

PEX-P8R8i

PCI Express, 8-ch Optically Isolated Digital Input,
8-ch Relay Output

PEX-P16R16i

PCI Express, 16-ch Optically Isolated Digital Input,
16-ch Relay Output

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.

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
NO_0	01	20 NO_3	NO_8	01	02 NO_11
COM_0	02	21 COM_3	COM_8	03	04 COM_11
NC_0	03	22 NC_3	NC_8	05	06 NC_11
NO_1	04	23 NO_4	NO_9	07	08 NO_12
COM_1	05	24 COM_4	COM_9	09	10 COM_12
NC_1	06	25 NO_5	NC_9	11	12 NO_13
NO_2	07	26 COM_5	NO_10	13	14 COM_13
COM_2	08	27 NO_6	COM_10	15	16 NO_14
NC_2	09	28 COM_6	NC_10	17	18 COM_14
NO_7	10	29 GND	NO_15	19	20 GND
COM_7	11	30 DIB_0	COM_15	21	22 DIB_8
DIA_0	12	31 DIB_1	DIA_8	23	24 DIB_9
DIA_1	13	32 DIB_2	DIA_9	25	26 DIB_10
DIA_2	14	33 DIB_3	DIA_10	27	28 DIB_11
DIA_3	15	34 DIB_4	DIA_11	29	30 DIB_12
DIA_4	16	35 DIB_5	DIA_12	31	32 DIB_13
DIA_5	17	36 DIB_6	DIA_13	33	34 DIB_14
DIA_6	18	37 DIB_7	DIA_14	35	36 DIB_15
DIA_7	19		DIA_15	37	38 N/A
			N/A	39	40 N/A

CON1

CON2 (PEX-P16R16i only)

Ordering Information

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

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
 - 2000 Vdc Photo-isolation Protection



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

Hardware Specifications

Model	PEX-P8R8i	PEX-P16R16i
Hardware		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1	Female DB37 x 1 40-pin box header x 1
Digital Input		
Channels	8	16
Type	Photocoupler (Sink or Source)	
Response Speed	Without Filter: 50 kHz (Typical) With Filter: 0.455 kHz(Typical)	
Trigger Mode	Static Update	
Wet Contact, ON Voltage Level	AC/DC 5 ~ 24 V (AC 50 ~ 1 kHz)	
Wet Contact, OFF Voltage Level	AC/DC 0 ~ 1 V	
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 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 200 mA @ +12 V	
Mechanical		
Dimensions (mm)	112 x 115 x 22 (W x L x D)	112 x 172 x 22 (W x L x D)
Environmental		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

Accessories

	CA-3710	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°))
	CA-3710D	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°))
	CA-3715DM-H	DB-37 Male-Male Cable, 1.5 M, 180°. (RoHS)
	CA-3730DM-H	DB-37 Male-Male Cable, 3.0 M, 180°. (RoHS)
	CA-3750DM	DB-37 Male-Male Cable, 5.0 M, 180°. (RoHS)
	CA-3750DM-H	DB-37 Male-Male Cable, 5.0 M, 180°. (RoHS)
	CA-4002	37-pin Male D-sub connector with plastic cover.
	CA-4037W	40-pin flat & D-sub 37-pin Female cable 24 cm.
	DB-37	Directly connect signal to D-sub 37-pin connector
	DN-37	DIN Rail Mounting 37-pin Connector

