

## PEX-D48

PCI Express, 48-ch OPTO-22 Compatible DIO Board



### Features ▶▶▶▶

- PCI Express x1, Plug & Play
- DIO response time is about 2 us (500 kHz max.)
- Emulate two industrial-standard 8255 PPI ports (mode 0)
- D/O with higher driving capability
- One 16-bit event counter
- Card ID function
- 48 buffered TTL digital I/O lines
- Six 8-bit bi-direction I/O ports
- D/I with pull-high and pull-low jumpers
- One 32-bit programmable internal timer
- 4 Interrupt sources

### Introduction

The PEX-D48 is the new generation product that ICP DAS provides to meet RoHS compliance requirement, and is designed as easy replacement for the PIO-D48/PIO-D48U. Users can replace the PIO-D48/PIO-D48U by the PEX-D48 directly without any software/driver modification.

The PEX-D48 supports PCI Express bus and provides 48 TTL digital I/O lines. These lines are grouped into six 8-bit bi-direction ports. Every three 8-bit ports are named as port A (PA), port B (PB) and port C (PC) in a connector, and the port C can be split into 2 nibble-wide (4-bit) parts. All ports are configured as inputs upon power-up or reset.

The PEX-D48 adds a Card ID switch for users to recognize the board by the ID via software when using two or more PEX-D48 cards in one computer. The pull-high/low jumpers allow user to predefine the DI status instead of floating when the DI channels are unconnected or broken.

### Software

- DOS Lib and TC/BC/MSC sample program (with source codes)
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes
- Supports 32-bit and 64-bit Windows XP/2003/Vista/7
- Supports LabVIEW and Linux

### Hardware Specifications

Digital I/O	
I/O Channels	48-ch, 5 V TTL compatible
Input Logic Low	0.8 V max.
Input Logic High	2.4 V min.
Output Source Current	32 mA max.
Output Sink Current	64 mA max.
Programmable Interrupts	4
General	
Bus Type	PCI Express x1
Connectors	Female DB-37 x 1, 50-pin Male box header x 1
Power Consumption	900 mA @ +5 V
Operating Temperature	0 °C ~ +60 °C
Storage Temperature	-20 °C ~ +70 °C
Humidity	5 ~ 85% RH, non-condensing

### Pin Assignments

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

### Ordering Information

PEX-D48 CR	PCI Express, 48-ch TTL DIO board (RoHS)
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