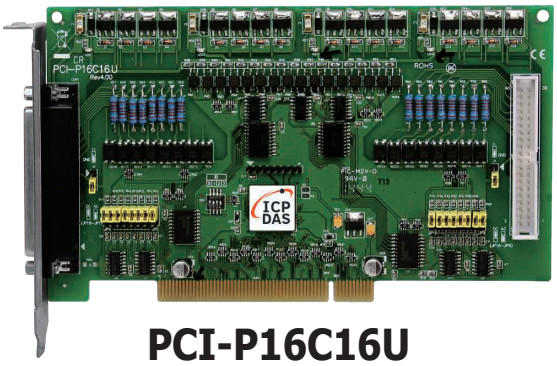


PCI-P16C16U

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

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

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.

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

Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
OUT_0	01	20	Ext. Power 1
OUT_1	02	21	Ext. Power 1
OUT_2	03	22	GND_1
OUT_3	04	23	GND_1
OUT_4	05	24	Ext. Power 2
OUT_5	06	25	Ext. Power 2
OUT_6	07	26	GND_2
OUT_7	08	27	GND_2
N/A	09	28	N/A
N/A	10	29	N/A
N/A	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
DO_8	01	02	Ext. Power3
DO_9	03	04	Ext. Power3
DO_10	05	06	GND3
DO_11	07	08	GND3
DO_12	09	10	Ext. Power4
DO_13	11	12	Ext. Power4
DO_14	13	14	GND4
DO_15	15	16	GND4
N/A	17	18	N/A
N/A	19	20	N/A
N/A	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

Hardware Specifications

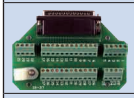
Hardware	
Card ID	Yes (4-bit)
Connector	Female DB37 x 1 40-pin box header x 1
Digital Input	
Channels	16
Type	Wet Contact , Photocoupler
Sink/Source (NPN/PNP)	Sink/Source
ON Voltage Level	AC/DC 5 ~ 24 V (AC 50 ~ 1 kHz)
OFF Voltage Level	AC/DC 0 ~ 1 V
Response Speed	Without Filter: 50 kHz (Typical) With 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

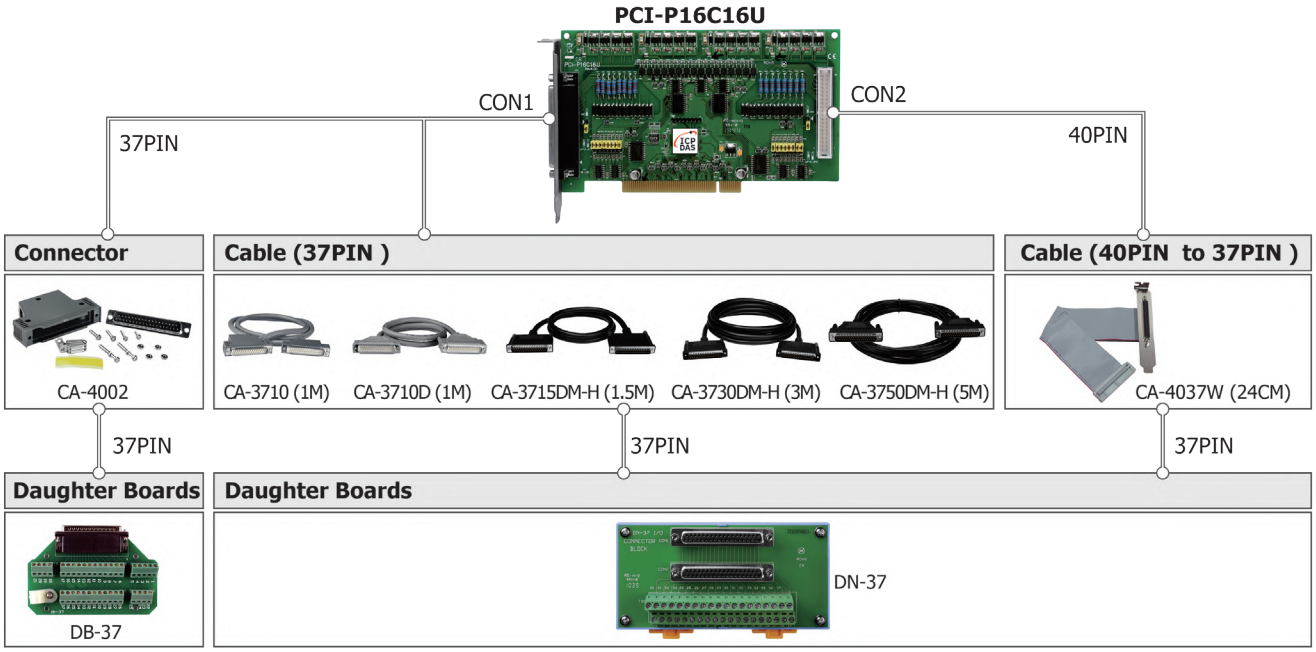
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Ordering Information

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

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)



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