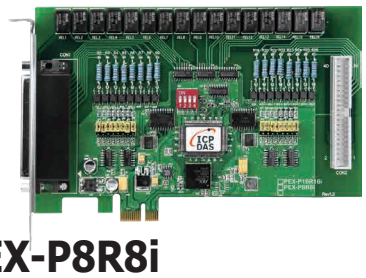
PEX-P8R8i



PEX-P16R16i



# PEX-P8R8i

PCI Express, 8-ch Isolated DI,
8-ch Relay Output Board

# PEX-P16R16i

PCI Express, 16-ch Isolated DI,
16-ch Relay Output Board

## Features

- PCI Express x1 Interface
- Supports Card ID (SMD Switch)
- 8/16-channel Relay Output
  - 7 ms Relay Release Time
- 8/16-channel Isolated Digital Input
  - Selectable DC Signal Input Filter
  - AC Signal Input with Filter
  - 3750 Vrms Photo-isolation Protection

## Introduction

The PEX-P8R8i/PEX-P16R16i series utilizes the PCI Express bus and is designed as an easy replacement for the PISO-P16R16U board without requiring any modification to either the software or the driver.

The PEX-P8R8i/PEX-P16R16i provides 8/16 photocoupler Digital Input channels with 3750 Vrms isolation protection, and allows the input signals to be completely floated to prevent ground loops. The boards are also equipped with 8/16 Relay Output 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.

## Software

**Drivers**

- ☑ 32/64-bit Windows 10/11
- ☑ Linux

**Sample Programs**

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

## Pin Assignments

| Pin Assignment | Terminal No. | | Pin Assignment |
|---|---|---|---|
| NO_0 | 01 | 20 | NO_3 |
| COM_0 | 02 | 21 | COM_3 |
| NC_0 | 03 | 22 | NC_3 |
| NO_1 | 04 | 23 | NO_4 |
| COM_1 | 05 | 24 | COM_4 |
| NC_1 | 06 | 25 | NO_5 |
| NO_2 | 07 | 26 | COM_5 |
| COM_2 | 08 | 27 | NO_6 |
| NC_2 | 09 | 28 | COM_6 |
| NO_7 | 10 | 29 | GND |
| COM_7 | 11 | 30 | DIB_0 |
| DIA_0 | 12 | 31 | DIB_1 |
| DIA_1 | 13 | 32 | DIB_2 |
| DIA_2 | 14 | 33 | DIB_3 |
| DIA_3 | 15 | 34 | DIB_4 |
| DIA_4 | 16 | 35 | DIB_5 |
| DIA_5 | 17 | 36 | DIB_6 |
| DIA_6 | 18 | 37 | DIB_7 |
| DIA_7 | 19 | | |

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)

## Hardware Specifications

| Model | PEX-P8R8i | PEX-P16R16i |
|---|---|---|
| **Hardware** | | |
| Card ID | Yes (4-bit) | |
| Connector | Female DB37 x 1 | Female DB37 x 1<br>40-pin box header x 1 |
| **Digital Input** | | |
| Channels | 8 | 16 |
| Type | Wet Contact , Photocoupler | |
| Sink/Source (NPN/PNP) | Sink/Source | |
| ON Voltage Level | AC/DC 5 ~ 24 V (AC 50 ~ 1 kHz) | |
| OFF Voltage Level | AC/DC 0 ~ 1 V | |
| Response Speed | Without Filter: 50 kHz (Typical)<br>With Filter: 0.455 kHz(Typical) | |
| Trigger Mode | Static Update | |
| Isolation | 3750 Vrms | |
| **Relay Output** | | |
| Channels | 8 | 16 |
| Type | 4 SPDT, 4 SPST | 8 SPDT, 8 SPST |
| Contact Rating | AC:120 V@0.5 A<br>DC: 24 V@1 A | |
| Operate Time | 1 ms (typical) | |
| Release Time | 7 ms (typical) | |
| Electrical Endurance | 100,000 ops. | |
| Mechanical Endurance | 5,000,000 ops. | |
| **PC Bus** | | |
| Type | PCI Express x 1 | |
| Data Bus | 8-bit | |
| **Power** | | |
| Consumption | 450 mA @ +3.3 V<br>200 mA @ +12 V | |
| **Mechanical** | | |
| Dimensions (mm) | 112 x 115 x 22<br>(W x L x D) | 112 x 172 x 22<br>(W x L x D) |
| **Environment** | | |
| Operating Temperature | 0 ~ +60°C | |
| Storage Temperature | -20 ~ +70°C | |
| Humidity | 5 ~ 85% RH, Non-condensing | |



