



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

Universal PCI, 32-ch Isolated Digital I/O and 32-ch Digital I/O Board (Current Sourcing, 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	IDI_1	DI 0	01	DI 1
IDI_2	02	IDI_3	DI 2	03	DI 3
IDI_4	03	IDI_5	DI 4	05	DI 5
IDI_6	04	IDI_7	DI 6	07	DI 7
IDI_8	05	IDI_9	DI 8	09	DI 9
IDI_10	06	IDI_11	DI 10	11	DI 11
IDI_12	07	IDI_13	DI 12	13	DI 13
IDI_14	08	IDI_15	DI 14	15	DI 15
EI.COM1	09		GND	17	GND
EPWR1	10		+5 V	19	+12 V
IDO_0	11				CON2
IDO_2	12	IGND	DO 0	01	DO 1
IDO_4	13	IDO1	DO 2	03	DO 3
IDO_6	14	IDO3	DO 4	05	DO 5
IDO_8	15	IDO5	DO 6	07	DO 7
IDO_10	16	IDO7	DO 8	09	DO 9
IDO_12	17	IDO9	DO 10	10	DO 11
IDO_14	18	IDO11	DO 12	12	DO 13
EPWR2	19	IDO13	DO 14	14	DO 15
		IDO15	GND	16	GND
			+5 V	18	+12 V
					CON3

### 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>Hardware</b>		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1 20-pin box header x 2	
<b>Digital Input</b>		
Channels	16 (Isolated) + 16 (Non-isolated)	
Type	Isolated: Photocoupler (Sink and Source) Non-isolated: 5V/TTL	
TTL Input, ON Voltage Level	2.0 V Min.	
TTL Input, OFF Voltage Level	0.8 V Max.	
Response Speed	4 kHz (Typical) (Isolated) 1.0 MHz (Typical) (Non-isolate)	
Trigger Mode	Static Update	
Wet Contact, ON Voltage Level	9 ~ 24 V (Min. 7 V; Max. 30 V)	5 ~ 12 V (Min. 3.5 V; Max. 16 V)
Wet Contact, OFF Voltage Level	0 ~ 1 V	
Isolation	3750 Vrms (Isolated)	
<b>Digital Output</b>		
Channels	16 (Isolated) + 16 (Non-isolated)	
Type	Isolated:Source (PNP), Open Emitter Non-isolated: 5V/TTL	
Operation Mode	Static Update	
Voltage	Non-isolated: Logic 0: 0.4 V max. Logic 1: 2.4 V min.	
Max. 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) 1.2 MHz (Typical) (Non-isolate)	
Isolation	3750 Vrms (Isolated)	
<b>PC Bus</b>		
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Data Bus	8-bit	
<b>Power</b>		
Consumption	640 mA @ +5 V	
<b>Mechanical</b>		
Dimensions (mm)	105.06 x 163.68 x 22 (W x L x D)	
<b>Environmental</b>		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

## Software

### Drivers

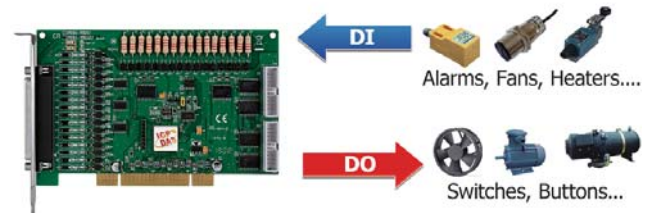
- 32/64-bit Windows 10/11
- Linux
- DASYLab

### Simple Programs

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

## Applications

- Product Test
- Factory Automation
- Laboratory Automation



## Ordering Information

<b>PISO-730AU CR</b>	Universal PCI, 32-ch Isolated Digital I/O and 32-ch Digital I/O Board (Current Sourcing, PNP) (RoHS) Includes one CA-4002 D-Sub connector
<b>PISO-730AU-5V CR</b>	Universal PCI, 32-ch Isolated Digital I/O and 32-ch Digital I/O Board (Current Sourcing, PNP) (RoHS) Includes one CA-4002 D-Sub connector

## Accessories

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

