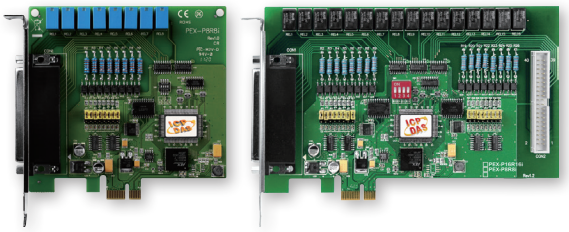
PEX-P8R8i/PEX-P16R16i

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

PEX-P8R8i PEX-P16R16i



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 V_{DC} 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 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
Digital Input			
Isolation Voltage		2000 V_{DC} (Photocoupler)	
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}	
	Current	1 A	
Operating Time		1 ms (Typical)	
Lifetime		Mechanical: 5,000,000 ops. Electrical: 100,000 ops.	
Insulation Resistance		1000 MΩ @ 500 V_{DC}	
General			
Bus Type		PCI Express x1	
Card ID		Yes (4-bit)	
Connectors		Female DB37 x 1	Female DB37 x 1, 40-pin Box Header x 1
Power Consumption		450 mA @ +3.3 V; 200 mA @ +12 V	
Operating Temperature		0°C to +60°C	
Humidity		5 to 85% RH, Non-condensing	

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)

Ordering Information

PEX-P8R8i CR	PCI Express, 8-channel Isolated Digital Input, 8-channel Relay Output Board (RoHS). Includes one CA-4002 D-sub Connector.
PEX-P16R16i CR	PCI Express, 16-channel Isolated Digital Input, 16-channel Relay Output Board (RoHS). Includes one CA-4037W Cable and two CA-4002 D-sub Connectors.