



PISO-P64U/PISO-P64U-24V

Universal PCI, 64-channel Optically-isolated Digital Input Board

Introduction

The PISO-P64U/P64U-24V Universal PCI card supports the 3.3 V/5 V PCI bus and provides 64 optically-isolated Digital Input channels. Either an internal or an external power supply can be used, which can be selected via a jumper. The internal power is provided by an onboard isolated DC/DC converter that provides 3000 VDC isolation and is used for connecting dry-contact input devices. The Digital Input channels are arranged into four isolated banks when using four isolated external power supplies. DI channels 0 - 15 are allocated to Bank A, DI channels 16 - 31 are allocated to Bank B, DI channels 32 - 47 are allocated to Bank C, and DI channels 48 - 63 are allocated to Bank D.

The onboard photocouplers provide 3750 Vrms isolation, and act as an interface to field logic signals, eliminate ground-loop problems, and isolate the host computer from potentially damaging voltage spikes. The PISO-P64U/P64U-24V card contains a single DB-37 connector and a single 40-pin male header, each supporting 32 input channels.

The PISO-P64U/P64U-24V card also includes 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	Pin Assignment	Terminal No.	Pin Assignment
IGND0	01	IGND1	IGND2	01	IGND3
DI_0	02	DI_16	DI_32	03	DI_48
DI_1	03	DI_17	DI_33	05	DI_49
DI_2	04	DI_18	DI_34	07	DI_50
DI_3	05	DI_19	DI_35	09	DI_51
DI_4	06	DI_20	DI_36	11	DI_52
DI_5	07	DI_21	DI_37	13	DI_53
DI_6	08	DI_22	DI_38	15	DI_54
DI_7	09	DI_23	DI_39	17	DI_55
DI_8	10	DI_24	DI_40	19	DI_56
DI_9	11	DI_25	DI_41	21	DI_57
DI_10	12	DI_26	DI_42	23	DI_58
DI_11	13	DI_27	DI_43	25	DI_59
DI_12	14	DI_28	DI_44	27	DI_60
DI_13	15	DI_29	DI_45	29	DI_61
DI_14	16	DI_30	DI_46	31	DI_62
DI_15	17	DI_31	DI_47	33	DI_63
ECOM0	18	DI_32	ECOM2(+)	35	ECOM3
N.C.	19	DI_33	ECOM2(-)	37	N.C.
		DI_34	N.C.	39	N/A
		DI_35			
		DI_36			
		DI_37			
		DI_38			
		DI_39			
		DI_40			
		DI_41			
		DI_42			
		DI_43			
		DI_44			
		DI_45			
		DI_46			
		DI_47			
		DI_48			
		DI_49			
		DI_50			
		DI_51			
		DI_52			
		DI_53			
		DI_54			
		DI_55			
		DI_56			
		DI_57			
		DI_58			
		DI_59			
		DI_60			
		DI_61			
		DI_62			
		DI_63			
		ECOM1			
		CON1			
		CON2			

Features

- Universal PCI (3.3 V/5 V) Interface
- Supports Card ID (SMD Switch)
- 3750 Vrms Photo-isolation Protection
- Built-in DC/DC Converter with 3000 VDC Isolation
- 64-channel Optically-isolated Digital Input
 - Jumper-selectable Internal or External Power Source for DI
 - 4 Isolated Banks when using 4 Isolated External Power Supplies



Software

Drivers

- 32/64-bit Windows XP/2003/2008/7/8/10
- 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-P64U	PISO-P64U-24V
Hardware		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1 40-pin Box header x 1	
Digital Input		
Channels	64	
Type	Photocoupler (Sink and Source)	
Response Speed	4 kHz (Typical)	
Trigger Mode	Static Update	
Wet Contact, ON Voltage Level	5 ~ 15 V (Max 24 V)	20 ~ 28 V (Max 30 V)
Wet Contact, OFF Voltage Level	0 ~ 1 V	
Dry Contact, ON Voltage Level	Close to GND	
Dry Contact, OFF Voltage Level	Open	
Isolation	3750 Vrms (Using external power)	
PC Bus		
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Data Bus	8-bit	
Power		
Consumption	400 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	

Ordering Information

PISO-P64U CR	Universal PCI, 64-channel Optically-isolated Digital Input Board (RoHS). Includes one CA-4037B cable and two CA-4002 D-sub Connectors.
PISO-P64U-24V CR	Universal PCI, 64-channel Optically-isolated Digital Input (Logic High: +20 ~ +28 V) Board (RoHS). Includes one CA-4037B cable and two CA-4002 D-sub Connectors

Accessories

	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.
	CA-4037B	40-pin flat & D-sub 37-pin Female cable 24 cm.
	DB-37	Directly connect signal to D-sub 37-pin connector
	DN-37	DIN Rail Mounting 37-pin Connector

