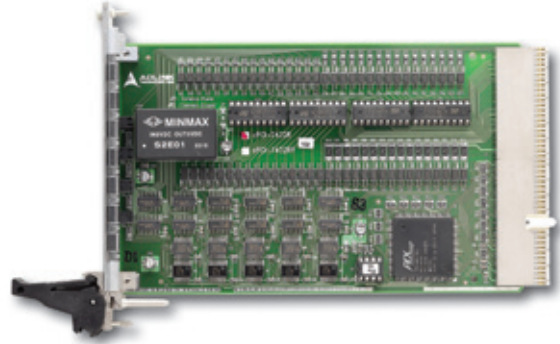


# cPCI-7432/7433/7434

## 64-CH Isolated Digital I/O Modules

### Features

- 3U Eurocard form factor, CompactPCI compliant (PICMG 2.0 R2.1)
  - Isolated Digital I/O
    - 32-CH isolated digital inputs and 32-CH isolated digital outputs (cPCI-7432, cPCI-7432R and cPCI-7432RP)
    - 64-CH isolated digital inputs (cPCI-7433 and cPCI-7433R)
    - 64-CH isolated digital outputs (cPCI-7434, cPCI-7434R, cPCI-7434P and cPCI-7434RP)
  - Non-polarity digital input range (cPCI-7432, cPCI-7432R, cPCI-7432RP, cPCI-7433 and cPCI-7433R)
  - Isolated input voltage up to 24 V (cPCI-7432, cPCI-7432R, cPCI-7432RP, cPCI-7433 and cPCI-7433R)
  - Isolation Voltage
    - 5000 V<sub>RMS</sub> (cPCI-7432, cPCI-7433, cPCI-7434 and cPCI-7434R, cPCI-7434P and cPCI-7434RP)
    - 2500 V<sub>RMS</sub> (cPCI-7432R, cPCI-7432RP and cPCI-7433R)
  - Sink current up to 500 mA on each isolated output (Darlington sink type)
  - Two external interrupt sources (cPCI-7432, cPCI-7432R, cPCI-7432RP, cPCI-7433 and cPCI-7433R)
- 
- **Operating Systems**
    - Windows Vista/XP/2000/2003
    - Linux
  - **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



cPCI-7432R

### Introduction

The ADLINK cPCI-743X series cards are 64-CH high-density isolated digital input and/or output cards. They provide a robust 2,500 V<sub>RMS</sub> isolation protection which is suitable of the industrial applications. The wide input range of the cPCI-7432 series and cPCI-7433 series makes it easy to sense the status of external devices. The cPCI-7432 series and cPCI-7434 series feature a wide output range from 5 to 35 V, suitable for relay driving and industrial automation applications. The cPCI-7432, cPCI-7432R, cPCI-7434, cPCI-7434R provide sink drive output type while the cPCI-7432RP, cPCI-7434P and cPCI-7434RP provide source drive output type. The cPCI-7432 series and cPCI-7433 series also provide two interrupt sources on digital input channels, which are easily user configurable.

### Specifications

#### Isolated Digital Input

- Number of channels
  - 32 (cPCI-7432, cPCI-7432R & cPCI-7432RP)
  - 64 (cPCI-7433 & cPCI-7433R)
- Maximum input range (Non-polarity)
  - 24 V, non-polarity (cPCI-7432, cPCI-7432R, cPCI-7432RP, cPCI-7433 & cPCI-7433R)
- Digital logic levels
  - 0-24 V, non-polarity (cPCI-7432, cPCI-7432R, cPCI-7432RP, cPCI-7433 & cPCI-7433R)
  - Input high voltage: 5-24 V
  - Input low voltage: 0-1.5 V
- Input resistance
  - 2.4 kΩ @ 0.5 W (cPCI-7432, cPCI-7432R & cPCI-7432RP)
  - 2.4 kΩ @ 1 W (cPCI-7433 & cPCI-7433R)
- Isolation voltage
  - 2500 V<sub>RMS</sub> (cPCI-7432R, cPCI-7432RP & cPCI-7433R)
  - 5000 V<sub>RMS</sub> (cPCI-7432 & cPCI-7433)
- Interrupt sources: digital input channel 0 and 1
- Data transfers: programmed I/O

#### Isolated Digital Output

- Number of channels
  - 32 (cPCI-7432, cPCI-7432R & cPCI-7432RP)
  - 64 (cPCI-7434, cPCI-7434R, cPCI-7434P & cPCI-7434RP)
- Output type
  - Darlington sink driver (cPCI-7432, cPCI-7432R, cPCI-7434 & cPCI-7434R)
  - Darlington source driver (cPCI-7432RP, cPCI-7434P & cPCI-7434RP)
- Sink current (cPCI-7432, cPCI-7432R, cPCI-7434 & cPCI-7434R)
  - 500 mA for one channel @ 100% duty
  - 500 mA for all channels @ 20% duty

