isolated digital inputs and 64 (PCI/PCIe-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/PCIe-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.

Software Support

- Windows 7/8.1 x64/x86, Linux
- LabVIEW, MATLAB, C/C++, Visual Basic, Visual Studio.NET
- AD-Logger

Ordering Information

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

Specifications

Isolated Digital Input

- Number of channels
  - 64 (PCI/PCIe-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/PCIe-7442)
  - 128 (PCI-7444)
- Output type: open drain Power MOSFET driver
- Output range: 5 V to 40 V
- Sink current:
  - All channels "ON": 250mA @ 40V
  - Single channel "ON" : 300mA @ 40V
- Isolation voltage: 1250 VRMS channel-to-system
- Data transfer: programmed I/O

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

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

Safety Functions (PCI/PCIe-7442 PCI-7444 only)

- Programmable power-up DO status
- Watchdog timer
  - Base clock: 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

VDC	PCI-7442	PCI-7443	PCI-7444	PCIe-7442	
	+5V	+5V	+5V	+3.3V	+12V
Typical	800mA	550mA	800mA	1 mA	170 mA
Max.				1.5 mA	300 mA

- Dimension: (not including connectors)
  175 mm x 107 mm (6.82” x 4.17”)

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

* For more information on mating cables, please refer to P3-48/49.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

All products and company name listed are trademarks or trade names of their respective companies.
Updated Aug. 8, 2016. ©2016 ADLINK Technology, Inc. All Rights Reserved.
All specifications are subject to change without further notice.