
SPECIFICATION FOR APPROVAL

客戶名稱 **Customer:** _____
客戶機種 **Customer Model:** _____
客戶產品料號 **Product P/N:** _____
承認書編號 **Approval Sheet No.:** _____
承認日期 **Approval Date:** _____
產品品名 **Description:** RC-3100C - Resistive touch controller board
尺寸 **Dimension:** 70mmx20mmx8.5mm
韌體版本 **Firmware Version:** _____
驗證碼 **Checksum:** _____

APPROVAL BY:

DATE: Feb. 05, 2009



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This Specifications of Controller is applied for 4/5 wires Resistive Touch Panel use.

1 § Name Definition:

1.1 RC-3100C: 4 wires + 5Wires & USB+RS232 interface Combo.

2 § Specifications of the Risintech Touch controller including as following:

- 2.1 Electrical
- 2.2 Environmental
- 2.3 Physical Characteristics

Electrical

1 Supply Voltage and Current

- 1.1 Input Voltage +5 Vdc, normal (+4.75 to +5.25 Vdc).
- 1.2 Power consumption: 21 mA @ stand by mode(touch inactive), 670uA @ USB suspend or power down mode
- 1.3 Supply must be capable of sourcing 100 mA, minimum.

2 Interface

- 2.1 To support RS-232/USB host communication interface, interface auto-sense by cable.
- 2.2 RS-232
 - 2.2.1 EIA 232E (Serial RS-232), DCE configuration. 8 Data Bits, 1 Stop Bit, No Parity, Full Duplex.
 - 2.2.2 Baud rate: 9600 bps.
 - 2.2.3 Hardware handshaking: None.
- 2.3 USB
 - 2.3.1 HID 1.1 compatible full speed.
 - 2.3.2 Support suspend and remote wakeup capability.

3 Operating Modes

- 3.1 Drawing mode
- 3.2 Button mode

4 Touch Resolution

- 4.1 Report 4096x4096, size independent

5 Report rate

- 5.1 USB: Max. 200 Points/Sec (pps)
- 5.2 RS232: Max. 160pps, typical 160pps

6 Pin out definition

- 6.1 4 wire model: (X+ 、 Y+ 、 X- 、 Y-) , (X+ 、 X- 、 Y+ 、 Y-) , (X+ 、 Y+ 、 Y- 、 X-).
- 6.2 5 wire model: ELO type (UL 、 UR 、 COM 、 LL 、 LR) , 3M type (UL 、 UR 、 COM 、 LR 、 LL)

7 Panel resistance

- 7.1 50 ~ 200 ohm (pin to pin on the same layer, touch resistance under 3.5k ohm)

8 Calibration

- 8.1 Calibration: Fast full oriental 4 points position
- 8.2 Linearization: Accuracy 9/25 points linearity compensation
- 8.3 Support Edge Compensation

9 Operating

- 9.1 Drawing mode: position and linearity verification

- 9.2 Button mode: Mouse left /right button emulation
- 9.3 Sound Notification: enable/disable beep or audio sound for Touch down/Touch up
- 9.4 COM port support: COM1~255 for Windows and Linux, COM1 ~ 8 for DOS
- 9.5 Display support: monitor/ display rotation, multiple monitors(4 device), split monitor
- 9.6 OS support: All Windows-32 bit O.S, VISTA/XP-64 bit OS, WinCE 4.2/5.0/6.0, DOS, All Linux(Kernel 2.6 and X-Window mode), QNX

Environmental

1 Temperature

- 1.1 Operating: -40°C to 85°C
- 1.2 Storage: -65°C to 150°C

2 Humidity

- 2.1 Operating: 10% to 90% RH, non-condensing
- 2.2 Storage: 10% to 90% RH, non-condensing

3 ESD

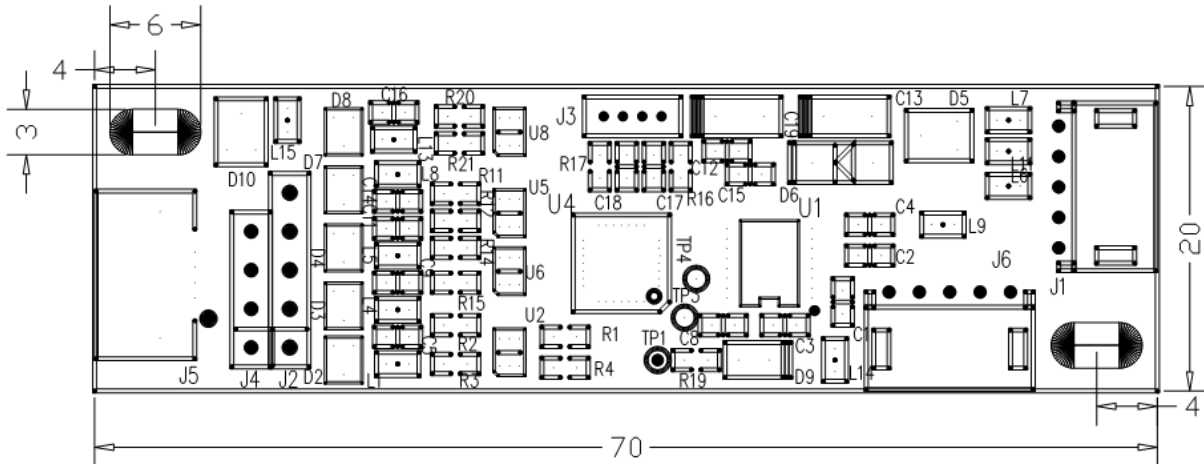
- 3.1 Per EN 6100-4-2 1995: Level 4. Contact discharge 4kV, air discharge 8kV.

