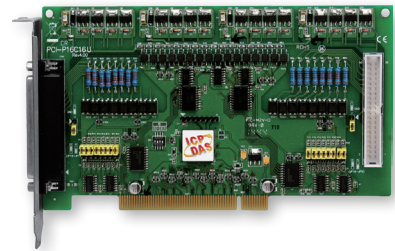


# PCI-P16C16U **NEW**

Universal PCI, 16-channel Isolated Digital Input and 16-channel Open-collector Digital Output Board (Sink, NPN)



## Features

- Universal PCI (3.3 V/5 V) Interface
- 16-channel Optically-isolated Digital Input
- 16-channel Open-collector Digital Output (Sink, NPN)
- External Power Status LED Indicator
- Selectable DC Signal Input Filter
- AC Signal Input with Filter
- Supports Card ID (SMD Switch)
- 5000 V<sub>rms</sub> Photo-isolation Protection

## Introduction

The PCI-P16C16U Universal PCI card supports the 3.3 V/5 V PCI bus and provides 16 optically-isolated Digital Input channels and 16 open-collector (Sink, NPN) Digital Output channels. The DI channels provide 5000 V<sub>rms</sub> isolation protection that allows the input signals to be completely floated so as to prevent ground loops and isolate the host computer from potentially damaging voltage spikes. The open-collector DO channels are typically used for alarm and warning notifications, control of signal output, control of external circuits that require a higher voltage level, or signal transmission applications, etc. The PCI-P16C16U contains a single DB-37 connector and a single 40-pin box header, and includes a 40-pin to DB-37 flat cable for easy wiring.

The PCI-P16C16U cards 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**
- 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	5000 V <sub>rms</sub> (Photocoupler)
Input Voltage	Logic 1: AC/DC +5 ~+ 24 V (AC 50 ~ 1 kHz) Logic 0: AC/DC 0 ~ +1 V
Response Speed	Without Filter: 50 kHz (Typical) With Filter: 0.455 kHz (Typical)
Digital Output	
Channels	16
Isolation Voltage	5000 V <sub>rms</sub>
Compatibility	Transistor (Sink, Open-collector)
Output Capability	DC: 600 mA/+30 V for each channel @ 100% duty
Response Speed	1 kHz (Typical)
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	Pin Assignment	Terminal No.	Pin Assignment
OUT_0	01	20	Ext. Power 1	DO_8	01
OUT_1	02	21	Ext. Power1	DO_9	03
OUT_2	03	22	GND_1	DO_10	05
OUT_3	04	23	GND_1	DO_11	07
OUT_4	05	24	Ext. Power2	DO_12	09
OUT_5	06	25	Ext. Power2	DO_13	11
OUT_6	07	26	GND_2	DO_14	13
OUT_7	08	27	GND_2	DO_15	15
N/A	09	28	N/A	N/A	17
N/A	10	29	N/A	N/A	19
N/A	11	30	DIB_0	N/A	21
DIA_0	12	31	DIB_1	N/A	22
DIA_1	13	32	DIB_2	DIA_8	23
DIA_2	14	33	DIB_3	DIA_9	25
DIA_3	15	34	DIB_4	DIA_10	27
DIA_4	16	35	DIB_5	DIA_11	29
DIA_5	17	36	DIB_6	DIA_12	31
DIA_6	18	37	DIB_7	DIA_13	33
DIA_7	19			DIA_14	35
				DIA_15	37
				N/A	39
					40

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PCI Bus Data Acquisition Boards

## Ordering Information

PCI-P16C16U CR	Universal PCI, 16-channel Isolated Digital Input and 16-channel Open-collector Digital Output Board (Sink, NPN) (RoHS). Includes one CA-4037W Cable and two CA-4002 D-sub Connectors.
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