# Serial I/O Cables

## Description
## And
## Connection Diagrams

## CABLEx-SIO4B-STD3-DB25x-RS530

For the following products:

**PMC-SIO4BX**
**PCI-SIO4B**
**PC104P-SIO4B**
**PMC-SIO4BX-SYNC**
**PCI-SIO4B-SYNC**
**PC104P-SIO4B-SYNC**

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# PREFACE

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This document provides information on the description and connection diagrams for serial IO cables.

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# Introduction

This document includes descriptions and pin-out for serial IO cables for SIO4B/BX family of boards (PMC-SIO4BX, PCI-SIO4B). All of these boards have the same high-density connector so that all can be interchanged in a system without changing the serial IO cables.

**NOTE:** Since the SIO4B/BX/SYNC family of cards can accommodate many different protocols, the pin assignments for the DB25 connectors do not match any unique specification. General Standards Corporation can accommodate special pin assignments at the time you place the order. Please contact General Standards Corporation for more information.

All cables described in this diagram have a high-density connector on the ends that mate with any of these SIO4B/BX boards.

Cable part numbers for these SIO4B/BX boards are:

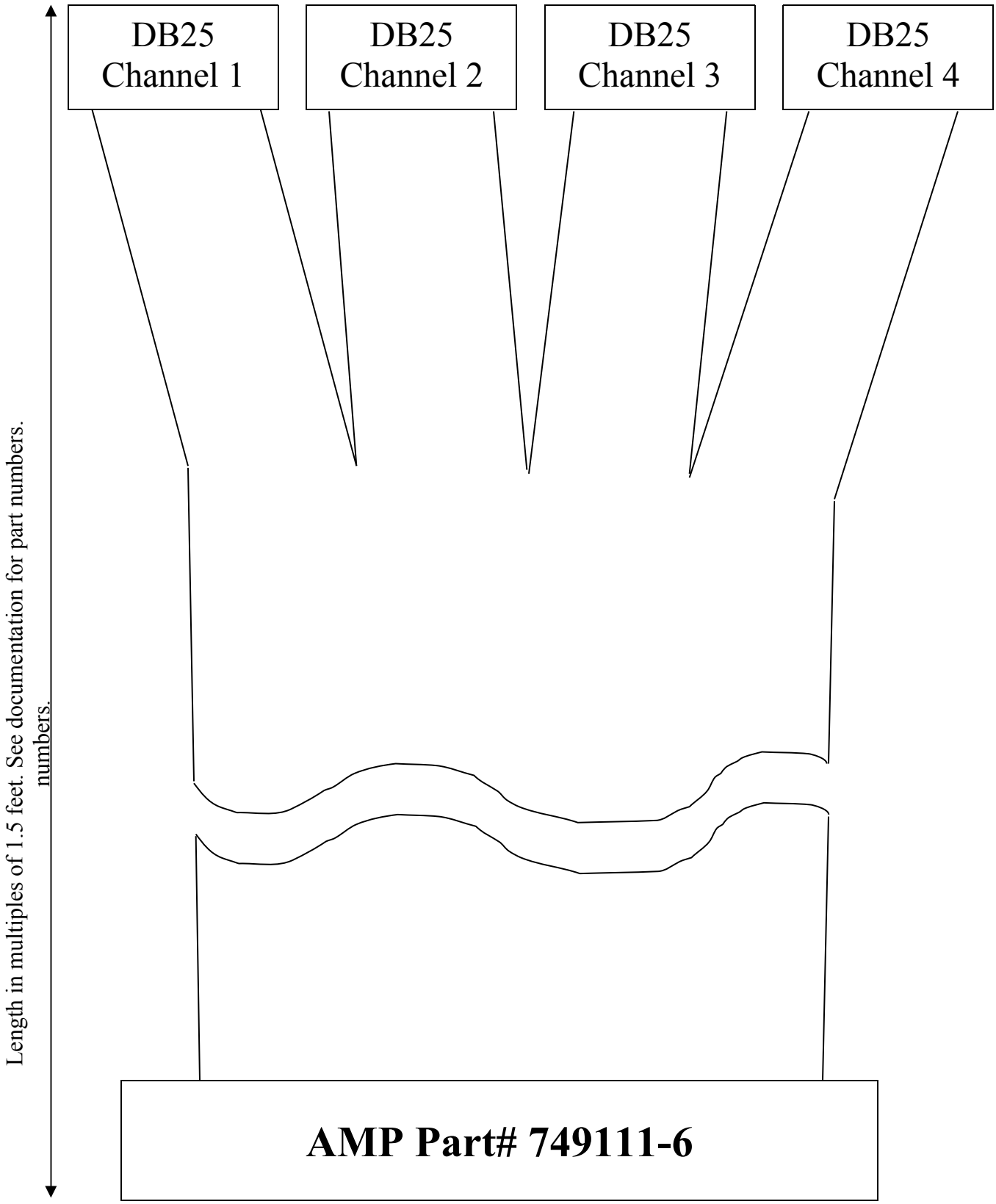
1) **CABLEx-SIO4B-STD3-DB25x-RS530**
   - x => length in feet (multiple of 1.5 ft, in lengths up to 100 feet)
   - STD3 => standard wiring diagram per diagram attached
   - DB25 => Four DB25 connectors are attached to the user end of the cable.
     - DB25P indicates DB25P connectors (P = pins, male)
     - DB25S indicated DB25S connectors (S = socket, female)
   - RS530 => Indicates a custom pin-out

2) **CABLEx-SIO4B-FLAT**
   - x => length in feet (multiple of 1.5 ft, in lengths up to 100 feet)
   - FLAT => designates a 68-pin connector on SIO4BX end only.

These cables use standard 68 conductor 'twist-n-flat' (also known as 'vari-twist') cable. It is made up of twisted pairs with a flat area every 1.5 feet. The conductor spacing in the flat area is standard 50 mil allowing connections to standard IDC connectors.

The pin-out on all of the boards assures that each differential signal is routed to a single twisted pair in the cable.

**SIO4B/BX card family cable overview:**





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# Cable CONNECTIONS for the CABLEx-SIO4B-STD3-DB25x-RS530:

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

* These signals are only present on the SIO4BX model cards.

# Cable CONNECTIONS for the CABLEx-SIO4B-STD3-DB25x-RS530:

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

* These signals are only present on the SIO4BX model cards.