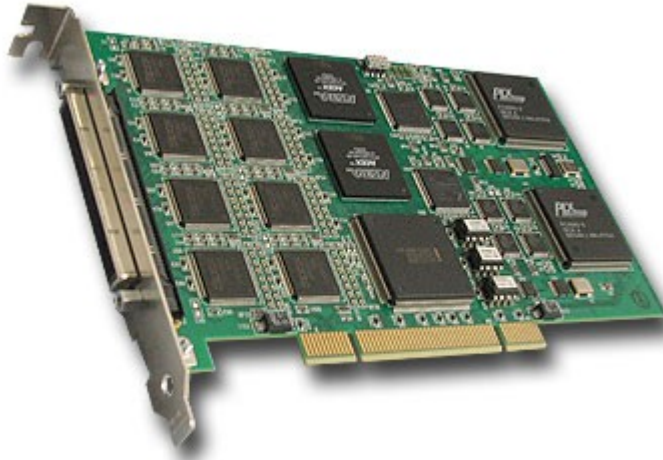


# **General Standards Corporation**

## **High Performance Bus Interface Solutions**

### **PCI-SIO8BXS**

**Eight Channel High Performance Serial I/O PCI CARD**  
*Featuring Multi-Protocol Serial I/O with Software Configurable Cable Transceivers and Deep FIFO Buffers (up to a total of 512 KB)*



The PCI-SIO8BX is an eight channel serial interface card which provides high speed, full-duplex, multi-protocol serial capability for PCI applications. The SIO8BX combines four multi-protocol Dual Universal Serial Controllers (USC®), 16 external FIFOs, and multi-protocol transceivers to provide eight fully independent synchronous/asynchronous serial channels. These features, along with a high performance PCI interface engine, give the PCI-SIO8BX unsurpassed performance in a serial interface card.

#### Features:

- Eight 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 Serial Channel – Up to 32k Deep Each
- Serial Mode Protocols include Asynchronous, MonoSync, BiSync and SDLC/HDLC.
- Multi-protocol Transceivers support RS422 (V.11)/RS485, RS423 (V.10), RS232 (V.28), V.35, RS530A, as well as other Mixed Protocol modes.
- Parity and CRC detection capability
- Two On-Board Programmable Oscillators provide increased flexibility for exact Baud Rate Clock generation
- Low Force Helix (LFH) type 160 pin front edge I/O Connector with optional cable adapter to eight DB25 connectors.
- Nine signals per channel, configurable as either DTE or DCE configuration: 3 Serial Clocks, 2 Serial Data signals, Clear-To-Send (CTS), and Ready-To-Send (RTS), DCD, and DTR.
- Unused signals may be reconfigured as general purpose IO.
- Fast RS422/RS485/V.35 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

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### **General Standards Corporation**

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# General Standards Corporation

## High Performance Bus Interface Solutions

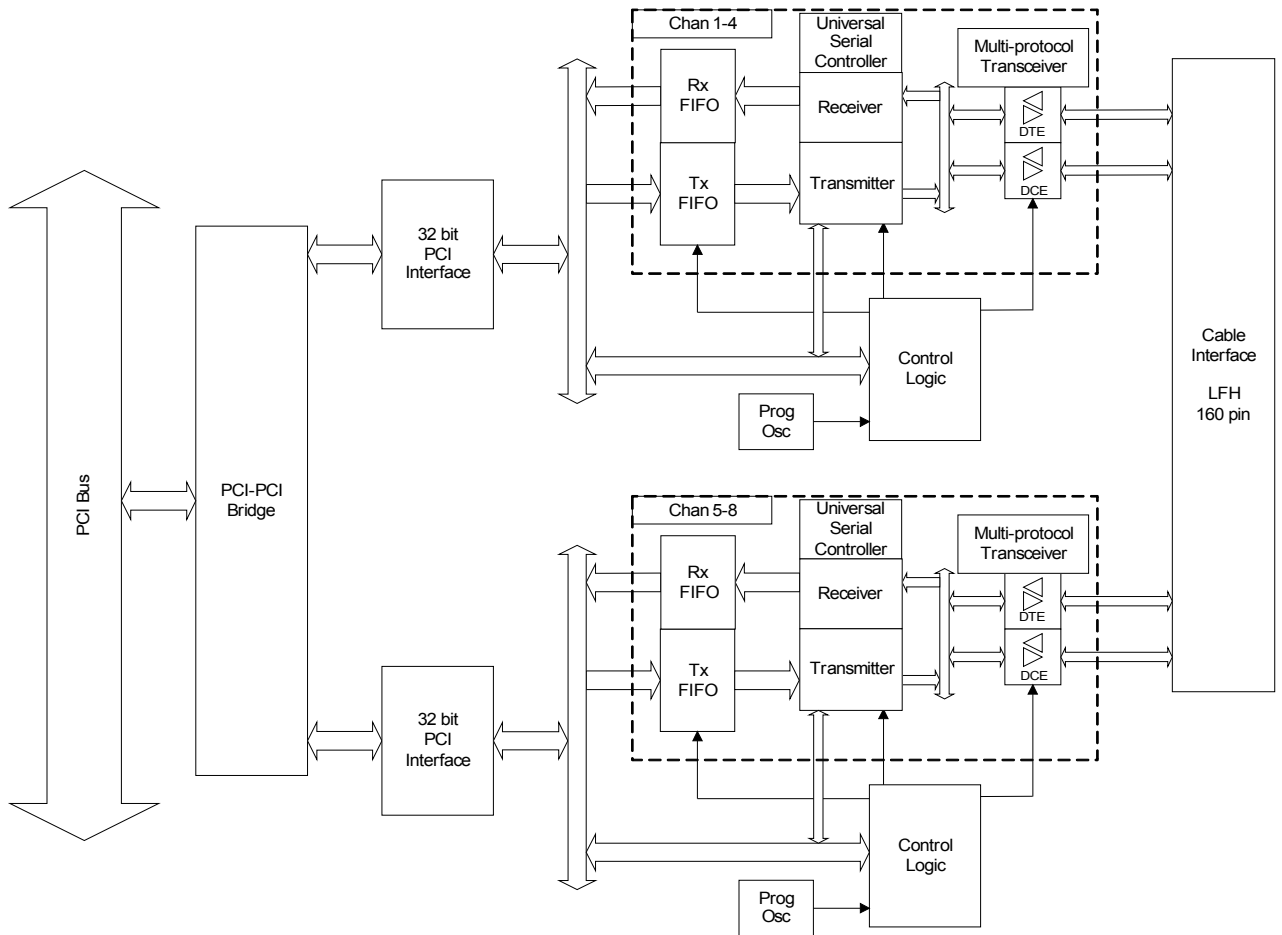
- A variety of device drivers are available, including VxWorks, WinNT, Win2k, WinXP, Linux, and Labview

