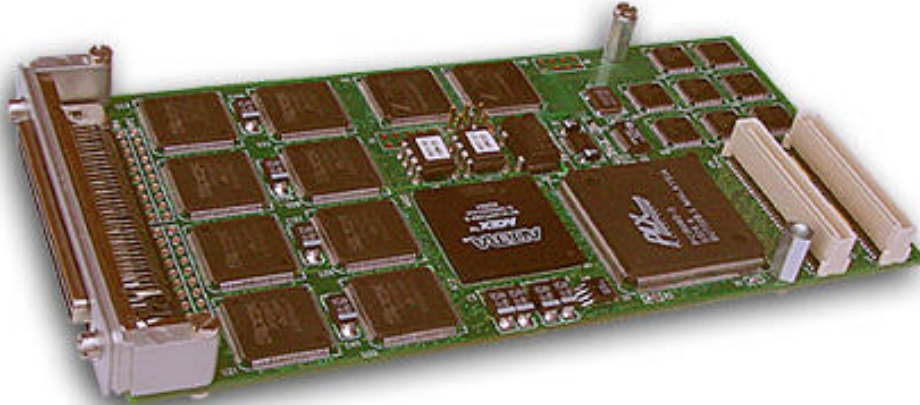


General Standards Corporation

High Performance Bus Interface Solutions

PMC-SIO4BX

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



Features Include:

- Four Independent Multi-Protocol Serial Channels
- Synchronous Serial Data Rates up to 10 Mbits/sec
- Asynchronous Serial Data Rates up to 1 Mbit/sec
- Independent Transmit and Receive FIFOs for each channel - Up to 32 Kbytes each
- Serial Mode Protocols include Asynchronous, Bisync, SDLC, HDLC, IEEE 802.3, and Nine-Bit
- Multiprotocol Transceivers support RS422 (V.11)/RS485, RS423 (V.10), RS232 (V.28), V.35, RS530, as well as other Mixed Protocol modes.
- Parity and CRC detection capability
- Four Programmable Oscillators provide increased flexibility for Baud Rate Clock generation
- SCSI II type 68 pin front edge I/O Connector with optional cable adapter to four DB25 connectors
- Eight signals per channel, configurable as either DTE or DCE configuration: 3 Serial Clocks, 2 Serial Data signals, Clear-To-Send (CTS), Ready-To-Send(RTS), and Data Carrier Detect (DCD)
- Unused signals may be reconfigured as general purpose IO
- Fast RS422/RS485 Differential Cable Transceivers Provide Data Rate up to 10Mbps
- RS423 and RS232 Cable Transceivers Provide Data Rate up to 230kbps
- 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

