### Introduction

ADLINK’s PCI/LPCI/LPCIe/cPCI-723X series are 32-CH isolated input and/or output cards which provide a 2,500 V optical isolation protection. The wide input range of the PCI/cPCI/LPCI/LPCIe-7230 and PCI-7233 makes it easy to sense the status of external devices. The non-polarity characteristic is suitable for a wide variety of industry applications. The PCI-7234 device also features a wide output range from 5 to 35 V, which is suitable for relay driving and industrial automation applications. The PCI-7234P provides current-source output capability. The PCI/cPCI/LPCIe-7230 and PCI-7233 also provide two interrupt sources on digital input channels. The PCI-7233 also features a change-of-state (COS) function that generates an interrupt when any digital input changes its state.

### Features
- Supports a 32-bit 5 V PCI bus (PCI-7230/7233/7234/7234P)
- Supports a 32-bit 3.3 V or 5 V PCI bus (LPCI-7230)
- 3U Eurocard form factor, CompactPCI compliant (PICMG 2.0 R2.1) (cPCI-7230)
- 16-CH isolated digital inputs & 16-CH isolated digital outputs (PCI-7230/LPCI-7230/LPCIe-7230/cPCI-7230)
- 32-CH isolated digital inputs (PCI-7233)
- 32-CH isolated digital outputs (PCI-7234/7234P)
- 5000 VRMS optical isolation (PCI-7230 & PCI-7233/cPCI-7230)
- 2500 VRMS optical isolation (LPCI-7230/LPCIe-7230)
- Sink current up to 500 mA on single isolated output
- Two external interrupt sources (PCI-7230/LPCI-7230/LPCIe-7230/cPCI-7230)
- Change-of-state interrupt sources (PCI-7233)
- Compact, low-profile PCI/PCI Express® size PCB

### Operating Systems
- Windows 7/Vista/XP/2003 Server
- Linux

### Recommended Software
- AD-Logger
- VB.NET/VC.NET/VC+/+/BCB/Delphi
- DAQBench

### Driver Support
- DAQPilot for LabVIEW™
- DAQ-MLILB for MATLAB®
- PCIS-DASK for Windows
- PCIS-DASK/X for Linux

### Specifications

#### Isolated Digital Input
- **Number of channels**
  - 16 (PCI-7230/LPCI-7230/LPCIe-7230/cPCI-7230)
  - 32 (PCI-7233)
- **Maximum input range**
  - 24 V, non-polarity
  - PCI-7230/LPCI-7230/LPCIe-7230
- **Digital logic levels**
  - 0-24 V, non-polarity
    - Input high voltage: 5-24 V
    - Input low voltage: 0-1.5 V
- **Input resistance**: 1.2 kΩ @ 0.5 W
- **Isolation voltage**
  - 2500 VRMS (LPCI-7230/LPCIe-7230)
  - 5000 VRMS (PCI-7230/PCI-7233/cPCI-7230)
- **Interrupt sources**
  - Digital input channel 0 and 1 (PCI-7230/LPCI-7230/LPCIe-7230)
  - Change-of-state (PCI-7233)
- **Data transfers**: programmed I/O

#### Isolated Digital Output
- **Number of channels**
  - 16 (PCI-7230/LPCI-7230/LPCIe-7230/cPCI-7230)
  - 32 (PCI-7234)
- **Sink current**
  - 500 mA for one channel @ 100% duty cycle (PCI-7230/LPCI-7230/LPCIe-7230)
  - 370 mA for all channels @ 10% duty (PCI-7230/LPCI-7230/LPCIe-7230)
  - 130 mA for all channels @ 50% duty (PCI-7230/LPCI-7230/LPCIe-7230)
  - 500 mA for single channel @ 100% duty (PCI-7234)
  - 500 mA for all channels @ 20% duty (PCI-7234)
- **Source current**
  - 500 mA for one channel @100% duty cycle (PCI-7234)
  - 260 mA for all channels @10% duty cycle (PCI-7234)
- **Power dissipation**
  - Max. 1.47 W per chip (8 DO channels)
  - Max. 2.25 W per chip (8 DO channels)
- **Supply voltage**: 5-35 VDC
- **Isolation voltage**: 2500 VRMS
- **Data transfers**: programmed I/O

### General Specifications
- **I/O connector**
  - PCI-7230/LPCI-7230/cPCI-7230
    - One 50-pin SCSI-II female
  - PCI-7230/LPCI-7230/cPCI-7230
    - One 37-pin D-sub female
  - PCI-7230/LPCI-7230/cPCI-7230
    - One 37-pin D-sub female
  - PCI-7230/LPCI-7230/cPCI-7230
    - One 37-pin D-sub female
Operating temperature: 0°C to 60°C
Storage temperature: -20°C to 80°C
Relative humidity: 5% to 95%, non-condensing
Power requirements

<table>
<thead>
<tr>
<th>Device</th>
<th>Power Consumption</th>
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</thead>
<tbody>
<tr>
<td>PCI-7230</td>
<td>+5 V @ 150 mA typical</td>
</tr>
<tr>
<td>PCI-7233</td>
<td>+5 V @ 300 mA typical</td>
</tr>
<tr>
<td>PCI-7234</td>
<td>+5 V @ 180 mA typical</td>
</tr>
<tr>
<td>PCI-7234P</td>
<td>+5 V @ 150 mA typical</td>
</tr>
<tr>
<td>LPCIe-7230</td>
<td>+3.3 V @ 279 mA</td>
</tr>
<tr>
<td>LPCIe-7230</td>
<td>+12 V @ 133 mA</td>
</tr>
<tr>
<td>cPCI-7230</td>
<td>+5 V @ 270 mA typical</td>
</tr>
</tbody>
</table>

Dimensions (not including connectors)
- 153 mm X 107 mm (PCI-7230)
- 158 mm X 107 mm (PCI-7233)
- 175 mm X 107 mm (PCI-7234 & PCI-7234P)
- 120 mm X 65 mm (LPCI-7230)
- 119.9 mm(L) x 68.9 mm(H) (LPCIe-7230)
- 160 mm x 100 mm (cPCI-7230)

Terminal Boards & Cables

PCI-7230/7233/7234/7234P:
- DIN-37D-01
  Terminal Board with One 37-pin D-sub Connector and DIN-Rail Mounting (Cables are not included)
- ACLD-9137-O
  General-Purpose Terminal Board with One 37-pin D-sub Male Connector
- ACL-10137-1-MM
  37-pin D-sub male/male cable, 1 M

LPCIe-7230/LPCIe-7234/cPCI-7230:
- DIN-50S-01
  Terminal Board with One 50-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included)
- ACL-10250-1
  50-pin SCSI-II cable (mating with AMP-787082-5), 1 M

* For more information on mating cables, please refer to P2-61/62.

Ordering Information

PCI-7230
16-CH Isolated DI & 16-CH Isolated DO Card

PCI-7233
32-CH Isolated DI Card with inverted input logic

PCI-7234
32-CH Isolated DO Card

PCI-7234P
32-CH Isolated DO Card with Source Current Transistor

LPCI-7230
16-CH Isolated DI & 16-CH Isolated DO Low-Profile PCI Card

LPCIe-7230
16-CH Isolated DI & 16-CH Isolated DO Low-Profile PCI Express® Card

cPCI-7230
16-CH Isolated DI & 16-CH Isolated DO Module