

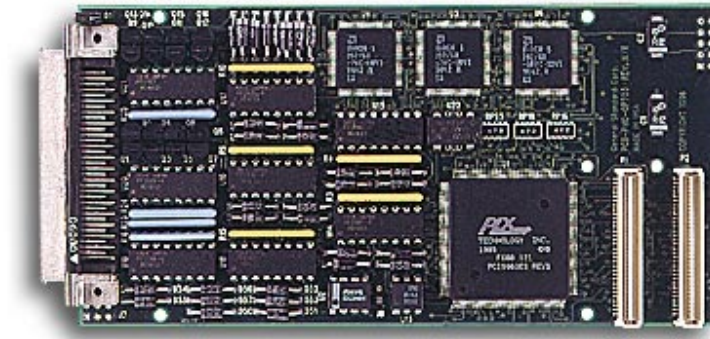
General Standards Corporation

High Performance Bus Interface Solutions

PMC-OPTO32A

32 Optically Coupled Channels

24 Inputs, 8 Outputs



Features Include:

- 24 optically isolated inputs
- Selectable input voltage range thru use of field replaceable bias resistors.
- 8 optically isolated outputs - 4 normal current, 4 high current
- 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 23
- 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 Programmable board base address
- VxWorks™ driver available

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Functional Overview:

The PMC-OPTO32A board has 32 optically-coupled digital I/O channels consisting of 8 outputs and 24 inputs. Each channel is electrically isolated (1000 Volts) from the PMC host processor board. Change-of-State Interrupts allow for an interrupt to the PMC 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. The board is a single PMC board, which complies with the PMC electrical interface IEEE1386.1. Both VxWorks and Windows NT drivers are available.

Figure 1 Input Channels 0-22, Typical

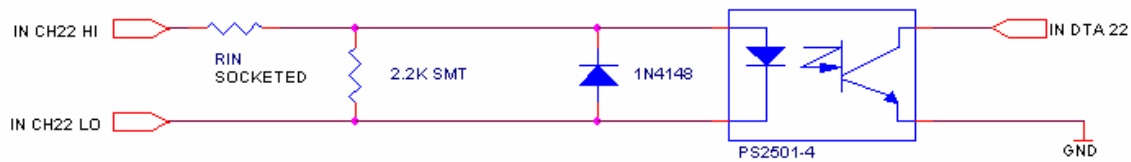
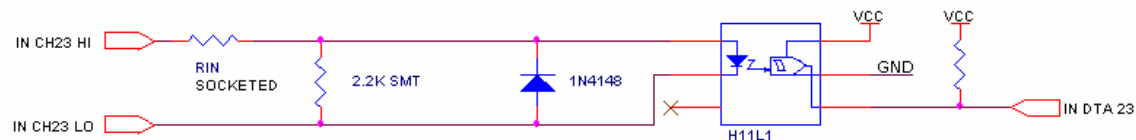


Figure 2 Input Channel 23



MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

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Input/Output Characteristics

Input Voltage Resistance Current: See Table below ordering information
Output Voltage/VCEO: 80V Max
Output Current: 100mA Max
Isolation Voltage: 5000 V
Current Transfer Ratio: 80-600%
Typical Ton/Toff: 3/5 uSec.

Power Requirements

Power Consumption: 200mA @ 5V Typical

Physical Characteristics

Height: 13.5 mm (0.53 in)
Depth: 149.0 mm (5.87 in)
Width: 74.0 mm (2.91 in)

Environmental Specifications

Ambient Temperature Range: Operating: 0 to +55 degrees Celsius
Storage: -40 to +85 degrees Celsius
Relative Humidity: Operating: 0 to 80%, non-condensing
Storage: 0 to 95%, non-condensing
Altitude: Operation to 10,000 ft.

Cooling Requirements

Conventional air-cooling; 200 LPFM (typical mezzanine environment).

PCI INTERFACE

- Compatibility:** Conforms to PCI Specification 2.1.
Supports "plug-n-play" initialization.
Provides a single multifunction interrupt.
Supports FIFO DMA transfers as bus master.

ORDERING INFORMATION

Contact factory for other input voltage options, including a mix of different input voltages. The Input Voltage specified is the minimum voltage required to guarantee that a logic '1' is detected. The Input Resistance is selected via a SIP resistor and can be swapped out by the user; there is one SIP resistor for each group of four channels.

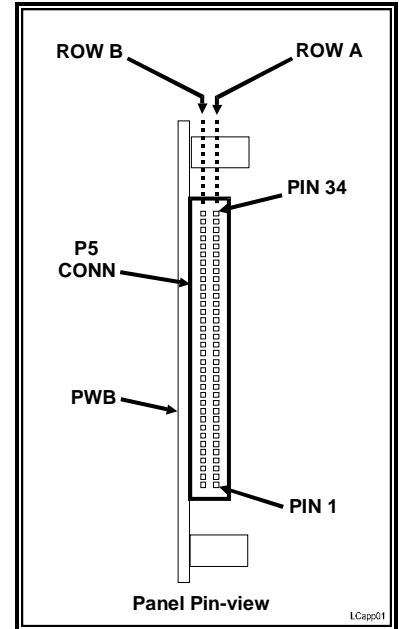
| Part # | Input Voltage | Input Resistance | Input Current |
|-----------------|---------------|------------------|---------------|
| PMC-OPTO32A-5V | 5V | 2,200 Ohms | 23 milli-Amps |
| PMC-OPTO32A-12V | 12V | 5,100 Ohms | 23 milli-Amps |
| PMC-OPTO32A-28V | 28V | 12,000 Ohms | 23 milli-Amps |
| PMC-OPTO32A-48V | 48V | 20,000 Ohms | 23 milli-Amps |

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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 | IN CH17 HI |
| 2 | IN CH00 LO | 36 | IN CH17 LO |
| 3 | IN CH01 HI | 37 | IN CH18 HI |
| 4 | IN CH01 LO | 38 | IN CH18 LO |
| 5 | IN CH02 HI | 39 | IN CH19 HI |
| 6 | IN CH02 LO | 40 | IN CH19 LO |
| 7 | IN CH03 HI | 41 | IN CH20 HI |
| 8 | IN CH03 LO | 42 | IN CH20 LO |
| 9 | IN CH04 HI | 43 | IN CH21 HI |
| 10 | IN CH04 LO | 44 | IN CH21 LO |
| 11 | IN CH05 HI | 45 | IN CH22 HI |
| 12 | IN CH05 LO | 46 | IN CH22 LO |
| 13 | IN CH06 HI | 47 | IN CH23 HI |
| 14 | IN CH06 LO | 48 | IN CH23 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 | IN CH16 HI | 67 | PWR OUT CH7 HI |
| 34 | IN CH16 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 Kel Corporation 8840-068-174AD - connector, 8840S068CVR – shell. The Robinson Nugent phone no. is 812-945-0211. Contact GSC for factory built cables of any desired length. See Table above for pin-out.

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