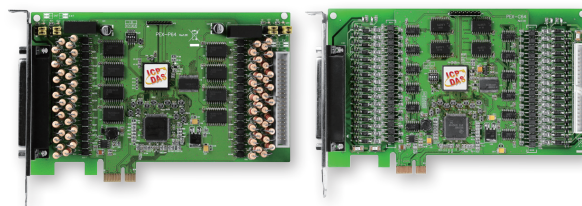


## PEX-P64/PEX-P64-24V PEX-C64

**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<sub>rms</sub> 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<sub>DC</sub> 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<sub>DC</sub> 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<sub>rms</sub> 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
<b>Digital Input</b>			
Isolation Voltage	3750 V <sub>rms</sub>	-	-
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	-
<b>Digital Output</b>			
Isolation Voltage	-	-	3750 V <sub>rms</sub>
Channels	-	-	64
Compatibility	-	-	Sink, Open Collector
Output Capability	-	-	100 mA/+30 V for one channel @ 100% duty
<b>General</b>			
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/MSD 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	20	IGND1	Ext. GND1
DO_0	DI_0	02	21	DI_16	DO_16
DO_1	DI_1	03	22	DI_17	DO_17
DO_2	DI_2	04	23	DI_18	DO_18
DO_3	DI_3	05	24	DI_19	DO_19
DO_4	DI_4	06	25	DI_20	DO_20
DO_5	DI_5	07	26	DI_21	DO_21
DO_6	DI_6	08	27	DI_22	DO_22
DO_7	DI_7	09	28	DI_23	DO_23
DO_8	DI_8	10	29	DI_24	DO_24
DO_9	DI_9	11	30	DI_25	DO_25
DO_10	DI_10	12	31	DI_26	DO_26
DO_11	DI_11	13	32	DI_27	DO_27
DO_12	DI_12	14	33	DI_28	DO_28
DO_13	DI_13	15	34	DI_29	DO_29
DO_14	DI_14	16	35	DI_30	DO_30
DO_15	DI_15	17	36	DI_31	DO_31
Ext. PWR0	ECOM0	18	37	ECOM1	Ext. PWR1
N.C.	N.C.	19			

Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	
PEX-C64	PEX-P64		PEX-P64	PEX-C64	
Ext. GND2	IGND2	01	02	IGND3	Ext. GND3
DO_32	DI_32	03	04	DI_48	DO_48
DO_33	DI_33	05	06	DI_49	DO_49
DO_34	DI_34	07	08	DI_50	DO_50
DO_35	DI_35	09	10	DI_51	DO_51
DO_36	DI_36	11	12	DI_52	DO_52
DO_37	DI_37	13	14	DI_53	DO_53
DO_38	DI_38	15	16	DI_54	DO_54
DO_39	DI_39	17	18	DI_55	DO_55
DO_40	DI_40	19	20	DI_56	DO_56
DO_41	DI_41	21	22	DI_57	DO_57
DO_42	DI_42	23	24	DI_58	DO_58
DO_43	DI_43	25	26	DI_59	DO_59
DO_44	DI_44	27	28	DI_60	DO_60
DO_45	DI_45	29	30	DI_61	DO_61
DO_46	DI_46	31	32	DI_62	DO_62
DO_47	DI_47	33	34	DI_63	DO_63
Ext. PWR2	ECOM2(+)	35	36	ECOM3	Ext. PWR3
N.C.	ECOM2(-)	37	38	N.C.	N.C.
N.C.	N.C.	39	40	N.C.	N.C.