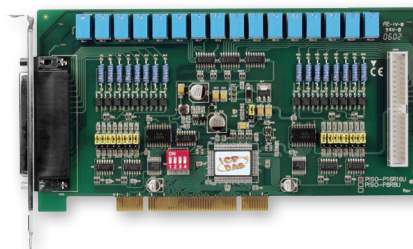


# PISO-P16R16U

Universal PCI, 16-channel Isolated Digital Input and 16-channel 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 V<sub>rms</sub> 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 photocopler Digital Input channels that provide 3750 V<sub>rms</sub> 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.

## Software

### Drivers

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

### 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

Digital Input	
Channels	16
Isolation Voltage	3750 V <sub>rms</sub> (Photocopler)
Input Voltage	Logic 1: AC/DC +5 ~ +24 V (AC 50 ~ 1 kHz) Logic 0: AC/DC 0 ~ +1 V
Input Impedance	1.2 KΩ, 0.5 W
Response Speed	Without Filter: 50 kHz (Typical) With Filter: 0.455 kHz (Typical)
Digital Output	
Channels	16
Relay Type	8 SPDT, 8 SPST
Contact Rating	AC: 120 V @ 0.5 A DC: 24 V @ 1 A
Operating Time	1 ms (Typical)
Release Time	7 ms (Typical)
Insulation Resistance	1000 MΩ
Lifetime	Mechanical: 5,000,000 ops. Electrical: 100,000 ops.
General	
Bus Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz
Card ID	Yes (4-bit)
I/O Connector	Female DB37 x 1 40-pin box header x 1
Power Consumption	800 mA @ +5 V
Operating Temperature	0 to +60 °C
Humidity	5 to 85% RH, Non-condensing

## Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
NO_0	01	NO_3
COM_0	02	COM_3
NC_0	03	NC_3
NO_1	04	NO_4
COM_1	05	COM_4
NC_1	06	NO_5
NO_2	07	NO_5
COM_2	08	COM_5
NC_2	09	NO_6
NO_7	10	COM_6
COM_7	11	DIB_0
DIA_0	12	DIB_1
DIA_1	13	DIB_2
DIA_2	14	DIB_3
DIA_3	15	DIB_4
DIA_4	16	DIB_5
DIA_5	17	DIB_6
DIA_6	18	DIB_7
DIA_7	19	

CON1

Pin Assignment	Terminal No.	Pin Assignment
NO_8	01	NO_11
COM_8	03	COM_11
NC_8	05	NC_11
NO_9	07	NO_12
COM_9	09	COM_12
NC_9	11	NO_13
NO_10	13	COM_13
COM_10	15	NO_14
NC_10	17	COM_14
NO_15	19	GND
COM_15	21	DIB_8
DIA_8	23	DIB_9
DIA_9	25	DIB_10
DIA_10	27	DIB_11
DIA_11	29	DIB_12
DIA_12	31	DIB_13
DIA_13	33	DIB_14
DIA_14	35	DIB_15
DIA_15	37	N/A
N/A	39	N/A

CON2

## Ordering Information

PISO-P16R16U	Universal PCI, 16-channel Isolated Digital Input and 16-channel Relay Output. Includes one CA-4037W Cable and two CA-4002 D-sub Connectors.
PISO-P16R16U CR	Universal PCI, 16-channel Isolated Digital Input and 16-channel Relay Output (RoHS). Includes one CA-4037W Cable and two CA-4002 D-sub Connectors.