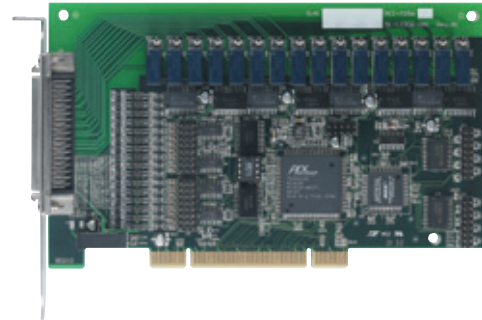# PCI-7256
16-CH Latching Relay Outputs & 16-CH Isolated DI Card

Features

- Supports a 32-bit 3.3 V or 5 V PCI bus
- 16-CH latching SPDT relays
- Latching relays
- Power saving on relay actuation
- Output status unchanged when power-off
- Onboard LED indicators for relay status
- Relay output status read back
- Onboard relay driving circuits
- Onboard connectors for external LED connection
- 16-CH isolated digital inputs
- 2500 V$_{RMS}$ optical isolation for digital inputs
- Change-of-state (COS) interrupt
- Onboard low-pass filtering for digital inputs
- Two external interrupt sources
- Onboard isolated +5 V power for dry contact inputs
- Compact, half-size PCB
- Board ID

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

Introduction

ADLINK PCI-7256 is a 16-CH latching relay outputs and 16-CH isolated DI card. All relays are Form C type, which are suitable for device connection with ON/OFF control. With latching relays, the PCI-7256 has the advantage of power saving. The status of each latching relay output is represented by an onboard LED. When the relay is in SET condition, its corresponding LED will turn ON, and on the contrary, it is OFF. Latching relays also features unchanged status even when the system power is turned off, so that the PCI-7256 is suitable for critical applications which need to keep output status when fault conditions happen.

All digital input channels are non-polarity, optically isolated, and may be set to use RC filter or not. The PCI-7256 also features a change-of-state (COS) function that generates an interrupt when any digital input changes its state.

Specifications

Relay Output
- Number of channels: 16
- Relay type: Latching SPDT (Form C), latching
- The output status will keep unchanged when power-off
- Isolation voltage: 1500 V$_{RMS}$
- Contact rating
  - AC: 125 V @ 0.5 A
  - DC: 30 V @ 1 A
- Breakdown voltage: 1000 V$_{RMS}$
- Contact resistance: 60 mΩ
- Relay ON/OFF time
  - Operate time: 3 ms
  - Release time: 3 ms
- LED indicators
  - Onboard LEDs for relay status
  - Onboard connectors for external LED connection
- Expected relay life:
  - >2x10^5 operations @ 1 A, 30 V$_{DC}$
  - >10^5 operations @ 0.5 A, 125 V$_{AC}$
- Data transfer: programmed I/O

Isolated Digital Input
- Number of channels: 16
- Maximum input range: 24 V, non-polarity
- Digital logic levels
  - 0-24 V, non-polarity
    - Input high voltage: 10-24 V
    - Input low voltage: 0-2 V
- Input resistance: 4.7 kΩ @ 0.5 W
- Isolation voltage: 2500 V$_{RMS}$ channel-to-system
- Interrupt sources: Change-of-state interrupt, digital input channel 0 and 1
- Data transfer: programmed I/O

Isolated Power Supply
- Output voltage: +5 V
- Output current: 170 mA max @ 40˚C

General Specifications
- I/O connector: 68-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

+5 V
340 mA typical
980 mA max. (when all relays are activated simultaneously)

- Dimensions (not including connectors) 175 mm x 107 mm

Termination Boards

- **DIN-68S-01**
  Termination Board with a 68-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included. For information on mating cables, refer to Section 12.)

Pin Assignment

Signal	Pin	Pin	Signal
ISO5V	1	35	ISOGND
DI0	2	36	DI1
DI2	3	37	DI3
DI4	4	38	DI5
DI6	5	39	DI7
DICOM2	6	40	DICOM1
DI8	7	41	DI9
DI10	8	42	DI11
DI12	9	43	DI13
DI14	10	44	DI15
NC0	11	45	NC8
COM0	12	46	COM8
NO0	13	47	NO8
NC1	14	48	NC9
COM1	15	49	COM9
NO1	16	50	NO9
NC2	17	51	NC10
COM2	18	52	COM10
NO2	19	53	NO10
NC3	20	54	NC11
COM3	21	55	COM11
NO3	22	56	NO11
NC4	23	57	NC12
COM4	24	58	COM12
NO4	25	59	NO12
NC5	26	60	NC13
COM5	27	61	COM13
NO5	28	62	NO13
NC6	29	63	NC14
COM6	30	64	COM14
NO6	31	65	NO14
NC7	32	66	NC15
COM7	33	67	COM15
NO7	34	68	NO15

Ordering Information

- **PCI-7256**
  16-CH Latching Relay Outputs & 16-CH Isolated DI Card