



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

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	Pin Assignment	Terminal No.	Pin Assignment
NO_0	01	20 NO_3	NO_8	01	NO_11
COM_0	02	21 COM_3	COM_8	03	COM_11
NC_0	03	22 NC_3	NC_8	05	NC_11
NO_1	04	23 NO_4	NO_9	07	NO_12
COM_1	05	24 COM_4	COM_9	09	COM_12
NC_1	06	25 NO_5	NC_9	11	NO_13
NO_2	07	26 COM_5	NO_10	13	COM_13
COM_2	08	27 NO_6	COM_10	15	NO_14
NC_2	09	28 COM_6	NC_10	17	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
CON2 (PEX-P16R16i only)					
CON1					

CON2 (PEX-P16R16i only)

CON1

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



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	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) 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 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)
Environment		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

Ordering Information

PEX-P8R8i CR	PCI Express, 8-ch Optically Isolated Digital Input, 8-ch Relay Output Board (RoHS) Includes one CA-4002 D-Sub connector
PEX-P16R16i CR	PCI Express, 16-ch Optically Isolated Digital Input, 16-ch Relay Output Board (RoHS) 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)

