

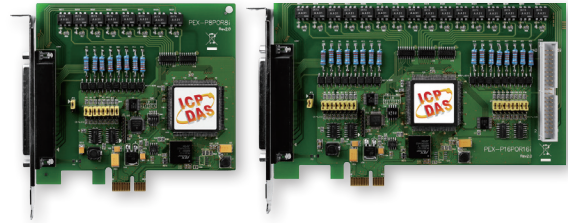
# PEX-P8POR8i/PEX-P16POR16i

PCI Express, 8/16-channel Isolated Digital Input and 8/16-channel PhotoMOS Relay Output Board



PEX-P8POR8i

PEX-P16POR16i



## Features

- PCI Express x1 Interface
- Supports Card ID (SMD Switch)
- LED Power Indicator
- 8/16-channel Isolated Digital Input
  - Selectable DC Signal Input Filter
  - AC Signal Input with Filter
  - 2000 V<sub>DC</sub> Photo-isolation Protection
- 8/16-channel PhotoMOS Relay Output
  - Supports DO Status Readback (Register Level)
  - 0.05 ms Release Time
  - Long Life and High Reliability PhotoMos Relay
  - Low Leakage Current when PhotoMos Relay is OFF
  - No Contact Bounce, No Sparking

## Introduction

The PEX-P8POR8i/PEX-P16POR16i series utilizes the PCI Express bus and designed as an easy replacement for the PCI-P8POR8/P16POR16 series without requiring any modification to either the software or the driver.

The PEX-P8POR8i/PEX-P16POR16i provides 8/16 photocoupler Digital Input channels with 2000 V<sub>DC</sub> isolation protection, and allows the input signals to be completely floated to prevent ground loops. It is also equipped with 8/16 PhotoMOS Relay Outputs channels that can be used for controlling the ON/OFF state of external devices, for driving external relays or small power switches, or for activating alarms, etc.

## Hardware Specifications

Model	PEX-P8POR8i	PEX-P16POR16i
<b>Digital Input</b>		
Isolation Voltage	2000 V <sub>DC</sub> (Photocoupler)	
Channels	8	16
Input Voltage	Logic 1: AC/DC +5 ~ +24 V (AC 50 ~ 1 kHz) Logic 0: AC/DC 0 ~ +1 V	
Response Speed	Without Filter: 50 kHz (Typical) With Filter: 0.455 kHz (Typical)	
<b>Relay Output</b>		
Channels	8	16
Relay Type	PhotoMos, Form A	
Contact Rating	Voltage	300 V (AC peak or DC)
	Current	130 mA
Operating Time	0.7 ms (Typical)	
Insulation Resistance	1000 MΩ @ 500 V <sub>DC</sub>	
Electrical Endurance	Long Life and No Spike	
<b>General</b>		
Bus Type	PCI Express x1	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1	Female DB37 x 1, 40-pin Box Header x 1
Power Consumption	550 mA @ +3.3 V 250 mA @ +12 V	600 mA @ +3.3 V 300 mA @ +12 V
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

## Software

### Drivers

- 32/64-bit Windows XP/2003/2008/7/8/10
- Linux

### Sample Programs

- DOS Lib and TC/BC/MSC Demo
- LabVIEW Toolkit
- VB/VC/Delphi/BCB/VB.NET/C#.NET/VC.NET/MATLAB Demo

## Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
NO_0	01	20	CM_0	02	CM_8
NO_1	02	21	CM_1	03	CM_9
NO_2	03	22	CM_2	04	CM_10
NO_3	04	23	CM_3	05	CM_11
NO_4	05	24	CM_4	06	CM_12
NO_5	06	25	CM_5	07	CM_13
NO_6	07	26	CM_6	08	CM_14
NO_7	08	27	CM_7	09	CM_15
N/A	09	28	N/A	10	CM_16
N/A	10	29	N/A / GND	11	N/A
N/A	11	30	DIB_0	12	N/A
DIA_0	12	31	DIB_1	13	N/A
DIA_1	13	32	DIB_2	14	N/A
DIA_2	14	33	DIB_3	15	N/A
DIA_3	15	34	DIB_4	16	N/A
DIA_4	16	35	DIB_5	17	N/A
DIA_5	17	36	DIB_6	18	N/A
DIA_6	18	37	DIB_7	19	N/A
DIA_7	19			20	N/A / GND
				21	DIB_8
				22	DIB_9
				23	DIB_10
				24	DIB_11
				25	DIB_12
				26	DIB_13
				27	DIB_14
				28	DIB_15
				29	N/A
				30	N/A
				31	N/A
				32	N/A
				33	N/A
				34	N/A
				35	N/A
				36	N/A
				37	N/A
				38	N/A
				39	N/A
				40	N/A

CON2 (PEX-P16POR16i only)

## Ordering Information

PEX-P8POR8i CR	PCI Express, 8-channel Isolated Digital Input, 8-channel PhotoMos Relay Output Board (RoHS). Includes one CA-4002 D-sub Connector.
PEX-P16POR16i CR	PCI Express, 16-channel Isolated Digital Input, 16-channel PhotoMos Relay Output Board (RoHS). Includes one CA-4037W Cable and two CA-4002 D-sub Connectors.

2  
4  
PCI Express Data Acquisition Boards