# Serial I/O Cables

## Description
## And
## Connection Diagrams

## PMC-SIO4-RS232
## PCI-SIO4-RS232
## cPCI-SIO4-RS232

Preliminary
November 17, 2000

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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[1]

This diagram includes descriptions and pin-out for serial IO cables for SIO4 boards (PMC-SIO4, PCI-SIO4, cPCI-SIO4). 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.

All cables described in this diagram have a high-density connector on the ends that mate with any of these SIO4 boards.

Cable part numbers for these SIO4 boards are:

1) **CABLEx-SIO4-STD232-DB25P** where x is the length in feet, STD232 (see * below) designates a standard wiring diagram (per diagram attached), and DB25 designates that DB25 connectors are attached to the user end of the cable. Four DB25 connectors are used with the STD2 version. The DB25P suffix indicates the use of DB25P connectors (P = pins, male) on the user end of the cable. Replace DB25P with DB25S for a socket connector (ie, S for Socket, female DB25).

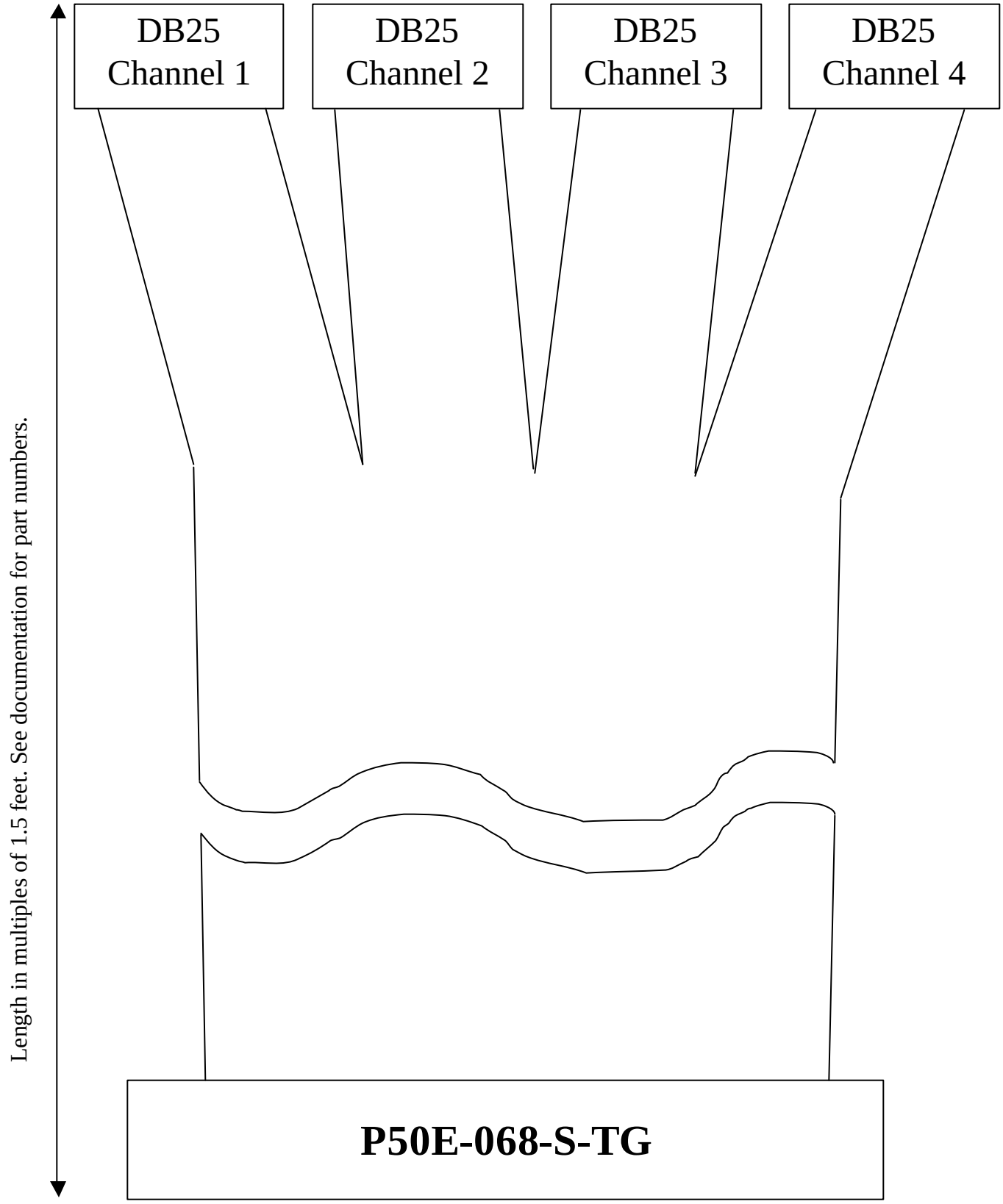
2) **CABLEx-SIO4-FLAT** where x is the length in feet and FLAT designates a connector on one end only.

