

PEX-P32C32

PEX-P32A32



PEX-P32C32/PEX-P32A32

PCI Express, 32-ch Optically Isolated Digital Input and
32-ch Open Collector Isolated Digital Output

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.

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Terminal No.	Pin Assignment
Ext. GND0	01	Ext. GND0	20	Ext. GND1
DI_0	02	DO_0	21	DI_16
DI_1	03	DO_1	22	DI_17
DI_2	04	DO_2	23	DI_18
DI_3	05	DO_3	24	DI_19
DI_4	06	DO_4	25	DI_20
DI_5	07	DO_5	26	DI_21
DI_6	08	DO_6	27	DI_22
DI_7	09	DO_7	28	DI_23
DI_8	10	DO_8	29	DI_24
DI_9	11	DO_9	30	DI_25
DI_10	12	DO_10	31	DI_26
DI_11	13	DO_11	32	DI_27
DI_12	14	DO_12	33	DI_28
DI_13	15	DO_13	34	DI_29
DI_14	16	DO_14	35	DI_30
DI_15	17	DO_15	36	DI_31
ECOM0	18	DO_16	37	ECOM1
IGND0	19	DO_17	38	IGND1
		DO_18	39	N/A
		DO_19		
		DO_20		
		DO_21		
		DO_22		
		DO_23		
		DO_24		
		DO_25		
		DO_26		
		DO_27		
		DO_28		
		DO_29		
		DO_30		
		DO_31		
		Ext. PWR1		
		N/A		
		N/A		
		CON2		
		CON1		

Features

- PCI Express x1 Interface
- 32-channel Optically-isolated Digital Input
 - ☐ Internal Power (3000 VDC Isolation) for Dry-Contact Input
- 3750 Vrms 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)



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

Hardware Specifications

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

Ordering Information

PEX-P32C32 CR	PCI Express, 32-ch Optically Isolated Digital Input and 32-ch Open Collector Isolated Digital Output Board (Current Sinking, NPN) (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 Open Collector Isolated Digital Output Board (Current Source, PNP) (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-3710D CR	DB-37 Male-Male D-sub cable 1M (Cable for Daughter Board (180°)) (RoHS)
	CA-3715DM-H CR	DB-37 Male-Male Cable, 1.5 M, 180° (RoHS)
	CA-3730DM-H CR	DB-37 Male-Male Cable, 3.0 M, 180° (RoHS)
	CA-3750DM CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)
	CA-3750DM-H CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)
	CA-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
	CA-4037B CR	40-pin flat & D-sub 37-pin Female cable 24 cm (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
	DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
	DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)

