



## PEX-C64

PCI Express, 64-ch Open Collector Isolated Digital Output Board (Current Sinking, NPN)

### Introduction

The PEX-C64 board utilizes the PCI Express bus and provides 64 optically-isolated Digital Output channels, each of which includes a Darlington transistor that provides 3750 Vrms isolation, and an integrated suppression diode for the inductive load. The DO channels are allocated into four isolated banks when using four isolated external power supplies, and act as an interface between field logic signals, eliminating ground loop problems and isolating the host computer from potentially damaging voltage spikes.

The PEX-C64 board also includes an onboard Card ID switch that enables the board to be easily recognized via software if two or more cards are installed in the same computer. The PEX-C64 board is designed as an easy replacement for the PISO-C64U board without requiring any modification to either the software or the driver.

### Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
Ext. GND0	01	Ext. GND1	Ext. GND2	01	Ext. GND3
DO_0	02	DO_16	DO_32	03	DO_48
DO_1	03	DO_17	DO_33	05	DO_49
DO_2	04	DO_18	DO_34	07	DO_50
DO_3	05	DO_19	DO_35	09	DO_51
DO_4	06	DO_20	DO_36	11	DO_52
DO_5	07	DO_21	DO_37	13	DO_53
DO_6	08	DO_22	DO_38	15	DO_54
DO_7	09	DO_23	DO_39	17	DO_55
DO_8	10	DO_24	DO_40	19	DO_56
DO_9	11	DO_25	DO_41	21	DO_57
DO_10	12	DO_26	DO_42	23	DO_58
DO_11	13	DO_27	DO_43	25	DO_59
DO_12	14	DO_28	DO_44	27	DO_60
DO_13	15	DO_29	DO_45	29	DO_61
DO_14	16	DO_30	DO_46	31	DO_62
DO_15	17	DO_31	DO_47	33	DO_63
Ext. PWR0	18	Ext. PWR1	Ext. PWR2	35	Ext. PWR3
N.C.	19	N.C.	N.C.	37	N.C.
			N.C.	39	N.C.
					CON2
					CON1

### Ordering Information

<b>PEX-C64 CR</b>	PCI Express, 64-ch Open Collector Isolated Digital Output Board (Current Sinking, NPN) (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors
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### Features

- PCI Express x1 Interface
- 64-channel Optically-isolated Digital Output (Sink, NPN)
  - Supports Output Status Readback
- Supports Card ID (SMD Switch)
- 3750 Vrms Photo-isolation Protection
- Digital Input Arranged into Four Isolated Banks when using Four Isolated External Power Supplies



### Software

#### Drivers

- 32/64-bit Windows XP/2003/2008/7/8/10
- Linux








#### Sample Programs

- DOS Lib and TC/BC/MSVC Demo
- LabVIEW Toolkit
- VB/VC/Delphi/BCB/VB.NET/C#.NET/VC.NET/MATLAB Demo

### Hardware Specifications

Digital Output	
Isolation Voltage	3750 Vrms
Channels	64
Compatibility	Sink, Open Collector
Output Capability	100 mA/+30 V for each channel @ 100% duty
Response Speed	4 kHz (Typical)
General	
Bus Type	PCI Express x1
Card ID	Yes (4-bit)
Connectors	Female DB37 x 1 40-pin Box Header x 1
Power Consumption	400 mA @ +3.3 V 200 mA @ +12 V
Operating Temperature	0°C to +60°C
Humidity	5 to 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-4037B	40-pin flat & D-sub 37-pin Female cable 24 cm.
	DB-32R	32-channel relay output board Include : CA-3710D Male- Male D-sub Cable 1.0 M
	DB-37	Directly connect signal to D-sub 37-pin connector
	DN-37	DIN Rail Mounting 37-pin Connector

