



SCOM-080x

**3U CompactPCI
4 or 8-channel Serial
Communication Card**

User Manual

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Document Revisions

Revision	Comment	BY	Date
E0	Initial	LL	09/09/99
E1.0	Change J2 pins designations Change Opt. Isolation spec. Change serial RS-422 speed	LL	10/18/99
E1.1	Correct communication rate	LL	10/19/99
E1.2	Review and correction	JR	03/10/00
E1.3	Update jumper settings	DG	01/30/01
E2.0	Updated document format	TJ	01/09/02

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I. Introduction

This document describes the specifications and functionality of Tenta's Serial Communication board, 3U Compact PCI bus interface. This board was designed as general-purpose Serial communication board with standard RS-232 and RS-485 ports.

The board form factor, physical dimension and BUS interface comply with Compact PCI Specification PICMG 2.0 R2.1. The I/O and power signals are distributed through J2 connector.

II. Ordering Information

Part Number	Description
AS00800-01	Serial communication card, 3U, 4 channel
AS00801-01	Serial communication card, 3U, 8 channel

III. Specifications

A. Physical Specifications

Criteria	Specifications
PCB Dimensions	100MM (3.9370") Height X 160MM (6.2992") Depth X 1.6MM (0.0629") Thickness
Form Factor	Plug in Euro card, 3U Height, 8 HP Width (1 slot), IEEE (1101.1, 101.10 and P1101.11)
Connectors	Metric 2.0mm grid, female connector type A is used for J1 (cPCI BUS) and J2 (Signal distribution).
Front Panel	128.5mm Height X 20.32mm Depth X 2.5 mm Thickness.

B. Environmental Specifications

Criteria	Specifications
Operating temperature	0-70 °C
Storage	-40 to +85 °C
Humidity	5 to 95% non-condensing

C. Functional Specifications

Criteria	Specifications
BUS interface	Compact PCI, 32 bit (16 bit data transfer) 33MHz
Plug and Play	Support auto recognition of the board on power-on and plug-in includes device ID, Vendor ID and configuration
Front Panel Indicators	5V Bus, 5V Isolated, Tx and Rx LEDs for each channel

D. Power Specifications

Criteria	Specifications
Digital Section Power Supply	+5VDC from J1
Output Section Power Supply	+5VDC EXT generated on board by DC/DC (3W)

E. Serial Signal Specifications

Criteria	Specifications
Number of Serial Outputs	4 or 8 (configured as RS-232 or RS-422)
RS-232 Standard	Compatible with EIA/TIA-232E and V.28 Specification
RS-422 Standard	Compatible with EIA standard RS-422/485
RS-232 Max Data Rate	120Kbps
RS-422 Max Data Rate	1.25Mbps
Isolation	Opto Isolation, Min 1500V

