

PEX-D64

PCI Express, 64-ch Digital I/O Board with Timer/Counter

Features

- Supports PCI Express x1
- 64 channels of digital I/O
- One 32-bit programmable internal timer
- One 16-bit event counter
- Card ID Function(SMD Switch)
- One 16-bit counter and One 32-bit counter with 4 MHz time base
- 3 independent programmable 16-bit down counter
- Interrupt trigger by : Even/Timer trigger

Introduction

The PEX-D64 supports PCI Express bus. These cards provide 32-ch DI and 32-ch DO that consist of two 16-bit input ports and two 16-bit output ports. The PEX-D64 offer 6-ch counter/timer with four-clock sources, 2 MHz, 1 MHz, 500 kHz and 250 kHz. The user can use the clock source from the soldering pad. 3 of the 6-ch timer/ counter are for general purposes such as frequency measurement, event counting and pulse generation; the other 3 channels are for interrupt function.

The PEX-D64 has a Card ID switch with which users can recognize the board by the ID via software when using two or more PEX-D64 cards in one computer.

The cards support various OS versions, such as Linux, DOS, Windows. DLL and Active X control together with various language sample program based on Turbo C++, Borland c++, Microsoft C++, Visual C++, Borland Delphi, Borland C++ Builder, Visual Basic, C#.NET, Visual Basic.NET and LabVIEW are provided in order to help users to quickly and easily develop their own applications.

Software

Drivers

- ☑ 32/64-bit Windows 10/11
- ☑ Linux
- ☑ DASYLab

Sample Programs

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

Ordering Information

PEX-D64 CR	PCI Express, 64-ch Digital I/O Board with Timer/Counter (RoHS)

Hardware Specifications

Hardware	
Connector	20-pin box header x 5
Card ID	Yes (4-bit)
Digital Input	
Channels	32
Type	5 V/TTL
ON Voltage Level	2.0 V Min.
OFF Voltage Level	0.8 V Max.
Response Speed	500 kHz (Typical)
Trigger Mode	Static Update
Digital Output	
Channels	32
Type	5 V/TTL
Operation Mode	Static Update
Load Voltage	Logic 0: 0.4 V max. Logic 1: 2.4 V min.
Load Current	Sink: 24 mA@ 0.8 V Source: 15 mA @ 2.0 V
Response Speed	500 kHz (Typical)
Timer/Counter/Frequency	
Channels	6 (Independent x 3/EVTIRQ x 1/TMRIRQ x 1/EXTIRQ x 1)
Type	5 V/TTL
Resolution	16-bit
Reference Clock	Internal: 4 MHz
PC Bus	
Type	PCI Express x 1
Data Bus	8-bit
Power	
Consumption	200 mA @ +3.3 V 180 mA @ +12 V
Mechanical	
Dimensions (mm)	112 x 156 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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Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
DO 0	01	02	DO 1
DO 2	03	04	DO 3
DO 4	05	06	DO 5
DO 6	07	08	DO 7
DO 8	09	10	DO 9
DO 10	10	12	DO 11
DO 12	12	14	DO 13
DO 14	14	16	DO 15
GND	16	18	GND
+5 V	18	20	+12 V

CN1

Pin Assignment	Terminal No.		Pin Assignment
DI 0	01	02	DI 1
DI 2	03	04	DI 3
DI 4	05	06	DI 5
DI 6	07	08	DI 7
DI 8	09	10	DI 9
DI 10	11	12	DI 11
DI 12	13	14	DI 13
DI 14	15	16	DI 15
GND	17	18	GND
+5 V	19	20	STROBE1

CN2

Pin Assignment	Terminal No.		Pin Assignment
DO 16	01	02	DO 17
DO 18	03	04	DO 19
DO 20	05	06	DO 21
DO 22	07	08	DO 23
DO 24	09	10	DO 25
DO 26	10	12	DO 27
DO 28	12	14	DO 29
DO 30	14	16	DO 31
GND	16	18	GND
+5 V	18	20	+12 V

CN3

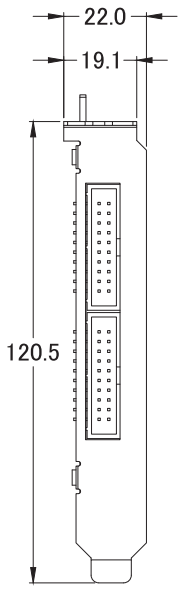
Pin Assignment	Terminal No.		Pin Assignment
DI 16	01	02	DI 17
DI 18	03	04	DI 19
DI 20	05	06	DI 21
DI 22	07	08	DI 23
DI 24	09	10	DI 25
DI 26	11	12	DI 27
DI 28	13	14	DI 29
DI 30	15	16	DI 31
GND	17	18	GND
+5 V	19	20	STROBE2