The cable length must be a multiple of 1.5 ft, in lengths up to 100 feet.

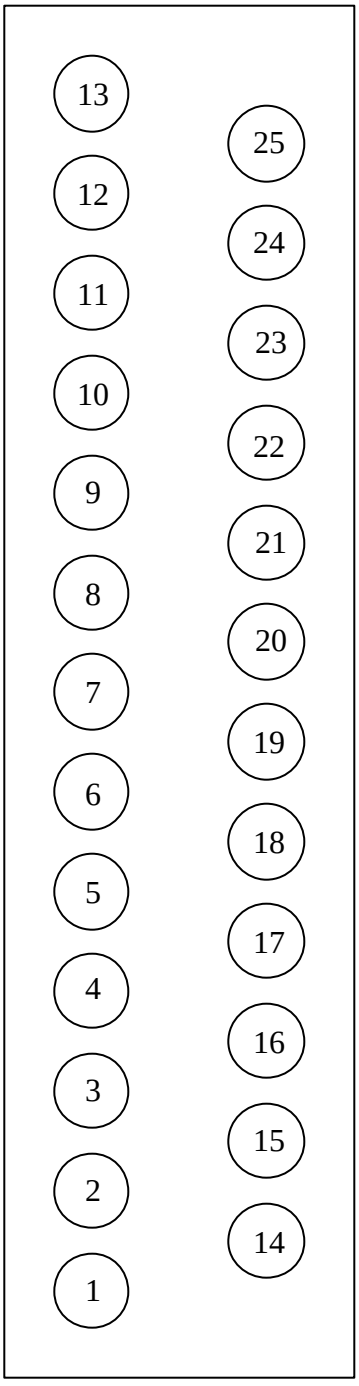
The flat cable used is standard 68 conductor 'twist-n-flat' (also known as 'vari-twist'). It is made up of twisted pairs with a flat area every 1.5 feet. The conductor spacing in the flat area is standard 50 mil; this allows the user to attach any 'old-style' insulation displacement connector (IDC) to the flat area.

* The wiring diagram can be chosen from GSC's "library" or provided by customer. The STD2 version may become a stocked item once typical lengths have been established.

## SIO4 card family cable overview:



# DB25 Connector Pin-out (same for each channel)




| | |
|---|---|
| 1 | CHAN_1_GND |
| 2 | CHANNEL_1_CABLE_TXD |
| 3 | CHANNEL_1_CABLE_RXD |
| 4 | * |
| 5 | CHANNEL_1_CABLE_CTS |
| 6 | * |
| 7 | * |
| 8 | CHANNEL_1_CABLE_DCD |
| 9 | CABLE_CHANNEL_1_TX_CLK |
| 10 | CABLE_CHANNEL_1_RX_CLK |
| 11 | * |
| 12 | * |
| 13 | * |
| 14 | * |
| 15 | * |
| 16 | * |
| 17 | * |
| 18 | * |
| 19 | * |
| 20 | * |
| 21 | * |
| 22 | * |
| 23 | * |
| 24 | * |
| 25 | * |

