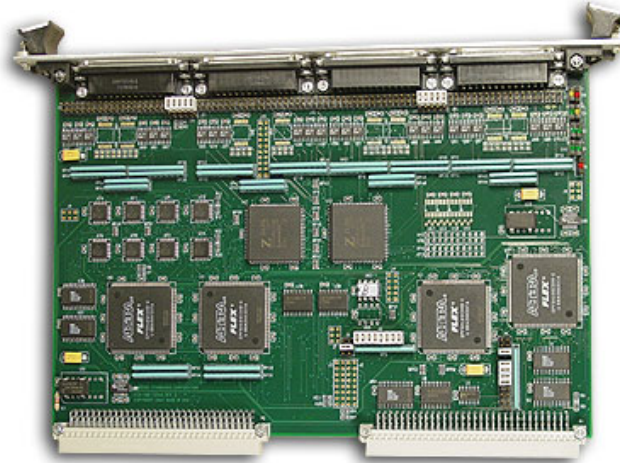


General Standards Corporation

High Performance Bus Interface Solutions

VME-SIO4A

Quad Channel High Performance Serial I/O VME CARD



Features Include:

- 4 Full-Duplex Serial Channels
- Either RS-422/485 or RS232 interface available
- Up to 10 Mbits/s synchronous operation on each channel
- Up to 32 Kbyte FIFOs for transmit and receive of each channel (8 FIFOs Total)
- Serial channel cabling - via front panel of host
- Built-In-Self Test capability verifies proper operation of the card
- Supports Asynchronous, Bisync, SDLC, HDLC, and Nine-bit protocols
- DMA to/from Zilog Z16C30 (USC) to on-board FIFOs
- DMA to/from on-board FIFOs to host
- Programmable selectable data rates via on-board baud rate generator per each channel
- Sync word selection allows an interrupt upon the reception of a user specified character.
- Extensive interrupt signaling capability

Applications Include:

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

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Functional Description:

The VME-SIO4A is an easy-to-use four channel full-duplex RS-422/485 serial board. Each channel can operate up to 10 Mbits/s. Optional 32 Kbyte FIFO buffer for both transmit and receive data on each channel (256 Kbytes total) provides for a smooth and efficient interface between the serial interfaces and the Host computer. The board is based on the Zilog Z16C30 high speed Integrated Universal Serial Controller (USC) which supports Asynchronous, Isochronous, Bisync, Monosync, HDLC, SDLC, External Sync and Nine-Bit protocols. The USC chip provides full duplex operation with baud rate generators, digital phase-locked loop for clock recovery and a full duplex DMA interface. The board only requires simple read/write statements to operate.

MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

❑ Power Requirements

The Measured power consumption of the VME-SIO4AA board is 1.7 Amps Idle

General Self Test Internal Loopback
1.9 Amps.

External Loopback
1 Channel Transmitting
1 Channel Receiving.

1.9 to 2.0 Amps external Loopback -

❑ 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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SYSTEM I/O CONNECTIONS

THE CHANNEL PIN-OUT JUMPERS (J10, J12, J13, J15)

Jumpers J10, J12, J13, and J15 may be removed to allow wire wrapping to accommodate various pin-out configurations. It is the suggestion of GSC that any reconfiguration of the pin-out should always maintain paired signals on the cable, i.e., the “+” signals should travel beside or be twisted with the “-“ signal.

If the jumpers are installed in the factory configuration, then the following pin-outs will apply:

The table below explains the Pin-Out for User Connectors (P3 Channel 0, P4 Channel 1, P5 Channel 2, P6 Channel 3)

Jumper Pin #	Signal Name	Connector Pin #
1-2	LWR Cable TxD/RxD +	3
3-4	LWR Cable TxD/RxD -	16
5-6	NC	
7-8	LWR Cable Cts/DCD +	5
9-10	LWR Cable Cts/DCD -	18
11-12	NC	
13-14	NC	
15-16	Ground	7
17-18	Ground	20
19-20	NC	
21-22	NC	
23-24	LWR Cable Tx/Rx/CLK +	9
25-26	LWR Cable Tx/Rx/CLK -	22
27-28	UPR Cable TxD/RxD -	10
29-30	UPR Cable TxD/RxD +	23
31-32	UPR Cable CTS/DCD -	11
33-34	UPR Cable CTS/DCD +	24
35-36	UPR Cable Tx/Rx/CLK -	12
37-38	UPR Cable Tx/Rx/CLK +	25

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General Standards Corporation assumes no responsibility for the use of any circuits in this product. No circuit patent licenses are implied. Information included herein supersedes previously published specifications on this product and is subject to change without notice.

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