ACCES I/O PRODUCTS, INC.

# PCIe-DIO-24HS
Digital I/O with COS IRQ

FEATURES
- 24 high-current DIO lines
- IRQ generation from Port C bit 3, or Change of State (COS) Detection ("S" models)
- DIO lines buffered
- Four and eight bit ports independently selectable for inputs or outputs
- User configurable 10k ohm Pull-up/Pull-down resistors on DIO lines
- Jumper selectable VCCIO (5V, 3.3V)
- VCCIO voltage available to the user via 0.5A resettable fuse
- Latching 50 pin connector

FACTORY OPTIONS
- Extended temperature operation (-40° to +85℃)
- Quick-disconnect tab on mounting bracket for wiring harness or cable shield ground (with non-latching 50 pin connector)
- RoHS Compliance
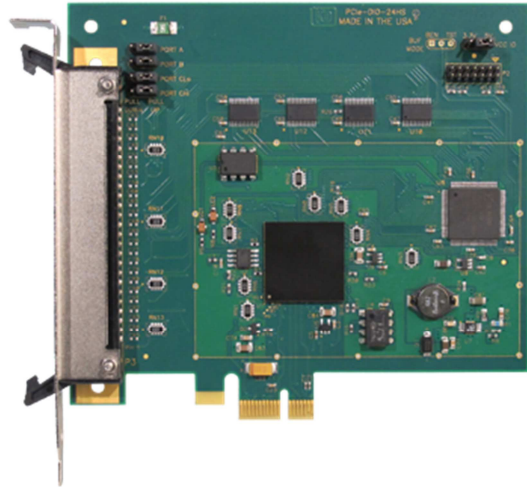
FUNCTIONAL DESCRIPTION
This product is a x1 lane PCIe DIO board available in two models from basic DIO to advanced COS detection capabilities. The card emulates an 8255 compatible chip, providing 24 DIO lines. The DIO lines are grouped into three 8-bit ports: A, B, and C. Each 8-bit port is configured via software to function as either inputs or outputs. Port C can be further broken into two 4-bit nybbles via software and configured as either inputs or outputs.

Each DIO line is buffered and capable of up to 32mA source/sink. The VCCIO logic level is globally configured via jumper selection as 5V or 3.3V. Also, ports A, B, C low nybble, and C high nybble are individually jumper configured as pull-up or pull-down through 10kΩ resistor networks.

The card is half-length with a 4.2 inch seated height. I/O wiring connections for this board are via a male 50 pin right angle connector on the card mounting bracket. A ribbon cable can be used to connect this card to termination panels.

ACCESSORIES

UTBK-50	CAB50F-X	STB-50	DIN-SNAP-6
50 pin female screw terminal board plugs directly onto the card's I/O connector	Ribbon Cable Assy, X=length in feet	Screw terminal board, ships with standoffs but can also mount on SNAP-TRACK or DIN-SNAP	SNAP-TRACK for DIN-rail mounting STB-50

SOFTWARE
The card is supported for use in most operating systems and includes Linux and Windows compatible software packages. This package contains sample programs and source code in Delphi and Visual C++ for 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. Embedded OS support includes Windows XPe.

BLOCK DIAGRAM
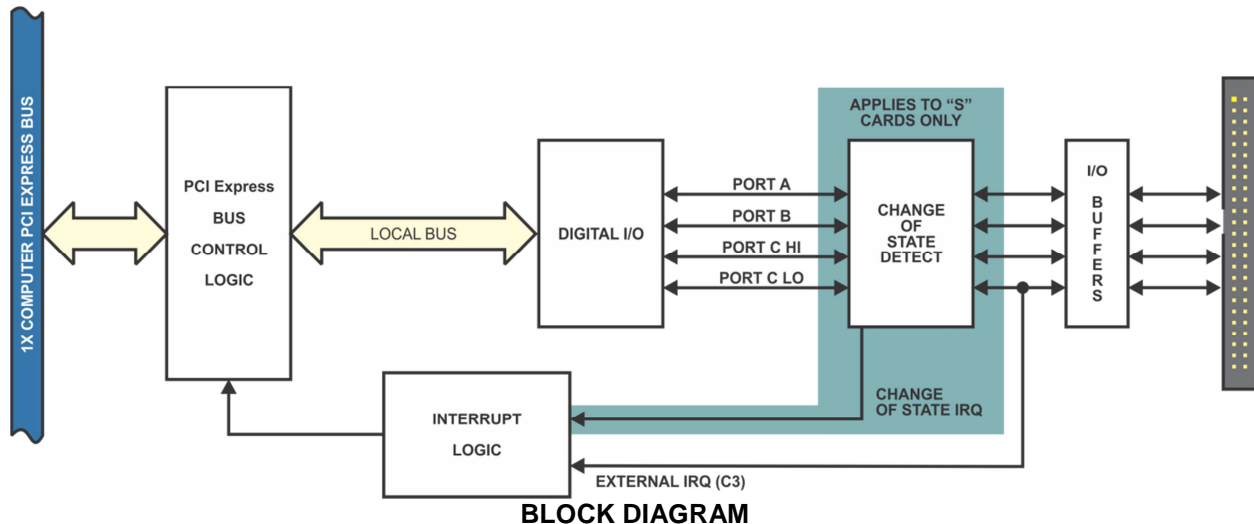
SPECIFICATIONS

Digital I/O

Lines	24; Ports A, B, and C
Type	Emulates 8255 compatible chips
Logic Level	VCCIO
Pull-up/down	10k ohm, jumper selectable

VCCIO

Logic Levels	5V	
Low Inputs	≤ 1.5V	≤ 2uA
High Inputs	≥ 3.5V	≤ 2uA
Low Outputs	≤ 0.55V	32mA
High Outputs	≥ 3.8V	32mA

Logic Levels	3.3V	
Low Inputs	≤ 0.8V	≤ 2uA
High Inputs	≥ 2.0V	≤ 2uA
Low Outputs	≤ 0.55V	24mA
High Outputs	≥ 2.4V	24mA

Environmental

Operating Temperature	0° to 70°C, optional -40° to +85°C
Storage Temperature	-55° to +150°C
Humidity	5% to 95% RH, w/o condensation
Card Dimensions	Half-Length; Height - 4.2" seated

ORDERING GUIDE

- PCIe-DIO-24H — 24 line DIO Card w/latching 50 pin connector
- PCIe-DIO-24HS — 24 line DIO Card w/latching 50 pin connector and COS IRQ
- PCIe-DIO-24HS-S03 — 24 line DIO Card with non-latching 50 pin header, mounting bracket with ground tab, and barcode SN and PN label

Factory Options

- Extended temperature operation (-40° to +85°C)
- Non-latching 50 pin right angle connector and a quick-disconnect ground tab on mounting bracket
- RoHS Compliance

50 Pin Connector Pin Assignments

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

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