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, and IEEE 802.3
- 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
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.
Power Requirements:
+5VDC ±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.

<table>
<thead>
<tr>
<th>Optional Parameter</th>
<th>Specify Option As:</th>
<th>Total FIFO Value</th>
<th>FIFO Size per direction per channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIFO Size:</td>
<td>X =256K</td>
<td>256Kbyte</td>
<td>32 Kbytes</td>
</tr>
<tr>
<td></td>
<td>X = 64K</td>
<td>64Kbyte</td>
<td>8 Kbytes</td>
</tr>
<tr>
<td></td>
<td>X = 4KLC</td>
<td>4Kbyte</td>
<td>512 bytes</td>
</tr>
</tbody>
</table>

USER I/O CONNECTIONS:
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 749621-7 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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