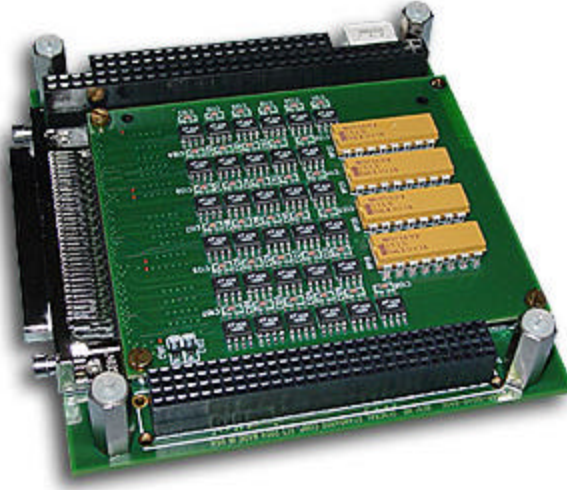


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High Performance Bus Interface Solutions

PC104P-SIO4B

Quad Channel High Performance Serial I/O PC104+ CARD
With up to 256Kbytes of FIFO buffering and Multiple Serial Protocols



The PC104P-SIO4B board is a four channel serial interface card which provides high speed, full-duplex, multi-protocol serial capability for PCI applications. The PC104P-SIO4B combines two multi-protocol Dual Universal Serial Controllers (USC®) and 8 external FIFOs to provide four fully independent asynchronous or synchronous RS422/RS485 serial channels. These features, along with a high performance PCI interface engine, give the PC104P-SIO4B unsurpassed performance in a serial interface card.

The PC104P-SIO4B incorporates the following features:

- Four Independent Multi-Protocol Serial Channels
- Synchronous Serial Data Rates up to 10M bits/sec
- Asynchronous Serial Data Rates up to 1M bit/sec
- SCSI II type 68 pin front edge I/O Connector with optional cable adapter to four DB25 connectors.
- Independent Transmit and Receive FIFO Buffers for each Serial Channel – Up to 32k Deep Each
- Serial Mode Protocols include Asynchronous, Bi-sync, Mono-sync, SDLC, HDLC, Ethernet, and Nine-Bit
- Parity and CRC detection capability
- Four Programmable Oscillators provide increased flexibility for Baud Rate Clock generation
- Two Serial Clocks, Two Serial Data signals, Data Carrier Detect signal, and Clear-To-Send signal per Channel
- Unused signals may be reconfigured as general purpose IO (for RTS capability)
- Fast RS485/RS422 Differential Cable Transceivers to Provide Increased Noise Immunity
- Industry Standard Zilog Z16C30 Multi-Protocol Universal Serial Controllers (USC®)
- Dual PCI DMA Engine to speed transfers and minimize host I/O overhead
- A variety of device drivers are available, including VxWorks, WinNT, Win2k, Linux, and Labview available

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Email: sales@generalstandards.com

