

PEX-D24

PCI Express, 24-ch Digital I/O Board

PEX-D56

PCI Express, 56-ch Digital I/O Board

Features

- PCI Express x1 Interface
- Supports Card ID (SMD Switch)
- Emulates two Industrial-standard 8255 PPI Ports (Mode 0)
- DI/O Response Time approximately 2 µs (500 kHz Max.)
- 24/56 Buffered TTL Digital Input/Output Lines
- Three 8-bit Bi-directional I/O Ports
- DO Provides Higher Driving Capability
- Four Interrupt Sources

Introduction

The PEX-D24/D56 series utilizes the PCI Express bus and is designed as an easy replacement for the PIO-D24/PIO-D24U/PIO-D56/PIO-D56U series without requiring any modification to either the software or the driver.

The PEX-D24/D56 provides 24/56 buffered TTL Digital Input/Output lines.

The PEX-D24/D56 also includes an onboard Card ID that enables the board to be easily recognized via software if two or more cards are installed in the same computer.

Software

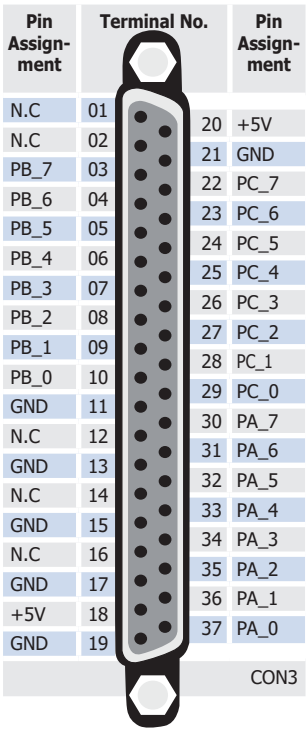
Drivers

- ☑ 32/64-bit Windows 10/11
- ☑ Linux

Sample Programs

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

Pin Assignments



Pin Assignment	Terminal No.		Pin Assignment
N.C	01	20	+5V
N.C	02	21	GND
PB_7	03	22	PC_7
PB_6	04	23	PC_6
PB_5	05	24	PC_5
PB_4	06	25	PC_4
PB_3	07	26	PC_3
PB_2	08	27	PC_2
PB_1	09	28	PC_1
PB_0	10	29	PC_0
GND	11	30	PA_7
N.C	12	31	PA_6
GND	13	32	PA_5
N.C	14	33	PA_4
GND	15	34	PA_3
N.C	16	35	PA_2
GND	17	36	PA_1
+5V	18	37	PA_0
GND	19		

CON3

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	+12 V

CON2 (PEX-D56 only)

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

CON1 (PEX-D56 only)

Hardware Specifications

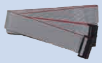
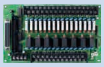
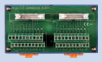
Model	PEX-D24	PEX-D56
Hardware		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1	Female DB37 x 1 20-pin box header x 2
Digital Input		
Channels	24 (Bi-Direction)	24 (Bi-Direction) +16
Type	5 V/TTL	
ON Voltage Level	2.0 V Min.	
OFF Voltage Level	0.8 V Max.	
Response Speed	500 kHz (Typical)	
Trigger Mode	Static Update	
Digital Output		
Channels	24 (Bi-Direction)	24 (Bi-Direction) +16
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: 64 mA @ 0.8 V Source: 32 mA @ 2.0 V	CON1: Sink: 2.4 mA @ 0.8 V Source: 0.8 mA @ 2.0 V CON3: Sink: 64 mA @ 0.8 V Source: 32 mA @ 2.0 V
Response Speed	500 kHz (Typical)	
PC Bus		
Type	PCI Express x 1	
Data Bus	8-bit	
Power		
Consumption	650 mA @ +3.3 V 0 mA @ +12 V	750 mA @ +3.3 V 0 mA @ +12 V
Mechanical		
Dimensions (mm)	86 x 134 x 22 (W x L x D)	
Environment		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

