



PISO-730U/PISO-730U-5V

Universal PCI, 32-ch Isolated Digital I/O and 32-ch Digital I/O Board (Current Sinking, NPN)

Introduction

The PISO-730U/730U-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 Vrms 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 Darlington (NPN) transistor and an integrated 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.

The PISO-730U/730U-5V cards also include an onboard Card ID switch that enables the board to be recognized via software if two or more boards are installed in the same computer.

Software

Drivers

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

Sample Programs

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

Ordering Information

PISO-730U CR	Universal PCI, 32-ch Isolated Digital I/O and 32-ch Digital I/O Board (Current Sinking, NPN) (RoHS) Includes one CA-4002 D-Sub connector
PISO-730U-5V CR	Universal PCI, 32-ch Isolated Digital I/O and 32-ch Digital I/O Board (Current Sinking, NPN) (RoHS) Includes one CA-4002 D-Sub connector

Features

- Universal PCI (3.3 V/5 V) Interface
- 16-channel Optically-isolated Digital Input
- 16-channel Optically-isolated Digital Output (Sink, NPN)
- 16-channel 5 V/TTL Digital Output
- 16-channel 5 V/TTL Digital Input
- Built-in DC/DC Converter with 3000 VDC Isolation
- 3750 Vrms Photo-isolation Protection
- Supports Card ID (SMD Switch)
- Supports DO Status Readback (Register Level)
- 2 Interrupt Sources



Hardware Specifications

Model	PISO-730U	PISO-730U-5V
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	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)	
Digital Output		
Channels	16 (Isolated) + 16 (Non-isolated)	
Type	Isolated: Sink (NPN), Open Collector 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)	
PC Bus		
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Data Bus	8-bit	
Power		
Consumption	640 mA @ +5 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	

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Terminal No.	Pin Assignment
IDI_0	01	IDI_1	20	DI 1
IDI_2	02	IDI_3	21	DI 2
IDI_4	03	IDI_5	22	DI 3
IDI_6	04	IDI_7	23	DI 4
IDI_8	05	IDI_9	24	DI 5
IDI_10	06	IDI_11	25	DI 6
IDI_12	07	IDI_13	26	DI 7
IDI_14	08	IDI_15	27	DI 8
EI.COM1	09	EI.COM2	28	DI 9
EPWR1	10	IGND	29	DI 10
IDO_0	11	DO 0	30	DI 11
IDO_2	12	DO 1	31	DI 12
IDO_4	13	DO 2	32	DI 13
IDO_6	14	DO 3	33	DI 14
IDO_8	15	DO 4	34	DI 15
IDO_10	16	DO 5	35	GND
IDO_12	17	DO 6	36	+5 V
IDO_14	18	DO 7	37	CON2
EPWR2	19	DO 8		CON3
CON1		DO 9		
		DO 10		
		DO 11		
		DO 12		
		DO 13		
		DO 14		
		DO 15		
		GND		
		+5 V		
		CON3		

Accessories

	CA-2002	20-pin flat cable, 20 cm x 2
	CA-2010	20-pin flat cable, 1 M
	CA-2020	20-pin flat cable, 2 M.
	CA-3710	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°))
	CA-3710D	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°))
	CA-3715DM-H	DB-37 Male-Male Cable, 1.5 M, 180°. (RoHS)
	CA-3730DM-H	DB-37 Male-Male Cable, 3.0 M, 180°. (RoHS)
	CA-3750DM	DB-37 Male-Male Cable, 5.0 M, 180°. (RoHS)
	CA-3750DM-H	DB-37 Male-Male Cable, 5.0 M, 180°. (RoHS)
	CA-4002	37-pin Male D-sub connector with plastic cover.
	DB-37	Directly connect signal to D-sub 37-pin connector
	DN-37	DIN Rail Mounting 37-pin Connector
	DN-20	Two 20-pin header DIN-rail terminal board
	DN-20/N	DN-20 without DIN-Rail mount.
	DB-16P	Isolated Digital Input Daughter Board
	DB-16R	Relay Output Daughter Board
	ADP-20/PCI	20-pin extender

