

# cPCI-7452

## 128-CH Isolated DI & 128-CH Isolated DO Card

CompactPCI



### Introduction

The ADLINK cPCI-7452 is a 256-CH extra-high-density opto-isolated digital input and output card. It provides a robust 2500 V<sub>RMS</sub> isolation protection, suitable for most industrial applications. The wide input range of the cPCI-7452 makes it easy to sense the status of external devices. The cPCI-7452 also features a wide output range from 5 to 35 V, suitable for driving relays and use in industrial automation applications. The cPCI-7452 provides sink drive outputs. The cPCI-7452 provides Change-of-State interrupt on all digital input channels, simplifying configuration and management.

### Features

- 6U Eurocard form factor, CompactPCI compliant (PICMG 2.0 R3.0)
- 128-CH isolated digital inputs and 128-CH isolated digital outputs
- Non-polarity digital input range
- Isolated input voltage up to 28 V<sub>DC</sub>
- Isolation voltage up to 2500 V<sub>RMS</sub>
- Sink current up to 300 mA on each isolated output
- Interrupt sources: 128-CH DI Change-of- State
- Output status read back
- 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: 128
- Maximum input range: 24 V, non-polarity
- Digital logic levels: 0-24 V, non-polarity
  - Input high voltage: 5-24 V
  - Input low voltage: 0-2 V
- Input resistance: 2.4 kΩ @ 1/2 W
- ESD protection CKT switch (Forward)
- Isolation voltage: 2500 V<sub>RMS</sub> channel-to-system
- Interrupt sources: 128 channel Change-of-state (COS)
- Data transfer: programmed I/O

#### Isolated Digital Output

- Number of channels: 128
- Supply voltage: 5-35 V
- Output type: open collector Darlington transistor
- Sink current: 500 mA for one channel @ 100% duty
- Isolation voltage: 2500 V<sub>RMS</sub> channel-to-system
- Data transfer: programmed I/O

#### Isolation +5 V Power Supply

- Output Voltage: +5 V
- Output Current: 100 mA max. (@ 40°C)

#### General Specifications

- I/O connector
  - Two 200-pin dual port VHDCI female
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 5% to 95%, non-condensing
- Power requirements

3.3 V	+5 V
300 mA typical	1.26 A typical
- Dimensions (not including connectors)  
233.35 mm (L) x 160 mm (W)

### Terminal Boards & Cables

#### ■ DIN-100S-01

Terminal Board with One 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included.)

#### ■ ACL-102150-1

SCSI-100 to MINI SCSI-100 connector, 1 M (cPCI-7452 only)

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

### Ordering Information

#### ■ cPCI-7452

128-CH Isolated DI & 128-CH Isolated DO Card

Pin Assignment

DO Connector

CN1B			CN1A		
N/C	100	50	N/C	IDO_0	1 51
IGND	99	49	IGND	IDO_1	2 52
IGND	98	48	IGND	IDO_2	3 53
IGND	97	47	IGND	IDO_3	4 54
VDD2	96	46	VDD2	IDO_4	5 55
IDO_127	95	45	IDO_119	IDO_5	6 56
IDO_126	94	44	IDO_118	IDO_6	7 57
IDO_125	93	43	IDO_117	IDO_7	8 58
IDO_124	92	42	IDO_116	VDD1	9 59
IDO_123	91	41	IDO_115	IGND	10 60
IDO_122	90	40	IDO_114	IGND	11 61
IDO_121	89	39	IDO_113	IGND	12 62
IDO_120	88	38	IDO_112	IDO_16	13 63
IGND	87	37	IGND	IDO_17	14 64
IGND	86	36	IGND	IDO_18	15 65
IGND	85	35	IGND	IDO_19	16 66
VDD2	84	34	VDD2	IDO_20	17 67
IDO_111	83	33	IDO_103	IDO_21	18 68
IDO_110	82	32	IDO_102	IDO_22	19 69
IDO_109	81	31	IDO_101	IDO_23	20 70
IDO_108	80	30	IDO_100	VDD1	21 71
IDO_107	79	29	IDO_99	IGND	22 72
IDO_106	78	28	IDO_98	IGND	23 73
IDO_105	77	27	IDO_97	IGND	24 74
IDO_104	76	26	IDO_96	N/C	25 75
N/C	75	25	N/C	IDO_32	26 76
IGND	74	24	IGND	IDO_33	27 77
IGND	73	23	IGND	IDO_34	28 78
IGND	72	22	IGND	IDO_35	29 79
VDD2	71	21	VDD2	IDO_36	30 80
IDO_95	70	20	IDO_87	IDO_37	31 81
IDO_94	69	19	IDO_86	IDO_38	32 82
IDO_93	68	18	IDO_85	IDO_39	33 83
IDO_92	67	17	IDO_84	VDD1	34 84
IDO_91	66	16	IDO_83	IGND	35 85
IDO_90	65	15	IDO_82	IGND	36 86
IDO_89	64	14	IDO_81	IGND	37 87
IDO_88	63	13	IDO_80	IDO_48	38 88
IGND	62	12	IGND	IDO_49	39 89
IGND	61	11	IGND	IDO_50	40 90
IGND	60	10	IGND	IDO_51	41 91
VDD2	59	9	VDD2	IDO_52	42 92
IDO_79	58	8	IDO_71	IDO_53	43 93
IDO_78	57	7	IDO_70	IDO_54	44 94
IDO_77	56	6	IDO_69	IDO_55	45 95
IDO_76	55	5	IDO_68	VDD1	46 96
IDO_75	54	4	IDO_67	IGND	47 97
IDO_74	53	3	IDO_66	IGND	48 98
IDO_73	52	2	IDO_65	IGND	49 99
IDO_72	51	1	IDO_64	V5V	50 100

