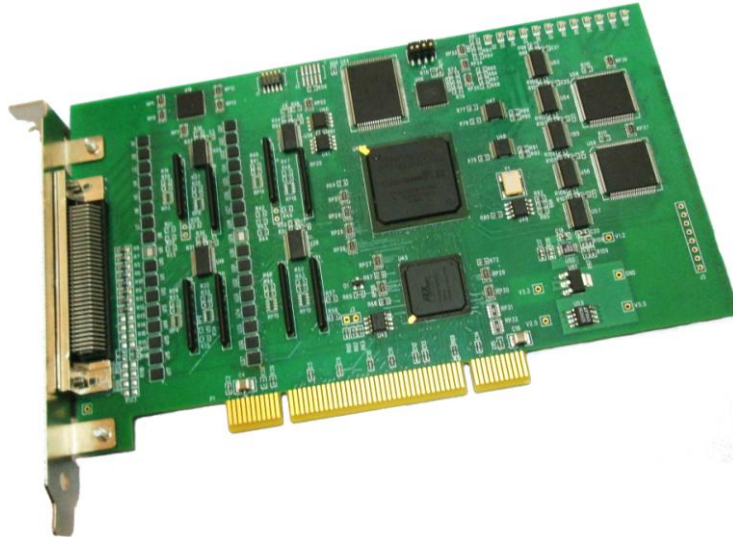


General Standards Corporation

High Performance Bus Interface Solutions

PCI66-SIO4B

Four Channel High Performance Serial I/O PCI Card
Featuring RS422/RS485 Transceivers
and up to 32K Byte FIFO Buffers (256K Byte total)



The PCI66-SIO4B is a four channel serial interface card which provides high speed, full-duplex, multi-protocol serial capability for PCI applications. The PCI66-SIO4B combines multi-protocol Dual Universal Serial Controllers, deep external FIFOs, and fast RS422/RS485 transceivers to provide four fully independent synchronous/asynchronous serial channels. These features, along with a high performance 66MHz PCI interface engine, give the PCI66-SIO4B unsurpassed performance in a serial interface card.

Features:

- Four Independent RS422/RS485 Serial Channels
- Serial Mode Protocols include Asynchronous, Monosync, Bisync, SDLC, HDLC, Nine-Bit, and IEEE 802.3
- Synchronous Serial Data Rates up to 10Mbps
- Asynchronous Serial Data Rates up to 1Mbps
- Independent Transmit and Receive FIFOs for each Serial Channel – 32K byte each
- Transceivers support RS422 and RS485
- Parity and CRC detection capability
- Programmable Oscillators provide increased flexibility for Baud Rate Clock generation
- SCSI type 68 pin front edge I/O Connector
- Eight signals per channel, configurable as either DTE or DCE:
3 Serial Clocks (TxClk,RxClk,AuxClk), 2 Serial Data signals (TxData,RxDData), CTS, RTS, DCD
- Unused signals may be reconfigured as General Purpose IO
- Fast RS422/RS485 Differential Cable Transceivers Provide Data Rates up to 10Mbps
- Industry Standard Zilog Z16C30 Multi-Protocol Universal Serial Controllers (USC®)
- Standard Cable to four DB25 connectors and Custom Cables available
- Available drivers include VxWorks, WinNT, Win2k, WinXP, Linux, and Labview
- Industrial Temperature Option Available

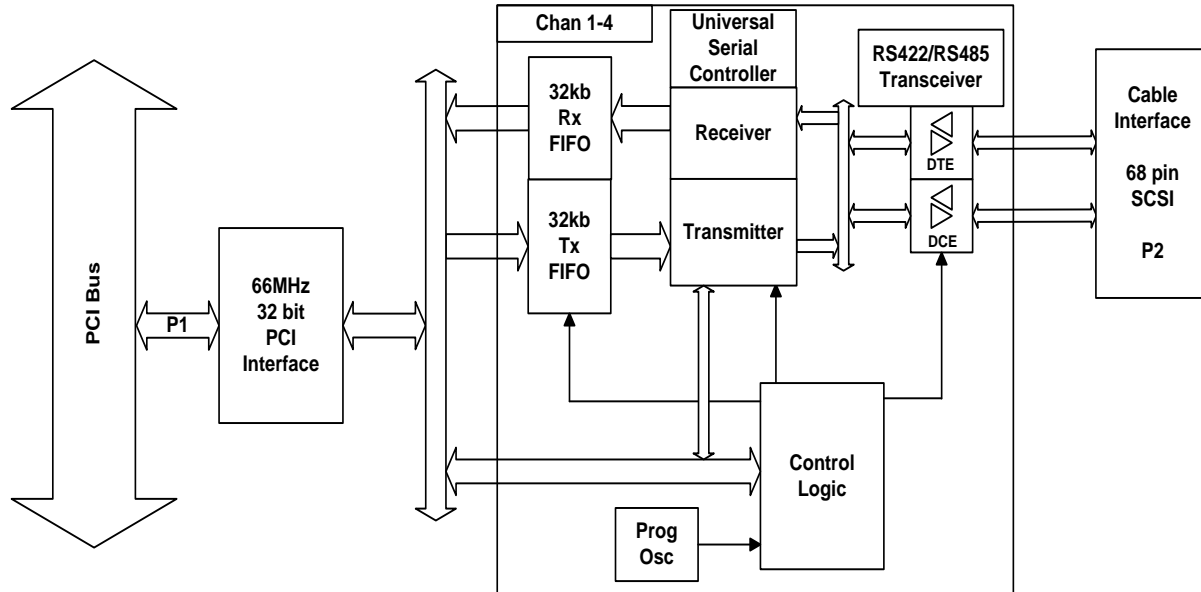
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Functional Diagram:

