

General Standards Corporation

High Performance Bus Interface Solutions

Serial to Fiber Optic Converter Box

Quad-Channel High Performance Fiber Optic Extension product for Serial I/O

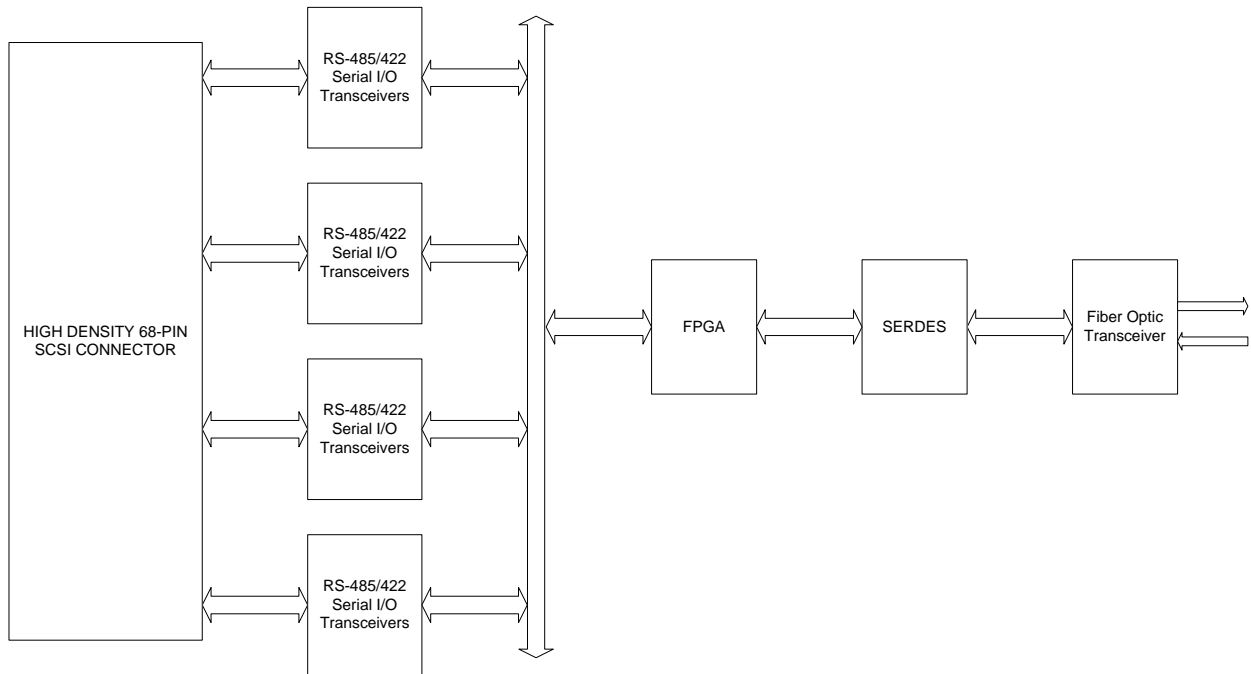


Features Include:

