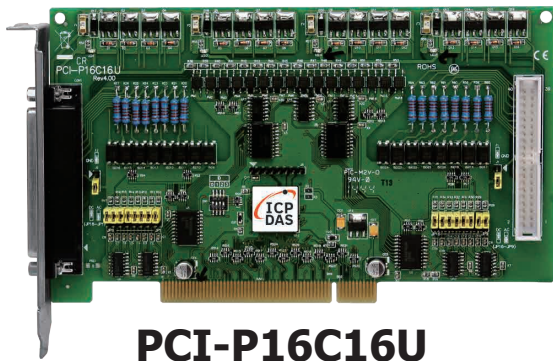




Universal PCI, 16-ch Isolated DI and 16-ch Open Collector (Sink, NPN) DO Board

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 Vrms 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.

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
OUT_0	01		DO_8	01	Ext. Power3
OUT_1	02	20 Ext. Power 1	DO_9	03	Ext. Power3
OUT_2	03	21 Ext. Power 1	DO_10	05	GND3
OUT_3	04	22 GND_1	DO_11	07	GND3
OUT_4	05	23 GND_1	DO_12	09	Ext. Power4
OUT_5	06	24 Ext. Power 2	DO_13	11	Ext. Power4
OUT_6	07	25 Ext. Power 2	DO_14	13	GND4
OUT_7	08	26 GND_2	DO_15	15	GND4
N/A	09	27 GND_2	N/A	17	N/A
N/A	10	28 N/A	N/A	19	N/A
N/A	11	29 N/A	N/A	21	DIB_8
DIA_0	12	30 DIB_0	DIA_8	23	DIB_9
DIA_1	13	31 DIB_1	DIA_9	25	DIB_10
DIA_2	14	32 DIB_2	DIA_10	27	DIB_11
DIA_3	15	33 DIB_3	DIA_11	29	DIB_12
DIA_4	16	34 DIB_4	DIA_12	31	DIB_13
DIA_5	17	35 DIB_5	DIA_13	33	DIB_14
DIA_6	18	36 DIB_6	DIA_14	35	DIB_15
DIA_7	19	37 DIB_7	DIA_15	37	N/A
			N/A	39	N/A
		CON1			CON2

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 Vrms Photo-isolation Protection



Software

Drivers

- ☒ 32/64-bit Windows 10/11 ☒ Linux

Sample Programs

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

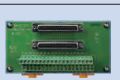
📁 Hardware Specifications

Hardware	
Card ID	Yes (4-bit)
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	5000 Vrms
Digital Output	
Channels	16
Type	Open Collector
Sink/Source (NPN/PNP)	Sink (NPN)
Operation Mode	Static Update
Load Current	DC: 600 mA/+30 V for one 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	16-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

Ordering Information

PCI-P16C16U CR	Universal PCI, 16-ch Isolated DI and 16-ch Open Collector (Sink, NPN) DO Board (RoHS) Includes one CA-4037W cable and two CA-4002 D-Sub connectors
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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)
	CA-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
	CA-4037W CR	40-pin flat & D-sub 37-pin Female cable 24 cm (RoHS)
	DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
	DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)

