

PISO-P32C32U/PISO-P32C32U-5V

Universal PCI, 32-ch Isolated DI and 32-ch Open Collector Isolated (Sink, NPN) DO Board

Features

- Universal PCI (3.3 V/5 V) Interface
- 32 Optically-isolated Digital Input Channels
- 32 Optically-isolated Digital Output Channels (Sink, NPN)
- Supports DO Status Readback (Register Level)
- 3750 Vrms Photo-isolation Protection
- Four Isolated Banks
- Built-in DC/DC Converter with 3000 VDC Isolation
- Supports Card ID (SMD Switch)

Introduction

The PISO-P32C32U/P32C32U-5V card features 32 optically 32 optically-isolated Digital Input channels and 32 optically-isolated Digital Output channels, arranged into four isolated banks. Each input channel uses a photocoupler, while each output channel contains a Darlington transistor. Either an external power supply or an isolated internal power supply from the PC via a DC/DC converter can be used for the input port, which is selected via a jumper, whereas the output port should use an external power supply. The board eliminates ground-loop problems and isolates the host computer from potentially damaging voltage spikes.

The PISO-P32C32U/P32C32U-5V cards also include an onboard Card ID switch (version 1.1 or above) that enables the board to be recognized via software if two or more boards are installed in the same computer.

The PISO-P32C32U-5V uses lower input impedance that is suitable for 5 V signal applications, while the PISO-P32C32U uses higher input impedance that is suitable for 12 or 24 V signal applications and produces less heat.

Applications

- High speed data acquisition system.
- Process monitor and control.
- Vibration analysis.
- Digital pattern generator from digital I/O port.

Software

Drivers

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

Sample Programs

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

Hardware Specifications

Model	PISO-P32C32U	PISO-P32C32U-5V
Hardware		
Card ID	Yes (4-bit) for Version 1.1 or above	
Connector	Female DB37 x 1 40-pin box header x 1	
Digital Input		
Channels	32	
Type	Wet Contact , Photocoupler	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: 9 ~ 24 V (Min. 7 V; Max. 30 V)	Dry: Close to GND Wet: 5 ~ 12 V (Min. 3.5 V; Max. 16 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)	
Digital Output		
Channels	32	
Type	Open Collector	
Sink/Source (NPN/PNP)	Sink (NPN)	
Operation Mode	Static Update	
Load Current	100 mA/+30 V for each channel @ 100% duty	
Response Speed	4 kHz (Typical)	
Isolation	3750 Vrms	
PC Bus		
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Data Bus	8-bit	
Power		
Consumption	600 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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Ordering Information

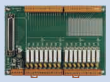
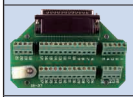
PISO-P32C32U CR	Universal PCI, 32-ch Isolated DI and 32-ch Open Collector Isolated (Sink, NPN) DO Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors
PISO-P32C32U-5V CR	Universal PCI, 32-ch Isolated DI and 32-ch Open Collector Isolated (Sink, NPN) DO Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors

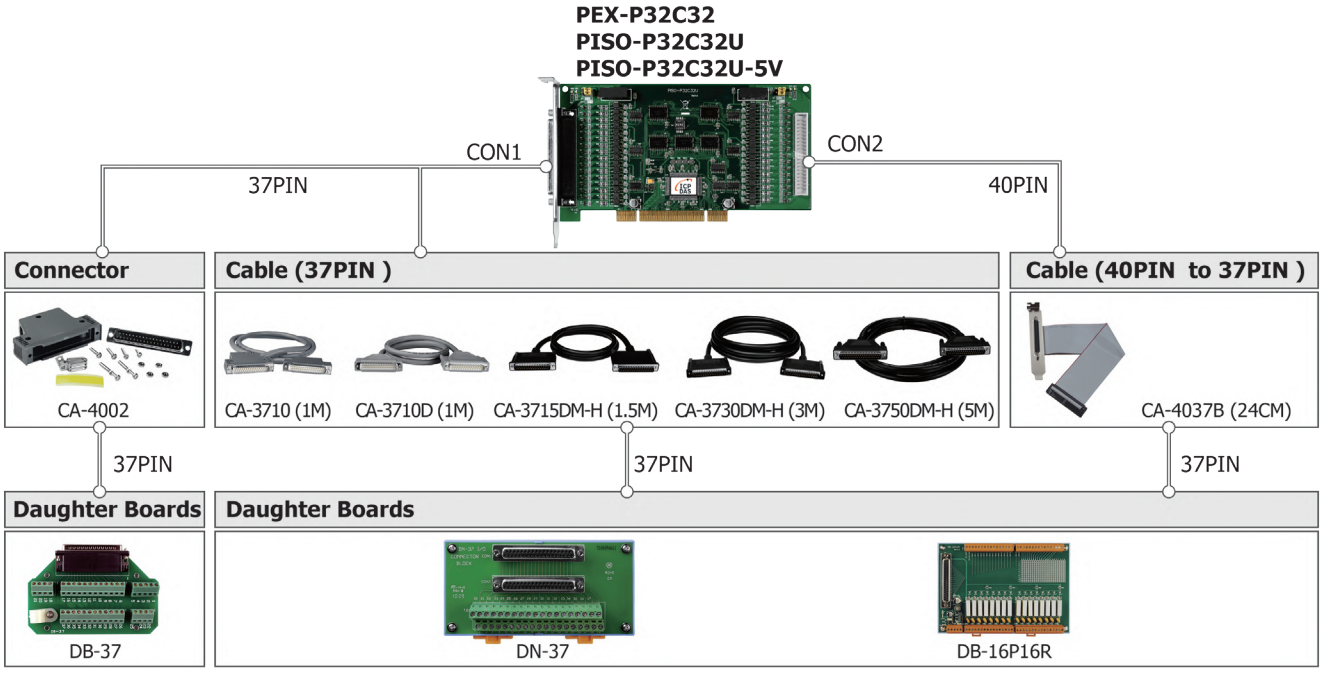
Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
Ext. GND0	01	20	Ext. GND0
DI_0	02	21	DO_0
DI_1	03	22	DO_1
DI_2	04	23	DO_2
DI_3	05	24	DO_3
DI_4	06	25	DO_4
DI_5	07	26	DO_5
DI_6	08	27	DO_6
DI_7	09	28	DO_7
DI_8	10	29	DO_8
DI_9	11	30	DO_9
DI_10	12	31	DO_10
DI_11	13	32	DO_11
DI_12	14	33	DO_12
DI_13	15	34	DO_13
DI_14	16	35	DO_14
DI_15	17	36	DO_15
ECOM0	18	37	Ext. PWR0
IGND0	19		
CON1			

Pin Assignment	Terminal No.		Pin Assignment
Ext. GND1	01	02	Ext. GND1
DI_16	03	04	DO_16
DI_17	05	06	DO_17
DI_18	07	08	DO_18
DI_19	09	10	DO_19
DI_20	11	12	DO_20
DI_21	13	14	DO_21
DI_22	15	16	DO_22
DI_23	17	18	DO_23
DI_24	19	20	DO_24
DI_25	21	22	DO_25
DI_26	23	24	DO_26
DI_27	25	26	DO_27
DI_28	27	28	DO_28
DI_29	29	30	DO_29
DI_30	31	32	DO_30
DI_31	33	34	DO_31
ECOM1	35	36	Ext. PWR1
IGND1	37	38	N/A
N/A	39	40	N/A
CON2			

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-16P16R CR	16-channel input terminal and 16-channel relay output board Include : CA-3710D Male- Male D-sub Cable 1.0 M (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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