

PISO-P64U/PISO-P64U-24V

Universal PCI, 64-ch Isolated DI Board

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

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.

Software

Drivers

- [x] 32/64-bit Windows 10/11
- [x] Linux
- [x] DASYLab

Sample Programs

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

Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
IGND0	01	20	IGND1
DI_0	02	21	DI_16
DI_1	03	22	DI_17
DI_2	04	23	DI_18
DI_3	05	24	DI_19
DI_4	06	25	DI_20
DI_5	07	26	DI_21
DI_6	08	27	DI_22
DI_7	09	28	DI_23
DI_8	10	29	DI_24
DI_9	11	30	DI_25
DI_10	12	31	DI_26
DI_11	13	32	DI_27
DI_12	14	33	DI_28
DI_13	15	34	DI_29
DI_14	16	35	DI_30
DI_15	17	36	DI_31
ECOM0	18	37	ECOM1
N.C.	19		

CON1

Pin Assignment	Terminal No.		Pin Assignment
IGND2	01	02	IGND3
DI_32	03	04	DI_48
DI_33	05	06	DI_49
DI_34	07	08	DI_50
DI_35	09	10	DI_51
DI_36	11	12	DI_52
DI_37	13	14	DI_53
DI_38	15	16	DI_54
DI_39	17	18	DI_55
DI_40	19	20	DI_56
DI_41	21	22	DI_57
DI_42	23	24	DI_58
DI_43	25	26	DI_59
DI_44	27	28	DI_60
DI_45	29	30	DI_61
DI_46	31	32	DI_62
DI_47	33	34	DI_63
ECOM2(+)	35	36	ECOM3
ECOM2(-)	37	38	N.C.
N.C.	39	40	N/A

CON2

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	Dry + Wet Contact , Photocoupler	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: 5 ~ 15 V (Max 24 V)	Dry: Close to GND Wet: 20 ~ 28 V (Max 30 V)
OFF Voltage Level	Dry: Open Wet: 0 ~ 1 V	
Response Speed	4 kHz (Typical)	
Trigger Mode	Static Update	
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)	
Environment		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

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Applications

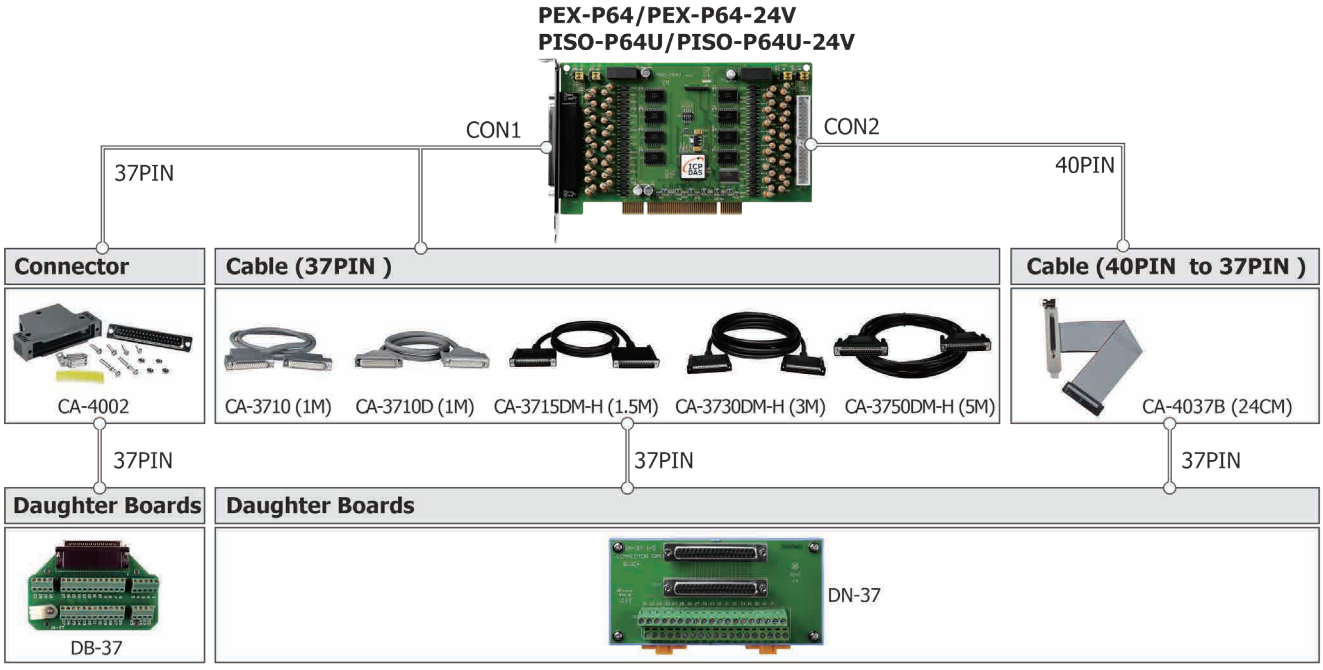
- Factory automation
- Product test
- Laboratory automation

Ordering Information

PISO-P64U CR	Universal PCI, 64-ch 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-ch Optically Isolated Digital Input Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors

Accessories

 CA-3710 CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°)) (RoHS)
 CA-3710D CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°)) (RoHS)
 CA-3715DM-H CR	DB-37 Male-Male Cable, 1.5 M, 180° (RoHS)
 CA-3730DM-H CR	DB-37 Male-Male Cable, 3.0 M, 180° (RoHS)
 CA-3750DM CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)
 CA-3750DM-H CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)
 DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
 DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)



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