DI Connector

CN2B			CN2A		
N/C	100	50	N/C	IDI_0	1 51
COM16	99	49	COM15	IDI_1	2 52
COM16	98	48	COM15	IDI_2	3 53
COM16	97	47	COM15	IDI_3	4 54
COM16	96	46	COM15	IDI_4	5 55
IDI_127	95	45	IDI_119	IDI_5	6 56
IDI_126	94	44	IDI_118	IDI_6	7 57
IDI_125	93	43	IDI_117	IDI_7	8 58
IDI_124	92	42	IDI_116	COM1	9 59
IDI_123	91	41	IDI_115	COM1	10 60
IDI_122	90	40	IDI_114	COM1	11 61
IDI_121	89	39	IDI_113	COM1	12 62
IDI_120	88	38	IDI_112	IDI_16	13 63
COM14	87	37	COM13	IDI_17	14 64
COM14	86	36	COM13	IDI_18	15 65
COM14	85	35	COM13	IDI_19	16 66
COM14	84	34	COM13	IDI_20	17 67
IDI_111	83	33	IDI_103	IDI_21	18 68
IDI_110	82	32	IDI_102	IDI_22	19 69
IDI_109	81	31	IDI_101	IDI_23	20 70
IDI_108	80	30	IDI_100	COM3	21 71
IDI_107	79	29	IDI_99	COM3	22 72
IDI_106	78	28	IDI_98	COM3	23 73
IDI_105	77	27	IDI_97	COM3	24 74
IDI_104	76	26	IDI_96	N/C	25 75
N/C	75	25	N/C	IDI_32	26 76
COM12	74	24	COM11	IDI_33	27 77
COM12	73	23	COM11	IDI_34	28 78
COM12	72	22	COM11	IDI_35	29 79
COM12	71	21	COM11	IDI_36	30 80
IDI_95	70	20	IDI_87	IDI_37	31 81
IDI_94	69	19	IDI_86	IDI_38	32 82
IDI_93	68	18	IDI_85	IDI_39	33 83
IDI_92	67	17	IDI_84	COM5	34 84
IDI_91	66	16	IDI_83	COM5	35 85
IDI_90	65	15	IDI_82	COM5	36 86
IDI_89	64	14	IDI_81	COM5	37 87
IDI_88	63	13	IDI_80	IDI_48	38 88
COM10	62	12	COM9	IDI_49	39 89
COM10	61	11	COM9	IDI_50	40 90
COM10	60	10	COM9	IDI_51	41 91
COM10	59	9	COM9	IDI_52	42 92
IDI_79	58	8	IDI_71	IDI_53	43 93
IDI_78	57	7	IDI_70	IDI_54	44 94
IDI_77	56	6	IDI_69	IDI_55	45 95
IDI_76	55	5	IDI_68	COM7	46 96
IDI_75	54	4	IDI_67	COM7	47 97
IDI_74	53	3	IDI_66	COM7	48 98
IDI_73	52	2	IDI_65	COM7	49 99
IDI_72	51	1	IDI_64	N/C	50 100