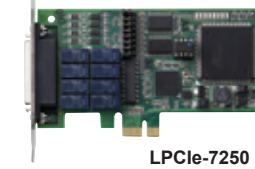
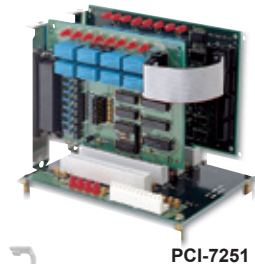
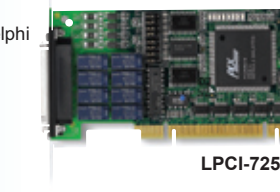
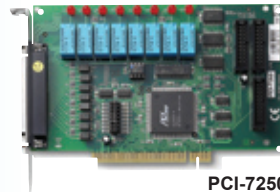


# PCI-7250/7251, LPCI-7250, LPCle-7250

## 8-CH Relay Outputs & 8-CH Isolated DI Cards

### Features

- Support a 32-bit 5 V PCI bus (PCI-7250/7251)
  - Support a 32-bit 3.3 V or 5 V PCI bus (LPCI-7250)
  - x1 lane PCI Express Interface (LPCle-7250)
  - 4-CH SPDT & 4-CH SPST relays (PCI-7250)
  - 8-CH SPDT & 8-CH SPST relays (PCI-7250 + 1 x PCI-7251)
  - 12-CH SPDT & 12-CH SPST relays (PCI-7250 + 2 x PCI-7251)
  - 16-CH SPDT & 16-CH SPST relays (PCI-7250 + 3 x PCI-7251)
  - 8-CH SPDT (LPCI-7250/LPCle-7250)
  - Non-latching relays
  - Onboard LED indicators for relay status
  - Onboard relay driving circuits
  - Relay output status read back
  - 8-CH isolated digital inputs (PCI-7250/LPCI-7250/LPCle-7250)
  - 16-CH isolated digital inputs (PCI-7250 + 1 x PCI-7251)
  - 24-CH isolated digital inputs (PCI-7250 + 2 x PCI-7251)
  - 32-CH isolated digital inputs (PCI-7250 + 3 x PCI-7251)
  - Onboard low-pass filtering for digital inputs
  - Compact, half-size PCB (PCI-7250/7251)
  - Compact, low-profile PCI size PCB (LPCI-7250/LPCle-7250)
- ### Operating Systems
- Windows Vista/XP/2000/2003
  - Linux
  - Windows CE (call for availability)
- ### Recommended Software
- VB.NET/VC.NET/VB/VC++/BCB/Delphi
  - DAQBench
- ### Driver Support
- DAQPilot for Windows
  - DAQ-LVIEW PnP for LabVIEW™
  - DAQ-MTLB for MATLAB®
  - PCIS-DASK for Windows
  - PCIS-DASK/X for Linux



### Introduction

ADLINK PCI-7250/7251 provides 4-CH SPDT (Form C) & 4-CH SPST (Form A) relay outputs and 8-CH isolated digital inputs. The LPCI-7250, and LPCle-7250 provides 8-CH SPDT (Form C) relay outputs and 8-CH isolated digital inputs. The status of each relay output is represented by an onboard LED. When the relay is in SET condition, its corresponding LED will turn ON, and on the contrary, it is OFF. All digital input channels are non-polarity, optically isolated, and may be set to use RC filter or not. The devices are suitable for collecting digital inputs in noisy environments.

The PCI-7251 is an 8-CH relay outputs and 8-CH isolated DI extension card of the PCI-7250. All the I/O functions of PCI-7251 are the same as those of the PCI-7250. The PCI-7251 has to be connected with PCI-7250 and the bus interface is controlled by the PCI-7250. Up to three PCI-7251 cards can be connected to one PCI-7250, therefore, expanding the PCI-7250's DIO from 8 DIO to maximum 32 DIO.

### Specifications

#### Relay Output

- Number of channels: 8
- Relay types
  - PCI-7250/7251:
    - ◆ Channel 0-3: SPDT (normal open)
    - ◆ Channel 4-7: SPST (normal open)
  - LPCI-7250/LPCle-7250:
    - ◆ Channel 0-7: SPDT (normal open)
- Contact rating
  - PCI-7250/7251
    - ◆ AC: 120 V @ 0.5 A
    - ◆ DC: 24 V @ 1 A
  - LPCI-7250/LPCle-7250
    - ◆ DC: 30 V @ 2 A
- Breakdown voltage: 1000 V<sub>RMS</sub>
- Contact resistance: 100 mΩ
- Relay ON/OFF time
  - Operate time: 8 ms
  - Release time: 8 ms
- LED indicators: onboard LEDs for relay status
- Expected life
  - PCI-7250/7251:
    - ◆ >5x10<sup>5</sup> operations @ 1 A, 24 V<sub>DC</sub>
    - ◆ >2x10<sup>5</sup> operations @ 0.5 A, 120 V<sub>AC</sub>
  - LPCI-7250/LPCle-7250:
    - ◆ >10<sup>5</sup> operations @ 2 A, 30 V<sub>DC</sub>
    - ◆ >5x10<sup>5</sup> operations @ 1 A, 30 V<sub>DC</sub>
- Data transfers: programmed I/O