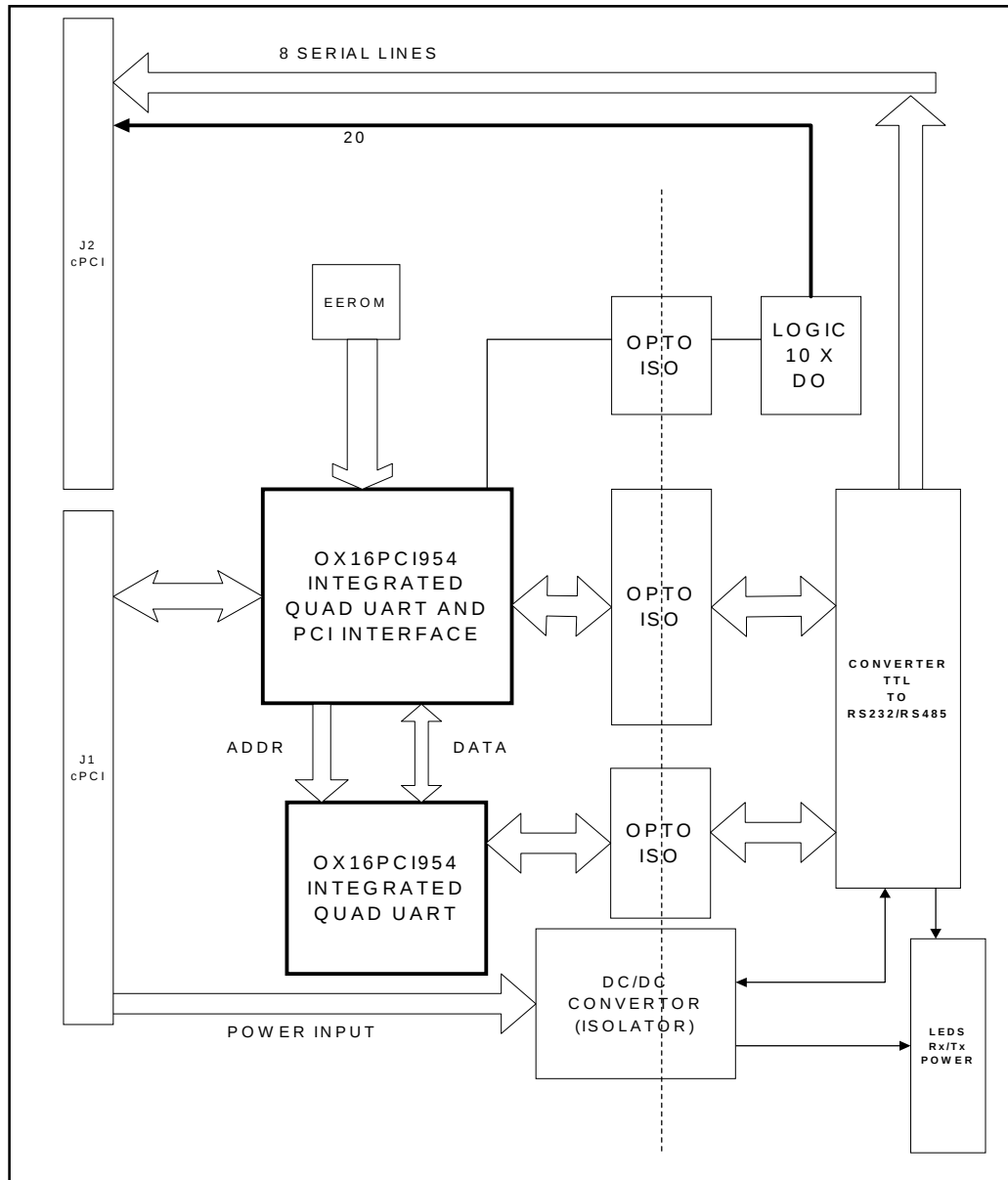
F. Digital Output Signal Specifications

Criteria	Specifications
Number of Digital outputs	10
Voltage Level	TTL
Output Current	+/-20mA
Isolation	Opto Isolation, Min 1500V

G.J2 Signals Distribution

	Z	A	B	C	D	E	F
22	GND	Reserved	Reserved	Reserved	Reserved	Reserved	GND
21	GND	Reserved	Reserved	Reserved	Reserved	Reserved	GND
20	GND	TX_E-	TX_F-	TX_G-	TX_H-		GND
19	GND	TX_E+	TX_F+	TX_G+	TX_H+		GND
18	GND	AGND	AGND	AGND	AGND	AGND	GND
17	GND	RX_E-	RX_F-	RX_G-	RX_H-	B4	GND
16	GND	RX_E+	RX_F+	RX_G+	RX_H+	B3	GND
15	GND	AGND	AGND	AGND	AGND	B2	GND
14	GND	CK_B-				B1	GND
13	GND	CK_B+				B0	GND
12	GND	CK_A-					GND
11	GND	CK_A+					GND
10	GND	AGND	AGND	AGND	AGND	AGND	GND
9	GND	RX_A-	RX_B-	RX_C-	RX_D-	A4	GND
8	GND	RX_A+	RX_B+	RX_C+	RX_D+	A3	GND
7	GND	AGND	AGND	AGND	AGND	A2	GND
6	GND	TX_A-	TX_B-	TX_C-	TX_D-	A1	GND
5	GND	TX_A+	TX_B+	TX_C+	TX_D+	A0	GND
4	GND	24V	24Vret	24V	(Spare)	Reserved	GND
3	GND	Reserved	Reserved	Reserved	Reserved	Reserved	GND
2	GND	Reserved	Reserved	Reserved	Reserved	Reserved	GND
1	GND				5V	5V	GND

IV. Block Diagram



V. I/O Address Map

Board addresses reside on the CompactPCI I/O address map. All Read and Write operations are done with 32 bits word width. On power-up or system reset, all on-board control registers are reset to 0. This sets all digital outputs to inactive state (high).