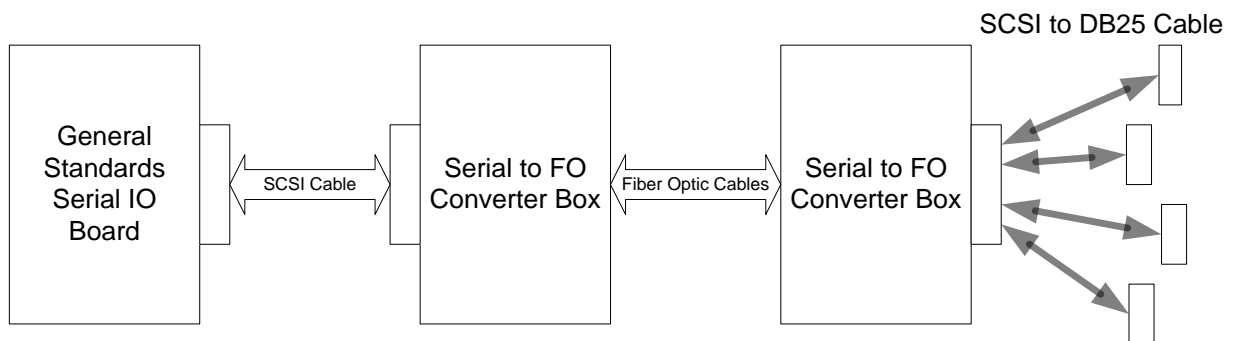
- Remote Serial Converter Box with high density 68-pin SCSI-3 connector for serial connections. Adapter cable (SCSI to 4x DB25s) available upon request. 68-pin SCSI-3 connector is compatible with General Standards' Serial IO Cards such as the XXX-SIO4B/SIO4BX/SIO4BXR and SYNC products.
- 4 channels with up to 8 differentials signal per channel. Channels 1 and 2 provide 4 inputs and 4 outputs each. Channels 3 and 4 provide 3 inputs and 3 outputs each.
- Two Modes of operation
 - MODE 1: Boxes can be used, back-to-back to make up a serial to fiber (and then back to serial) extension product.
 - MODE 2: When used with the SIO4BXR-FO board, this makes a complete IO solution. The SIO4BXR-FO board provides the PCI host interface, Zilog Z16C30 Universal Serial Controllers (USC), FIFOs and fiber optic transceivers. The Serial to Fiber Optic Converter Box takes the Fiber Optic signals and converts them into standard serial signals as listed below.
- Transceivers support RS422 (V.11)/RS485.
- Four signals per channel, configurable as either DTE or DCE configuration.
- Fast RS422/RS485 Differential Cable Transceivers Provide Data Rate up to 10Mbps
- Back to back mode allows connecting to existing SIO4BXR boards or any generic serial IO controller product

The Serial to Fiber Optic Converter Box has 68-pin SCSI connector for the serial IO and a TX/RX pair of fiber optic connectors for extending the length of serial signals.

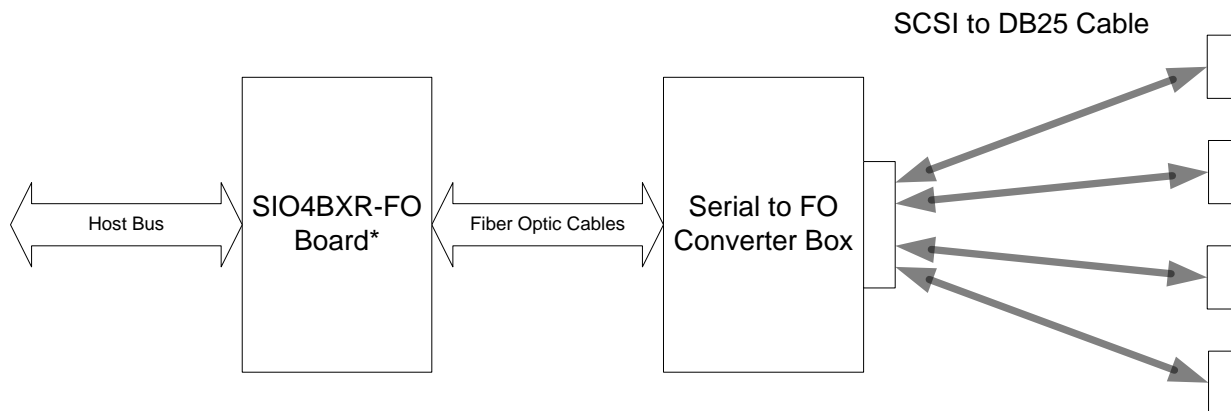
Serial to Fiber Optic Converter Box:



Mode 1 Block Diagram – Used in Back-to-Back mode to for a serial to fiber optic and back to serial extension product.



Mode 2 Block Diagram – Used with SIO4BXR-FO* board



*In Development

Electrical Characteristics:

- +5VDC \pm 0.2 VDC at 900 mA typical (3A supply shipped with unit)
- Power Dissipation: TBD Watts typical
- At +25 °C, with specified operating voltages

Dimensions:

165.00 x (160.00 +/- 0.50) x 51.50 (mm)

6.496 x (6.299 +/- 0.020) x 2.028 (inches)

System I/O Connections (RS485/RS422):

The user interface connections on the SIO4B-FO are via a SCSI-3 type 68-pin connector (female) mounted to the face plate. The part number for the 68-pin connector is AMP 787170-7. The mating connector is AMP 749111-6 or equivalent.

The fiber optic connections (Tx/Rx pair) are via an SFP module with LC style connectors.

Standard multi-mode cables with LC connectors and 50 um MMF can be used. Contact GSC for information on Fiber Optic cables.

LINK LENGTHS:

- 200 m with 50 μ m MMF
- 100 m with 62.5 μ m MMF

Longer distances are possible with Single Mode optics. Contact GSC for details.