The PCI66-SIO4B is a high performance, four channel serial board based on the SIO4BX product line from General Standards Corporation. The PCI66-SIO4B has a 66Mhz PCI interface, RS422/RS485 transceivers, and 68 Pin SCSI Front Panel IO Connector.



Universal Serial Controller Data Modes:

- Asynchronous Sample rates of 1/16, 1/32/ or 1/64 Clock Rate. Programmable Start/Stop/Parity Bits
- Isochronous 1x Synchronous Clocking . Programmable Start/Stop/Parity Bits
- Async with Code Violations Start Bit replaced with Three Bit Code Violation Pattern as in MIL-STD-1553B
- Monosync Single Character used for Synchronization
- Bisync Two Characters used for Synchronization
- HDLC Receiver recognizes Flags, Optional Address Matching, Zero Deletion, and CRC Checking
- Bisync Transparent Sync Pattern is DLE-SYN Programmable.
- NineBit Additional Address/Data bit between Parity and Stop Bits
- 802.3 Implements Data Format of 802.3 with 16 bit Address Compare
- Slaved Monosync Transmit Data is Synchronized to Received Data
- HDLC Loop Transmitter Echoes Received Messages

Universal Serial Controller Data Encoding:

- NRZ
- NRZB
- NRZI-Mark
- NRZI-Space
- Biphasic Mark
- Biphasic-Space
- Biphasic Level
- Differential Biphasic Level

See Zilog Z16C30 data sheet at www.zilog.com for detailed Universal Serial Controller Capabilities

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Power Requirements (@25° C):

- +5VDC ± 0.2 VDC at 2 Amps Max (typical 1.2 Amps)
- +12VDC ± 0.2 VDC at 0.03 Amps Max (typical 0.02 Amps)
- Typical Total Power Dissipation: ~6W

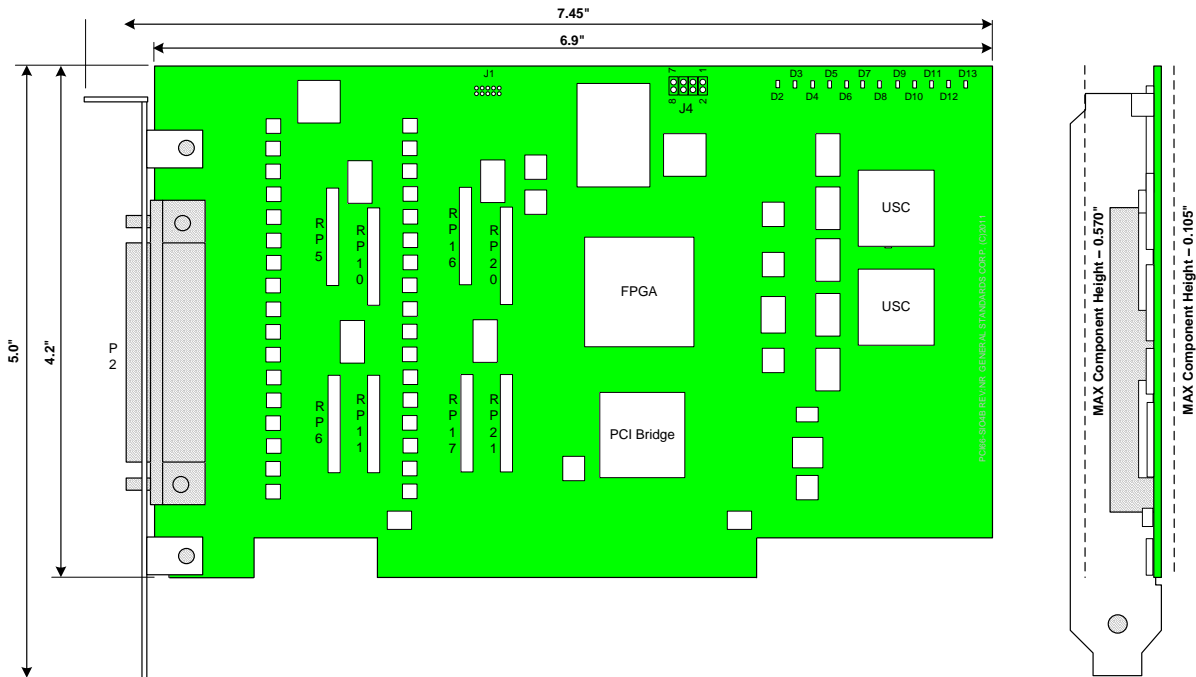
PCI Compatibility:

- 32bit / 66MHz PCI r2.2 Compliant
- Direct Master DMA transfer
- Provides a single multifunction interrupt (INTA)
- 3.3V IO / 5V tolerant PCI bus interface

Physical Characteristics:

Conforms to PCI Short Card Specification

Length: 6.9"
Width: 4.2"



Environmental Specifications:

Ambient Temperature Range: Operating: 0° to +70° C (Commercial Option)
-40° to +85° C (Industrial Option)
Storage: -40° to +85° C

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

Ordering Information:

PCI166 – SIO4B - <FIFO Size> - <Temperature>

Option	Valid Selections	Description
FIFO Size	48KLC	(software selectable) 4K byte Tx / 8K byte Rx FIFO or 8K byte Tx / 4K byte Rx FIFO
	64K	8K byte Tx / 8K byte Rx FIFO
	256K	32K byte Tx / 32K byte Rx FIFO
Temperature	<blank>	0°C to +70°C – Commercial (Standard)
	I	-40°C to +85°C – Industrial

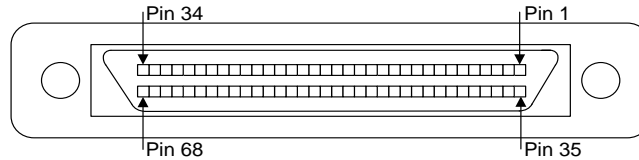
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System I/O Connections:

User I/O Connector: 68-pin SCSI connector (female) - P2
 Part Number: AMP/TYCO 787170-7
 Mating Connector: AMP/TYCO 749111-6 (or equivalent)



Pin #	RS422/RS485		Pin #	RS422/RS485	
	DTE	DCE		DTE	DCE
1	AUXC1+		35	AUXC3+	
2	AUXC1-		36	AUXC3-	
3	DCD1+		37	DCD3+	
4	DCD1-		38	DCD3-	
5	CTS1+	RTS1+	39	CTS3+	RTS3+
6	CTS1-	RTS1-	40	CTS3-	RTS3-
7	RXD1+	TXD1+	41	RXD3+	TXD3+
8	RXD1-	TXD1-	42	RXD3-	TXD3-
9	RXC1+	TXC1+	43	RXC3+	TXC3+
10	RXC1-	TXC1-	44	RXC3-	TXC3-
11	RTS1+	CTS1+	45	RTS3+	CTS3+
12	RTS1-	CTS1-	46	RTS3-	CTS3-
13	TXD1+	RXD1+	47	TXD3+	RXD3+
14	TXD1-	RXD1-	48	TXD3-	RXD3-
15	TXC1+	RXC1+	49	TXC3+	RXC3+
16	TXC1-	RXC1-	50	TXC3-	RXC3-
17	SGND1		51	SGND3	
18	SGND2		52	SGND4	
19	CTS2+	RTS2+	53	CTS4+	RTS4+
20	CTS2-	RTS2-	54	CTS4-	RTS4-
21	RXD2+	TXD2+	55	RXD4+	TXD4+
22	RXD2-	TXD2-	56	RXD4-	TXD4-
23	RXC2+	TXC2+	57	RXC4+	TXC4+
24	RXC2-	TXC2-	58	RXC4-	TXC4-
25	RTS2+	CTS2+	59	RTS4+	CTS4+
26	RTS2-	CTS2-	60	RTS4-	CTS4-
27	TXD2+	RXD2+	61	TXD4+	RXD4+
28	TXD2-	RXD2-	62	TXD4-	RXD4-
29	TXC2+	RXC2+	63	TXC4+	RXC4+
30	TXC2-	RXC2-	64	TXC4-	RXC4-
31	DCD2+		65	DCD4+	
32	DCD2-		66	DCD4-	
33	AUXC2+		67	AUXC4+	
34	AUXC2-		68	AUXC4-	

Table 1- Front Panel (P2) IO Connections

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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