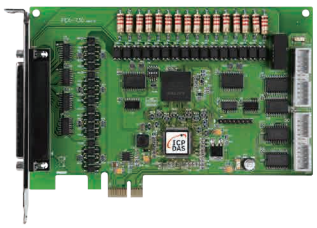
PEX-730



PEX-730A



PEX-730

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

PEX-730A

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

Features

- Support PCI Express x1
- Supports Output Status Readback
- Supports Card ID (SMD Switch)
- 16-channel Optically-isolated Digital Input
- 16-channel Optically-isolated Digital Output
  - PEX-730: Current Sinking (NPN)
  - PEX-730A: Current Sourcing (PNP)
- 16-channel 5 V/TTL Digital Output
- 16-channel 5 V/TTL Digital Input
- 3750 Vrms Photo-isolation Protection
- Internal Power (3000 VDC isolation) for Dry-contact Input
- Two Interrupt Sources

Introduction

PEX-730/730A cards provide 32 isolated digital I/O channels (16 x DI and 16 x DO) and 32 TTL-level digital I/O channels (16 x DI and 16 x DO). Both the isolated DI and DO channels use a short optical transmission path to transfer an electronic signal between the elements of a circuit and keep them electrically isolated. With 3750 Vrms isolation protection, these DI/O channels allow the input signals to be completely floated so as to prevent ground loops and isolate the host computer from damaging voltages. Each digital output offers a Darlington NPN (Current Sinking for PEX-730) or PNP (Current Sourcing for PEX-730A) transistor and 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.

These cards also adds a Card ID switch. Users can set Card ID on a board and recognize the board by the ID via software when using two or more cards in one computer. The PEX-730/730A is designed as easy replacement for the PISO-730U/PISO-730A without any software/driver modification.

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
- Product test
- Laboratory automation

Hardware Specifications

Model	PEX-730	PEX-730A
Hardware		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1 , 20-pin box header x 2	
Digital Input		
Channels	16 (Isolated) + 16 (Non-isolated)	
Type	Wet Contact , Isolated: Photocoupler Non-isolated: 5V/TTL	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	Wet: 9 ~ 24 V (Min. 7 V; Max. 30 V) TTL: 2.0 V Min.	
OFF Voltage Level	Wet: 0 ~ 1 V TTL: 0.8 V Max.	
Response Speed	4 kHz (Typical) (Isolated) 500 kHz(Typical) (Non-isolated)	
Trigger Mode	Static Update	
Isolation	3750 Vrms (Isolated)	
Digital Output		
Channels	16 (Isolated) + 16 (Non-isolated)	
Type	Open Collector Non-isolated: 5V/TTL	Open Emitter Non-isolated: 5V/TTL
Sink/Source (NPN/PNP)	Sink (NPN)	Source (PNP)
Operation Mode	Static Update	
Load Voltage	Non-isolated: Logic 0: 0.4 V max. Logic 1: 2.4 V min.	
Load Current	100 mA/+30 V for each channel @ 100% duty (Isolated) Sink: 2.4 mA @ 0.8 V (Non-isolated) Source: 0.8 mA @ 2.0 V (Non-isolated)	
Response Speed	4 kHz (Typical) (Isolated) 500 kHz (Typical) (Non-isolated)	
Isolation	3750 Vrms (Isolated)	
PC Bus		
Type	PCI Express x 1	
Data Bus	8-bit	
Power		
Consumption	350 mA @ +3.3 V , 250 mA @ +12 V	
Mechanical		
Dimensions (mm)	116 x 163 x 22 (W x L x D)	
Environment		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

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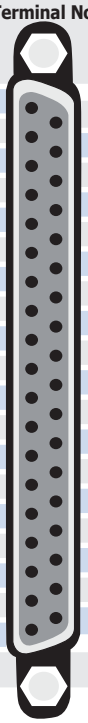
Ordering Information

PEX-730 CR	PCI Express, 32-ch Isolated DI and 32-ch (Sink, NPN) DO Board (RoHS) Includes one CA-4002 D-Sub connector
PEX-730A CR	PCI Express, 32-ch Isolated DI and 32-ch (Source, PNP) DO Board (RoHS) Includes one CA-4002 D-Sub connector

Pin Assignments

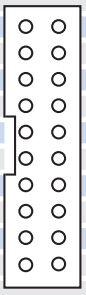
Pin Assignment	Terminal No.		Pin Assignment
IDI_0	01	20	IDI_1
IDI_2	02	21	IDI_3
IDI_4	03	22	IDI_5
IDI_6	04	23	IDI_7
IDI_8	05	24	IDI_9
IDI_10	06	25	IDI_11
IDI_12	07	26	IDI_13
IDI_14	08	27	IDI_15
EI.COM1	09	28	EI.COM2
EO.COM1	10	29	IGND
IDO_0	11	30	IDO1
IDO_2	12	31	IDO3
IDO_4	13	32	IDO5
IDO_6	14	33	IDO7
IDO_8	15	34	IDO9
IDO_10	16	35	IDO11
IDO_12	17	36	IDO13
IDO_14	18	37	IDO15
EO.COM2	19		