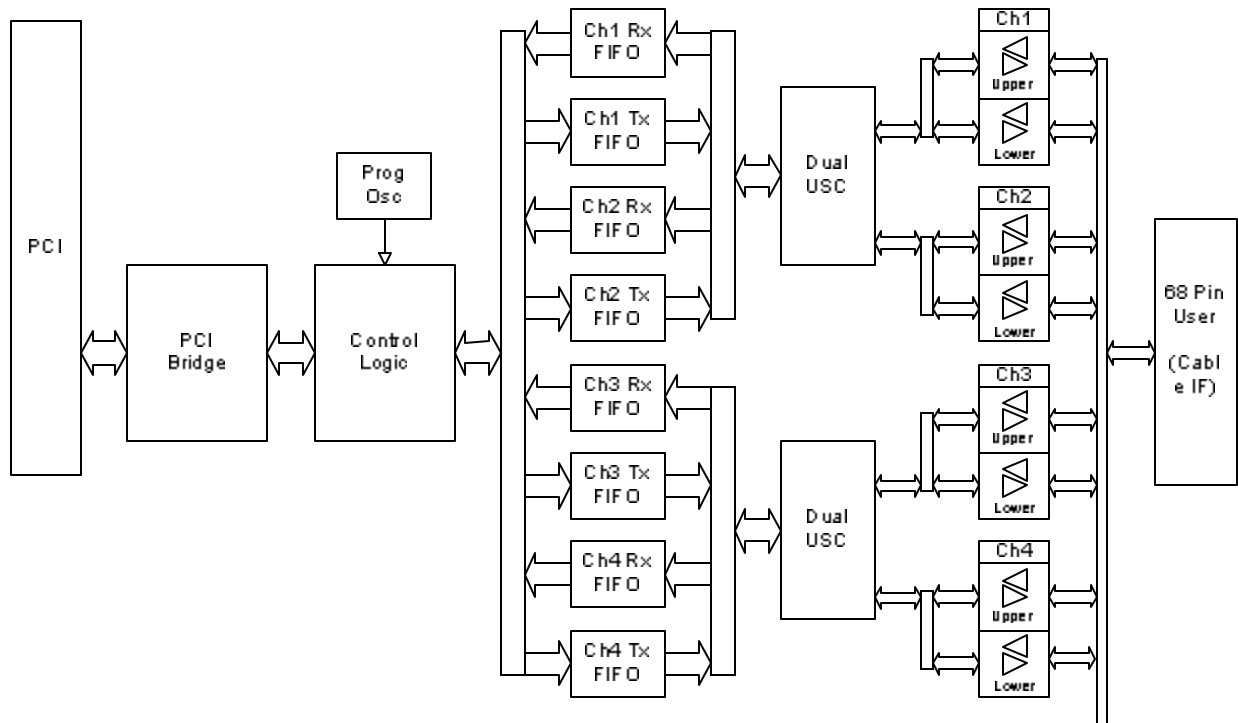
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Applications Include:

- LAN/WAN Networking
- Telecommunications
- Serial Interface

Functional Diagram:



Mechanical and Environmental Specifications:

PCI Interface:

- Conforms to PCI Specification 2.1, with D32 read/write transactions.
- Supports "plug-n-play" initialization.
- Provides a single multifunction interrupt.
- Supports FIFO DMA transfers as bus master.

Electrical Characteristics:

- +5VDC \pm 0.2 VDC at 1.5 Amps
- Power Dissipation: 6.0 Watts typical
- At +25 °C, with specified operating voltages

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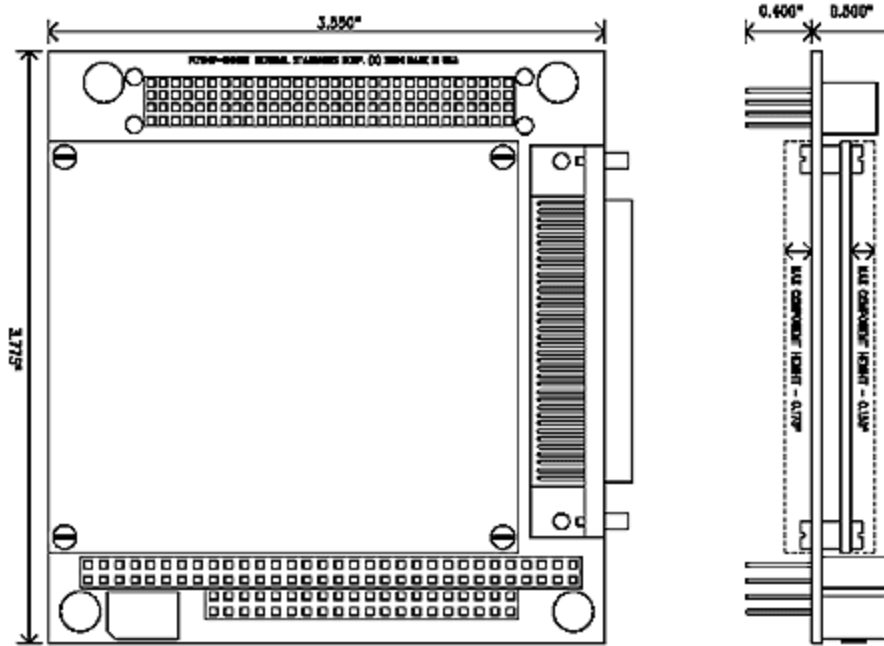
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Physical Characteristics:



