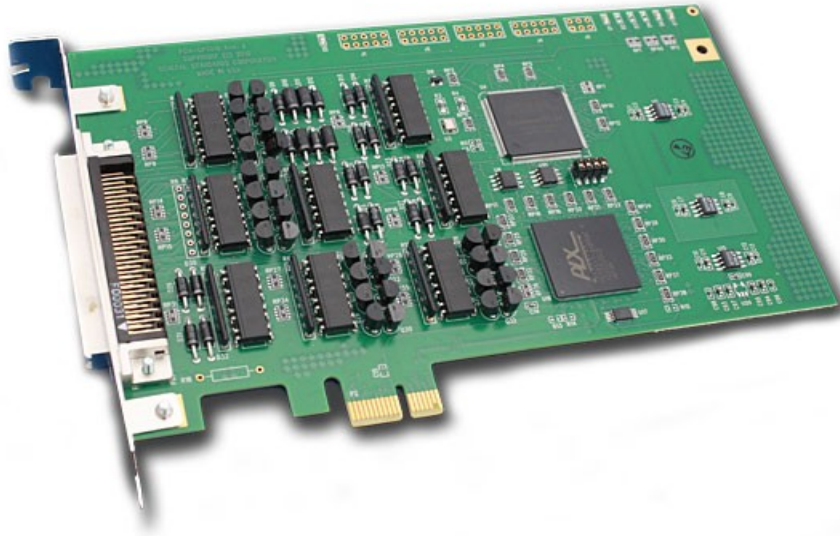


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High Performance Bus Interface Solutions

PCIe-PTO16x16

32 Optically Coupled Channels
16 Inputs, 16 Outputs



Features Include:

16 optically isolated inputs

Selectable input voltage range thru use of field replaceable bias resistors.

16 optically isolated outputs - 12 normal outputs, 4 diode clamped

Software Programmable clock debounce rate

Software Programmable Change of State detection. Rising edge or falling edge per input channel

Software Programmable Interrupts on any or all Change of State bit(s)

Software Pre-loadable Event counter on Input Bit 15

Programmable Interrupt on event counter overflow

Built in Self-Test Features.

Programmable Little Endian / Big Endian swapping

PCI cycles Asynchronous to local bus cycles

Software Controlled Test LED

VxWorks™ driver available

True PCIe form factor

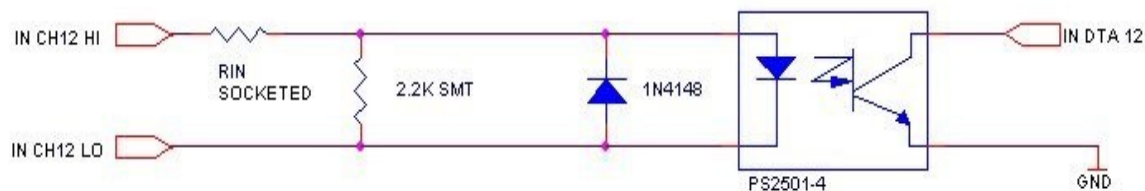
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Functional Overview:

The PCIe-OPTO16x16 board has 32 optically-coupled digital I/ O channels consisting of 16 outputs and 16 inputs. Each channel is electrically isolated (5000 Volts) from the PCI host processor board. Change-of-State Interrupts allow for an interrupt to the PCI host to be generated from any level change on any input. Built-in-self-test, selectable debounce times, input pulse counter, and I/ O voltages to 50 Volts makes for a versatile digital interface board.

Figure 1 Input Channels 0-15, Typical

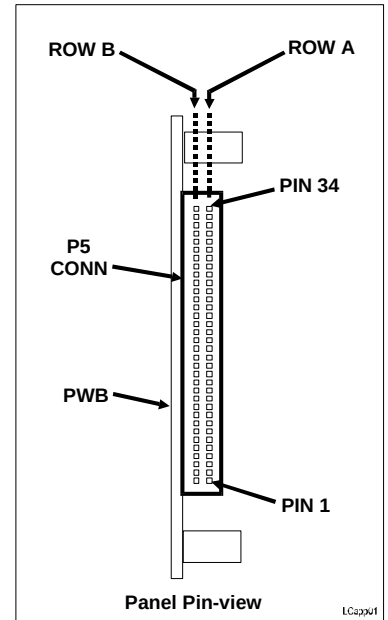


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SYSTEM I/O CONNECTIONS

Pin #	PA2, Row A, Signal Names:	Pin #	PB2, Row B, Signal Names:
1	IN CH00 HI	35	LOG OUT CH9 HI
2	IN CH00 LO	36	LOG OUT CH9 LO
3	IN CH01 HI	37	LOG OUT CH10 HI
4	IN CH01 LO	38	LOG OUT CH10 LO
5	IN CH02 HI	39	LOG OUT CH11 HI
6	IN CH02 LO	40	LOG OUT CH11 LO
7	IN CH03 HI	41	LOG OUT CH12 HI
8	IN CH03 LO	42	LOG OUT CH12 LO
9	IN CH04 HI	43	LOG OUT CH13 HI
10	IN CH04 LO	44	LOG OUT CH13 LO
11	IN CH05 HI	45	LOG OUT CH14 HI
12	IN CH05 LO	46	LOG OUT CH14 LO
13	IN CH06 HI	47	LOG OUT CH15 HI
14	IN CH06 LO	48	LOG OUT CH15 LO
15	IN CH07 HI	49	LOG OUT CH0 HI
16	IN CH07 LO	50	LOG OUT CH0 LO
17	IN CH08 HI	51	LOG OUT CH1 HI
18	IN CH08 LO	52	LOG OUT CH1 LO
19	IN CH09 HI	53	LOG OUT CH2 HI
20	IN CH09 LO	54	LOG OUT CH2 LO
21	IN CH10 HI	55	LOG OUT CH3 HI
22	IN CH10 LO	56	LOG OUT CH3 LO
23	IN CH11 HI	57	PWR OUT CH4 HI
24	IN CH11 LO	58	PWR OUT CH4 LO
25	IN CH12 HI	59	PWR OUT CLAMP 4
26	IN CH12 LO	60	PWR OUT CH5 HI
27	IN CH13 HI	61	PWR OUT CH5 LO
28	IN CH13 LO	62	PWR OUT CLAMP 5
29	IN CH14 HI	63	PWR OUT CLAMP 6
30	IN CH14 LO	64	PWR OUT CH6 HI
31	IN CH15 HI	65	PWR OUT CH6 LO
32	IN CH15 LO	66	PWR OUT CLAMP 7
33	LOG OUT CH8 HI	67	PWR OUT CH7 HI
34	LOG OUT CH8 LO	68	PWR OUT CH7 LO



The 68-pin DSUB (user I/O interface) connector (PLUG) is mounted at the front edge of the board. The part number is P50E-068DDP-SRI-TG, manufacturer, Robinson Nugent. The mating part number is 3M Corporation P50-068-DDS-EA, Backshell: P50-068-STR-BSK
 Contact GSC for factory built cables of any desired length. See Table above for pin-out.

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