

PEX-P8POR8i/PEX-P16POR16i

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



Features ▶▶▶▶

- PCI Express x1, Plug & Play
- Supports DO status Readback (Register Level)
- Selectable DC signal input filter
- 2000 V_{bc} photo-isolation protection
- LED power indicator
- Low leakage current when PhotoMos relay is off
- High speed DIO operation
- Supports Card ID (SMD Switch)
- 8/16-ch PhotoMos Relay output, 8/16-ch isolated digital input
- AC signal input with filter
- 0.05 ms release time
- Long life and high reliability PhotoMos relay
- No contact bounce, no sparking

Introduction

The PEX-P8POR8i/PEX-P16POR16i is a PCI Express card with programmable digital I/O interface. It provides 8/16 photocouple digital inputs with 2000 V_{bc} isolation protection, allows the input signals to be completely floated to prevent the ground loops. It is also equipped with 8/16 PhotoMos relay outputs for controlling ON/OFF of external devices, driving external relays or small power switches, and activating alarms... etc.

The PEX-P8POR8i/PEX-P16POR16i is designed as easy replacement for the PCI-P8POR8/P16POR16, and users can replace the PCI-P8POR8/P16POR16 with the PEX-P8POR8i/PEX-P16POR16i directly without any software/driver modification.

Hardware Specifications

Models	PEX-P8POR8i	PEX-P16POR16i
Digital Input		
Isolation Voltage	2000 V _{bc} (Photo-couple)	
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)	
Relay Output		
Channels	8	16
Relay Type	PhotoMos, Form A	
Contact Rating (Voltage)	300 V (AC peak or DC)	
Contact Rating (Current)	130 mA	
Operate Time	0.7 ms (typical)	
Release Time	0.05 ms (typical)	
On-state Resistance	24 Ω Max.	
Off-state Leakage Current	1 uA Max.	
General		
Bus Type	PCI Express x1	
Card ID	Yes (4-bit)	
Connectors	Female DB-37 x 1	Female DB-37 x 1, 40-pin box header x 1
Power Consumption	800 mA @ +5 V	
Operating Temperature	0 °C ~ +60 °C	
Humidity	5 ~ 85% RH, non-condensing	

Software

- DOS Lib and TC/BC/MSC sample program (with source codes)
- DLL and OCX SDK for 32-bit and 64-bit Windows XP/2003/ Vista/2008/7
- Supports LabVIEW and Linux
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
NO_0	01	20 CM_0
NO_1	02	21 CM_1
NO_2	03	22 CM_2
NO_3	04	23 CM_3
NO_4	05	24 CM_4
NO_5	06	25 CM_5
NO_6	07	26 CM_6
NO_7	08	27 CM_7
N/A	09	28 N/A
N/A	10	29 N/A / GND
N/A	11	30 DIB_0
DIA_0	12	32 DIB_2
DIA_1	13	31 DIB_1
DIA_2	14	32 DIB_2
DIA_3	15	33 DIB_3
DIA_4	16	34 DIB_4
DIA_5	17	35 DIB_5
DIA_6	18	36 DIB_6
DIA_7	19	37 DIB_7

CON1

Pin Assignment	Terminal No.	Pin Assignment
NO_8	01	02 CM_8
NO_9	03	04 CM_9
NO_10	05	06 CM_10
NO_11	07	08 CM_11
NO_12	09	10 CM_12
NO_13	11	12 CM_13
NO_14	13	14 CM_14
NO_15	15	16 CM_15
N/A	17	18 N/A
N/A	19	20 N/A / GND
N/A	21	22 DIB_8
DIA_8	23	24 DIB_9
DIA_9	25	26 DIB_10
DIA_10	27	28 DIB_11
DIA_11	29	30 DIB_12
DIA_12	31	32 DIB_13
DIA_13	33	34 DIB_14
DIA_14	35	36 DIB_15
DIA_15	37	38 N/A
N/A	39	40 N/A

CON2 (PEX-P16POR16i only)

Ordering Information

PEX-P8POR8i CR	PCI Express, 8-ch Isolated Digital Input, 8-ch PhotoMos Relay Output Board Includes one CA-4002 D-Sub connector.
PEX-P16POR16i CR	PCI Express, 16-ch Isolated Digital Input, 16-ch PhotoMos Relay Output Board Includes one CA-4037W cable and two CA-4002 D-Sub connectors.