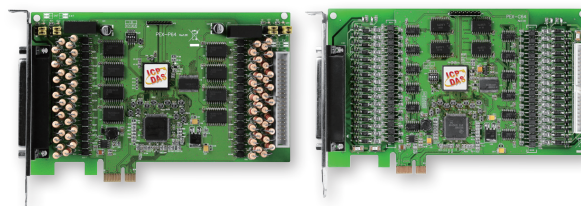


PEX-P64/PEX-P64-24V PEX-C64

NEW

PCI Express, 64-ch Optical-Isolated DI Board
PCI Express, 64-ch Open Collector DO (Sink, NPN) Board



Features

- PCI Express x1, Plug & Play
- Supports Card ID (SMD Switch)
- 3750 V_{rms} photo-isolation protection
- Four isolated banks when using four isolated external power supplies
- 64-ch optically isolated DO (Sink, NPN) for PEX-C64
 - Supports output status Readback
- 64-ch optically isolated DI for PEX-P64/P64-24V
 - Internal power (3000 V_{DC} Isolation) for dry-contact input

Introduction

The PEX-P64 card provides 64 optically isolated digital input channels that use either an internal or external power supply selected via a jumper. The internal power is provided by an onboard DC/DC converter with 3000 V_{DC} isolation and is used for connecting dry-contact input devices. The PEX-C64 card provides 64 optically isolated digital output channels, each of which offers a Darlington transistor and an integrated suppression diode for the inductive load. The open collector outputs (DO channels) are typically used for alarm and warning notification, signal output control, control for external circuits that require a higher voltage level, and signal transmission applications, etc.

The PEX-P64/C64 supports PCI Express bus. These DI and DO channels are arranged into four isolated banks when using four isolated external power supplies. The onboard provide 3750 V_{rms} isolation, and act as an interface to field logic signals, eliminate ground-loop problems, and isolate the host computer from damaging voltages.

These cards also add a Card ID switch on-board. Users can set Card ID and then recognize the board by the ID via software when using two or more PEX-P64/C64 cards in one computer. The PEX-P64/C64 is designed as easy replacement for the PISO-P64U/C64U without any software/driver modification.

Hardware Specifications

| Models | PEX-P64 | PEX-P64-24V | PEX-C64 |
|-----------------------|---|-------------|--|
| Digital Input | | | |
| Isolation Voltage | 3750 V _{rms} | - | - |
| Channels | 64 | - | - |
| Compatibility | Photo coupler isolated | - | - |
| Input Logic Low | 0 ~ 1 V | 0 ~ 1 V | - |
| Input Logic High | 5 ~ 15 V | 20 ~ 28 V | - |
| Impedance | 1.2 KΩ, 1 W | 3 KΩ, 1 W | - |
| Digital Output | | | |
| Isolation Voltage | - | - | 3750 V _{rms} |
| Channels | - | - | 64 |
| Compatibility | - | - | Sink, Open Collector |
| Output Capability | - | - | 100 mA/+30 V for one channel @ 100% duty |
| General | | | |
| Bus Type | PCI Express x1 | | |
| Card ID | Yes (4-bit) | | |
| Connectors | Female DB-37 x 1, 40-pin box header x 1 | | |
| Power Consumption | 400 mA @ +5 V | | 800 mA @ +5 V |
| Operating Temperature | 0 °C ~ +60 °C | | |
| Humidity | 5 ~ 85% RH, non-condensing | | |

Ordering Information

| | |
|----------------|--|
| PEX-P64 CR | PCI Express, 64-ch Optically Isolated DI (high: 5~15 V) Board (RoHs) Includes one CA-4037B cable and two CA-4002 D-Sub connectors. |
| PEX-P64-24V CR | PCI Express, 64-ch Optically Isolated DI (high: 20~28 V) Board (RoHs) Includes one CA-4037B cable and two CA-4002 D-Sub connectors. |
| PEX-C64 CR | PCI Express, 64-ch Optically Isolated DO Board (Sink, NPN, RoHs) Includes one CA-4037B cable and two CA-4002 D-Sub connectors. |

