

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

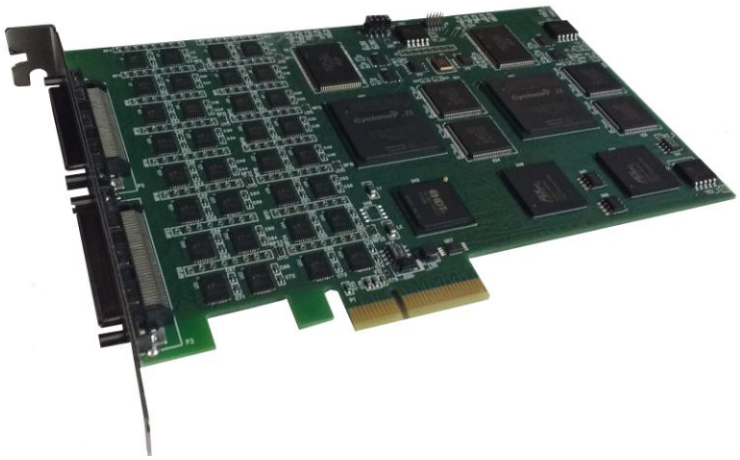
General Standards Corporation

High Performance Bus Interface Solutions

PCIe4-SIO8BX2V

Eight Channel High Performance Serial I/O PCIe Card

Featuring RS422/RS485/RS232 Software Configurable Transceivers and 32K Byte FIFO Buffers (512K Byte total)



The PCIe4-SIO8BX2V is an eight channel serial interface card which provides high speed, full-duplex, multi-protocol serial capability for PCIe applications. The PCIe4-SIO8BX2V combines multi-protocol Dual Universal Serial Controllers, deep external FIFOs, and software selectable multi-protocol transceivers to provide eight fully independent synchronous/asynchronous serial channels. These features, along with a high performance four lane PCIe interface engine, give the PCIe4-SIO8BX2V unsurpassed performance in a serial interface card.

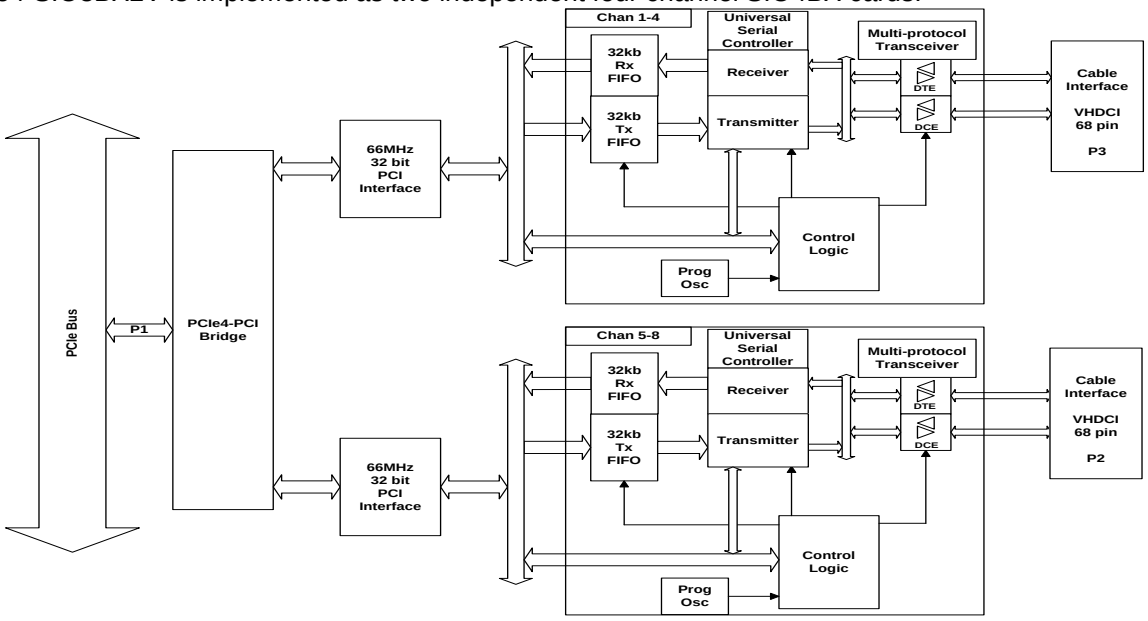
Features:

- Four Lane PCI Express (PCIe4) Interface
- Eight Independent RS422/RS485/RS232 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
- Multi-protocol Transceivers support RS422/RS485 and RS232
- Parity and CRC detection capability
- Programmable Oscillators provide increased flexibility for Baud Rate Clock generation
- Two VHDCI 68 pin front edge I/O Connectors
- Eight signals per channel, configurable as either DTE or DCE:
  3 Serial Clocks (TxC,RxC,AuxC), 2 Serial Data signals (TxD,RxD), CTS, RTS, DCD
- Unused signals may be reconfigured as General Purpose IO
- Fast RS422/RS485 Differential Cable Transceivers Provide Data Rates up to 10Mbps
- RS232 Cable Transceivers Provide Data Rates up to 250kbps
- Industry Standard Zilog Z16C30 Multi-Protocol Universal Serial Controllers (USC®)
- Standard Cable - VHDCI to four DB25 connectors. Custom Cables available
- Available drivers include VxWorks, WinNT, Win2k, WinXP, Linux, and Labview
- Industrial Temperature Option Available

General Standards Corporation
8302A Whitesburg Drive · Huntsville, AL 35802
Phone: (256)880-8787 or (800)653-9970
FAX: (256)880-8788
Email: sales@generalstandards.com

Functional Diagram:

The PCIe4-SIO8BX2V is a high performance, eight channel serial board based on the SIO4BX product line from General Standards Corporation. In order to maintain software compatibility, the PCIe4-SIO8BX2V is implemented as two independent four channel SIO4BX cards.



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
- Biphase Mark
- Biphase-Space
- Biphase Level
- Differential Biphase Level

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

Power Requirements (@25° C):

- +3.3VDC ± 0.2 VDC at 2.3 Amps Max (typical 1.7 Amps)
- +12VDC ± 0.2 VDC at 0.05 Amps Max (typical 0.03 Amps)
- Typical Total Power Dissipation: ~6.1W

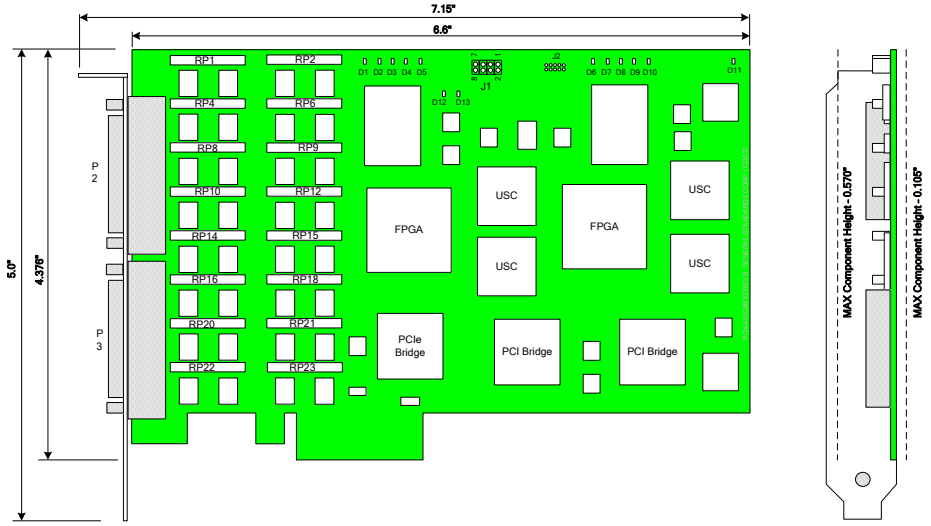
PCIe Compatibility:

- PCI Express Base Specification (Revision 1.1)
- 4 lane PCIe support
- 512byte maximum payload support
- Lane reversal and lane polarity inversion
- End-to-end CRC (ECRC) check and generation
- Up to four outstanding memory reads
- Four, 128-byte read completion buffers
- ASPM L0s link state power management
- Legacy interrupt signaling and MSI interrupts

Physical Characteristics:

Conforms to PCIe Short Card Specification

Length: 167.65 mm (6.600")
Width: 111.15 mm (4.376")



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:

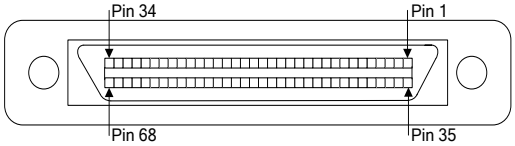
PCIe4 – SIO8BX2V - <*Temperature*>

Option	Valid Selections	Description
Temperature	<blank>	0°C to +70°C – Commercial (Standard)
	I	-40°C to +85°C – Industrial

General Standards Corporation
8302A Whitesburg Drive · Huntsville, AL 35802
Phone: (256)880-8787 or (800)653-9970
FAX: (256)880-8788
Email: sales@generalstandards.com

System I/O Connections:

User I/O Connector: 68-pin VHDCI connector (receptacle)
Part Number: TE Connectivity 5796055-1
Mating Connector: TE Connectivity 5787131-3 (or equivalent)



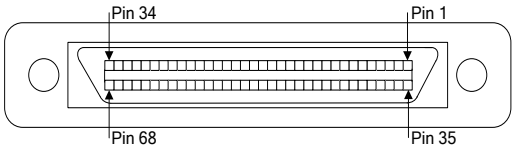
Note: Protocol Mode is set on a per channel basis.

Pin #	RS422/RS485		RS232		Pin #	RS422/RS485		RS232	
	DTE	DCE	DTE	DCE		DTE	DCE	DTE	DCE
1	AUXC5+		Unused		35	AUXC7+		Unused	
2	AUXC5-		AUXC5		36	AUXC7-		AUXC7	
3	DCD5+		Unused		37	DCD7+		Unused	
4	DCD5-		DCD5		38	DCD7-		DCD7	
5	CTS5+	RTS5+	Unused		39	CTS7+	RTS7+	Unused	
6	CTS5-	RTS5-	CTS5	RTS5	40	CTS7-	RTS7-	CTS7	RTS7
7	RXD5+	TXD5+	Unused		41	RXD7+	TXD7+	Unused	
8	RXD5-	TXD5-	RXD5	TXD5	42	RXD7-	TXD7-	RXD7	TXD7
9	RXC5+	TXC5+	Unused		43	RXC7+	TXC7+	Unused	
10	RXC5-	TXC5-	RXC5	TXC5	44	RXC7-	TXC7-	RXC7	TXC7
11	RTS5+	CTS5+	Unused		45	RTS7+	CTS7+	Unused	
12	RTS5-	CTS5-	RTS5	CTS5	46	RTS7-	CTS7-	RTS7	CTS7
13	TXD5+	RXD5+	Unused		47	TXD7+	RXD7+	Unused	
14	TXD5-	RXD5-	TXD5	RXD5	48	TXD7-	RXD7-	TXD7	RXD7
15	TXC5+	RXC5+	Unused		49	TXC7+	RXC7+	Unused	
16	TXC5-	RXC5-	TXC5	RXC5	50	TXC7-	RXC7-	TXC7	RXC7
17	SGND5		SGND5		51	SGND3		SGND7	
18	SGND6		SGND6		52	SGND8		SGND8	
19	CTS6+	RTS6+	Unused		53	CTS8+	RTS8+	Unused	
20	CTS6-	RTS6-	CTS6	RTS6	54	CTS8-	RTS8-	CTS8	RTS8
21	RXD6+	TXD6+	Unused		55	RXD8+	TXD8+	Unused	
22	RXD6-	TXD6-	RXD6	TXD6	56	RXD8-	TXD8-	RXD8	TXD8
23	RXC6+	TXC6+	Unused		57	RXC8+	TXC8+	Unused	
24	RXC6-	TXC6-	RXC6	TXC6	58	RXC8-	TXC8-	RXC8	TXC8
25	RTS6+	CTS6+	Unused		59	RTS8+	CTS8+	Unused	
26	RTS6-	CTS6-	RTS6	CTS6	60	RTS8-	CTS8-	RTS8	CTS8
27	TXD6+	RXD6+	Unused		61	TXD8+	RXD8+	Unused	
28	TXD6-	RXD6 -	TXD6	RXD6	62	TXD8-	RXD8-	TXD8	RXD8
29	TXC6+	RXC6+	Unused		63	TXC8+	RXC8+	Unused	
30	TXC6-	RXC6-	TXC6	TXC6	64	TXC8-	RXC8-	TXC8	RXC8
31	DCD6+		Unused		65	DCD8+		Unused	
32	DCD6-		DCD6		66	DCD8-		DCD8	
33	AUXC6+		Unused		67	AUXC8+		Unused	
34	AUXC6-		AUXC6		68	AUXC8-		AUXC8	

