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Find the *Acces PCIe-DIO-24S* at our website: ***Click HERE***

PCIe-DIO-48S
PCIe-DIO-24S

PCI Express Digital I/O Cards with Change of State Detection

FEATURES



- 48 channel high-current TTL digital I/O lines
- Change of State (COS) detection and interrupt capabilities
- Compatible with industry standard 8255 PPI
- Two 50-pin male headers with 24 digital lines each
- User interrupt pin on each DIO connector
- All 48 digital I/O lines buffered with 32mA source / 64mA sink current capabilities
- Four and eight bit ports independently selectable for inputs or outputs
- Pull-ups on DIO lines (optional pull-down)
- 5V VCCIO (3.3V optional)
- VCCIO available to the user on each I/O header
- Compatible with industry standard I/O racks like Grayhill, Opto 22, Western Reserve Controls, etc.

FACTORY OPTIONS

- 3.3V VCCIO (LVTTL)
- I/O lines pulled down
- Molex PC-style connector for maximum 5V VCCIO current sourcing capability
- Extended temperature operation (-40° to +85°C)
- 48 channel card without change of state feature
- 24 channel card with change of state

FUNCTIONAL DESCRIPTION

The PCIe-DIO-48S is a 48 channel PCI Express (PCIe) card designed for use in a variety of digital I/O applications. It uses the high speed PCI Express bus to transfer digital data to and from the card. The digital I/O is compatible with 8255 PPI chips making it easy to program. This also allows for simple and trouble-free migration from other ACCES PCI digital I/O cards . The card features a x1 lane PCI Express connector which can be used in any available x1, x2, x4, x8, x12, or x16 PCI Express expansion slot.

Each 50-pin header has three 8-bit I/O ports designated A, B and C. Port C can be further divided into two 4-bit nybbles. Each port can be programmed as inputs or outputs. Change of State (COS) detection and interrupt capabilities are designed to relieve software from polling routines that can consume valuable processing time. Each port can be programmed for detecting state changes on their lines, in which any changes of the enabled port's bits (low-to-high or high-to-low) will generate an IRQ. An ISR (interrupt service routine) then polls the port to determine which bit changed state and clear the interrupt. The connectors are also compatible with existing 48 and 24 channel ACCES PCI digital I/O cards.

The card is 6.6 inches in length and 4.2 inches seated height. One or two flat ribbon cables are routed through a cutout in the mounting bracket and plugged onto the keyed 50-pin male headers on the side of the card. A strain relief bracket securely holds the ribbon cables at the point of exit via the PCIe mounting bracket.

