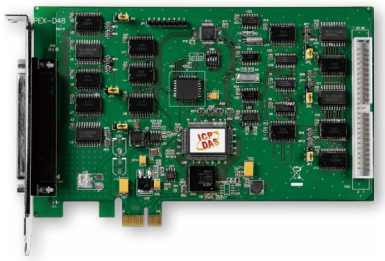
PEX-D48

PCI Express, 48-channel Digital I/O Board



Features

- PCI Express x1 Interface, Plug & Play
- Supports Card ID (SMD Switch)
- DIO Response Time: ~2 µs (500 kHz Max.)
- Emulates two Industrial-standard 8255 PPI Ports (Mode 0)
- DO Provides Higher Driving Capability
- One 16-bit Event Counter
- 48 Buffered TTL Digital Input/Output Lines
- Six 8-bit Bi-directional Input/Output Ports
- One 32-bit Programmable Internal Timer
- Pull-high/Pull-low Jumpers for DI Channels
- Four Interrupt Sources

Introduction

The PEX-D48 utilizes the PCI Express bus and designed as an easy replacement for the PIO-D48/PIO-D48U/PIO-D48SU without requiring any modification to the software or the driver.

The PEX-D48 provides 48 buffered TTL Digital Input/Output lines, which are grouped into six 8-bit bi-directional ports: Port A (PA), Port B (PB) and Port C (PC) in a connector. Port C can also be split into two nibble-wide (4-bit) segments. All ports are configured as input ports during power-on or after a reset.

The PEX-D48 also includes an onboard Card ID that enables the board to be recognized via software if two or more PEX-D48 cards are installed in the same computer. The pull-high/low jumpers allow the DI status to be predefined instead of remaining floating if the DI channels are disconnected or interrupted.

Software

Drivers

- ✓ 32/64-bit Windows XP/2003/2008/Vista/7/8
- ✓ 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	+5 V
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
+5 V	18	37	PA_0
GND	19		

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Pin Assignment	Terminal No.		Pin Assignment
PC_7	01	02	GND
PC_6	03	04	GND
PC_5	05	06	GND
PC_4	07	08	GND
PC_3	09	10	GND
PC_2	11	12	GND
PC_1	13	14	GND
PC_0	15	16	GND
PB_7	17	18	GND
PB_6	19	20	GND
PB_5	21	22	GND
PB_4	23	24	GND
PB_3	25	26	GND
PB_2	27	28	GND
PB_1	29	30	GND
PB_0	31	32	GND
PA_7	33	34	GND
PA_6	35	36	GND
PA_5	37	38	GND
PA_4	39	40	GND
PA_3	41	42	GND
PA_2	43	44	GND
PA_1	45	46	GND
PA_0	47	48	GND
+5 V	49	50	GND

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Hardware Specifications

Programmable DI/O	
Channels	48
Compatibility	5 V/TTL
Digital Input	
Input Voltage	Logic 0: 0.8 V Max. Logic 1: 2.0 V Min.
Response Speed	500 kHz
Digital Output	
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
Response Speed	500 kHz
Timer/Counter	
Channels	2 (Event Timer x 1/32-bit Timer x 1)
Resolution	16-bit
Reference Clock	Internal: 4 MHz
General	
Bus Type	PCI Express x1
Card ID	Yes (4-bit)
Connectors	Female DB37 x 1 50-pin Box Header x 1
Power Consumption	900 mA @ +5 V
Operating Temperature	0°C to +60°C
Humidity	5 to 85% RH, Non-condensing

Ordering Information

PEX-D48 CR	PCI Express, 48-channel Digital I/O Board (RoHS)