General Standards Corporation
8302A Whitesburg Drive · Huntsville, AL 35802
Phone: (256)880-8787 or (800)653-9970
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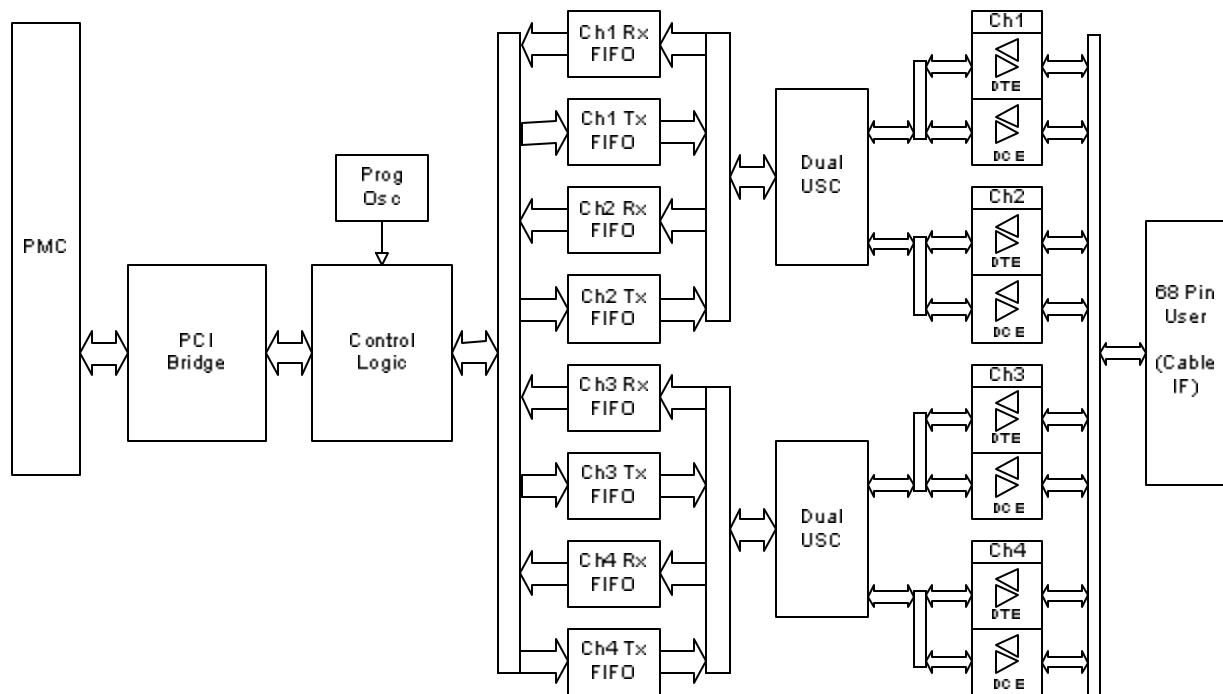
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Applications Include:

- ✓ LAN/WAN Networking
- ✓ Telecommunications
- ✓ Serial Interface

Functional Description:

The PMC-SIO4BX board is a four channel serial interface card which provides high speed, full-duplex, multi-protocol serial capability for PMC applications. The SIO4BX combines two multi-protocol Dual Universal Serial Controllers (USC®), 8 external FIFOs, and multi-protocol transceivers to provide four fully independent asynchronous or synchronous serial channels. These features, along with a high performance PCI interface engine, give the PMC-SIO4BX unsurpassed performance in a serial interface card.



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Power Requirements:

+5VDC \pm 0.2 VDC at 1.2 Amps (typical 6.0 watts) at +25°C

Compatibility:

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.

Physical Characteristics:

Height: 98 mm

Length: 175 mm

Width: 6.1 mm

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)

ORDERING INFORMATION:

Specify the basic product model number (PMC-SIO4BX), followed by an option suffix "-X", as indicated below. For example, model number PMC-SIO4BX-256K describes a board with a total of 256Kbytes of FIFO buffering.

Optional Parameter	Specify Option As:	Total FIFO Value	FIFO Size per direction per channel
FIFO Size:	X =256K	256Kbyte	32 Kbytes
	X = 64K	64Kbyte	8 Kbytes
	X = 4KLC	4Kbyte	512 bytes

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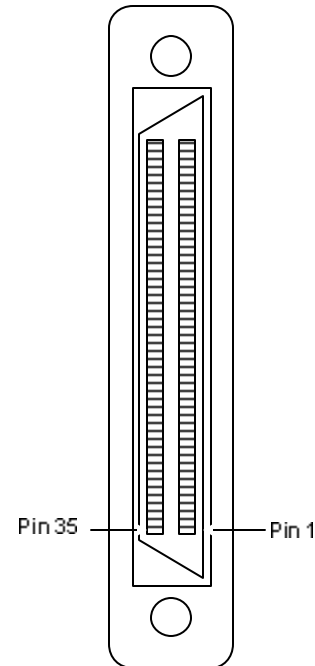
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USER I/O CONNECTIONS:

