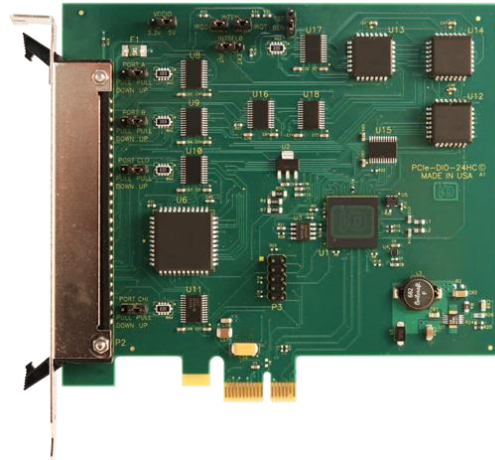


FEATURES

- 24 high-current DIO lines
- Three 82C54 Counter/Timers
- IRQ generation from Port C bit 3, an external source & Counter A2, configurable for edge- (rising/falling) and/or level-triggered (high/low)
- DIO lines buffered
- Four and eight bit ports independently selectable for inputs or outputs
- Jumper selectable 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 male header on card mounting bracket for secure cable retention



FACTORY OPTIONS

- Extended temp operation (-40° to +85°C)
- RoHS compliant version

FUNCTIONAL DESCRIPTION



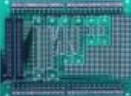



This product is a x1 lane PCIe DIO board with basic DIO, Counter/Timers and interrupt generation capabilities. The card uses an 8255 compatible chip, providing 24 DIO lines. The DIO lines are grouped into three 8-bit ports: A, B, and C. Each 8-bit port is configured via software to function as either inputs or outputs. Port C is further broken into two 4-bit nybbles via software, 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 configurable as pull-up or pull-down through 10kΩ resistor networks.

There are three 82C54 counter(s) that each include three 16-bit counter/timers factory configured in an optimal mode for use as event counters, frequency output, pulse width, and frequency measurement.

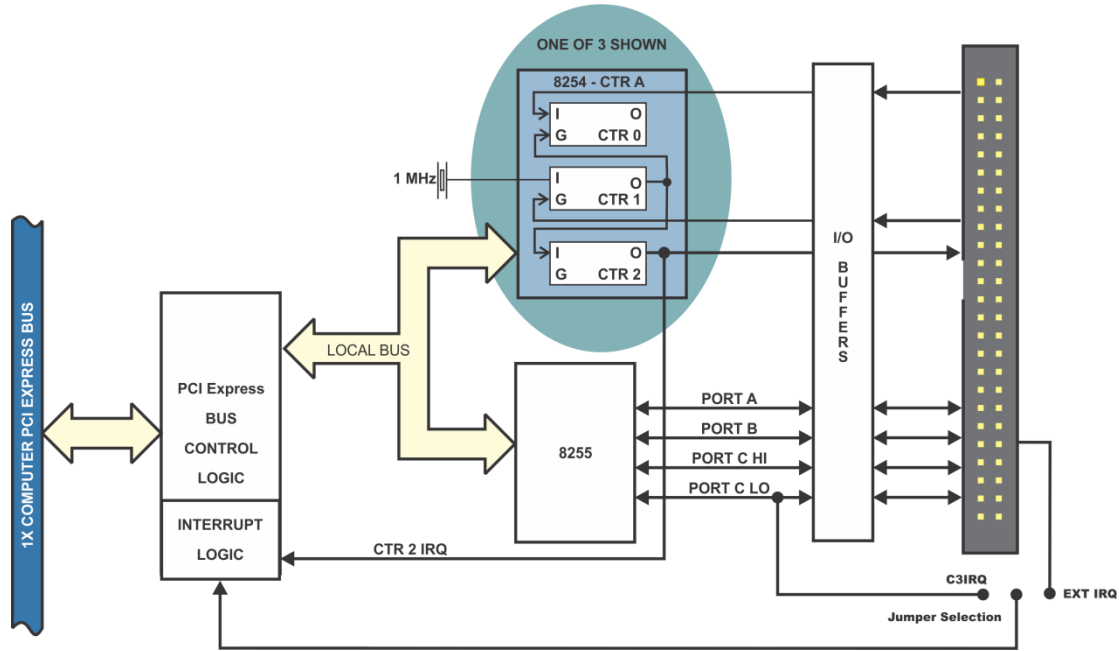
The card is 4.824 inches in length and 4.2 inches seated height. I/O wiring for this board is via a right angle 50-pin latching male header connector. A ribbon cable can be used to connect this card to termination panels.

OPTIONAL ACCESSORIES

CAB50-6	CAB50F-X	STA-50	T-BOX	STB-50	DIN-SNAP-6
Female to Edge Ribbon Cable for solid state rack	F/F Ribbon Cable Assembly, X=length in feet	Screw terminal board mounted on standoffs with bread-board area	Metal enclosure with powder coated finish, for STA-50	Screw terminal board, panel mount on SNAP-TRACK or DIN-SNAP	SNAP-TRACK for DIN-rail mounting one STB-50
					

SOFTWARE

The card comes with a free DOS/Linux/Windows (XP and newer) software package containing drivers, utilities, a graphical settings program to help configure option jumpers etc., and sample programs (with source) in Visual Basic, C#, Delphi, and Visual C++ for Windows. Linux support includes basic Comedi and direct-register source with tips on using the card from Python and other modern environments. Our Windows-standard DLLs can be used from all the most popular application programs including LabVIEW and even most "office applications". Embedded OS support includes XPe, all flavors of Windows Embedded Standard, and more...including VxWorks and QNX.



BLOCK DIAGRAM

SPECIFICATIONS

Digital I/O

Lines 24; Ports A, B, and C
 Type 8255 compatible
 Logic Level VCCIO jumper selectable
 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

Counter / Timers

Number / Type Three 82C54 programmable counters
 Counter size 16-bit
 Logic level VCCIO
 On-board clock 1MHz
 Clock Pulse Width See 82C54A datasheet

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 Length – 4.824"; Height - 4.2" seated

ORDERING GUIDE

- PCIe-DIO-24HC 24-line DIO Card with three 8254's

Factory Options

- Extended temp operation (-40°C to +85°C)
- RoHS compliant version

50 Pin Header Connector Assignments

Assignment	Pin
Port C Hi	PC7 1
	PC6 3
	PC5 5
	PC4 7
Port C Lo	PC3 9
	PC2 11
	PC1 13
	PC0 15
	PB7 17
Port B	PB6 19
	PB5 21
	PB4 23
	PB3 25
	PB2 27
	PB1 29
	PB0 31
Port A	PA7 33
	PA6 35
	PA5 37
	PA4 39
	PA3 41
	PA2 43
	PA1 45
PA0 47	
Fused VCCIO	49

Assignment	Pin
Counter A0 Freq In	2
Ctr A1 P.W.I. (Gate)	4
Counter A2 Freq Out	6
Counter B0 Freq in	8
Ctr B1 P.W.I. (Gate)	10
Counter B2 Freq Out	12
Counter C0 Freq In	14
Ctr C1 P.W.I. (Gate)	16
Ctr C2 Freq Out	18
Digital Interrupt Disable	20
External Interrupt Source	22
Even pins 24-50 are all Ground	24
	26
	28
	30
	32
	34
	36
	38
	40
	42
44	
46	
48	
50	