CON1



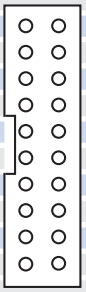
Pin Assignment	Terminal No.		Pin Assignment
DI 0	01	02	DI 1
DI 2	03	04	DI 3
DI 4	05	06	DI 5
DI 6	07	08	DI 7
DI 8	09	10	DI 9
DI 10	11	12	DI 11
DI 12	13	14	DI 13
DI 14	15	16	DI 15
GND	17	18	GND
+5 V	19	20	+12 V

CON2

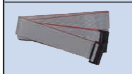
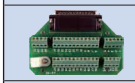
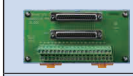
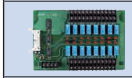
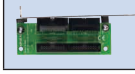


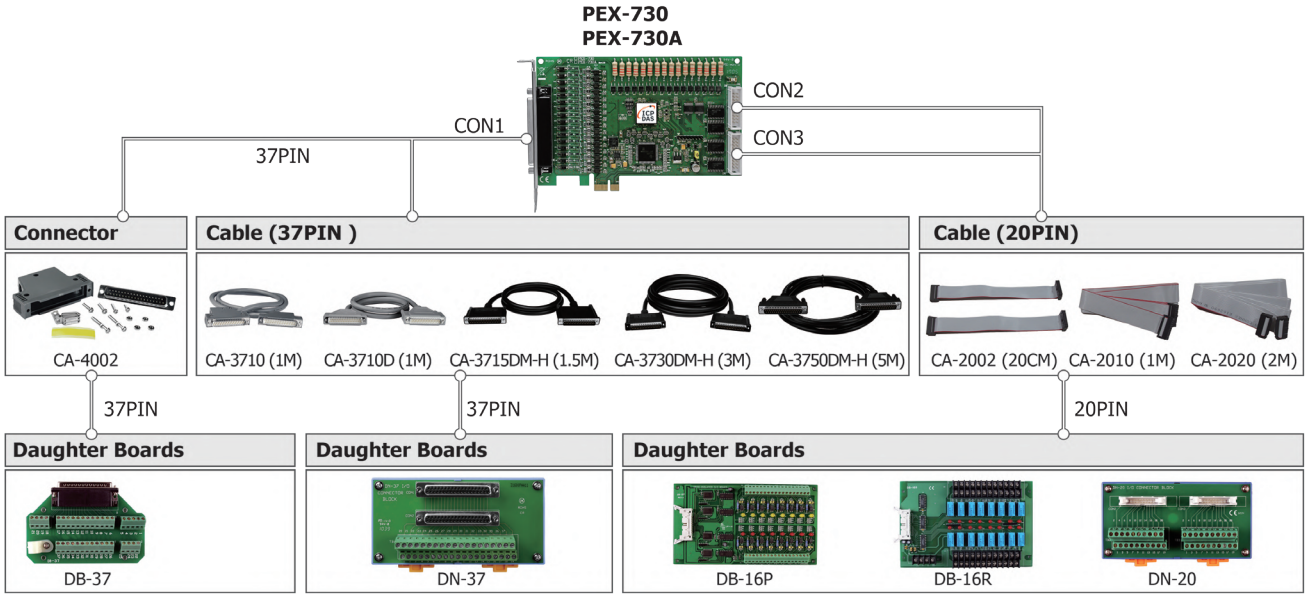
Pin Assignment	Terminal No.		Pin Assignment
DO 0	01	02	DO 1
DO 2	03	04	DO 3
DO 4	05	06	DO 5
DO 6	07	08	DO 7
DO 8	09	10	DO 9
DO 10	10	12	DO 11
DO 12	12	14	DO 13
DO 14	14	16	DO 15
GND	16	18	GND
+5 V	18	20	+12 V

CON3



Accessories

 CA-2002 CR	20-pin flat cable, 20 cm x 2 (RoHS)
 CA-2010 CR	20-pin flat cable, 1 M (RoHS)
 CA-2020 CR	20-pin flat cable, 2 M (RoHS)
 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 1 M (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)
 DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
 DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)
 DN-20 CR	Two 20-pin header DIN-rail terminal board (RoHS)
 DN-20/N CR	DN-20 without DIN-Rail mount (RoHS)
 DB-16P CR	Isolated Digital Input Daughter Board (RoHS)
 DB-16R CR	Relay Output Daughter Board (RoHS)
 ADP-20/PCI CR	20-pin extender (RoHS)



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