Table 1- Front Panel (P2) IO Connections

System I/O Connections:

User I/O Connector: 68-pin VHDCI connector (receptacle)
Part Number: TE Connectivity 5796055-1
Mating Connector: TE Connectivity 5787131-3 (or equivalent)



Note: Protocol Mode is set on a per channel basis.

Pin #	RS422/RS485		RS232		Pin #	RS422/RS485		RS232	
	DTE	DCE	DTE	DCE		DTE	DCE	DTE	DCE
1	AUXC1+		Unused		35	AUXC3+		Unused	
2	AUXC1-		AUXC1		36	AUXC3-		AUXC3	
3	DCD1+		Unused		37	DCD3+		Unused	
4	DCD1-		DCD1		38	DCD3-		DCD3	
5	CTS1+	RTS1+	Unused		39	CTS3+	RTS3+	Unused	
6	CTS1-	RTS1-	CTS1	RTS1	40	CTS3-	RTS3-	CTS3	RTS3
7	RXD1+	TXD1+	Unused		41	RXD3+	TXD3+	Unused	
8	RXD1-	TXD1-	RXD1	TXD1	42	RXD3-	TXD3-	RXD3	TXD3
9	RXC1+	TXC1+	Unused		43	RXC3+	TXC3+	Unused	
10	RXC1-	TXC1-	RXC1	TXC1	44	RXC3-	TXC3-	RXC3	TXC3
11	RTS1+	CTS1+	Unused		45	RTS3+	CTS3+	Unused	
12	RTS1-	CTS1-	RTS1	CTS1	46	RTS3-	CTS3-	RTS3	CTS3
13	TXD1+	RXD1+	Unused		47	TXD3+	RXD3+	Unused	
14	TXD1-	RXD1-	TXD1	RXD1	48	TXD3-	RXD3-	TXD3	RXD3
15	TXC1+	RXC1+	Unused		49	TXC3+	RXC3+	Unused	
16	TXC1-	RXC1-	TXC1	RXC1	50	TXC3-	RXC3-	TXC3	RXC3
17	SGND1		SGND1		51	SGND3		SGND3	
18	SGND2		SGND2		52	SGND4		SGND4	
19	CTS2+	RTS2+	Unused		53	CTS4+	RTS4+	Unused	
20	CTS2-	RTS2-	CTS2	RTS2	54	CTS4-	RTS4-	CTS4	RTS4
21	RXD2+	TXD2+	Unused		55	RXD4+	TXD4+	Unused	
22	RXD2-	TXD2-	RXD2	TXD2	56	RXD4-	TXD4-	RXD4	TXD4
23	RXC2+	TXC2+	Unused		57	RXC4+	TXC4+	Unused	
24	RXC2-	TXC2-	RXC2	TXC2	58	RXC4-	TXC4-	RXC4	TXC4
25	RTS2+	CTS2+	Unused		59	RTS4+	CTS4+	Unused	
26	RTS2-	CTS2-	RTS2	CTS2	60	RTS4-	CTS4-	RTS4	CTS4
27	TXD2+	RXD2+	Unused		61	TXD4+	RXD4+	Unused	
28	TXD2-	RXD2 -	TXD2	RXD2	62	TXD4-	RXD4-	TXD4	RXD4
29	TXC2+	RXC2+	Unused		63	TXC4+	RXC4+	Unused	
30	TXC2-	RXC2-	TXC2	TXC2	64	TXC4-	RXC4-	TXC4	RXC4
31	DCD2+		Unused		65	DCD4+		Unused	
32	DCD2-		DCD2		66	DCD4-		DCD4	
33	AUXC2+		Unused		67	AUXC4+		Unused	
34	AUXC2-		AUXC2		68	AUXC4-		AUXC4	

Table 2- Front Panel (P3) 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.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP