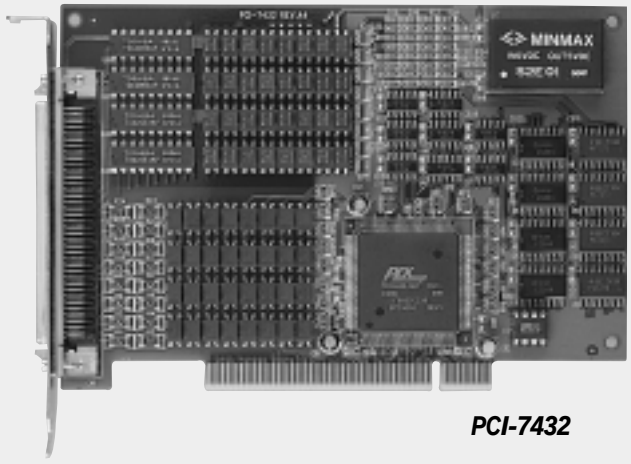
PCI-7432/7433/7434

Isolated 64-CH DI and/or DO Cards

Features

- 32-bit PCI Bus, Plug and Play
- High Density Isolation DIO card
- Isolated 32 DI & 32 DO Channels for PCI-7432
- Isolated 64 DI Channels for PCI-7433
- Isolated 64 DO Channels for PCI-7434
- 2500Vrms high isolation voltage
- Max 500mA high driving sink current on isolated output channels
- Up to 24V voltage input for isolated input
- Two external interrupt sources and dual interrupt system for PCI-7432/33
- Rugged 100-pin SCSI-type connector
- Compact size suitable for any size of chassis
- The software driver is forward compatible to the Compact PCI version



PCI-7432

Introduction

The PCI-7432/33/34 series products are the highest density digital I/O cards for the PCI bus. To use the plug & play PCI bus to replace the old ISA architecture is now a trend. All the I/O ports are accessed by 32-bits I/O instruction, therefore increasing the data throughput rate.

The PCI-74xx series cards contain 64 isolated DIO channels using the rugged 100-pin SCSI-II connector. The photo-isolators are used to isolate the signals between host and the I/O device, the 2500V rms high isolation voltage protect the host computer. They are very suitable for harsh industrial applications.

The isolated DO channels are driven by Darlington transistors with maximum 500 mA current sink capability, the DO channels are very suitable to drive the relay or high power lamps directly.

The maximum input voltage for the isolated DI channels is up to 24 volts. These DI channels are protected by on board 2.4KΩ resistors.

The full line software support for Windows 95/98 and Windows NT OS allows users to develop the application easily. The software development for PCI-7432 series products will be forward compatible to their CompactPCI version.

Specifications

Optical Isolated Input Channels

- Numbers of channel
  - 32 for PCI-7432
  - 64 for PCI-7433
- Input voltage: 0-24VDC (or -24VDC)
  - Logic H: 4~24V (-4 ~ -24V)
  - Logic L: 0~2.4V (0 ~ -2.4V)
- Input resistance: 2.4KΩ@ 0.5W
- Isolated voltage: > 2500 V rms
- Throughput: 10KHz (0.1ms)
- Interrupt sources: Ch#0 and Ch#1 of DI channels

Optical Isolated Output channels

- Numbers of Channel
  - 32 for PCI-7432
  - 64 for PCI-7434
- Output type: Open collector Darlington NPN transistors
- Device: TD62083 or compatible
- Sink current
  - Max. 500mA for only one of the TD62083 transistor is ON
  - 347mA/ch for all of the TD62083 transistors are ON @ 10% duty
- Power Dissipation: 1.47W per TD62083 device (8 DO channels)
- Output Voltage: open collector
  - Minimum 5V
  - Maximum up to 35V .
- Isolated voltage: > 2500 V rms
- Throughput: 10KHz (0.1ms)

General Specifications

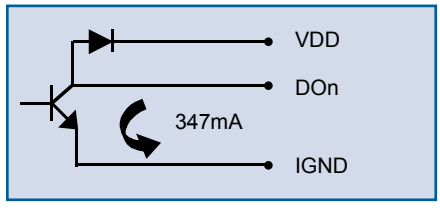
- Operating temperature: 0˚ ~ 60˚C
- Storage temperature: -20˚~ 80˚C
- Humidity: 5 ~95% non-condensing
- Connector: 100 pins SCSI-type female connector
- Power requirement

  PCI-7432
  - 530mA @5VDC (Typical)

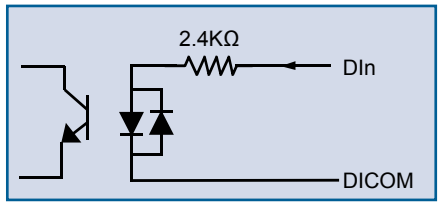
  PCI-7433
  - 500mA @5VDC (Typical)

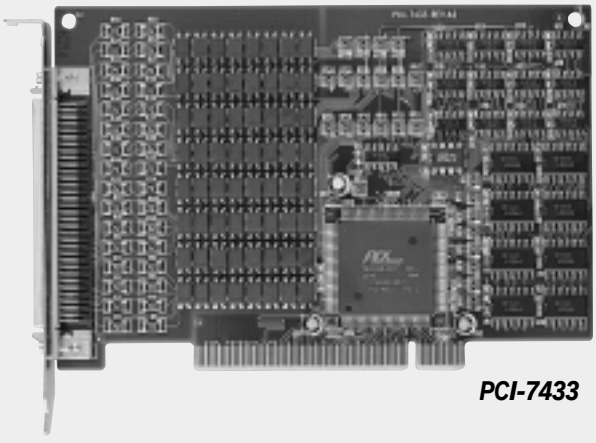
  PCI-7434
  - 560mA @5VDC (Typical)
- Dimension: 173 mm x 98 mm