### Applications Include:

- LAN/WAN Networking
- Telecommunications
- Serial Interface

### Functional Diagram:

The PCI-SIO8BXS is based on the four channel SIO4BX product line from General Standards Corporation. In order to maintain software compatibility, the PCI-SIO8BXS is implemented as two independent four channel SIO4BX cards. The following diagram shows the PCI-SIO8BXS setup.



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## High Performance Bus Interface Solutions

### System I/O Connections:

GSC PCI-SIO8BX 160 LFH Connector Pin-out, Rev A:			
1 TXC1+	80 TXD1+	81 TXD3+	160 TXC3+
2 TXC1-	79 TXD1-	82 TXD3-	159 TXC3-
3 RXC1+	78 RXD1+	83 RXD3+	158 RXC3+
4 RXC1-	77 RXD1-	84 RXD3-	157 RXC3-
5 AUXC1	76 DCD1+	85 DCD3+	156 AUXC3+
6 AUXC1-	75 DCD1-	86 DCD3-	155 AUXC3-
7 (DTR1+)	74 CTS1+	87 CTS3+	154 (DTR3+)
8 (DTR1-)	73 CTS1-	88 CTS3-	153 (DTR3-)
9 RTS1+	72 SGND1	89 SGND3	152 RTS3+
10 RTS1-	71 Unused	90 Unused	151 RTS3-
11 TXC2+	70 Unused	91 Unused	150 TXC4+
12 TXC2-	69 SGND2	92 SGND4	149 TXC4-
13 RXC2+	68 TXD2+	93 TXD4+	148 RXC4+
14 RXC2-	67 TXD2-	94 TXD4-	147 RXC4-
15 AUXC2+	66 RXD2+	95 RXD4+	146 AUXC4+
16 AUXC2-	65 RXD2-	96 RXD4-	145 AUXC4-
17 (DTR2+)	64 DCD2+	97 DCD4+	144 (DTR4+)
18 (DTR2-)	63 DCD2-	98 DCD4-	143 (DTR4-)
19 RTS2+	62 CTS2+	99 CTS4+	142 RTS4+
20 RTS2-	61 CTS2-	100 CTS4-	141 RTS4-
21 TXC5+	60 TXD5+	101 TXD7+	140 TXC7+
22 TXC5-	59 TXD5-	102 TXD7-	139 TXC7-
23 RXC5+	58 RXD5+	103 RXD7+	138 RXC7+
24 RXC5-	57 RXD5-	104 RXD7-	137 RXC7-
25 AUXC5+	56 DCD5+	105 DCD7+	136 AUXC7+
26 AUXC5-	55 DCD5-	106 DCD7-	135 AUXC7-
27 (DTR5+)	54 CTS5+	107 CTS7+	134 (DTR7+)
28 (DTR5-)	53 CTS5-	108 CTS7-	133 (DTR7-)
29 RTS5+	52 SGND5	109 SGND7	132 RTS7+
30 RTS5-	51 Unused	110 Unused	131 RTS7-
31 TXC6+	50 Unused	111 Unused	130 TXC8+
32 TXC6-	49 SGND6	112 SGND8	129 TXC8-
33 RXC6+	48 TXD6+	113 TXD8+	128 RXC8+
34 RXC6-	47 TXD6-	114 TXD8-	127 RXC8-
35 AUXC6+	46 RXD6+	115 RXD8+	126 AUXC8+
36 AUXC6-	45 RXD6-	116 RXD8-	125 AUXC8-
37 (DTR6+)	44 DCD6+	117 DCD8+	124 (DTR8+)
38 (DTR6-)	43 DCD6-	118 DCD8-	123 (DTR8-)
39 RTS6+	42 CTS6+	119 CTS8+	122 RTS8+
40 RTS6-	41 CTS6-	120 CTS8-	121 RTS8-

The user interface connector on the SIO8BX is a 160-pin LFH connector (female) mounted to the front edge of the board (P2). The part number for this 160-pin LFH connector is Molex 51-24-1040. The mating cable connector consists of Molex 70984-4009 (4 qty - contacts) and 71624-3000 (housing). Please see the PCI-SIO8BXS User's Manual, available on our website, for more detailed pin-out descriptions for the PCI-SIO8BXS, including pin-out charts for different modes of operation.

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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