

PISO-P16R16U

Universal PCI, 16-ch Isolated DI, 16-ch Relay Output Board

Features

- Universal PCI (3.3 V/5 V) Interface
- Supports Card ID (SMD Switch)
- 16-channel Relay Output
- 16-channel Optically-isolated Digital Input
  - 3750 Vrms Photo-isolation Protection
  - Selectable DC Signal Input Filter
  - AC Signal Input with Filter

Introduction

The PISO-P16R16U is a Universal PCI card supporting both the 3.3 V and 5 V PCI bus, and contains 16 photocoupler Digital Input channels that provide 3750 Vrms isolation protection, allowing the input signals to be completely floated so as to prevent ground loops and isolate the host computer from potentially damaging voltage spikes. The cards are also equipped with 16 Relay Output channels to enable the control of the ON/OFF state of external devices, drive external relays or small power switches, or activate alarms, etc.

The PISO-P16R16U card is fully compatible with the PISO-P16R16 card, and is designed as a direct replacement without requiring any modification to the software or the driver.

Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
NO_0	01	20	NO_3
COM_0	02	21	COM_3
NC_0	03	22	NC_3
NO_1	04	23	NO_4
COM_1	05	24	COM_4
NC_1	06	25	NO_5
NO_2	07	26	COM_5
COM_2	08	27	NO_6
NC_2	09	28	COM_6
NO_7	10	29	GND
COM_7	11	30	DIB_0
DIA_0	12	31	DIB_1
DIA_1	13	32	DIB_2
DIA_2	14	33	DIB_3
DIA_3	15	34	DIB_4
DIA_4	16	35	DIB_5
DIA_5	17	36	DIB_6
DIA_6	18	37	DIB_7
DIA_7	19		

CON1

Pin Assignment	Terminal No.		Pin Assignment
NO_8	01	02	NO_11
COM_8	03	04	COM_11
NC_8	05	06	NC_11
NO_9	07	08	NO_12
COM_9	09	10	COM_12
NC_9	11	12	NO_13
NO_10	13	14	COM_13
COM_10	15	16	NO_14
NC_10	17	18	COM_14
NO_15	19	20	GND
COM_15	21	22	DIB_8
DIA_8	23	24	DIB_9
DIA_9	25	26	DIB_10
DIA_10	27	28	DIB_11
DIA_11	29	30	DIB_12
DIA_12	31	32	DIB_13
DIA_13	33	34	DIB_14
DIA_14	35	36	DIB_15
DIA_15	37	38	N/A
N/A	39	40	N/A

CON2

Software

Drivers

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

Sample Programs

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

Hardware Specifications

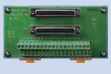
Hardware	
Connector	Female DB37 x 1 40-pin box header x 1
Digital Input	
Channels	16
Type	Wet Contact , Photocoupler
Sink/Source (NPN/PNP)	Sink/Source
ON Voltage Level	AC/DC 5 ~ 24 V (AC 50 ~ 1 kHz)
OFF Voltage Level	AC/DC 0 ~ 1 V
Response Speed	Without Filter: 50 kHz (Typical) With Filter: 0.455 kHz(Typical)
Trigger Mode	Static Update
Isolation	3750 Vrms
Relay Output	
Channels	16
Type	8 SPDT, 8 SPST
Contact Rating	AC:120 V @ 0.5 A DC: 24 V @ 1 A
Operate Time	1 ms (Typical)
Release Time	7 ms (Typical)
Electrical Endurance	100,000 ops.
Mechanical Endurance	5,000,000 ops.
PC Bus	
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz
Data Bus	8-bit
Power	
Consumption	800 mA @ +5 V
Mechanical	
Dimensions (mm)	105 x 183 x 22 (W x L x D)
Environment	
Operating Temperature	0 ~ +60°C
Storage Temperature	-20 ~ +70°C
Humidity	5 ~ 85% RH, Non-condensing

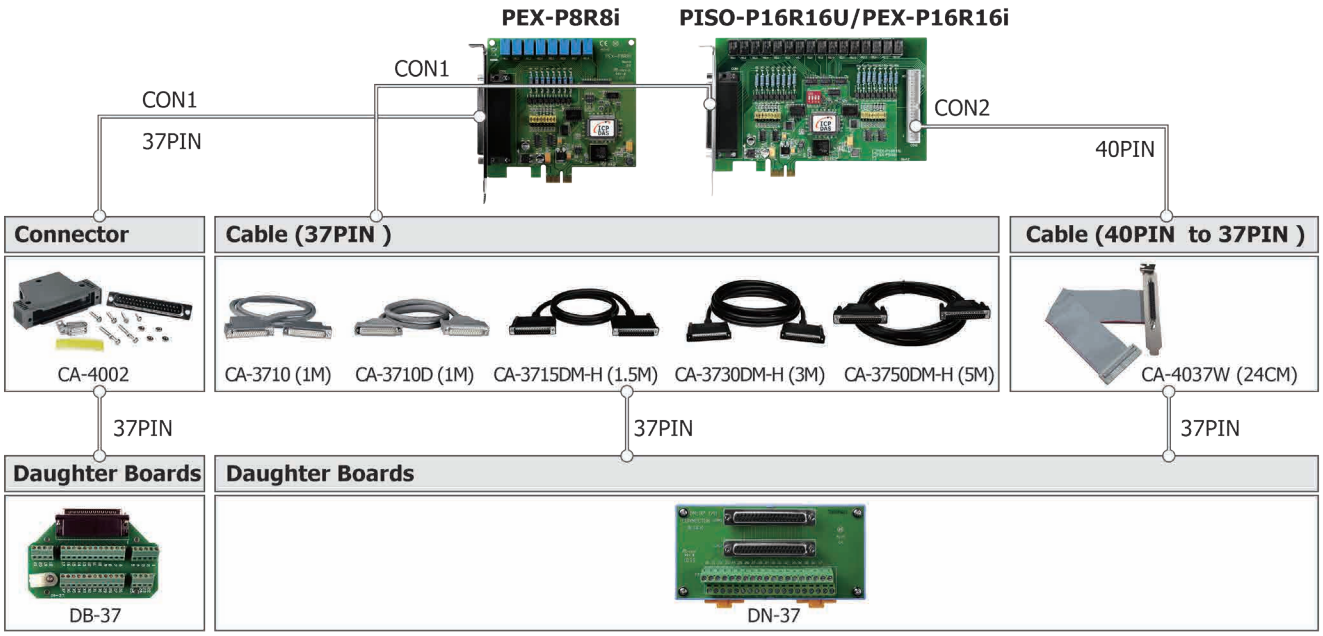
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Ordering Information

PISO-P16R16U CR	Universal PCI, 16-ch Isolated DI, 16-ch Relay Output Board (RoHS) Includes one CA-4037W 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)



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000