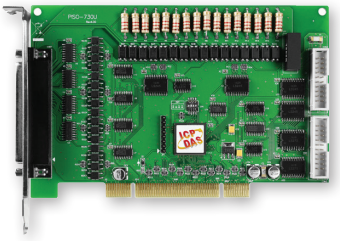
PISO-730U/PISO-730U-5V

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



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 V_{DC} Isolation
- 3750 V_{rms} Photo-isolation Protection
- Supports Card ID (SMD Switch)
- Supports DO Status Readback (Register Level)
- 2 Interrupt Sources

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 V_{rms} 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.

Pin Assignments

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

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

Software

Drivers

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

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	PISO-730U	PISO-730U-5V
Isolated Digital Input		
Channels	16	
Compatibility	Optical	
Isolation Voltage	3750 V_{rms}	
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)	
Isolated Digital Output		
Channels	16	
Compatibility	Sink (NPN), Open-collector	
Isolation Voltage	3750 V_{rms}	
Output Capability	100 mA/+30 V for each channel @ 100% duty	
Response Speed	4 kHz (Typical)	
Non-isolated Digital Input		
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)	
Non-isolated Digital Output		
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)	
General		
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	
Power Consumption	600 mA @ +5 V	
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

Ordering Information

PISO-730U CR	Universal PCI, 32-channel Isolated Digital I/O and 32-channel TTL Digital I/O Board (Sink, RoHS). Includes one CA-4002 D-sub Connector.
PISO-730U-5V CR	Universal PCI, PCI, 32-channel Isolated Digital I/O (Input Logic High: +5 ~ +12 V) and 32-channel TTL Digital I/O Board (Sink, RoHS). Includes one CA-4002 D-sub Connector.