

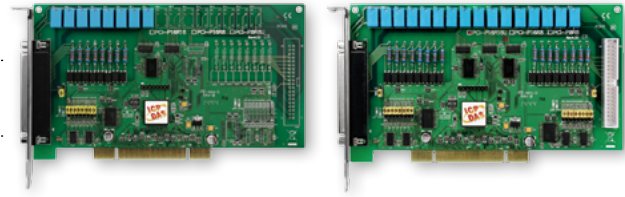
**PCI-P8R8U Available soon**  
**PCI-P16R16U Available soon**

Universal PCI, 8/16-channel Isolated Digital Input and  
 8/16-channel Relay Output Board



PCI-P8R8U

PCI-P16R16U



**Features**

- Universal PCI (3.3 V/5 V) Interface, Plug & Play
- 8/16-channel Optically-isolated Digital Input
- 8/16-channel Relay Output
- Selectable DC Signal Input Filter
- AC Signal Input with Filter
- 5000 V<sub>rms</sub> Photo-isolation Protection

**Introduction**

The PCI-P8R8U/P16R16U Universal PCI card supports the 3.3 V/5 V PCI bus and provides 8 or 16 optically-isolated Digital Input channels and 8 or 16 Relay 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 Relay Output channels can be used where it is necessary to control a circuit using a low-power signal, with complete electrical isolation between the control and the controlled circuits, or where several circuits need to be controlled by a single signal.

The PCI-P8R8U/P16R16U 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.

PCI-P8R8U/P16R16U cards can be used in a variety of applications, such as controlling the ON/OFF state of external devices, driving external relays or small power switches, activating alarms, contact closure, or sensing external voltages or switches, etc.

**Software**

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

Models	PCI-P8R8U	PCI-P16R16U
<b>Digital Input</b>		
Channels	8	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)	
<b>Digital Output</b>		
Channels	8	16
Relay Type	4 SPDT, 4 SPST	8 SPDT, 8 SPST
Contact Rating	AC: 120 V @ 0.5 A DC: 24 V @ 1 A	
Operating Time	5 ms (Typical)	
Release Time	10 ms (Typical)	
Insulation Resistance	100 MΩ	
Lifetime	Mechanical: 5,000,000 ops. Electrical: 100,000 ops.	
<b>General</b>		
Bus Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
I/O Connector	Female DB37 x 1	Female DB37 x 1 40-pin Box Header x 1
Power Consumption	500 mA @ +5 V	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
NO_0	01	NO_3	NO_8	01	NO_11
COM_0	02	COM_3	COM_8	03	COM_11
NC_0	03	NC_3	NC_8	05	NC_11
NO_1	04	NO_4	NO_9	07	NO_12
COM_1	05	COM_4	COM_9	09	COM_12
NC_1	06	NC_5	NC_9	11	NC_13
NO_2	07	NO_6	NO_10	13	NO_14
COM_2	08	COM_6	COM_10	15	COM_13
NC_2	09	NC_7	NC_10	17	NC_14
NO_7	10	NO_8	NO_15	19	NO_15
COM_7	11	COM_8	COM_15	21	COM_15
DIA_0	12	DIB_0	DIA_8	23	DIB_8
DIA_1	13	DIB_1	DIA_9	25	DIB_9
DIA_2	14	DIB_2	DIA_10	27	DIB_10
DIA_3	15	DIB_3	DIA_11	29	DIB_11
DIA_4	16	DIB_4	DIA_12	31	DIB_12
DIA_5	17	DIB_5	DIA_13	33	DIB_13
DIA_6	18	DIB_6	DIA_14	35	DIB_14
DIA_7	19	DIB_7	DIA_15	37	DIB_15
			N/A	39	N/A
			N/A	40	N/A

CON2 (PCI-P16R16 only)

**Ordering Information**

PCI-P8R8U CR	Universal PCI, 8-channel Isolated Digital Input and 8-channel Relay Output Board (RoHS). Includes one CA-4002 D-sub Connector.
PCI-P16R16U CR	Universal PCI, 16-ch Isolated Digital Input and 16-channel Relay Output Board (RoHS). Includes one CA-4037W Cable and two CA-4002 D-sub Connectors.