* Unused

# User Connector info for the SIO4-RS232 card family:

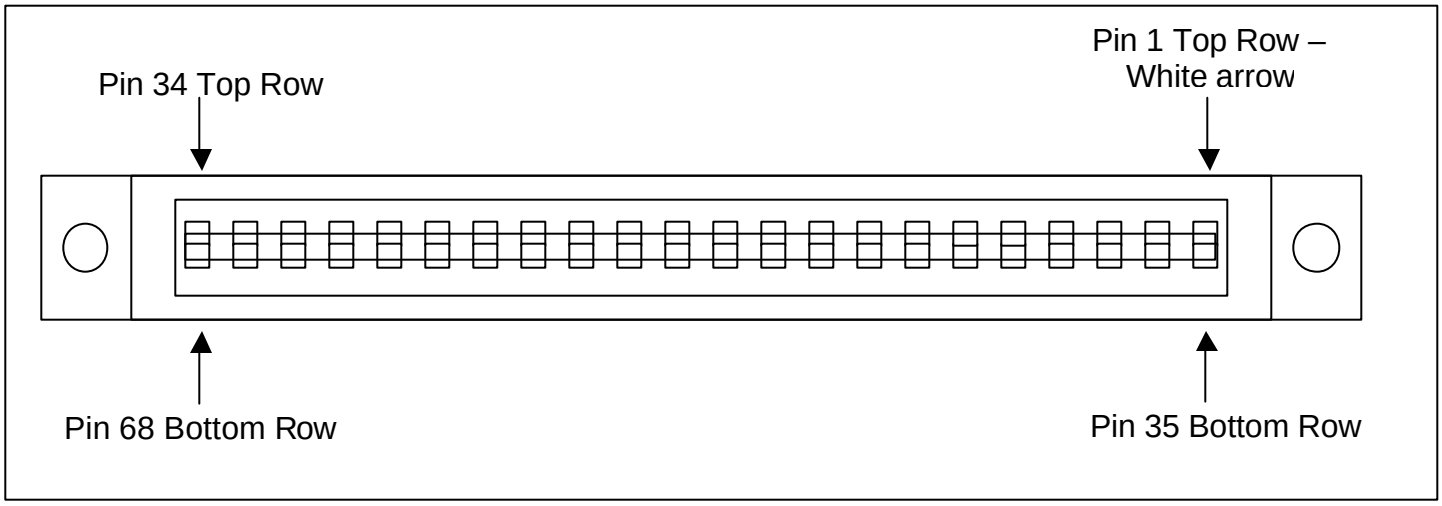



**Diagram 1 - Board Connector – As viewed from mating surface**

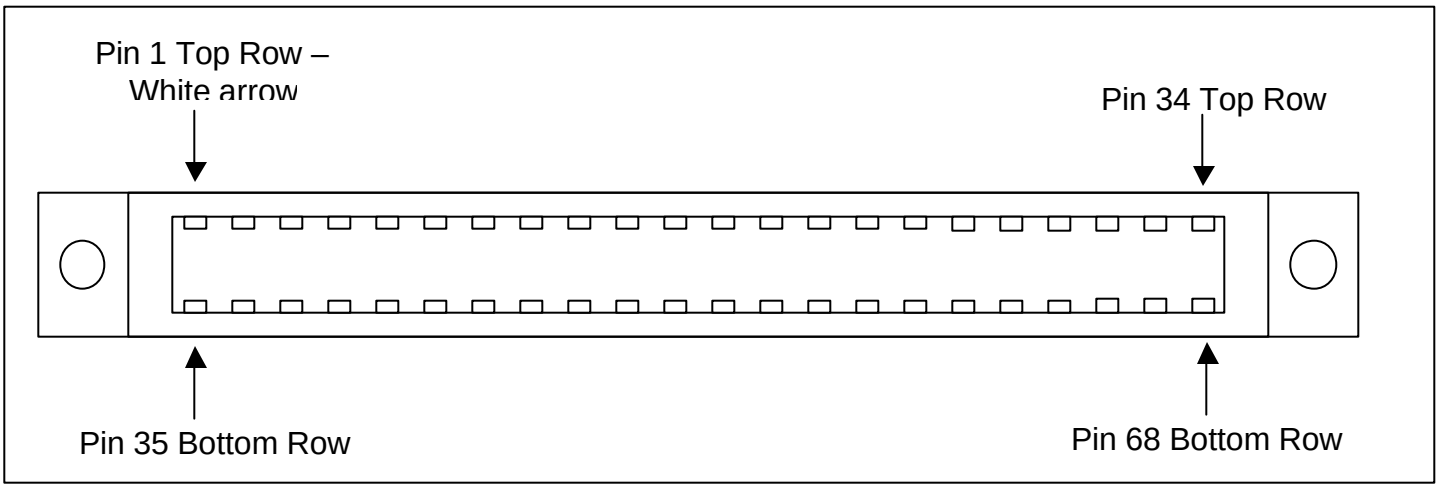



**Diagram 2 - Cable Connector – As viewed from mating surface**

**The Connectors used to make the cable are:**
The user cable connector part number for compatibility with the SIO4 is a Robinson Nugent **P50E-068-S-TG**.

## Pin Designations - PMC-SIO4-RS232 Cable:

| Board Connector Pin Number: | Signal Name: | DB25 Connector Number | DB25 Pin Number |
|---|---|---|---|
| 1 | CABLE_CHANNEL_1_TX_CLK | 1 | 9 |
| 2 | | | |
| 3 | CHANNEL_1_CABLE_TXD | 1 | 2 |
| 4 | | | |
| 5 | CHANNEL_1_CABLE_RXD | 1 | 3 |
| 6 | | | |
| 7 | | | |
| 8 | CABLE_CHANNEL_1_RX_CLK | 1 | 10 |
| 9 | CHANNEL_1_CABLE_CTS | 1 | 5 |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | CHAN_1_GND | 1 | 1 |
| 14 | | | |
| 15 | CHANNEL_1_CABLE_DCD | 1 | 8 |
| | **/* END CH 1 */** | | |
| 16 | | | |
| 17 | | | |
| 18 | CABLE_CHANNEL_2_TX_CLK | 2 | 9 |
| 19 | | | |
| 20 | CHANNEL_2_CABLE_TXD | 2 | 2 |
| 21 | | | |
| 22 | CHANNEL_2_CABLE_RXD | 2 | 3 |
