

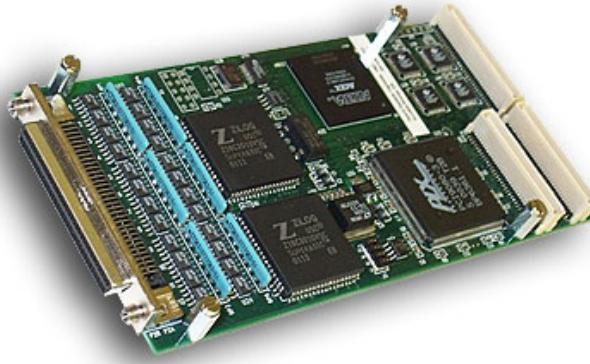
General Standards Corporation

High Performance Bus Interface Solutions

PMC-SIO4AR

Quad Channel High Performance Serial I/O With Rear I/O

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
- PMC Rear IO User Interface.
- SCSI II type 68-pin I/O Connector with optional cable adapter to DB25 connectors.
- Independent Transmit and Receive FIFOs for each Serial Channel – Up to 32k Bytes Deep
- Fast RS485/RS422 Differential Cable Transceivers to Provide Increased Noise Immunity
- Two Industry Standard Zilog Z16C30 Multi-Protocol Universal Serial Controllers
- Serial Mode Protocols include Async, Bisync, SDLC, HDLC, Ethernet, and Nine-Bit
- Parity and CRC detection capability
- Two Serial Clocks, Two Serial Data, Data Carrier Detect, and Clear-To-Send per Channel
- Dual PCI DMA Engine to speed transfers and minimize host I/O overhead
- Programmable Oscillator provides increased flexibility for Baud Rate Clock generation
- Device Drivers for VxWorks™, WinNT™, Win2k™, Linux™, and LabView™ are available

Applications Include:

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

General Standards Corporation

8302A Whitesburg Drive • Huntsville, AL 35802

Phone: (256)880-8787 or (800)653-9970

FAX: (256)880-8788

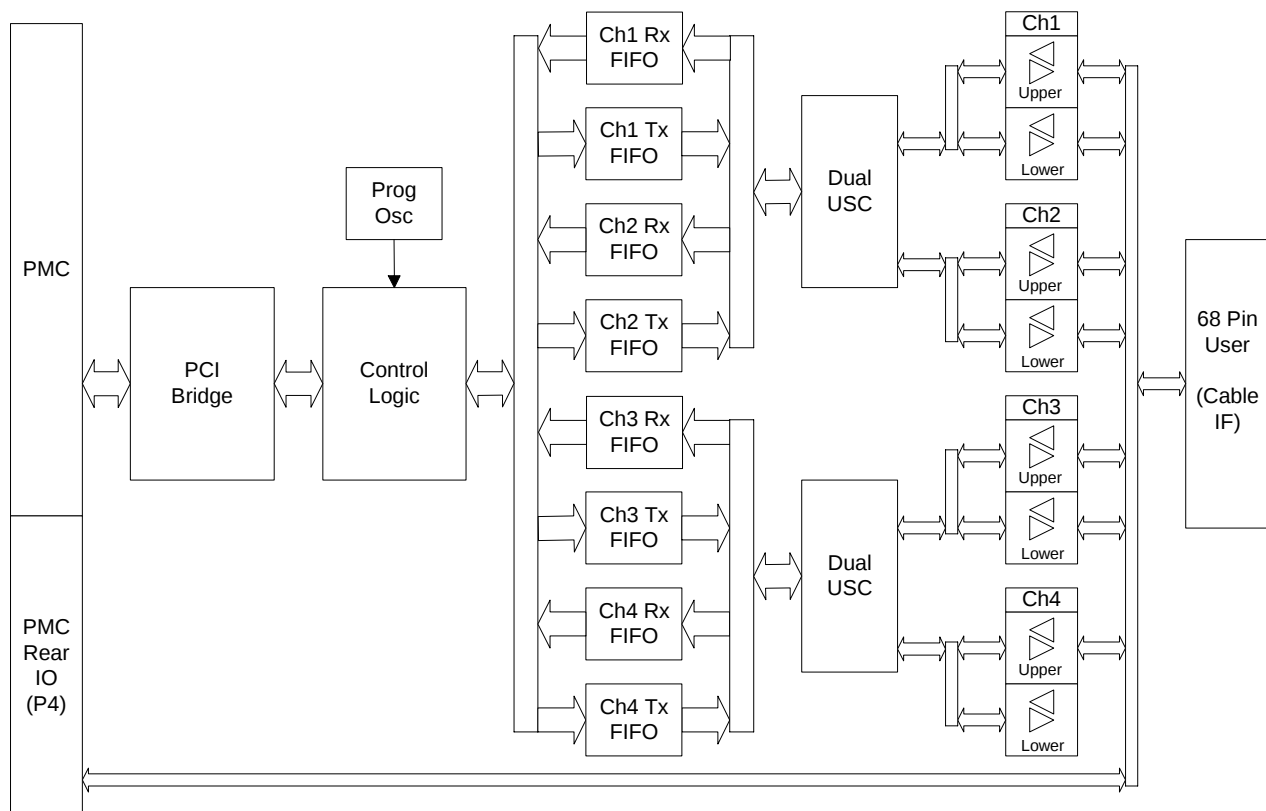
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Functional Description:

The PMC-SIO4AR board is a four channel serial interface card which provides high speed, full-duplex, multi-protocol serial capability for PCI Mezzanine Card (PMC) applications. The PMC-SIO4AR 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. In addition to the standard front edge I/O connector, the PMC-SIO4AR also provides a user interface via the PMC Rear IO connector. These features, along with a high performance PCI interface engine, give the PMC-SIO4AR unsurpassed performance in a serial interface card.



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ELECTRICAL SPECIFICATIONS

At +25 °C, with specified operating voltages.

PCI INTERFACE

- ☐ **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.

MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

☐ **Power Requirements**

+5VDC $\pm$ 0.2 VDC at 1.5 Amps

Power Dissipation: 6.0 Watts, Side 1
1.5 Watts, Side 2

☐ **Physical Characteristics**

Height: 7.0 mm
Depth: 149.0 mm
Width: 74.0 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).

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ORDERING INFORMATION

PMC-SIO4AR-“X”

“X” = FIFO Size Option

Part Number	Total FIFO Size (4 channels w/separate Rx/Tx FIFOs per channel)	Individual FIFO Size
PMC-SIO4AR-256K	256K byte	32K byte
PMC-SIO4AR-128K	128K byte	16K byte
PMC-SIO4AR-64K	64K byte	8K byte
PMC-SIO4AR-32K	32K byte	4K byte
PMC-SIO4AR-8K	8K byte	1K byte
PMC-SIO4AR-4KLC	4K byte	512 bytes

CABLE OPTIONS:

Please consult factory for cable options.

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SYSTEM I/O CONNECTIONS

The SCSI II type 68-pin (user I/O interface) connector (PLUG) is mounted at the front edge of the board (Ref. Des. PA2, for row A & PB2, for row B). The part number is 787170-7, manufacturer, AMP. Mating connector is AMP 749621-7. Contact GSC for factory built cables of any desired length.

Front Edge User Cable Pin-Out

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

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Rear IO PMC P4 Pin-Out

P2, Row A	Pin #	P2, Row B	Pin #
Ch1 CTS +	1	Ch3 CTS +	33
Ch1 CTS -	2	Ch3 CTS -	4
Ch1 Lower Cable TxD/RxD +	3	Ch3 Lower Cable TxD/RxD +	35
Ch1 Lower Cable TxD/RxD -	4	Ch3 Lower Cable TxD/RxD -	36
GND	5	GND	37
GND	6	GND	38
Ch1 Lower Cable TxClk/RxClk +	7	Ch3 Lower Cable TxClk/RxClk +	39
Ch1 Lower Cable TxClk/RxClk -	8	Ch3 Lower Cable TxClk/RxClk -	40
Ch1 DCD +	9	Ch3 DCD +	41
Ch1 DCD -	10	Ch3 DCD -	42
Ch1 Upper Cable TxD/RxD +	11	Ch3 Upper Cable TxD/RxD +	43
Ch1 Upper Cable TxD/RxD -	12	Ch3 Upper Cable TxD/RxD -	44
GND	13	GND	45
GND	14	GND	46
Ch1 Upper Cable TxClk/RxClk +	15	Ch3 Upper Cable TxClk/RxClk +	47
Ch1 Upper Cable TxClk/RxClk -	16	Ch3 Upper Cable TxClk/RxClk -	48
Ch2 CTS +	17	Ch4 CTS +	49
Ch2 CTS -	18	Ch4 CTS -	50
Ch2 Lower Cable TxD/RxD +	19	Ch4 Lower Cable TxD/RxD +	51
Ch2 Lower Cable TxD/RxD -	20	Ch4 Lower Cable TxD/RxD -	52
GND	21	GND	53
GND	22	GND	54
Ch2 Lower Cable TxClk/RxClk +	23	Ch4 Lower Cable TxClk/RxClk +	55
Ch2 Lower Cable TxClk/RxClk -	24	Ch4 Lower Cable TxClk/RxClk -	56
Ch2 DCD +	25	Ch4 DCD +	57
Ch2 DCD -	26	Ch4 DCD -	58
Ch2 Upper Cable TxD/RxD +	27	Ch4 Upper Cable TxD/RxD +	59
Ch2 Upper Cable TxD/RxD -	28	Ch4 Upper Cable TxD/RxD -	60
GND	29	GND	61
GND	30	GND	62
Ch2 Upper Cable TxClk/RxClk +	31	Ch4 Upper Cable TxClk/RxClk +	63
Ch2 Upper Cable TxClk/RxClk -	32	Ch4 Upper Cable TxClk/RxClk -	64

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