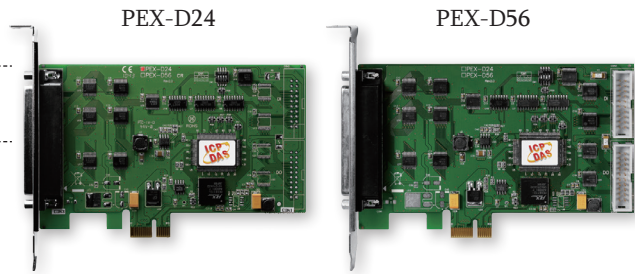


PEX-D24/PEX-D56

PCI Express, 24/56-channel 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, which are grouped into three 8-bit bi-directional ports: Port A (PA), Port B (PB) and Port C (PC), and are configured as input mode during power-on or after a reset.

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.

Hardware Specifications

Model	PEX-D24	PEX-D56
Programmable DI/O		
Channels	24	
Digital Input		
Channels	-	16
Compatibility	5 V/TTL	
Input Voltage	Logic 0: 0.8 V Max. Logic 1: 2.0 V Min.	
Response Speed	500 kHz	
Digital Output		
Channels	-	16
Compatibility	5 V/TTL	
Output Voltage	Logic 0: 0.4 V Max. Logic 1: 2.4 V Min.	
Output Capability	Sink: 64 mA @ 0.8 V Source: 32 mA @ 2.0 V	CN1 Sink: 2.4 mA @ 0.8 V Source: 0.8 mA @ 2.0 V
		CN3 Sink: 64 mA @ 0.8 V Source: 32 mA @ 2.0 V
Response Speed	500 kHz	
General		
Bus Type	PCI Express x1	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1	Female DB37 x 1, 20-pin Male Box Header x 2
Power Consumption	650 mA @ +3.3 V 0 mA @ +12 V	750 mA @ +3.3 V 0 mA @ +12 V
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

Software

Drivers

- 32/64-bit Windows XP/2003/2008/7/8/10
- Linux

Sample Programs

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

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	

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)

Ordering Information

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

2
5
PCI Express Data Acquisition Boards