Features

- ■ PCI Express x1, Plug & Play
- ■ Supports Card ID (SMD Switch)
- ■ Supports DO status Readback (Register Level)
- ■ 16 PhotoMos Relay output channels
- ■ 16 Optical isolated digital input channels
- ■ DC signal input with or without filter
- ■ AC signal input with filter
- ■ 2000 V_{DC} photo-isolation protection
- ■ LED power indicator
- ■ Long life and high reliability PhotoMos relay
- ■ Low leakage current when PhotoMos relay is off
- ■ No contact bounce, no sparking
- ■ High speed DIO operation
- ■ Supports Plug & Play to obtain I/O resources
- ■ No more manually setting of I/O address and IRQ

Available soon

PEX-P16POR16i

PCI Express, 16-channel Isolated Digital Input, 16-channel PhotoMos Relay Output

Introduction

The PEX-P16POR16i is a PCI Express card contains 16 optically isolated input channels and 16 PhotoMos relay output channels. Both the isolated DI channels and the PhotoMos relay channels use a short optical transmission path to transfer an electronic signal between elements of a circuit and keep them electrically isolated. The DI channels provide 2000 V_{DC} isolation protection, allowing the input signals to be completely floated so as to cut down ground loops, block voltage spikes, and isolate the host computer from damaging voltages. PhotoMos relays are used where it is necessary to control a circuit using a low-power signal (with complete electrical isolation between the control and controlled circuits), or where several circuits must be controlled by one signal.

The PEX-P16POR16i can be used in various applications, such as controlling the ON/OFF state of external devices, driving external relays or small power switches, activating alarms, contact closure, sensing external voltages or switches, etc. The PEX-P16POR16i is fully compatible with the PCI-P16POR16, and users can easily replace the PCI-P16POR16 with the PEX-P16POR16i without any need for software/driver modification when using PCI Express computers. The card can be installed in a 3.3 V/12 V PCI Express slot and supports true "Plug & Play", with two DB-37 connectors provided for easy wiring.

The PEX-P16POR16i also adds a Card ID switch on-board. Users can set Card ID and then recognizes the board by the ID via software when using two or more PEX-P16POR16i cards in one computer.
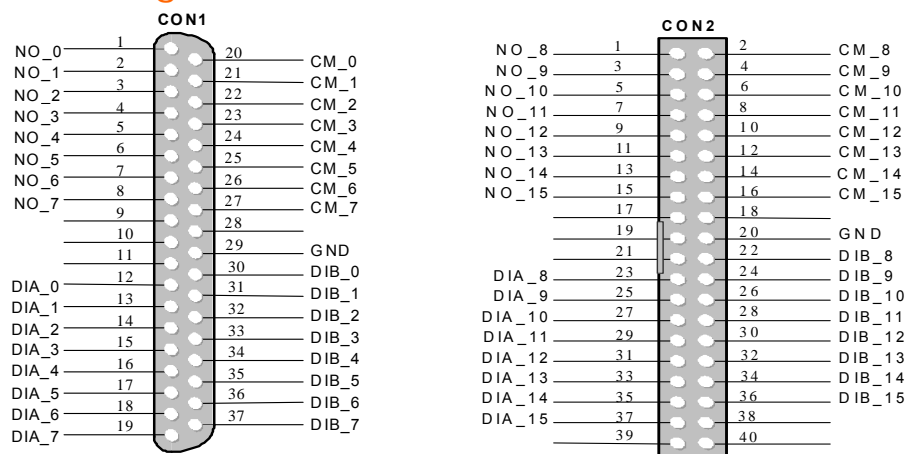
Software

- ■ DOS Lib and TC/BC/MSC sample program (with source codes)
- ■ DLL and OCX SDK for Windows 95/98/NT/2000.
- ■ 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 are included.
- ■ LabVIEW toolkit for Windows.
- ■ Driver for Linux.

Specifications

Digital Input	
Isolation Voltage	2000 V_{DC} (Photo-couple)
Channels	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	16
Relay Type	PhotoMos Relay (Form A)
Contact Rating	Load Voltage: 300 V (AC peak or DC) Load Current: 130 mA
Operate Time	0.7 ms (Typical)
Release Time	0.05 ms (Typical)
Insulation Resistance	23 Ω
General	
Bus Type	PCI-Express x1
Data Bus	16-bit
Card ID	Yes(4-bit)
I/O Connector	Female DB-37 x1 40-pin box header x1
Dimensions (L x W x D)	183 mm x 105 mm x 22 mm
Power Consumption	800 mA @ +5 V
Operating Temperature	0 ~ 60 °C
Storage Temperature	-20 ~ 70 °C
Humidity	5 ~ 85% RH, non-condensing

Pin Assignments

Ordering Information

PEX-P16POR16i CR	16-channel isolated digital input and 16-channel PhotoMos Relay output (RoHS) Includes one CA-4037W cable and two CA-4002 D-Sub connectors.

Optional Accessories

CA-3710	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45º))
CA-3710D	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180º))
CA-3710DM	DB-37 Male-Male Cable, 1.0 M, 180º. (RoHS)
CA-3730DM	DB-37 Male-Male Cable, 3.0 M, 180º. (RoHS)
CA-3750DM	DB-37 Male-Male Cable, 5.0 M, 180º. (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 (Pitch=5.08 mm)