Pin #	DTE Signal	DCE Signal	Pin #	DTE Signal	DCE Signal
1	Ch1 RxClk +	Ch1 TxClk +	35	Ch3 RxClk +	Ch3 TxClk +
2	Ch1 RxClk -	Ch1 TxClk -	36	Ch3 RxClk -	Ch3 TxClk -
3	Ch1 DCDI +	Ch1 DCDO +	37	Ch3 DCDI +	Ch3 DCDO +
4	Ch1 DCDI -	Ch1 DCDO -	38	Ch3 DCDI -	Ch3 DCDO -
5	Ch1 CTS +	Ch1 RTS +	39	Ch3 CTS +	Ch3 RTS +
6	Ch1 CTS -	Ch1 RTS -	40	Ch3 CTS -	Ch3 RTS -
7	Ch1 RxD +	Ch1 TxD +	41	Ch3 RxD +	Ch3 TxD +
8	Ch1 RxD -	Ch1 TxD -	42	Ch3 RxD -	Ch3 TxD -
9	Ch1 RxC +	Ch1 TxC +	43	Ch3 RxC +	Ch3 TxC +
10	Ch1 RxC -	Ch1 TxC -	44	Ch3 RxC -	Ch3 TxC -
11	Ch1 RTS +	Ch1 CTS +	45	Ch3 RTS +	Ch3 CTS +
12	Ch1 RTS -	Ch1 CTS -	46	Ch3 RTS -	Ch3 CTS -
13	Ch1 TxD +	Ch1 RxD +	47	Ch3 TxD +	Ch3 RxD +
14	Ch1 TxD -	Ch1 RxD -	48	Ch3 TxD -	Ch3 RxD -
15	Ch1 TxC +	Ch1 RxC +	49	Ch3 TxC +	Ch3 RxC +
16	Ch1 TxC -	Ch1 RxC -	50	Ch3 TxC -	Ch3 RxC -
17	GND	GND	51	GND	GND
18	GND	GND	52	GND	GND
19	Ch2 CTS +	Ch2 CTS +	53	Ch4 CTS +	Ch4 CTS +
20	Ch2 CTS -	Ch2 CTS -	54	Ch4 CTS -	Ch4 CTS -
21	Ch2 RxD +	Ch2 TxD +	55	Ch4 RxD +	Ch4 TxD +
22	Ch2 RxD -	Ch2 TxD -	56	Ch4 RxD -	Ch4 TxD -
23	Ch2 RxC +	Ch2 TxC +	57	Ch4 RxC +	Ch4 TxC +
24	Ch2 RxC -	Ch2 TxC -	58	Ch4 RxC -	Ch4 TxC -
25	Ch2 RTS +	Ch2 CTS +	59	Ch4 RTS +	Ch4 CTS +
26	Ch2 RTS -	Ch2 CTS -	60	Ch4 RTS -	Ch4 CTS -
27	Ch2 TxD +	Ch2 RxD +	61	Ch4 TxD +	Ch4 RxD +
28	Ch2 TxD -	Ch2 RxD -	62	Ch4 TxD -	Ch4 RxD -
29	Ch2 TxC +	Ch2 RxC +	63	Ch4 TxC +	Ch4 RxC +
30	Ch2 TxC -	Ch2 RxC -	64	Ch4 TxC -	Ch4 RxC -
31	Ch2 DCDI +	Ch2 DCDO +	65	Ch4 DCDI +	Ch4 DCDO +
32	Ch2 DCDI -	Ch2 DCDO -	66	Ch4 DCDI -	Ch4 DCDO -
33	Ch2 RxClk +	Ch2 TxClk +	67	Ch4 RxClk +	Ch4 TxClk +
34	Ch2 RxClk -	Ch2 TxClk -	68	Ch4 RxClk -	Ch4 TxClk -



The user interface connections on the SIO4BX 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. The tables below show the pinout for the RS485/RS422. Single Ended signals (RS-423 and RS-232) use the negative side (-) of the differential pair.

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