- Source current (cPCI-7432RP, cPCI-7434P, cPCI-7434RP)
  - 260 mA for all channels @ 10% duty
  - 59 mA for all channels @ 50% duty
- Power dissipation
  - Max. 2.25 W per chip (8 DO channels, cPCI-7432, cPCI-7432R, cPCI-7434 & cPCI-7434R)
  - Max. 1.47 W per chip (8 DO channels, cPCI-7432RP, cPCI-7434P & cPCI-7434RP)
- Supply voltage: 5-35 V
- Isolation voltage
  - 2500 V<sub>RMS</sub> (cPCI-7432R & cPCI-7432RP)
  - 5000 V<sub>RMS</sub> (cPCI-7434R, cPCI-7434P & cPCI-7434RP)
- Data transfer: 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 %, non-condensing
- Power requirements

Device	+5 V
cPCI-7432 cPCI-7432R cPCI-7432RP	530 mA typical
cPCI-7433 cPCI-7433R	500 mA typical
cPCI-7434 cPCI-7434R cPCI-7434P cPCI-7434RP	560 mA typical

- Dimensions (not including connectors)  
160 mm x 100 mm

### Termination Boards

#### DIN-100S-01

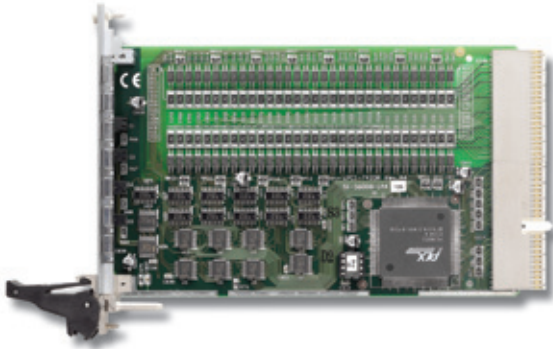
Termination Board with a 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included. For information on mating cables, refer to Section 12.)

Note:

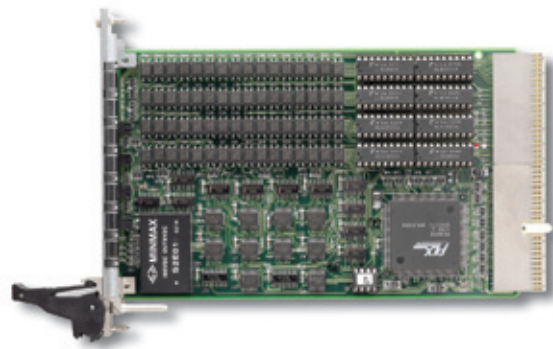
Legacy DIN-502S can be replaced by two DIN-50S-01 and ACL-10252-1 (100-Pin to two 50-Pin Cable, 1 M)

### Ordering Information

- **cPCI-7432**  
32-CH Isolated DI & 32-CH Isolated DO Card
- **cPCI-7432R**  
32-CH Isolated DI & 32-CH Isolated DO Card with Rear I/O
- **cPCI-7432RP**  
cPCI-7432 with Rear I/O & Source Current Transistor
- **cPCI-7433**  
64-CH Isolated DI Card
- **cPCI-7433R**  
64-CH Isolated DI Card with Rear I/O
- **cPCI-7434**  
64-CH Isolated DO Card
- **cPCI-7434R**  
64-CH Isolated DO Card with Rear I/O
- **cPCI-7434P**  
64-CH Isolated DO Card with Source Current Transistor
- **cPCI-7434RP**  
cPCI-7434 with Rear I/O & Source Current Transistor



cPCI-7433R



cPCI-7434R

**Pin Assignment**  
cPCI-7432 & cPCI-7432R

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
+5 Vout	50	100	+5 Vout

**Pin Assignment**  
cPCI-7432RP

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
IGND	34	84	IGND
VDD1	35	85	VDD2
VDD1	36	86	VDD2
VDD1	37	87	VDD2
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
IGND	46	96	IGND
VDD3	47	97	VDD4
VDD3	48	98	VDD4
VDD3	49	99	VDD4
+5 Vout	50	100	+5 Vout

**Pin Assignment**  
cPCI-7433 & cPCI-7433R

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
NC	50	100	NC

**Pin Assignment**  
cPCI-7434 & cPCI-7434R

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
IDI_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
+5 Vout	50	100	+5 Vout

**Pin Assignment**  
cPCI-7434P & cPCI-7434RP

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
IGND	9	59	IGND
VDD	10	60	VDD
VDD	11	61	VDD
VDD	12	62	VDD
IDI_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
IGND	21	71	IGND
VDD	22	72	VDD
VDD	23	73	VDD
VDD	24	74	VDD
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
IGND	34	84	IGND
VDD	35	85	VDD
VDD	36	86	VDD
VDD	37	87	VDD
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
IGND	46	96	IGND
VDD	47	97	VDD
VDD	48	98	VDD
VDD	49	99	VDD
+5 Vout	50	100	+5 Vout

- 1 Software Solutions
- 2 PXI/CompactPCI Platforms
- 3 Modular Instrument
- 4 PXI/CompactPCI Modules
- 5 Bus Interface
- 6 GPIB Interface
- 7 PCI/PCI Express<sup>®</sup> DAQ Cards
- 8 PCI/PCI Express<sup>®</sup> DIO Cards
- 9 PC/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