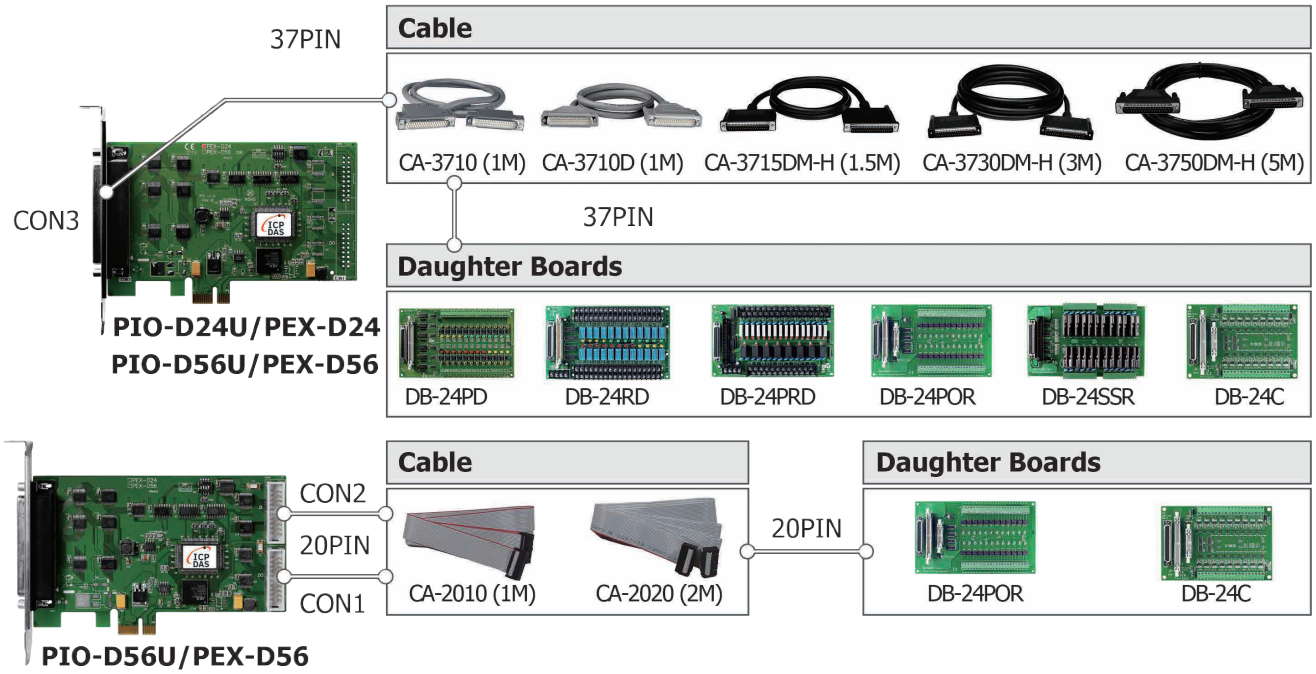
Ordering Information

PEX-D24 CR	PCI Express, 24-ch Digital I/O Board (RoHS)
PEX-D56 CR	PCI Express, 56-ch Digital I/O Board (RoHS)

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Accessories

 CA-2010 CR	20-pin flat cable, 1 M (RoHS)
 CA-2020 CR	20-pin flat cable, 2 M (RoHS)
 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-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
 DB-24PD CR	24-channel of isolated D/I board (RoHS)
 DB-24RD CR	24-channel of relay board (RoHS)
 DB-24PRD CR	24-channel of power relay board (RoHS)
 DB-24POR CR	24-channel of PhotoMos Relay output board (RoHS)
 DB-24SSR CR	24-channel Photo Mos relay output board (RoHS)
 DB-24C CR	24-channel of open-collector output board (RoHS)
 DN-20 CR DN-20-381 CR	I/O Connector Block with DIN-Rail Mounting and two 20-Pin Header (RoHS)
 DN-37 CR DN-37-381 CR	I/O Connector Block with DIN-Rail Mounting and 37-Pin D-Sub Connector (RoHS)



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