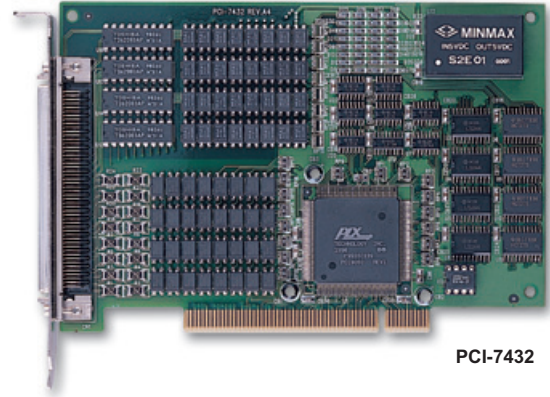


# PCI-7432/7433/7434

## 64-CH Isolated Digital I/O Cards

### Features

- Supports a 32-bit 5 V PCI bus
  - 32-CH isolated digital inputs & 32-CH isolated digital outputs (PCI-7432 & PCI-7432HIR)
  - 64-CH isolated digital inputs (PCI-7433 & PCI-7433HIR)
  - 64-CH isolated digital outputs (PCI-7434)
  - Non-polarity digital input range (PCI-7432, PCI-7432HIR, PCI-7433 & PCI-7433HIR)
  - 60 Hz AC signal input detection capability (PCI-7433ALC)
  - 2500 VRMS optical isolation
  - Sink current up to 500 mA on each isolated output
  - Isolated input voltage up to 24 V (PCI-7432 & PCI-7433)
  - Isolated input voltage up to 50 V (PCI-7432HIR & PCI-7433HIR)
  - Two external interrupt sources (PCI-7432, PCI-7432HIR, PCI-7433 & PCI-7433HIR)
  - Compact, half-size PCB
- **Operating Systems**
    - Windows 98/NT/2000/XP/2003
    - Linux
    - DOS
  - **Recommended Software**
    - VB/V/C++/BCB/Delphi
    - DAQBench
  - **Driver Support**
    - DAQ-LVIEW PnP for LabVIEW
    - DAQ-MTLB for MATLAB
    - DAQBOY for Windows
    - PCIS-DASK for Windows
    - PCIS-DASK/X for Linux



PCI-7432

### Introduction

ADLINK PCI-743X series cards are 64-CH high-density digital input and/or output cards. They provide a robust 2,500 V isolation protection which is suitable for most industrial applications. The wide input range of the PCI-7432 and PCI-7433 makes it easy to sense the status of external devices. There are several options for PCI-743X series, such as normal version with input range from 0 to 24 V, as well as HIR version with high input range from 0 to 50 V. The PCI-7433ALC provides more flexibility to extend the signal type from DC to AC, thus the PCI-7433ALC is suitable for AC power test system.

The PCI-7432 and PCI-7434 feature a wide output range from 5 to 35 V, suitable for relay driving and industrial automation applications. The PCI-7432 and PCI-7433 also provide two interrupt sources on digital input channels, which are easily user configurable.

### Specifications

#### Isolated Digital Input

- Number of channels
  - 32 (PCI-7432 & PCI-7432HIR)
  - 64 (PCI-7433 & PCI-7433HIR)
- Maximum input range (Non-polarity)
  - 24 V, non-polarity (PCI-7432 & PCI-7433)
  - 50 V, non-polarity (PCI-7432HIR & PCI-7433HIR)
  - 24 V, AC input amplitude @ 60 Hz (PCI-7433ALC)
- Digital logic levels
  - 0-24 V, non-polarity (PCI-7432 & PCI-7433)
    - Input high voltage: 5-24 V
    - Input low voltage: 0-1.5 V
  - 0-50 V, non-polarity (PCI-7432HIR & PCI-7433HIR)
    - Input high voltage: 10-50 V
    - Input low voltage: 0-2 V
  - 0-24 V, AC input amplitude @ 60 Hz (PCI-7433ALC)
    - Input high voltage: 5-24 V
    - Input low voltage: 0-1 V
- Input resistance
  - 2.4 kΩ @ 0.5 W (PCI-7432 & PCI-7433)
  - 2.4 kΩ @ 1 W (PCI-7433)
  - 4.7 kΩ @ 0.5 W (PCI-7432HIR)
  - 4.7 kΩ @ 1 W (PCI-7433HIR)
- Isolation voltage: 2500 VRMS
- Interrupt sources: digital input channel 0 & 1
- Data transfers: programmed I/O

#### Isolated Digital Output

- Number of channels
  - 32 (PCI-7432 & PCI-7432HIR)
  - 64 (PCI-7434)
- Output type: open collector Darlington transistor
- Sink current
  - 500 mA for one channel @ 100% duty
  - 500 mA for all channels @ 20% duty
- Power dissipation: Max. 2.25 W per chip (8 DO channels)
  - Supply voltage: 5-35 V
  - Isolation voltage: 2500 VRMS
  - Data transfers: programmed I/O

#### General Specifications

- I/O connector: 100-pin SCSI-II female
- Operating temperature: 0 to 60 °C
- Storage temperature: -20 to 80 °C
- Relative humidity: 5 to 95%, noncondensing
- Power requirements

Device	+5 V
PCI-7432	530 mA typical
PCI-7432HIR	
PCI-7433	500 mA typical
PCI-7433HIR	
PCI-7433ALC	
PCI-7434	560 mA typical

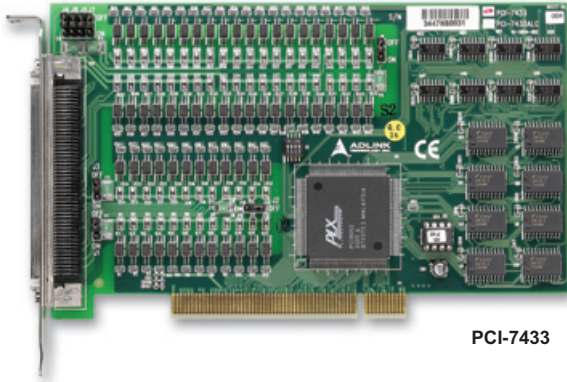
- Dimensions (not including connectors)
  - 156 mm x 106 mm (PCI-7432 & PCI-7432HIR)
  - 175 mm x 107 mm (PCI-7433, PCI-7433HIR & PCI-7433ALC)
  - 156 mm x 106 mm (PCI-7434)

### Termination Boards

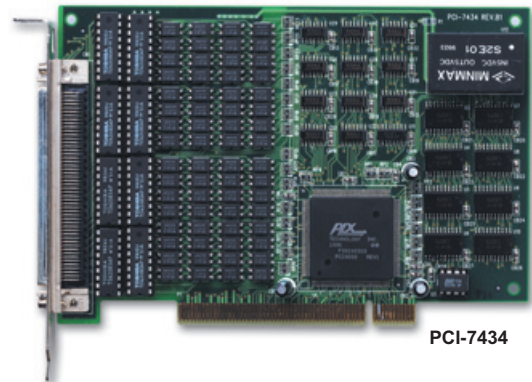
- **DIN-100S**  
Termination Board with a 100-pin SCSI-II Connector and DIN-Rail Mounting (Including One 1-meter ACL-102100 Cable)
- **DIN-502S**  
Two Pieces of DIN-50S Termination Board (Including One 1-meter ACL-10252 Cable)

### Ordering Information

- **PCI-7432**  
32-CH Isolated DI & 32-CH Isolated DO Card
- **PCI-7432HIR**  
32-CH Isolated DI & 32-CH Isolated DO Card with High Input Range
- **PCI-7433**  
64-CH Isolated DI Card
- **PCI-7433HIR**  
64-CH Isolated DI Card with High Input Range
- **PCI-7433ALC**  
64-CH Isolated DI Card for AC signal input detection
- **PCI-7434**  
64-CH Isolated DO Card



PCI-7433



PCI-7434

**Pin Assignment**

PCI-7432, PCI-7432HIR

IDI_0	1	51	IDI_8
IDI_1	2	52	IDI_9
IDI_2	3	53	IDI_10
IDI_3	4	54	IDI_11
IDI_4	5	55	IDI_12
IDI_5	6	56	IDI_13
IDI_6	7	57	IDI_14
IDI_7	8	58	IDI_15
COM1	9	59	COM2
COM1	10	60	COM2
COM1	11	61	COM2
COM1	12	62	COM2
IDI_16	13	63	IDI_24
IDI_17	14	64	IDI_25
IDI_18	15	65	IDI_26
IDI_19	16	66	IDI_27
IDI_20	17	67	IDI_28
IDI_21	18	68	IDI_29
IDI_22	19	69	IDI_30
IDI_23	20	70	IDI_31
COM3	21	71	COM4
COM3	22	72	COM4
COM3	23	73	COM4
COM3	24	74	COM4
N/C	25	75	N/C
IDO_0	26	76	IDO_8
IDO_1	27	77	IDO_9
IDO_2	28	78	IDO_10
IDO_3	29	79	IDO_11
IDO_4	30	80	IDO_12
IDO_5	31	81	IDO_13
IDO_6	32	82	IDO_14
IDO_7	33	83	IDO_15
VDD1	34	84	VDD2
IGND	35	85	IGND
IGND	36	86	IGND
IGND	37	87	IGND
IDO_16	38	88	IDO_24
IDO_17	39	89	IDO_25
IDO_18	40	90	IDO_26
IDO_19	41	91	IDO_27
IDO_20	42	92	IDO_28
IDO_21	43	93	IDO_29
IDO_22	44	94	IDO_30
IDO_23	45	95	IDO_31
VDD3	46	96	VDD4
IGND	47	97	IGND
IGND	48	98	IGND
IGND	49	99	IGND
+5Vout	50	100	+5Vout

**Pin Assignment**

PCI-7433, PCI-7433HIR, PCI-7433ALC

IDI_0	1	51	IDI_8
IDI_1	2	52	IDI_9
IDI_2	3	53	IDI_10
IDI_3	4	54	IDI_11
IDI_4	5	55	IDI_12
IDI_5	6	56	IDI_13
IDI_6	7	57	IDI_14
IDI_7	8	58	IDI_15
COM1	9	59	COM2
COM1	10	60	COM2
COM1	11	61	COM2
COM1	12	62	COM2
IDI_16	13	63	IDI_24
IDI_17	14	64	IDI_25
IDI_18	15	65	IDI_26
IDI_19	16	66	IDI_27
IDI_20	17	67	IDI_28
IDI_21	18	68	IDI_29
IDI_22	19	69	IDI_30
IDI_23	20	70	IDI_31
COM3	21	71	COM4
COM3	22	72	COM4
COM3	23	73	COM4
COM3	24	74	COM4
N/C	25	75	N/C
IDI_32	26	76	IDI_40
IDI_33	27	77	IDI_41
IDI_34	28	78	IDI_42
IDI_35	29	79	IDI_43
IDI_36	30	80	IDI_44
IDI_37	31	81	IDI_45
IDI_38	32	82	IDI_46
IDI_39	33	83	IDI_47
COM5	34	84	COM6
COM5	35	85	COM6
COM5	36	86	COM6
COM5	37	87	COM6
IDI_48	38	88	IDI_56
IDI_49	39	89	IDI_57
IDI_50	40	90	IDI_58
IDI_51	41	91	IDI_59
IDI_52	42	92	IDI_60
IDI_53	43	93	IDI_61
IDI_54	44	94	IDI_62
IDI_55	45	95	IDI_63
COM7	46	96	COM8
COM7	47	97	COM8
COM7	48	98	COM8
COM7	49	99	COM8
N/C	50	100	N/C

**Pin Assignment**

PCI-7434

IDO_0	1	51	IDO_8
IDO_1	2	52	IDO_9
IDO_2	3	53	IDO_10
IDO_3	4	54	IDO_11
IDO_4	5	55	IDO_12
IDO_5	6	56	IDO_13
IDO_6	7	57	IDO_14
IDO_7	8	58	IDO_15
VDD1	9	59	VDD2
IGND	10	60	IGND
IGND	11	61	IGND
IGND	12	62	IGND
IDO_16	13	63	IDO_24
IDO_17	14	64	IDO_25
IDO_18	15	65	IDO_26
IDO_19	16	66	IDO_27
IDO_20	17	67	IDO_28
IDO_21	18	68	IDO_29
IDO_22	19	69	IDO_30
IDO_23	20	70	IDO_31
VDD3	21	71	VDD4
IGND	22	72	IGND
IGND	23	73	IGND
IGND	24	74	IGND
N/C	25	75	N/C
IDO_32	26	76	IDO_40
IDO_33	27	77	IDO_41
IDO_34	28	78	IDO_42
IDO_35	29	79	IDO_43
IDO_36	30	80	IDO_44
IDO_37	31	81	IDO_45
IDO_38	32	82	IDO_46
IDO_39	33	83	IDO_47
VDD5	34	84	VDD6
IGND	35	85	IGND
IGND	36	86	IGND
IGND	37	87	IGND
IDO_48	38	88	IDO_56
IDO_49	39	89	IDO_57
IDO_50	40	90	IDO_58
IDO_51	41	91	IDO_59
IDO_52	42	92	IDO_60
IDO_53	43	93	IDO_61
IDO_54	44	94	IDO_62
IDO_55	45	95	IDO_63
VDD7	46	96	VDD8
IGND	47	97	IGND
IGND	48	98	IGND
IGND	49	99	IGND
+5Vout	50	100	+5Vout

- 1 Software Solutions
- 2 PXI/CompactPCI Platforms
- 3 PXI-Based Instruments
- 4 PXI/CompactPCI Modules
- 5 PCI DAQ Cards
- 6 **PCI DIO Cards**
- 7 PC/104-Plus Products
- 8 ISA DAS/DIO Cards
- 9 Wiring Termination Boards
- 10 Motion Vision & COM
- 11 Remote I/O Modules
- 12 Industrial Computers