

PEX-P8R8i/PEX-P16R16i

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



Features ▶▶▶▶

- PCI Express x1, Plug & Play
- 8/16-ch Relay output, 8/16-ch isolated digital input
- AC signal input with filter
- 7 ms relay release time
- Supports Card ID (SMD Switch)
- Selectable DC signal input filter
- 2000 V_{dc} photo-isolation protection

Introduction

The PEX-P8R8i/PEX-P16R16i is a PCI Express card with programmable digital I/O interface. It provides 8/16 photocoupler digital inputs with 2000 V_{dc} isolation protection, allows the input signals to be completely floated to prevent the ground loops. It is also equipped with 8/16 relay outputs for controlling ON/OFF of external devices, driving external relays or small power switches, and activating alarms... etc.

The PEX-P8R8i/PEX-P16R16i is designed as easy replacement for the PISO-P16R16U, and users can replace the PISO-P16R16U with the PEX-P8R8i/PEX-P16R16i directly without any software/driver modification.

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
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes
- Supports LabVIEW and Linux

Hardware Specifications

| Models | PEX-P8R8i | PEX-P16R16i |
|--------------------------|--|--|
| Digital Input | | |
| Isolation Voltage | 2000 V _{dc} (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 | 4 SPDT, 4 SPST | 8 SPDT, 8 SPST |
| Contact Rating (Voltage) | 120 V _{ac} /24 V _{dc} | |
| Contact Rating (Current) | 1 A | |
| Operate Time | 1 ms (typical) | |
| Release Time | 7 ms (typical) | |
| Life | Mechanical: 5,000,000 ops. Electrical: 100,000 ops. | |
| Insulation Resistance | 1000 MΩ | |
| 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 | |

Pin Assignments

| Pin Assignment | Terminal No. | Pin Assignment |
|----------------|--------------|----------------|
| NO_0 | 01 | NO_3 |
| COM_0 | 02 | 20 NO_3 |
| NC_0 | 03 | 21 COM_3 |
| NO_1 | 04 | 22 NC_3 |
| COM_1 | 05 | 23 NO_4 |
| NC_1 | 06 | 24 COM_4 |
| NO_2 | 07 | 25 NO_5 |
| COM_2 | 08 | 26 COM_5 |
| NC_2 | 09 | 27 NO_6 |
| NO_7 | 10 | 28 COM_6 |
| COM_7 | 11 | 29 GND |
| DIA_0 | 12 | 30 DIB_0 |
| 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 NO_11 |
| COM_8 | 03 | 04 COM_11 |
| NC_8 | 05 | 06 NC_11 |
| NO_9 | 07 | 08 NO_12 |
| COM_9 | 09 | 10 COM_12 |
| NC_9 | 11 | 12 NO_13 |
| NO_10 | 13 | 14 COM_13 |
| COM_10 | 15 | 16 NO_14 |
| NC_10 | 17 | 18 COM_14 |
| NO_15 | 19 | 20 GND |
| COM_15 | 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-P16R16i only)

Ordering Information

| | |
|----------------|--|
| PEX-P8R8i CR | PCI Express, 8-ch Isolated Digital Input, 8-ch Relay Output Board Includes one CA-4002 D-Sub connector. |
| PEX-P16R16i CR | PCI Express, 16-ch Isolated Digital Input, 16-ch Relay Output Board Includes one CA-4037W cable and two CA-4002 D-Sub connectors. |