



## PISO-730AU/PISO-730AU-5V

Universal PCI, 32-channel Isolated Digital I/O and 32-channel TTL Digital I/O Board (Source, PNP)

### Introduction

The PISO-730AU/730AU-5V 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 Digital Input and the Digital Output 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 V<sub>rms</sub> isolation protection, the DI/O channels allow the input signals to be completely floated so as to prevent ground loops and isolate the host computer from potentially damaging voltage spikes.

Each Digital Output includes a PNP transistor and an integral suppression diode for the inductive load. The open-collector Digital Output channels are typically used for alarm and warning notifications, signal output control, control for external circuits that require a higher voltage level, or signal transmission applications, etc.

### Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
IDI_0	01	20 IDI_1	DI 0	01	02 DI 1
IDI_2	02	21 IDI_3	DI 2	03	04 DI 3
IDI_4	03	22 IDI_5	DI 4	05	06 DI 5
IDI_6	04	23 IDI_7	DI 6	07	08 DI 7
IDI_8	05	24 IDI_9	DI 8	09	10 DI 9
IDI_10	06	25 IDI_11	DI 10	11	12 DI 11
IDI_12	07	26 IDI_13	DI 12	13	14 DI 13
IDI_14	08	27 IDI_15	DI 14	15	16 DI 15
EI.COM1	09		GND	17	18 GND
EPWR1	10		+5 V	19	20 +12 V
IDO_0	11	28 EI.COM2			
IDO_2	12	29 IGND			
IDO_4	13	30 IDO1	DO 0	01	02 DO 1
IDO_6	14	31 IDO3	DO 2	03	04 DO 3
IDO_8	15	32 IDO5	DO 4	05	06 DO 5
IDO_10	16	33 IDO7	DO 6	07	08 DO 7
IDO_12	17	34 IDO9	DO 8	09	10 DO 9
IDO_14	18	35 IDO11	DO 10	10	12 DO 11
EPWR2	19	36 IDO13	DO 12	12	14 DO 13
		37 IDO15	DO 14	14	16 DO 15
			GND	16	18 GND
			+5 V	18	20 +12 V

### Features

- Support the +3.3/+5 V PCI bus
- 16-channel Optically-isolated Digital Input
- 16-channel Optically-isolated Digital Output (Source, PNP)
- 16-channel 5 V/TTL Digital Output
- 16-channel 5 V/TTL Digital Input
- 3750 V<sub>rms</sub> Photo-isolation Protection
- 2 Interrupt Sources
- Supports Card ID (SMD Switch)
- Output status readback function



### Hardware Specifications

Model	PISO-730AU	PISO-730AU-5V
<b>Isolated Digital Input</b>		
Channels	16	
Compatibility	Optical	
Isolation Voltage	3750 V <sub>rms</sub>	
Input Voltage	Logic 0: 0 ~ +1 V Logic 1: +9 ~ +24 V	Logic 0: 0 ~ +1 V Logic 1: +5 ~ +12 V
Input Impedance	1.2 KΩ, 1 W	
Response Speed	4 kHz (Typical)	
<b>Isolated Digital Output</b>		
Channels	16	
Compatibility	Source (PNP), Open-collector	
Isolation Voltage	3750 V <sub>rms</sub>	
Output Capability	100 mA/+30 V for each channel @ 100% duty	
Response Speed	4 kHz (Typical)	
<b>Non-isolated Digital Input</b>		
Channels	16	
Compatibility	5 V/TTL	
Input Voltage	Logic 0: 0.8 V Max. Logic 1: 2.0 V Min.	
Response Speed	1.2 MHz (Typical)	
<b>Non-isolated Digital Output</b>		
Channels	16	
Compatibility	5 V/TTL	
Output Voltage	Logic 0: 0.4 V Max. Logic 1: 2.4 V Min.	
Output Capability	Sink: 2.4 mA @ 0.8 V Source: 0.8 mA @ 2.0 V	
Response Speed	1.2 MHz (Typical)	
<b>General</b>		
Bus Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1 20-pin Box Header x 2	
PCB Dimensions	163.68 mm x 105.06 mm (L x H)	
Power Consumption	640 mA @ +5 V	
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

## Software

### Drivers

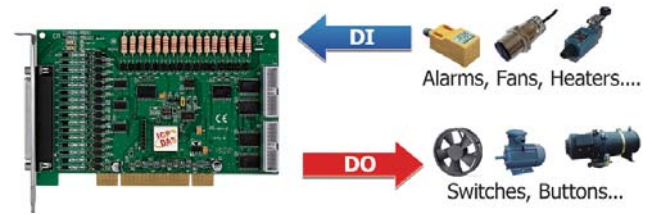
- 32/64-bit Windows XP/2003/2008/7/8/10
- Linux  DASYLab

### Simple Programs

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

## Applications

- Product Test
- Factory Automation
- Laboratory Automation



## Ordering Information

<b>PISO-730AU CR</b>	Universal PCI, 32-channel isolated digital I/O and 32-channel TTL Digital I/O board. (Current Sourcing) (RoHS) Includes one CA-4002 D-Sub connector.
<b>PISO-730AU-5V CR</b>	Universal PCI, 32-channel isolated digital I/O (Input Logic High: 5~12 V) and 32-channel TTL Digital I/O board. (Current Sourcing) (RoHS) Includes one CA-4002 D-Sub connector.

## Accessories

	CA-2002	20-pin flat cable, 20cm x 2		CA-4002	37-pin Male D-sub connector with plastic cover
	CA-2010	20-pin flat cable, 1M		DB-16P	16-channel Isolated Digital Input Daughter Board
	CA-2020	20-pin flat cable, 2M		DB-16R	16-channel Relay Output Daughter Board
	CA-3710	DB-37 Male-Male D-sub cable 1M (Cable for Daughter Board (45°))		DN-37	37-pin Din-Rail Mounting I/O Connector Board
	CA-3710D	DB-37 Male-Male D-sub cable 1M (Cable for Daughter Board (180°))		DB-37	Directly connect signal to D-sub 37-pin connector
	CA-3715DM-H	DB-37 Male-Male Cable, 1.5M, 180° (RoHS)		DN-20	20-pin Din-Rail Mounting I/O Connector Board
	CA-3730DM-H	DB-37 Male-Male Cable, 3M, 180° (RoHS)		DN-20/N	DN-20 without DIN-Rail Mount
	CA-3750DM-H	DB-37 Male-Male Cable, 5 M, 180° (RoHS)		ADP-20/PCI	20-pin extender