Digital Output Driving Circuits

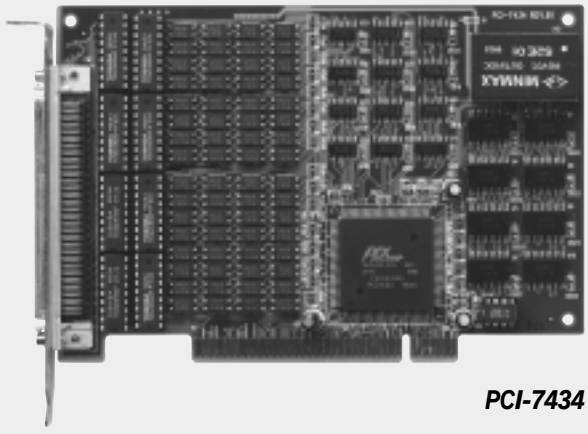


Digital Input Circuits





PCI-7433



PCI-7434

Termination Boards

- DIN-100S
- DIN-502S

Ordering Information

PCI-7432

Isolated 32 Digital Inputs & 32 Digital Outputs

PCI-7433

Isolation 64 Digital Inputs

PCI-7434

Isolation 64 Digital Outputs

The importance of isolation!

The isolation means the power and signal lines on the host computer have no connection with the external signals. The electronics digital signals are transmitted to/from the external devices by the photo-couplers. The isolation voltage of the photo- couplers on the PCI-743X series cards is 2500 V rms. Therefore, even the external devices are destroyed by electrical shock , the host computer is under fully protected.

Pin Assignments of 100-pin connector on PCI-7432 / 7433 / 7434

DI_0	1	51	DI_8	DI_0	1	51	DI_8	DO_0	1	51	DO_8
DI_1	2	52	DI_9	DI_1	2	52	DI_9	DO_1	2	52	DO_9
DI_2	3	53	DI_10	DI_2	3	53	DI_10	DO_2	3	53	DO_10
DI_3	4	54	DI_11	DI_3	4	54	DI_11	DO_3	4	54	DO_11
DI_4	5	55	DI_12	DI_4	5	55	DI_12	DO_4	5	55	DO_12
DI_5	6	56	DI_13	DI_5	6	56	DI_13	DO_5	6	56	DO_13
DI_6	7	57	DI_14	DI_6	7	57	DI_14	DO_6	7	57	DO_14
DI_7	8	58	DI_15	DI_7	8	58	DI_15	DO_7	8	58	DO_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
DI_16	13	63	DI_24	DI_16	13	63	DI_24	DO_16	13	63	DO_24
DI_17	14	64	DI_25	DI_17	14	64	DI_25	DO_17	14	64	DO_25
DI_18	15	65	DI_26	DI_18	15	65	DI_26	DO_18	15	65	DO_26
DI_19	16	66	DI_27	DI_19	16	66	DI_27	DO_19	16	66	DO_27
DI_20	17	67	DI_28	DI_20	17	67	DI_28	DO_20	17	67	DO_28
DI_21	18	68	DI_29	DI_21	18	68	DI_29	DO_21	18	68	DO_29
DI_22	19	69	DI_30	DI_22	19	69	DI_30	DO_22	19	69	DO_30
DI_23	20	70	DI_31	DI_23	20	70	DI_31	DO_23	20	70	DO_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
DO_0	26	76	DO_8	DI_32	26	76	DL_40	DO_32	26	76	DO_40
DO_1	27	77	DO_9	DI_33	27	77	DL_41	DO_33	27	77	DO_41
DO_2	28	78	DO_10	DI_34	28	78	DL_42	DO_34	28	78	DO_42
DO_3	29	79	DO_11	DI_35	29	79	DL_43	DO_35	29	79	DO_43
DO_4	30	80	DO_12	DI_36	30	80	DL_44	DO_36	30	80	DO_44
DO_5	31	81	DO_13	DI_37	31	81	DL_45	DO_37	31	81	DO_45
DO_6	32	82	DO_14	DI_38	32	82	DL_46	DO_38	32	82	DO_46
DO_7	33	83	DO_15	DI_39	33	83	DL_47	DO_39	33	83	DO_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
DO_16	38	88	DO_24	DI_48	38	88	DL_56	DO_48	38	88	DO_56
DO_17	39	89	DO_25	DI_49	39	89	DL_57	DO_49	39	89	DO_57
DO_18	40	90	DO_26	DI_50	40	90	DL_58	DO_50	40	90	DO_58
DO_19	41	91	DO_27	DI_51	41	91	DL_59	DO_51	41	91	DO_59
DO_20	42	92	DO_28	DI_52	42	92	DL_60	DO_52	42	92	DO_60
DO_21	43	93	DO_29	DI_53	43	93	DL_61	DO_53	43	93	DO_61
DO_22	44	94	DO_30	DI_54	44	94	DL_62	DO_54	44	94	DO_62
DO_23	45	95	DO_31	DI_55	45	95	DL_63	DO_55	45	95	DO_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
V5V	50	100	V5V	N/C	50	100	N/C	V5V	50	100	V5V

PCI-7432 PCI-7433 PCI-7434