CN4

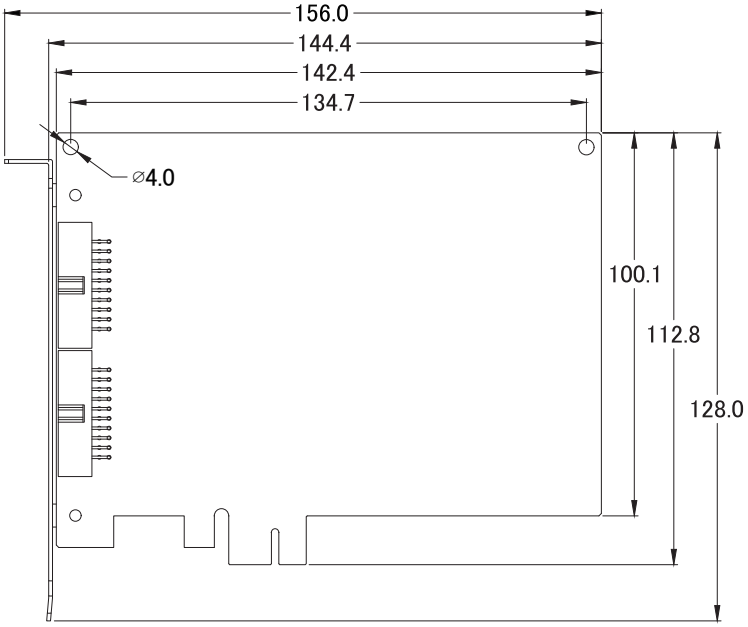
Pin Assignment	Terminal No.		Pin Assignment
CLK 2	01	02	CLK 1
OUT 2	03	04	OUT 1
GATE 2	05	06	GATE 1
CLK 3	07	08	CLK 0
OUT 3	09	10	OUT 0
GATE 3	10	12	GATE 0
GATE 4	12	14	CLK 4
-	14	16	OUT 4
GND	16	18	GND
+5 V	18	20	-

CN5

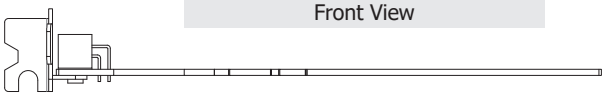
Dimensions (Units: mm)



Left Side View



Front View

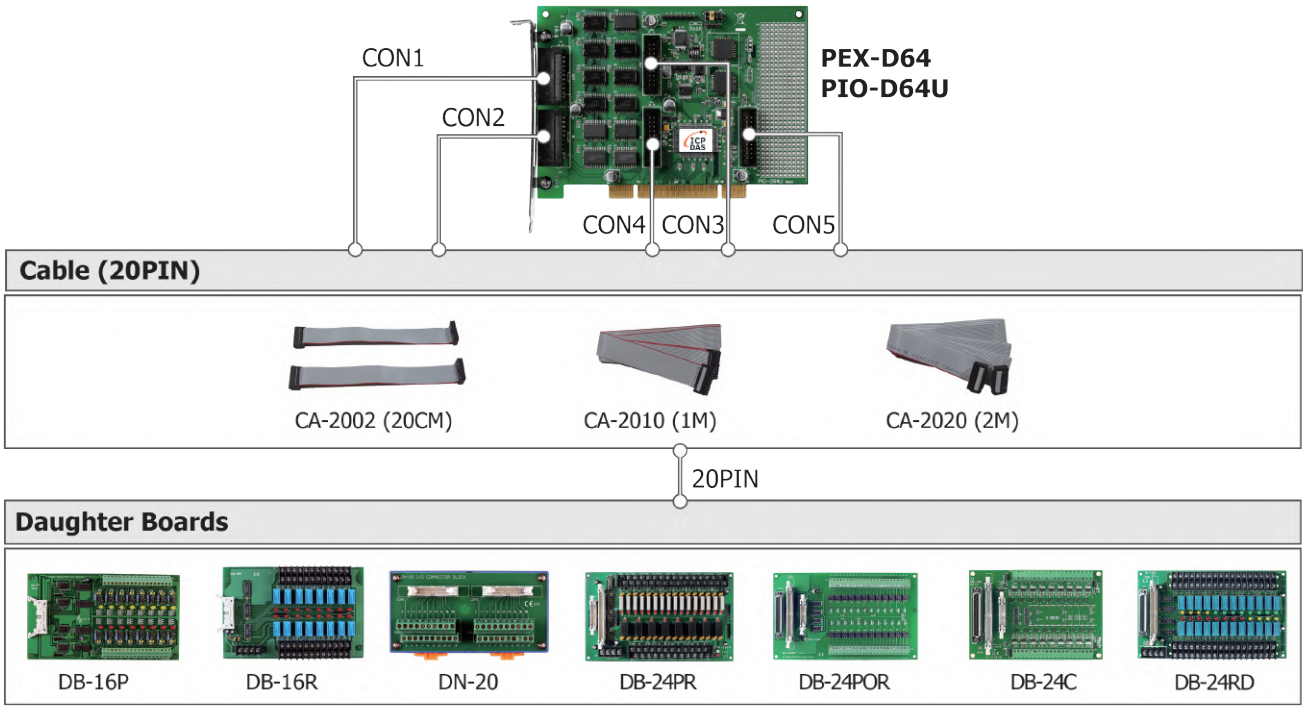


Bottom View

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Accessories

CA-2002 CR	20-pin flat cable, 20 cm x 2 (RoHS)
CA-2010 CR	20-pin flat cable, 1 M (RoHS)
CA-2020 CR	20-pin flat cable, 2 M (RoHS)
DB-24PR CR	24-channel power relay board (RoHS)
DB-24POR CR	24-channel of PhotoMos Relay output board (RoHS)
DN-20 CR	Two 20-pin header DIN-rail terminal board (RoHS)
DN-20/N CR	DN-20 without DIN-Rail mount (RoHS)
DB-16P CR	Isolated Digital Input Daughter Board (RoHS)
DB-16R CR	Relay Output Daughter Board (RoHS)
ADP-20/PCI CR	20-pin extender (RoHS)



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