

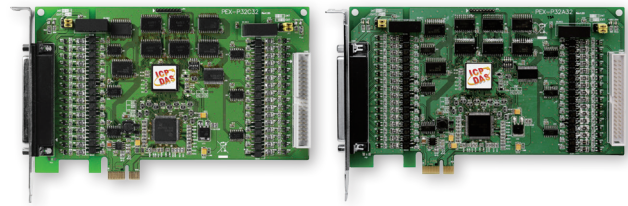
PEX-P32C32/PEX-P32A32

PCI Express, 32-channel Optically-isolated Digital Input and 32-channel Optically-isolated Open-collector Digital Output (Sink/Source) Board



PEX-P32C32

PEX-P32A32



Features

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

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 XP/2003/2008/7/8/10
- Linux

Sample Programs

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

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
Ext. GND0	01	20	Ext. GND0	01	Ext. GND1
DI_0	02	21	DO_0	02	DI_16
DI_1	03	22	DO_1	03	DI_17
DI_2	04	23	DO_2	04	DI_18
DI_3	05	24	DO_3	05	DI_19
DI_4	06	25	DO_4	06	DI_20
DI_5	07	26	DO_5	07	DI_21
DI_6	08	27	DO_6	08	DI_22
DI_7	09	28	DO_7	09	DI_23
DI_8	10	29	DO_8	10	DI_24
DI_9	11	30	DO_9	11	DI_25
DI_10	12	31	DO_10	12	DI_26
DI_11	13	32	DO_11	13	DI_27
DI_12	14	33	DO_12	14	DI_28
DI_13	15	34	DO_13	15	DI_29
DI_14	16	35	DO_14	16	DI_30
DI_15	17	36	DO_15	17	DI_31
ECOM0	18	37	Ext. PWR0	18	DI_32
IGND0	19			19	ECOM1
					IGND1
					N/A
					39

Hardware Specifications

Model	PEX-P32C32	PEX-P32A32
Digital Input		
Isolation Voltage	3750 Vrms	
Channels	32	
Compatibility	Sink or Source, Photocoupler isolated channel with common power or ground	
Input Voltage	Logic 0: 0 ~ +1 V, Logic 1: +9 ~ +24 V	
Impedance	3 KΩ, 0.25 W	
Digital Output		
Isolation Voltage	3750 Vrms	
Channels	32	
Compatibility	Sink, Open-collector	Source, Open-collector
Output Capability	100 mA/+30 V for each channel @ 100% duty	
General		
Bus Type	PCI Express x1	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1, 40-pin Box Header x 1	
Power Consumption	550 mA @ +3.3 V; 350 mA @ +12 V	
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

Ordering Information

PEX-P32C32 CR	PCI Express, 32-ch Optically-isolated Digital Input and 32-ch Optically-isolated Open-collector Digital Output Board (Sink, RoHS). Includes one CA-4037B Cable and two CA-4002 D-sub Connectors.
PEX-P32A32 CR	PCI Express, 32-ch Optically-isolated Digital Input and 32-ch Optically-isolated Open-collector Digital Output Board. (Source, RoHS). Includes one CA-4037B Cable and two CA-4002 D-sub Connectors.