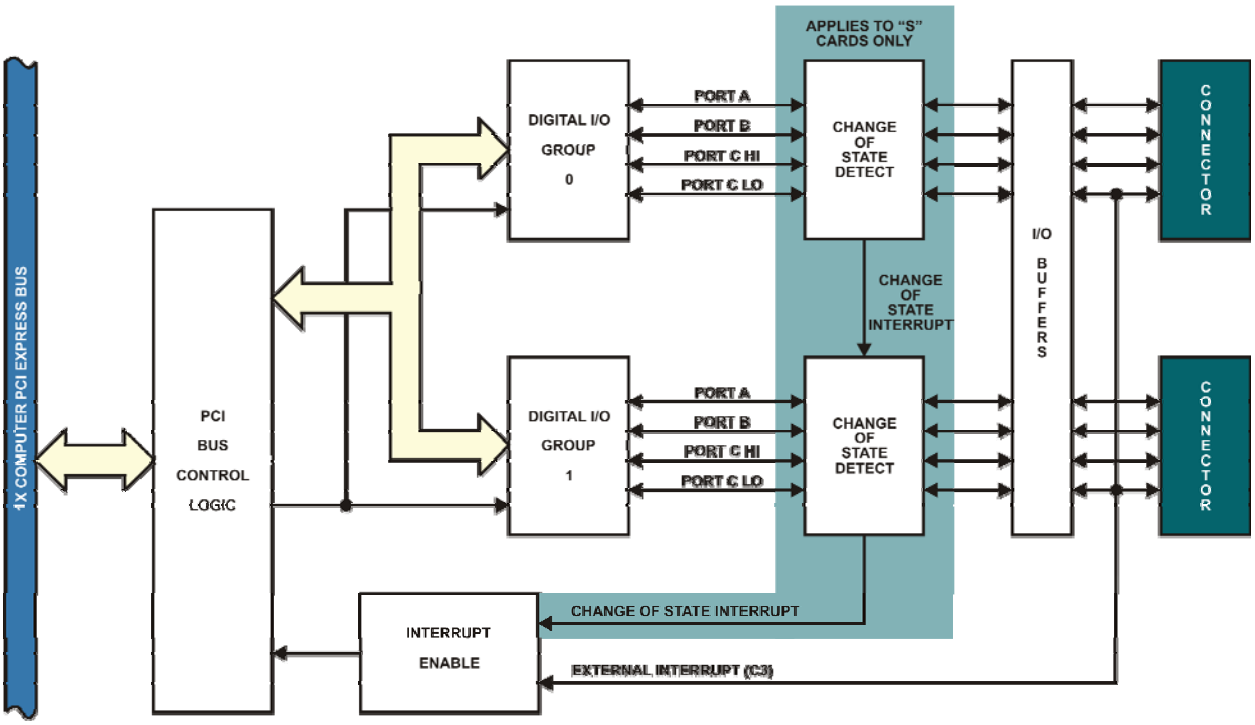
ACCESSORIES

Available accessories include a broad range of ribbon cables, screw terminal boards and optically isolated adaptors and DIN-rail mounts for a variety of quick and easy connectivity options. Use ribbon cables with a female header on one end and a 50-pin female edge connector on the other to connect with industry standard solid state module racks.

SOFTWARE

The card is supported for use in most operating systems and includes a free DOS, Linux , and Windows 2000/XP/2003/Vista/7 compatible software package. This package contains sample programs and source code in Visual Basic, Delphi, and Visual C++ for Windows. Also provided is a graphical setup program in Windows. Linux support includes installation files and basic samples for programming from user level via an open source kernel driver. Third party support includes a Windows standard DLL interface usable from the most popular application programs, and includes LabVIEW 8.5+ VIs. Embedded OS support includes Windows XPe.

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BLOCK DIAGRAM

SPECIFICATIONS

VCCIO	5V (TTL), optional 3.3V (LVTTL)
Digital Inputs	
Logic High	2.0V to VCCIO
Logic Low	0V to 0.8V
Current	±20uA (max)
Digital Outputs	
Logic High	2.0V (min); 32mA source
Logic Low	0.55V (max); 64mA sink
Power Output	VCCIO (P2 & P3; pin 49) Via 0.5A resettable fuse
Environmental	
Operating Temperature	0° to 70°C, optional -40° to +85°C
Storage Temperature	-55° to +150°C
Humidity	5% to 90% RH, without condensation
Card Dimensions	Length - 6.6"; Height - 4.2" (seated)

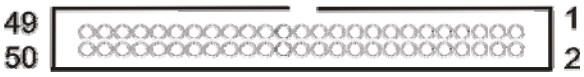
ORDERING GUIDE

- PCIe-DIO-48S 48-bit Digital I/O card with change of state detection
- PCIe-DIO-48 48-bit Digital I/O card
- PCIe-DIO-24S 24-bit Digital I/O card with change of state detection

Factory Options

- Extended temperature operation (-40° to +85°C)
- Molex PC-style connector for maximum 5V VCCIO current sourcing capability
- 3.3V VCCIO (LVTTL)
- I/O lines pulled down

50-Pin Connector arrangement and assignments



Pin	Signal Name	Pin	Signal Name
1	PC7	2	GND
3	PC6	4	GND
5	PC5	6	GND
7	PC4	8	GND
9	PC3*	10	GND
11	PC2	12	GND
13	PC1	14	GND
15	PC0	16	GND
17	PB7	18	GND
19	PB6	20	GND
21	PB5	22	GND
23	PB4	24	GND
25	PB3	26	GND
27	PB2	28	GND
29	PB1	30	GND
31	PB0	32	GND
33	PA7	34	GND
35	PA6	36	GND
37	PA5	38	GND
39	PA4	40	GND
41	PA3	42	GND
43	PA2	44	GND
45	PA1	46	GND
47	PA0	48	GND
49	VCCIO**	50	GND

* PC3 is an I/O pin and also a user interrupt
** VCCIO is protected by a resettable 0.5A fuse

ACCES I/O PRODUCTS, INC.

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