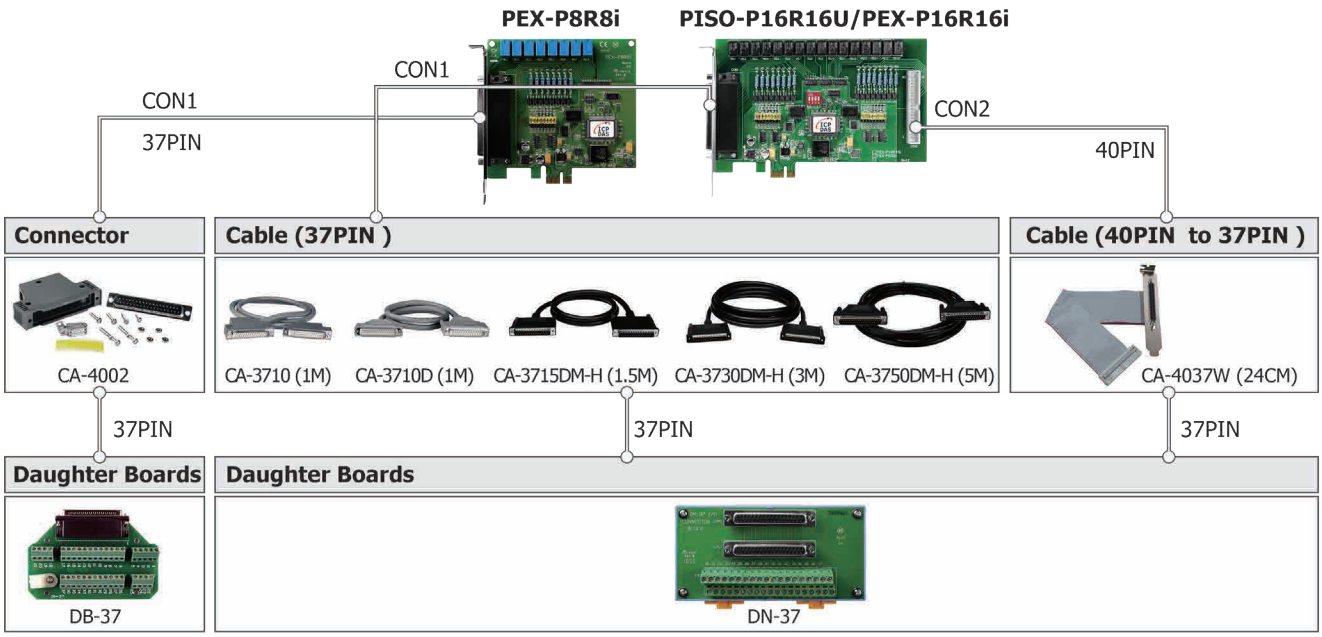
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## Ordering Information

| | |
|---|---|
| **PEX-P8R8i CR** | PCI Express, 8-ch Optically Isolated Digital Input, 8-ch Relay Output Board (RoHS)<br>Includes one CA-4002 D-Sub connector |
| **PEX-P16R16i CR** | PCI Express, 16-ch Optically Isolated Digital Input, 16-ch Relay Output Board (RoHS)<br>Includes one CA-4037W cable and two CA-4002 D-Sub connectors |

## Accessories

| | |
|---|---|
|  CA-3710 CR | DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°)) (RoHS) |
|  CA-3710D CR | DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°)) (RoHS) |
|  CA-3715DM-H CR | DB-37 Male-Male Cable, 1.5 M, 180° (RoHS) |
|  CA-3730DM-H CR | DB-37 Male-Male Cable, 3.0 M, 180° (RoHS) |
|  CA-3750DM CR | DB-37 Male-Male Cable, 5.0 M, 180° (RoHS) |
|  CA-3750DM-H CR | DB-37 Male-Male Cable, 5.0 M, 180° (RoHS) |
|  DB-37 CR | Directly connect signal to D-sub 37-pin connector (RoHS) |
|  DN-37 CR | DIN Rail Mounting 37-pin Connector (RoHS) |




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