VI. Jumper Configuration

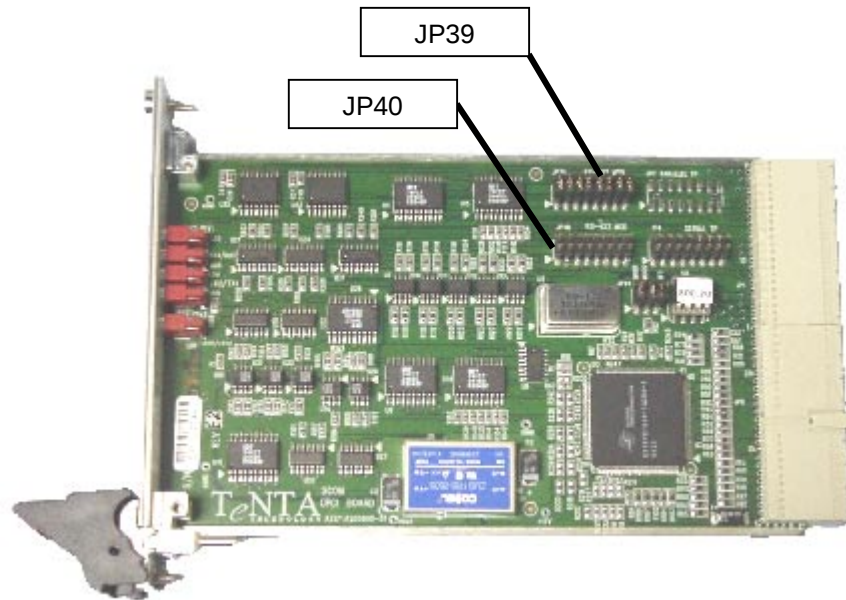
A. SCOM-0800

Use these jumpers for desired protocol.

SCOM-0800	RS232	RS485
Ch. 1-4	JP39	JP40

Place jumper on these pins for each channel.

Pins	Rx	Tx
Ch. 1	1,2	9,10
Ch. 2	3,4	11,12
Ch. 3	5,6	13,14
Ch. 4	7,8	15,16



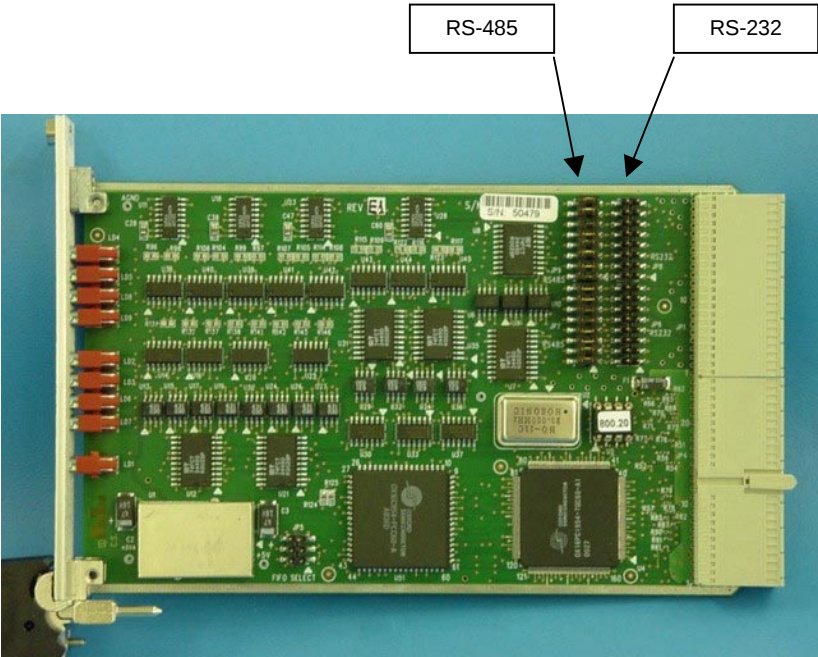
B. SCOM-0801

Use these jumpers for desired protocol.

SCOM-0801	RS232	RS485
Ch. 1-4	JP6	JP7
Ch. 5-8	JP8	JP9

Place jumper on these pins for each channel.

Pins	Rx	Tx
Ch. 1	1,2	9,10
Ch. 2	3,4	11,12
Ch. 3	5,6	13,14
Ch. 4	7,8	15,16



VII. Warranty

Tenta Technology warrants the original purchaser for two years from the date of delivery for any defect in the product, material or workmanship. Product should be used in suitable installation environment and for purposes it was designed. Any damages caused by natural disaster such as: fire, flood, wind and lightning are not covered. For more information, please contact Tenta Technology customer support (see locations on front page). Tenta Technology hardware and software are not intended for use in any manner when human life or safety is at risk and not for use in life support equipment.