



## PEX-P32C32

PCI Express, 32-ch Isolated DI and 32-ch Open Collector Isolated (Sink, NPN) DO Board

## PEX-P32A32

PCI Express, 32-ch Isolated DI and 32-ch Open Collector Isolated (Source, PNP) DO Board

### Features

- PCI Express x1 Interface
- Supports Card ID (SMD Switch)
- 32-channel Optically-isolated Digital Input
  - Internal Power (3000 VDC Isolation) for Dry-Contact Input
- 32-channel Optically-isolated Digital Output
  - PEX-P32C32: Current Sinking (Sink, NPN)
  - PEX-P32A32: Current Sourcing (Source, PNP)
  - Supports Output Status Readback (Register Level)
- 3750 Vrms Photo-isolation Protection



### Introduction

The PEX-P32C32/P32A32 series provides 32 optically-isolated Digital Input channels and 32 optically-isolated Digital Output channels, arranged into four isolated banks. Each input channel uses a photocoupler input that allows either an internal isolated power supply or an external power supply to be connected, and can be selected via a jumper.

Each Digital Output channel includes either a Darlington (PEX-P32C32) or a PNP (PEX-P32A32) transistor and an integrated suppression diode for the inductive load. The input port may use either an external power source or can be powered from the Host PC via a DC/DC converter. The output port should use an external power source. The board helps eliminate ground loop problems and isolates the host computer from potentially damaging voltage spikes.

The PEX-P32C32/P32A32 series 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-P32C32/P32A32 series is designed as an easy replacement for the PISO-P32C32U/P32A32U series without requiring any modification to either the software or the driver.

### Software

#### Drivers

- 32/64-bit Windows 10/11
- Linux

#### Sample Programs

- DOS Lib and TC/BC/MSC Demo
- VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB

### Applications

- Factory automation
- Laboratory automation
- Product test

### Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Terminal No.	Pin Assignment
Ext. GND0	01	Ext. GND0	01	Ext. GND1
DI_0	02	DO_0	02	DI_16
DI_1	03	DO_1	03	DI_17
DI_2	04	DO_2	04	DI_18
DI_3	05	DO_3	05	DI_19
DI_4	06	DO_4	06	DI_20
DI_5	07	DO_5	07	DI_21
DI_6	08	DO_6	08	DI_22
DI_7	09	DO_7	09	DI_23
DI_8	10	DO_8	10	DI_24
DI_9	11	DO_9	11	DI_25
DI_10	12	DO_10	12	DI_26
DI_11	13	DO_11	13	DI_27
DI_12	14	DO_12	14	DI_28
DI_13	15	DO_13	15	DI_29
DI_14	16	DO_14	16	DI_30
DI_15	17	DO_15	17	DI_31
ECOM0	18	Ext. PWR0	18	ECOM1
IGND0	19	CON1	19	IGND1
				N/A
				N/A
				CON2






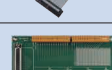

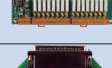

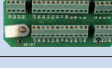

### Hardware Specifications

Model	PEX-P32C32	PEX-P32A32
<b>Hardware</b>		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1 40-pin box header x 1	
<b>Digital Input</b>		
Channels	32	
Type	Dry + Wet Contact , Photocoupler	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: 9 ~ 24 V (Min. 7 V ; Max. 30 V)	
OFF Voltage Level	Dry: Open Wet: 0 ~ 1 V	
Response Speed	4 kHz (Typical)	
Trigger Mode	Static Update	
Isolation	3750 Vrms (Using external power)	
<b>Digital Output</b>		
Channels	32	
Type	Open Collector	Open Emitter
Sink/Source (NPN/PNP)	Sink (NPN)	Source(PNP)
Operation Mode	Static Update	
Load Current	100 mA/+30 V for each channel @ 100% duty	
Response Speed	4 kHz (Typical)	
Isolation	3750 Vrms	
<b>PC Bus</b>		
Type	PCI Express x 1	
Data Bus	8-bit	
<b>Power</b>		
Consumption	550 mA @ +3.3 V 350 mA @ +12 V	
<b>Mechanical</b>		
Dimensions (mm)	105 x 180 x 22 (W x L x D)	
<b>Environment</b>		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

## Ordering Information

<b>PEX-P32C32 CR</b>	PCI Express, 32-ch Isolated DI and 32-ch Open Collector Isolated (Sink, NPN) DO Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors
<b>PEX-P32A32 CR</b>	PCI Express, 32-ch Isolated DI and 32-ch Open Collector Isolated (Source, PNP) DO Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors

## Accessories

	CA-3710 CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°)) (RoHS)		CA-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
	CA-3710D CR	DB-37 Male-Male D-sub cable 1M (Cable for Daughter Board (180°)) (RoHS)		CA-4037B CR	40-pin flat & D-sub 37-pin Female cable 24 cm (RoHS)
	CA-3715DM-H CR	DB-37 Male-Male Cable, 1.5 M, 180° (RoHS)		DB-16P16R CR	16-channel input terminal and 16-channel relay output board (RoHS) Include : CA-3710D Male- Male D-sub Cable 1.0 M
	CA-3730DM-H CR	DB-37 Male-Male Cable, 3.0 M, 180° (RoHS)		DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
	CA-3750DM CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)		DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)
	CA-3750DM-H CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)			