Software

- Driver**
- ✓ 32/64-bit Windows XP/2003/2008/Vista/7/8
 - ✓ Linux
- Sample Programs**
- ✓ DOS Lib and TC/BC/MSC demo
 - ✓ LabVIEW toolkit
 - ✓ VB/VC/Delphi/BCB/VB.NET/C#.NET/VC.NET and MATLAB demo

Pin Assignments

| Pin Assignment | Pin Assignment | Terminal No. | Pin Assignment | Pin Assignment |
|----------------|----------------|--------------|----------------|----------------|
| PEX-C64 | PEX-P64 | | PEX-P64 | PEX-C64 |
| Ext. GND0 | IGND0 | 01 | IGND1 | Ext. GND1 |
| DO_0 | DI_0 | 02 | DI_16 | DO_16 |
| DO_1 | DI_1 | 03 | DI_17 | DO_17 |
| DO_2 | DI_2 | 04 | DI_18 | DO_18 |
| DO_3 | DI_3 | 05 | DI_19 | DO_19 |
| DO_4 | DI_4 | 06 | DI_20 | DO_20 |
| DO_5 | DI_5 | 07 | DI_21 | DO_21 |
| DO_6 | DI_6 | 08 | DI_22 | DO_22 |
| DO_7 | DI_7 | 09 | DI_23 | DO_23 |
| DO_8 | DI_8 | 10 | DI_24 | DO_24 |
| DO_9 | DI_9 | 11 | DI_25 | DO_25 |
| DO_10 | DI_10 | 12 | DI_26 | DO_26 |
| DO_11 | DI_11 | 13 | DI_27 | DO_27 |
| DO_12 | DI_12 | 14 | DI_28 | DO_28 |
| DO_13 | DI_13 | 15 | DI_29 | DO_29 |
| DO_14 | DI_14 | 16 | DI_30 | DO_30 |
| DO_15 | DI_15 | 17 | DI_31 | DO_31 |
| Ext. PWR0 | ECOM0 | 18 | ECOM1 | Ext. PWR1 |
| N.C. | N.C. | 19 | | |

CON1

| Pin Assignment | Pin Assignment | Terminal No. | Pin Assignment | Pin Assignment |
|----------------|----------------|--------------|----------------|----------------|
| PEX-C64 | PEX-P64 | | PEX-P64 | PEX-C64 |
| Ext. GND2 | IGND2 | 01 | IGND3 | Ext. GND3 |
| DO_32 | DI_32 | 03 | DI_48 | DO_48 |
| DO_33 | DI_33 | 05 | DI_49 | DO_49 |
| DO_34 | DI_34 | 07 | DI_50 | DO_50 |
| DO_35 | DI_35 | 09 | DI_51 | DO_51 |
| DO_36 | DI_36 | 11 | DI_52 | DO_52 |
| DO_37 | DI_37 | 13 | DI_53 | DO_53 |
| DO_38 | DI_38 | 15 | DI_54 | DO_54 |
| DO_39 | DI_39 | 17 | DI_55 | DO_55 |
| DO_40 | DI_40 | 19 | DI_56 | DO_56 |
| DO_41 | DI_41 | 21 | DI_57 | DO_57 |
| DO_42 | DI_42 | 23 | DI_58 | DO_58 |
| DO_43 | DI_43 | 25 | DI_59 | DO_59 |
| DO_44 | DI_44 | 27 | DI_60 | DO_60 |
| DO_45 | DI_45 | 29 | DI_61 | DO_61 |
| DO_46 | DI_46 | 31 | DI_62 | DO_62 |
| DO_47 | DI_47 | 33 | DI_63 | DO_63 |
| Ext. PWR2 | ECOM2(+) | 35 | ECOM3 | Ext. PWR3 |
| N.C. | ECOM2(-) | 37 | N.C. | N.C. |
| N.C. | N.C. | 39 | N.C. | N.C. |

CON2

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PCI Express Data Acquisition Boards