SCSI Connector IO and SCSI to DB25 Adapter Cable IO

Cable connections for the SIO4B-FO							
Board Pin #	DB25 Pin #	DTE Mode Signal:	DCE Mode Signal:	Board Pin #	DB25 Pin #	DTE Mode Signal:	DCE Mode Signal:
1	12	Spare 1A+		35	12	Spare 3A+	
2	25	Spare 1A-		36	25	Spare 3A-	
3	10	Spare 1B+		37	10	Spare 3B+	
4	23	Spare 1B-		38	23	Spare 3B-	
5	3	Ch1 CTS +	Ch1 RTS +	39	3	Ch3 CTS +	Ch3 RTS +
6	16	Ch1 CTS -	Ch1 RTS -	40	16	Ch3 CTS -	Ch3 RTS -
7	1	Ch1 RxD +	Ch1 TxD +	41	1	Ch3 RxD +	Ch3 TxD +
8	14	Ch1 RxD -	Ch1 TxD -	42	14	Ch3 RxD -	Ch3 TxD -
9	5	Ch1 RxC +	Ch1 TxC +	43	5	Ch3 RxC +	Ch3 TxC +
10	18	Ch1 RxC -	Ch1 TxC -	44	18	Ch3 RxC -	Ch3 TxC -
11	9	Ch1 RTS +	Ch1 CTS +	45	9	Ch3 RTS +	Ch3 CTS +
12	22	Ch1 RTS -	Ch1 CTS -	46	22	Ch3 RTS -	Ch3 CTS -
13	7	Ch1 TxD +	Ch1 RxD +	47	7	Ch3 TxD +	Ch3 RxD +
14	20	Ch1 TxD -	Ch1 RxD -	48	20	Ch3 TxD -	Ch3 RxD -
15	11	Ch1 TxC +	Ch1 RxC +	49	11	Ch3 TxC +	Ch3 RxC +
16	24	Ch1 TxC -	Ch1 RxC -	50	24	Ch3 TxC -	Ch3 RxC -
17	13	Ch 1 GND		51	13	Ch 3 GND	
18	13	Ch 2 GND		52	13	Ch 4 GND	
19	3	Ch2 CTS +	Ch2 RTS +	53	3	Ch4 CTS +	Ch4 RTS +
20	16	Ch2 CTS -	Ch2 RTS -	54	16	Ch4 CTS -	Ch4 RTS -
21	1	Ch2 RxD +	Ch2 TxD +	55	1	Ch4 RxD +	Ch4 TxD +
22	14	Ch2 RxD -	Ch2 TxD -	56	14	Ch4 RxD -	Ch4 TxD -
23	5	Ch2 RxC +	Ch2 TxC +	57	5	Ch4 RxC +	Ch4 TxC +
24	18	Ch2 RxC -	Ch2 TxC -	58	18	Ch4 RxC -	Ch4 TxC -
25	9	Ch2 RTS +	Ch2 CTS +	59	9	Ch4 RTS +	Ch4 CTS +
26	22	Ch2 RTS -	Ch2 CTS -	60	22	Ch4 RTS -	Ch4 CTS -
27	7	Ch2 TxD +	Ch2 RxD +	61	7	Ch4 TxD +	Ch4 RxD +
28	20	Ch2 TxD -	Ch2 RxD -	62	20	Ch4 TxD -	Ch4 RxD -
29	11	Ch2 TxC +	Ch2 RxC +	63	11	Ch4 TxC +	Ch4 RxC +
30	24	Ch2 TxC -	Ch2 RxC -	64	24	Ch4 TxC -	Ch4 RxC -
31	10	Reserved Spare (1)		65	10	Reserved Spare (1)	
32	23	Reserved Spare (1)		66	23	Reserved Spare (1)	
33	12	Reserved Spare (1)		67	12	Reserved Spare (1)	
34	25	Reserved Spare (1)		68	25	Reserved Spare (1)	

NOTE 1: These pins are currently reserved and are not available for use. Please contact the factory with questions about the availability of these pins.

The SIO4B-FO was specifically designed to interface directly with General Standards' serial I/O products but it can be used in "Back to Back" mode with any serial I/O products as an extension product. The signal names in the table above are for reference only. The user can transmit and/or receive any signals on any pins. Any of the signals can also be used for discrete I/O as long as they comply with RS485/RS422 standards.