

cPCI-7452

128-CH Isolated DI & 128-CH Isolated DO Module

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_{RMS} 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_{DC}
- Isolation voltage up to 2500 V_{RMS}
- 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 Vista/XP/2000/2003
- Linux
- Windows CE (call for availability)

Recommended Software

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

Driver Support

- DAQPilot for Windows
- 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: 28 V, non-polarity
- Digital logic levels: 0-28 V, non-polarity
 - Input high voltage: 5-28 V
 - Input low voltage: 0-1.5 V
- Input resistance: 2.4 kΩ @ 1/2 W
- ESD protection CKT switch (Forward)
- Isolation voltage: 2500 V_{RMS} 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: 300 mA for one channel @ 100% duty
- Isolation voltage: 2500 V_{RMS} 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
- 200-pin dual port VHDCI female x 2
- 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

DIN-100S-01

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

Cable

ACL-102150

SCSI-I100 to MINI SCSI-I100 connector, 1 M (cPCI-7452 only)

Ordering Information

cPCI-7452

128-CH Isolated DI & 128-CH Isolated DO Module

Pin Assignment

DO Connector

DI Connector

CN1B			CN1A			CN2B			CN2A																	
N/C	100	50	N/C	1	51	IDO_0	1	51	N/C	100	50	N/C	1	51	IDO_8	1	51									
IGND	99	49	IGND	2	52	IDO_1	2	52	COM16	99	49	COM15	2	52	IDO_9	2	52	COM15	2	52	IDO_9	2	52			
IGND	98	48	IGND	3	53	IDO_2	3	53	COM16	98	48	COM15	3	53	IDO_10	3	53	COM15	3	53	IDO_10	3	53			
IGND	97	47	IGND	4	54	IDO_3	4	54	COM16	97	47	COM15	4	54	IDO_11	4	54	COM15	4	54	IDO_11	4	54			
VDD2	96	46	VDD2	5	55	IDO_4	5	55	COM16	96	46	COM15	5	55	IDO_12	5	55	COM15	5	55	IDO_12	5	55			
IDO_127	95	45	IDO_119	6	56	IDO_5	6	56	IDO_127	95	45	IDO_119	6	56	IDO_13	6	56	IDO_119	6	56	IDO_13	6	56			
IDO_126	94	44	IDO_118	7	57	IDO_6	7	57	IDO_126	94	44	IDO_118	7	57	IDO_14	7	57	IDO_118	7	57	IDO_14	7	57			
IDO_125	93	43	IDO_117	8	58	IDO_7	8	58	IDO_125	93	43	IDO_117	8	58	IDO_15	8	58	IDO_117	8	58	IDO_15	8	58			
IDO_124	92	42	IDO_116	9	59	VDD1	9	59	IDO_124	92	42	IDO_116	9	59	VDD1	9	59	COM1	9	59	COM2	9	59	COM2	9	59
IDO_123	91	41	IDO_115	10	60	IGND	10	60	IDO_123	91	41	IDO_115	10	60	IGND	10	60	COM1	10	60	COM2	10	60	COM2	10	60
IDO_122	90	40	IDO_114	11	61	IGND	11	61	IDO_122	90	40	IDO_114	11	61	IGND	11	61	COM1	11	61	COM2	11	61	COM2	11	61
IDO_121	89	39	IDO_113	12	62	IGND	12	62	IDO_121	89	39	IDO_113	12	62	IGND	12	62	COM1	12	62	COM2	12	62	COM2	12	62
IDO_120	88	38	IDO_112	13	63	IDO_16	13	63	IDO_120	88	38	IDO_112	13	63	IDO_24	13	63	IDO_112	13	63	IDO_24	13	63			
IGND	87	37	IGND	14	64	IDO_17	14	64	COM14	87	37	COM13	14	64	IDO_25	14	64	COM13	14	64	IDO_25	14	64			
IGND	86	36	IGND	15	65	IDO_18	15	65	COM14	86	36	COM13	15	65	IDO_26	15	65	COM13	15	65	IDO_26	15	65			
IGND	85	35	IGND	16	66	IDO_19	16	66	COM14	85	35	COM13	16	66	IDO_27	16	66	COM13	16	66	IDO_27	16	66			
VDD2	84	34	VDD2	17	67	IDO_20	17	67	COM14	84	34	COM13	17	67	IDO_28	17	67	COM13	17	67	IDO_28	17	67			
IDO_111	83	33	IDO_103	18	68	IDO_21	18	68	IDO_111	83	33	IDO_103	18	68	IDO_29	18	68	COM13	18	68	COM13	18	68	IDO_29	18	68
IDO_110	82	32	IDO_102	19	69	IDO_22	19	69	IDO_110	82	32	IDO_102	19	69	IDO_30	19	69	COM13	19	69	COM13	19	69	IDO_30	19	69
IDO_109	81	31	IDO_101	20	70	IDO_23	20	70	IDO_109	81	31	IDO_101	20	70	IDO_31	20	70	COM13	20	70	COM13	20	70	IDO_31	20	70
IDO_108	80	30	IDO_100	21	71	VDD1	21	71	IDO_108	80	30	IDO_100	21	71	VDD1	21	71	COM3	21	71	COM4	21	71	COM4	21	71
IDO_107	79	29	IDO_99	22	72	IGND	22	72	IDO_107	79	29	IDO_99	22	72	IGND	22	72	COM3	22	72	COM4	22	72	COM4	22	72
IDO_106	78	28	IDO_98	23	73	IGND	23	73	IDO_106	78	28	IDO_98	23	73	IGND	23	73	COM3	23	73	COM4	23	73	COM4	23	73
IDO_105	77	27	IDO_97	24	74	IGND	24	74	IDO_105	77	27	IDO_97	24	74	IGND	24	74	COM3	24	74	COM4	24	74	COM4	24	74
IDO_104	76	26	IDO_96	25	75	N/C	25	75	IDO_104	76	26	IDO_96	25	75	N/C	25	75	COM3	24	74	COM4	24	74	COM4	24	74
N/C	75	25	N/C	26	76	IDO_32	26	76	N/C	75	25	N/C	25	75	N/C	25	75	COM3	24	74	COM4	24	74	COM4	24	74
IGND	74	24	IGND	27	77	IDO_33	27	77	COM12	74	24	COM11	26	76	IDO_40	26	76	COM3	24	74	COM4	24	74	COM4	24	74
IGND	73	23	IGND	28	78	IDO_34	28	78	COM12	73	23	COM11	27	77	IDO_41	27	77	COM3	24	74	COM4	24	74	COM4	24	74
IGND	72	22	IGND	29	79	IDO_35	29	79	COM12	72	22	COM11	28	78	IDO_42	28	78	COM3	24	74	COM4	24	74	COM4	24	74
VDD2	71	21	VDD2	30	80	IDO_36	30	80	COM12	71	21	COM11	29	79	IDO_43	29	79	COM3	24	74	COM4	24	74	COM4	24	74
IDO_95	70	20	IDO_87	31	81	IDO_37	31	81	COM12	70	20	COM11	30	80	IDO_44	30	80	COM3	24	74	COM4	24	74	COM4	24	74
IDO_94	69	19	IDO_86	32	82	IDO_38	32	82	IDO_95	70	20	IDO_87	31	81	IDO_45	31	81	COM3	24	74	COM4	24	74	COM4	24	74
IDO_93	68	18	IDO_85	33	83	IDO_39	33	83	IDO_94	69	19	IDO_86	32	82	IDO_46	32	82	COM3	24	74	COM4	24	74	COM4	24	74
IDO_92	67	17	IDO_84	34	84	VDD1	34	84	IDO_93	68	18	IDO_85	33	83	IDO_47	33	83	COM3	24	74	COM4	24	74	COM4	24	74
IDO_91	66	16	IDO_83	35	85	IGND	35	85	IDO_92	67	17	IDO_84	34	84	VDD1	34	84	COM3	24	74	COM4	24	74	COM4	24	74
IDO_90	65	15	IDO_82	36	86	IGND	36	86	IDO_91	66	16	IDO_83	35	85	IGND	35	85	COM3	24	74	COM4	24	74	COM4	24	74
IDO_89	64	14	IDO_81	37	87	IGND	37	87	IDO_90	65	15	IDO_82	36	86	IGND	36	86	COM3	24	74	COM4	24	74	COM4	24	74
IDO_88	63	13	IDO_80	38	88	IDO_48	38	88	IDO_89	64	14	IDO_81	37	87	IGND	37	87	COM3	24	74	COM4	24	74	COM4	24	74
IGND	62	12	IGND	39	89	IDO_49	39	89	IDO_88	63	13	IDO_80	38	88	IDO_56	38	88	COM3	24	74	COM4	24	74	COM4	24	74
IGND	61	11	IGND	40	90	IDO_50	40	90	IDO_87	62	12	COM9	39	89	IDO_57	39	89	COM3	24	74	COM4	24	74	COM4	24	74
IGND	60	10	IGND	41	91	IDO_51	41	91	IDO_86	61	11	COM9	40	90	IDO_58	40	90	COM3	24	74	COM4	24	74	COM4	24	74
VDD2	59	9	VDD2	42	92	IDO_52	42	92	IDO_85	60	10	COM9	41	91	IDO_59	41	91	COM3	24	74	COM4	24	74	COM4	24	74
IDO_79	58	8	IDO_71	43	93	IDO_53	43	93	IDO_84	59	9	COM9	42	92	IDO_60	42	92	COM3	24	74	COM4	24	74	COM4	24	74
IDO_78	57	7	IDO_70	44	94	IDO_54	44	94	IDO_83	58	8	COM9	43	93	IDO_61	43	93	COM3	24	74	COM4	24	74	COM4	24	74
IDO_77	56	6	IDO_69	45	95	IDO_55	45	95	IDO_82	57	7	COM9	44	94	IDO_62	44	94	COM3	24	74	COM4	24	74	COM4	24	74
IDO_76	55	5	IDO_68	46	96	VDD1	46	96	IDO_81	56	6	COM9	45	95	IDO_63	45	95	COM3	24	74	COM4	24	74	COM4	24	74
IDO_75	54	4	IDO_67	47	97	IGND	47	97	IDO_80	55	5	COM9	46	96	COM8	46	96	COM3	24	74	COM4	24	74	COM4	24	74
IDO_74	53	3	IDO_66	48	98	IGND	48	98	IDO_79	54	4	COM9	47	97	COM8	47	97	COM3	24	74	COM4	24	74	COM4	24	74
IDO_73	52	2	IDO_65	49	99	IGND	49	99	IDO_78	53	3	COM9	48	98	COM8	48	98	COM3	24	74	COM4	24	74	COM4	24	74
IDO_72	51	1	IDO_64	50	100	V5V	50	100	IDO_77	52	2	COM9	49	99	COM8	49	99	COM3	24	74	COM4	24	74	COM4	24	74
									IDO_76	51	1	COM9	50	100	N/C	50	100	COM3	24	74	COM4	24	74	COM4	24	74
									IDO_75	50	100	COM9	50	100	N/C	50	100	COM3	24	74	COM4	24	74	COM4	24	74
									IDO_74	49	99	COM9	50	100	N/C	50	100	COM3	24	74	COM4	24	74	COM4	24	74
									IDO_73	48	98	COM9	50	100	N/C	50	100	COM3	24	74	COM4	24	74	COM4	24	74
									IDO_72	47	97	COM9														