| 23 | | | |
| 24 | | | |
| 25 | CABLE_CHANNEL_2_RX_CLK | 2 | 10 |
| 26 | CHANNEL_2_CABLE_CTS | 2 | 5 |
| 27 | | | |
| 28 | | | |
| 29 | | | |
| 30 | CHAN_2_GND | 2 | 1 |
| 31 | | | |
| 32 | CHANNEL_2_CABLE_DCD | 2 | 8 |
| | **/* END CH 2 */** | | |
| 33 | | | |
| 34 | | | |
| 35 | CABLE_CHANNEL_3_TX_CLK | 3 | 9 |
| 36 | | | |
| 37 | CHANNEL_3_CABLE_TXD | 3 | 2 |
| 38 | | | |
| 39 | CHANNEL_3_CABLE_RXD | 3 | 3 |
| 40 | | | |
| 41 | | | |
| 42 | CABLE_CHANNEL_3_RX_CLK | 3 | 10 |
| 43 | CHANNEL_3_CABLE_CTS | 3 | 5 |
| 44 | | | |
| 45 | | | |
| 46 | | | |
| 47 | CHAN_3_GND | 3 | 1 |
| 48 | | | |
| 49 | CHANNEL_3_CABLE_DCD | 3 | 8 |
| | **/* END CH 3 */** | | |

| | | | |
|---|---|---|---|
| 50 | | | |
| 51 | | | |
| 52 | CABLE_CHANNEL_4_TX_CLK | 4 | 9 |
| 53 | | | |
| 54 | CHANNEL_4_CABLE_TXD | 4 | 2 |
| 55 | | | |
| 56 | CHANNEL_4_CABLE_RXD | 4 | 3 |
| 57 | | | |
| 58 | | | |
| 59 | CABLE_CHANNEL_4_RX_CLK | 4 | 10 |
| 60 | CHANNEL_4_CABLE_CTS | 4 | 5 |
| 61 | | | |
| 62 | | | |
| 63 | | | |
| 64 | CHAN_4_GND | 4 | 1 |
| 65 | | | |
| 66 | CHANNEL_4_CABLE_DCD | 4 | 8 |
| | /* END CH 4 */ | | |
| 67 | | | |
| 68 | | | |