PCI-7432/7433/7434, cPCI-7432/7433/7434

64-CH Isolated Digital I/O Cards



cPCI-7432



cPCI-7433



cPCI-7434

PCI CompactPCI

Introduction

ADLINK's cPCI/PCI-743X series cards are 64-CH high-density digital input and/or output cards that provide a robust 2,500 V isolation protection and are suitable for most industrial applications. The wide input range of the cPCI/PCI-7432 and cPCI/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 is specifically designed for AC power test system.

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

Features

- **Supports a 32-bit 5 V PCI bus (PCI-7432/7433/7434)**
- **3U Eurocard form factor, CompactPCI compliant (PICMG 2.0 R2.1) (cPCI-7432/7433/7434)**
- **32-CH isolated digital inputs & 32-CH isolated digital outputs (PCI-7432/7432HIR, cPCI-7432)**
- **64-CH isolated digital inputs (PCI-7433/7433HIR, cPCI-7433)**
- **64-CH isolated digital outputs (PCI-7434, cPCI-7434/7434P)**
- **Isolation Voltage:**
  - **2500 V_{RMS}: PCI-7432/7433/7434**
  - **5000 V_{RMS}: cPCI-7432/7433/7434/7434P**
- **Sink current up to 500 mA on single isolated output**
- **Isolated input voltage up to 24 V (PCI-7432/7433, cPCI-7432/7433)**
- **Isolated input voltage up to 50 V (PCI-7432HIR/7433HIR)**
- **Two external interrupt sources (PCI-7432/7432HIR/7433/7433HIR, cPCI-7432/7432RP/7433)**

Operating Systems

- Windows 7/Vista/XP/2000/2003 Server
- Linux

Recommended Software

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

Driver Support

- DAQPilot for LabVIEW™
- DAQ-MTLB for MATLAB®
- PCIS-DASK for Windows
- PCIS-DASK/X for Linux

Specifications

Isolated Digital Input

- Number of channels
  - 32 (PCI-7432/7432HIR, cPCI-7432)
  - 64 (PCI-7433/7433HIR, cPCI-7433)
- Maximum input range (Non-polarity)
  - 24 V, non-polarity (PCI-7432/7433, cPCI-7432/7433)
- Digital logic levels: 0 V to 24 V, non-polarity
  - Input high voltage: 5 V to 24 V
  - Input low voltage: 0 V to 1.5 V
- Input resistance
  - 2.4 kΩ @ 0.5 W (PCI-7432, cPCI-7432, cPCI-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 V_{RMS}: PCI-7432/7432HIR/7433/7433HIR
  5000 V_{RMS}: cPCI-7432/7433
- Interrupt sources: digital input channel 0 & 1
- Data transfers: programmed I/O

Isolated Digital Output

- Number of channels
  - 32 (PCI-7432/7432HIR, cPCI-7432)
  - 64 (PCI-7434, cPCI-7434)
- Output type: open collector Darlington transistor
- Sink current (PCI-7432/7432HIR/7434, cPCI-7434)
  - 500 mA for single channel @ 100% duty cycle
  - 500 mA for all channels @ 20% duty cycle
- Source current (cPCI-7434P)
  - 500 mA for single channel @ 100% duty cycle
  - 260 mA for all channels @ 10% duty
- Power dissipation: Max. 2.25 W per chip (8 DO channels) (PCI-7432/7432HIR/7434, cPCI-7432/7434)
  Max. 1.47 W per chip (8 DO channels) (cPCI-7434P)
- Supply voltage: 5-35 V
- Isolation voltage: 2500 V_{RMS}
- Data transfers: programmed I/O

General Specifications

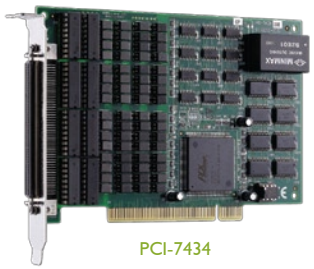
- I/O connector: 100-pin SCSI-II female
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 5% to 95%, non-condensing
- Power requirements

Device	+5 V
PCI-7432/7432HIR, cPCI-7432	530 mA typical
PCI-7433/7433HIR, cPCI-7433	500 mA typical
PCI-7434, cPCI-7434P	560 mA typical

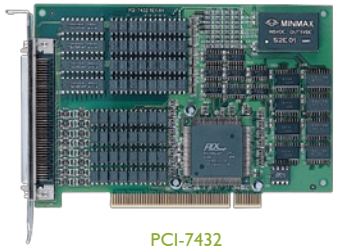
- Dimensions (not including connectors)
  - 156 mm x 106 mm (PCI-7432 & PCI-7432HIR)
  - 175 mm x 107 mm (PCI-7433, PCI-7433HIR)
  - 156 mm x 106 mm (PCI-7434)
  - 156 mm x 106 mm (PCI-7434P)
  - 160 mm x 100 mm (cPCI-7432/7433/7434)



PCI-7433



PCI-7434



PCI-7432

Terminal Boards & Cables

- DIN-100S-01
  Terminal Board with One 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included.)
- ACL-102100-1
  100-pin SCSI-II cable (mating with AMP-787082-9), 1 M

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

Note:
Legacy DIN-502S can be replaced by two DIN-50S-01 and ACL-10252-1 (100-Pin to two 50-Pin Cable, 1 M)

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-7434**
  64-CH Isolated DO Card
- **cPCI-7433**
  64-CH Isolated DI Card
- **cPCI-7434**
  64-CH Isolated DO Card
- **cPCI-7434P**
  64-CH Isolated DO Card with Source Current Transistor

Pin Assignment

PCI-7432/7432HIR, cPCI-7432				*PCI-7433/7433HIR, cPCI-7433*				*PCI-7434, cPCI-7434*			
IDI_0	1	51	IDI_8	IDI_0	1	51	IDI_8	IDO_0	1	51	IDO_8
IDI_1	2	52	IDI_9	IDI_1	2	52	IDI_9	IDO_1	2	52	IDO_9
IDI_2	3	53	IDI_10	IDI_2	3	53	IDI_10	IDO_2	3	53	IDO_10
IDI_3	4	54	IDI_11	IDI_3	4	54	IDI_11	IDO_3	4	54	IDO_11
IDI_4	5	55	IDI_12	IDI_4	5	55	IDI_12	IDO_4	5	55	IDO_12
IDI_5	6	56	IDI_13	IDI_5	6	56	IDI_13	IDO_5	6	56	IDO_13
IDI_6	7	57	IDI_14	IDI_6	7	57	IDI_14	IDO_6	7	57	IDO_14
IDI_7	8	58	IDI_15	IDI_7	8	58	IDI_15	IDO_7	8	58	IDO_15
COM1	9	59	COM2	COM1	9	59	COM2	VDD1	9	59	VDD2
COM1	10	60	COM2	COM1	10	60	COM2	IGND	10	60	IGND
COM1	11	61	COM2	COM1	11	61	COM2	IGND	11	61	IGND
COM1	12	62	COM2	COM1	12	62	COM2	IGND	12	62	IGND
IDI_16	13	63	IDI_24	IDI_16	13	63	IDI_24	IDO_16	13	63	IDO_24
IDI_17	14	64	IDI_25	IDI_17	14	64	IDI_25	IDO_17	14	64	IDO_25
IDI_18	15	65	IDI_26	IDI_18	15	65	IDI_26	IDO_18	15	65	IDO_26
IDI_19	16	66	IDI_27	IDI_19	16	66	IDI_27	IDO_19	16	66	IDO_27
IDI_20	17	67	IDI_28	IDI_20	17	67	IDI_28	IDO_20	17	67	IDO_28
IDI_21	18	68	IDI_29	IDI_21	18	68	IDI_29	IDO_21	18	68	IDO_29
IDI_22	19	69	IDI_30	IDI_22	19	69	IDI_30	IDO_22	19	69	IDO_30
IDI_23	20	70	IDI_31	IDI_23	20	70	IDI_31	IDO_23	20	70	IDO_31
COM3	21	71	COM4	COM3	21	71	COM4	VDD3	21	71	VDD4
COM3	22	72	COM4	COM3	22	72	COM4	IGND	22	72	IGND
COM3	23	73	COM4	COM3	23	73	COM4	IGND	23	73	IGND
COM3	24	74	COM4	COM3	24	74	COM4	IGND	24	74	IGND
N/C	25	75	N/C	N/C	25	75	N/C	N/C	25	75	N/C
IDO_0	26	76	IDO_8	IDI_32	26	76	IDI_40	IDO_32	26	76	IDO_40
IDO_1	27	77	IDO_9	IDI_33	27	77	IDI_41	IDO_33	27	77	IDO_41
IDO_2	28	78	IDO_10	IDI_34	28	78	IDI_42	IDO_34	28	78	IDO_42
IDO_3	29	79	IDO_11	IDI_35	29	79	IDI_43	IDO_35	29	79	IDO_43
IDO_4	30	80	IDO_12	IDI_36	30	80	IDI_44	IDO_36	30	80	IDO_44
IDO_5	31	81	IDO_13	IDI_37	31	81	IDI_45	IDO_37	31	81	IDO_45
IDO_6	32	82	IDO_14	IDI_38	32	82	IDI_46	IDO_38	32	82	IDO_46
IDO_7	33	83	IDO_15	IDI_39	33	83	IDI_47	IDO_39	33	83	IDO_47
VDD1	34	84	VDD2	COM5	34	84	COM6	VDD5	34	84	VDD6
IGND	35	85	IGND	COM5	35	85	COM6	IGND	35	85	IGND
IGND	36	86	IGND	COM5	36	86	COM6	IGND	36	86	IGND
IGND	37	87	IGND	COM5	37	87	COM6	IGND	37	87	IGND
IDO_16	38	88	IDO_24	IDI_48	38	88	IDI_56	IDO_48	38	88	IDO_56
IDO_17	39	89	IDO_25	IDI_49	39	89	IDI_57	IDO_49	39	89	IDO_57
IDO_18	40	90	IDO_26	IDI_50	40	90	IDI_58	IDO_50	40	90	IDO_58
IDO_19	41	91	IDO_27	IDI_51	41	91	IDI_59	IDO_51	41	91	IDO_59
IDO_20	42	92	IDO_28	IDI_52	42	92	IDI_60	IDO_52	42	92	IDO_60
IDO_21	43	93	IDO_29	IDI_53	43	93	IDI_61	IDO_53	43	93	IDO_61
IDO_22	44	94	IDO_30	IDI_54	44	94	IDI_62	IDO_54	44	94	IDO_62
IDO_23	45	95	IDO_31	IDI_55	45	95	IDI_63	IDO_55	45	95	IDO_63
VDD3	46	96	VDD4	COM7	46	96	COM8	VDD7	46	96	VDD8
IGND	47	97	IGND	COM7	47	97	COM8	IGND	47	97	IGND
IGND	48	98	IGND	COM7	48	98	COM8	IGND	48	98	IGND
IGND	49	99	IGND	COM7	49	99	COM8	IGND	49	99	IGND
+5Vout	50	100	+5Vout	N/C	50	100	N/C	+5Vout	50	100	+5Vout

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