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

Ordering Information:

Specify the basic product model number PC104P-SIO4B, followed by an option suffix "-X", as indicated below. For example, model number PC104P-SIO4B-256K describes a board with a total of 256Kbytes of FIFO buffering.

| Optional Parameter | Value | Specify Option As: |
|--------------------|----------|--------------------|
| FIFO Size: | 256Kbyte | X =256K |
| | 64Kbyte | X = 64K |
| | 4Kbyte | X = 4KLC |

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System I/O Connections (RS485/RS422 – see user manual for RS232 version):

| P2, Row A | Pin # | P2, Row B | Pin # |
|-------------------------------|-------|-------------------------------|-------|
| No connect | 1 | No connect | 35 |
| No connect | 2 | No connect | 36 |
| No connect | 3 | No connect | 37 |
| No connect | 4 | No connect | 38 |
| Ch1 CTS + | 5 | Ch3 CTS + | 39 |
| Ch1 CTS - | 6 | Ch3 CTS - | 40 |
| Ch1 Lower Cable TxD/RxD + | 7 | Ch3 Lower Cable TxD/RxD + | 41 |
| Ch1 Lower Cable TxD/RxD - | 8 | Ch3 Lower Cable TxD/RxD - | 42 |
| Ch1 Lower Cable TxClk/RxClk + | 9 | Ch3 Lower Cable TxClk/RxClk + | 43 |
| Ch1 Lower Cable TxClk/RxClk - | 10 | Ch3 Lower Cable TxClk/RxClk - | 44 |
| Ch1 DCD + | 11 | Ch3 DCD + | 45 |
| Ch1 DCD - | 12 | Ch3 DCD - | 46 |
| Ch1 Upper Cable TxD/RxD + | 13 | Ch3 Upper Cable TxD/RxD + | 47 |
| Ch1 Upper Cable TxD/RxD - | 14 | Ch3 Upper Cable TxD/RxD - | 48 |
| Ch1 Upper Cable TxClk/RxClk + | 15 | Ch3 Upper Cable TxClk/RxClk + | 49 |
| Ch1 Upper Cable TxClk/RxClk - | 16 | Ch3 Upper Cable TxClk/RxClk - | 50 |
| GND | 17 | GND | 51 |
| GND | 18 | GND | 52 |
| Ch2 CTS + | 19 | Ch4 CTS + | 53 |
| Ch2 CTS - | 20 | Ch4 CTS - | 54 |
| Ch2 Lower Cable TxD/RxD + | 21 | Ch4 Lower Cable TxD/RxD + | 55 |
| Ch2 Lower Cable TxD/RxD - | 22 | Ch4 Lower Cable TxD/RxD - | 56 |
| Ch2 Lower Cable TxClk/RxClk + | 23 | Ch4 Lower Cable TxClk/RxClk + | 57 |
| Ch2 Lower Cable TxClk/RxClk - | 24 | Ch4 Lower Cable TxClk/RxClk - | 58 |
| Ch2 DCD + | 25 | Ch4 DCD + | 59 |
| Ch2 DCD - | 26 | Ch4 DCD - | 60 |
| Ch2 Upper Cable TxD/RxD + | 27 | Ch4 Upper Cable TxD/RxD + | 61 |
| Ch2 Upper Cable TxD/RxD - | 28 | Ch4 Upper Cable TxD/RxD - | 62 |
| Ch2 Upper Cable TxClk/RxClk + | 29 | Ch4 Upper Cable TxClk/RxClk + | 63 |
| Ch2 Upper Cable TxClk/RxClk - | 30 | Ch4 Upper Cable TxClk/RxClk - | 64 |
| No connect | 31 | No connect | 65 |
| No connect | 32 | No connect | 66 |
| No connect | 33 | No connect | 67 |
| No connect | 34 | No connect | 68 |

The user interface connections on the PC104P-SIO4B is a SCSI II type 68-pin connector (female) mounted to the front edge of the board (P2). The part number for the 68 pin front edge connector is AMP 787170-7. The mating connector is AMP 749111-6 or equivalent.

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