#### Isolated Digital Input

- Number of channels: 8
- Maximum input range: 24 V, non-polarity
- Digital logic levels
  - 0-24 V, non-polarity
    - ◆ Input high voltage: 5-24 V
    - ◆ Input low voltage: 0-1.5 V
- Input resistance: 2.2 kΩ @ 0.33 W
- Isolation voltage: 5000 V<sub>RMS</sub>
- Data transfers: programmed I/O

#### General Specifications

- I/O connector
  - PCI-7250/7251
    - ◆ 37-pin D-sub female
  - LPCI-7250/LPCle-7250
    - ◆ 50-pin SCSI-II female
- Operating temperature: 0 to 60 °C
- Storage temperature: -20 to 80 °C
- Relative humidity: 5 to 95%, non-condensing
- Power requirements

Device	Power Consumption
PCI-7250	+5 V @ 140 mA typical
PCI-7251	+5 V @ 125 mA typical
LPCI-7250	+5 V @ 200 mA typical
LPCle-7250	+3.3 V @ 280 mA +12 V @ 180 mA

- Dimensions (not including connectors)
  - 162 mm x 107 mm (PCI-7250)
  - 141 mm x 102 mm (PCI-7251)
  - 120 mm x 65 mm (LPCI-7250)
  - 120 mm x 69 mm (LPCle-7250)

#### Termination Boards

##### PCI-7250/7251:

- **DIN-37D-01**  
Termination Board with a 37-pin D-sub Connector and DIN-Rail Mounting (Cables are not included. For information on mating cables, refer to Section 12.)

##### ACL8-9137-01

- General-Purpose Termination Board with one 37-pin D-sub Male Connector

##### LPCI-7250/LPCle-7250:

- **DIN-50S-01**  
Termination Board with a 50-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included. For information on mating cables, refer to Section 12.)

### Pin Assignment

PCI-7250			LPCI-7250/LPCle-7250				
NO0	1	20	NO3	NO0	1	26	NO4
COM0	2	21	COM3	COM0	2	27	COM4
NC0	3	22	NC3	NC0	3	28	NC4
NO1	4	23	NO4	NO1	4	29	NO5
COM1	5	24	COM4	COM1	5	30	COM5
NC1	6	25	NO5	NC1	6	31	NC5
NO2	7	26	COM5	NO2	7	32	NO6
COM2	8	27	NO6	COM2	8	33	COM6
NC2	9	28	COM6	NC2	9	34	NC6
NO7	10	29	N/C	NO3	10	35	NO7
COM7	11	30	DIO_L	COM3	11	36	COM7
DIO_H	12	31	DI1_L	NC3	12	37	NC7
DI1_H	13	32	DI2_L	N/C	13	38	N/C
DI2_H	14	33	DI3_L	N/C	14	39	N/C
DI3_H	15	34	DI4_L	N/C	15	40	N/C
DI4_H	16	35	DI5_L	N/C	16	41	N/C
DI5_H	17	36	DI6_L	N/C	17	42	N/C
DI6_H	18	37	DI7_L	IDI_0H	18	43	IDI_0L
DI7_H	19			IDI_1H	19	44	IDI_1L
				IDI_2H	20	45	IDI_2L
				IDI_3H	21	46	IDI_3L
				IDI_4H	22	47	IDI_4L
				IDI_5H	23	48	IDI_5L
				IDI_6H	24	49	IDI_6L
				IDI_7H	25	50	IDI_7L

### Ordering Information

- **PCI-7250**  
8-CH Relay Outputs & 8-CH Isolated DI Card
- **PCI-7251**  
8-CH Relay Outputs & 8-CH Isolated DI Extension Card for PCI-7250
- **LPCI-7250**  
8-CH Relay Outputs & 8-CH Isolated DI Low-Profile PCI Card
- **LPCle-7250**  
8-CH Relay Outputs & 8-CH Isolated DI Low-Profile PCI Express Card

- 1 Software Solutions
- 2 PXI/ CompactPCI Platforms
- 3 Modular Instrument
- 4 PXI/ CompactPCI Modules
- 5 Bus Interface
- 6 GPIB Interface
- 7 PCI/PCI Express DAQ Cards
- 8 **PCI/PCI Express DIO Cards**
- 9 PCI/104-Plus Modules
- 10 ISA DAS/ DIO Cards
- 11 System Product
- 12 Wiring Termination Boards
- 13 Motion, HSL, Vision, COM & GEME
- 14 Remote I/O Modules
- 15 Industrial Computers