

CPT-COM-B-B Card
Isolated RS232 Interface Board
Technical Brief

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Manual Release 1.0
Card Version 1.2

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CPT-COM-B Manual Revision History

CARD VERSION 1.0: Internal Use

CARD VERSION 1.1: Internal Use

CARD VERSION 1.2: Added Battery and External Supply Support
This version should be used for isolated RS232 operation with an on-card Battery option

Release 1.0 – Initial Release
Renamed as CPT-COM-B Board

CARD VERSION 1.3: Added RS422/485 support, made battery an external add on
This version should be used for isolated RS232 / RS422 / RS485 operation. Battery to be mounted separately

Release 1.1 – Initial Release
Available as CPT-COM - Generic RS232 / RS422 / RS485 interface support.

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1.0 CPT-COM Board Range Selection Guide

<i>Board Name</i>	<i>Features</i>								
	<i>TTL Input</i>	<i>RS232</i>	<i>RS422</i>	<i>RS485</i>	<i>USB</i>	<i>SPI</i>	<i>On-card Battery</i>	<i>External Supply</i>	<i>On-Card Isolation</i>
CPT-COM-B	3.3V	•					•	•	•
CPT-COM	3.3V	•	•	•				•	•
CPT-COM-4	3.3V			•				•	•
CPT-COM-U	3.3/5V				•			•	•
CPT-COM-S	3.3V					•		•	•

CPT-COM-B RS232 Interface Board

2.0 Overview of the CPT-COM-B

The CPT-COM-B is an isolated interface board that converts 3.3V-TTL level serial communications signals to a fully isolated RS232 output. The board can be powered from the 3.3V-TTL level serial port connector, an on-card 9V battery or an external 9V DC power source.

The CPT-COM-B card measures 60mm x 78mm.

On-card facilities include:

- Link Selectable DCE/DTE operation
- 9V Battery Power Supply
- Link Selectable Power Supply Selection
- 1000V Isolation between 3.3V-TTL level signals and RS232

Figure 2-1 shows a functional block diagram of the CPT-COM-B card.

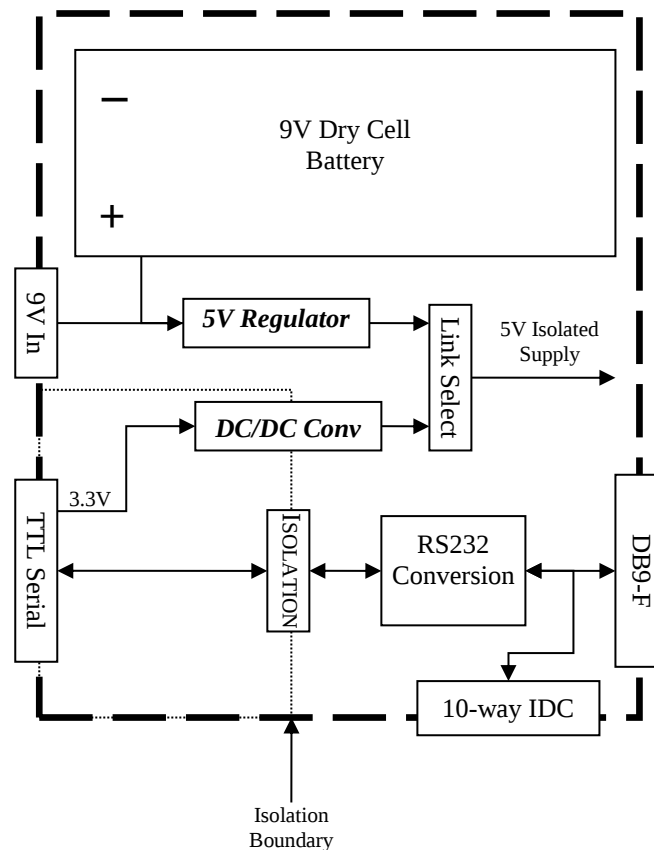


Figure 2-1: Functional Diagram of CPT-COM-B Board

3.0 Specifications

3.1 Serial Communication Interface

Definition	RS232 connection, providing two pin serial communications for interface between a standard PC serial port and a 3.3V-TTL serial interface, as used on Creative Power Technologies DSP controller boards DEFAULT MODE: 3.3V-TTL level serial connection, providing two pin serial communications for interface to an off-card 3.3V-TTL level to RS232 translation card. This is necessary for interfacing to a standard PC serial port
Isolation	1kV
Compatibility	Links provided to enable the board to be configured as a DTE or a DCE (LK1) Default is configuration as a DCE
PCB Connections: 3.3V	4 way MASCON/MOLEX header with VCC (3.3V) and GND connections (X4)
PCB Connections: RS232	10-way IDC connector, with pin outs to suit standard PC 9 pin serial port (X5) OR 9-way DSUB connector, with pin outs to suit standard PC 9 pin serial port (X3)

3.2 General

Physical Dimensions	L: 60mm
	W: 78mm
	H: 40mm approx.
Mounting Arrangement	4 off 3.5 mm holes spaced 52 x 70mm apart in the corners of the board
Environmental	-40 – 85°C ambient operating temperature 5% - 95% non-condensing humidity

3.3 Power Supply

Input Voltage Range	8-25VDC (nominal 9V) (No Battery Loaded)
Battery	9V
Standalone Input Current	<11mA
Max Input Power	Approx. TBD ~100mW
Supplies Generated on-card	+5V Isolated
Input Power Connector	2-way MASCON/MOLEX (X1) +9V (8-25V) on pin 1, CGND on pin 2