Physical Characteristics

1 Construction

1.1 Two-layers surface-mount design.

2 Dimensions



2.1 Total Width: 20 mm

2.2 Total Length: 70 mm(including connector)

2.3 Total height: 8.5mm

2.4 All mounting holes are plated through for chassis ground connection.

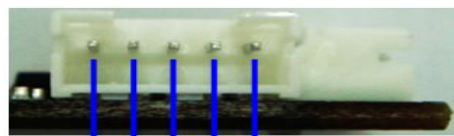
3 Connectors and Pin Definitions

The connector configuration permits the controller to be placed in-line between the touch screen and serial I/O attachments.

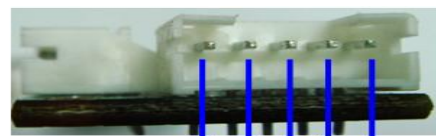
3.1 USB, Serial connector, and signal descriptions

The serial and USB I/O connector, J1/J6 is a 5-pins header(2.0mm pitch). Refer to the following figure for pin number locations.

Pin diagram for USB and serial connector, J1/J6, as viewed from connector mating surfaces



RS-232 Interface

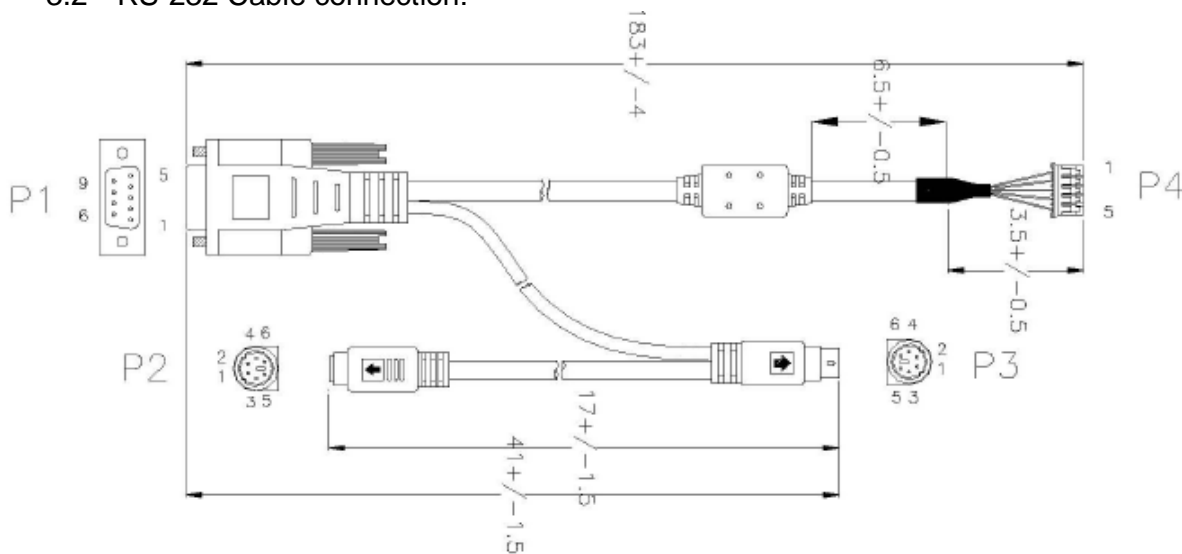


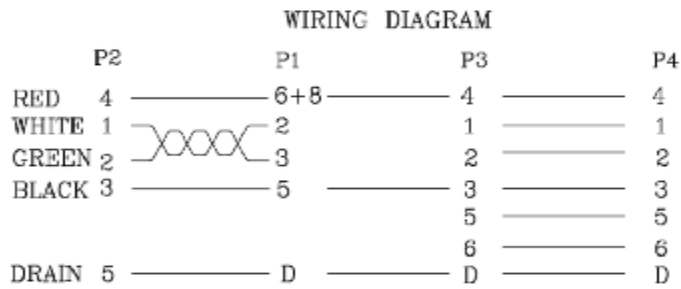
USB Interface

Signal definition for RS-232 interface		
Signal Name	J6 pin	Signal Function
G	1	Cable shield ground
V	2	+5V power drain from host side.
G	3	Signal ground
TxD	4	Serial data from controller to host
RxD	5	Serial data from host to controller
Signal definition for USB interface		
Signal Name	J1 pin	Signal Function
G	1	Cable shield ground
V	2	+5V power drain from host USB port
G	3	Signal ground
D+	4	USB bus signal D+
D-	5	USB bus signal D-

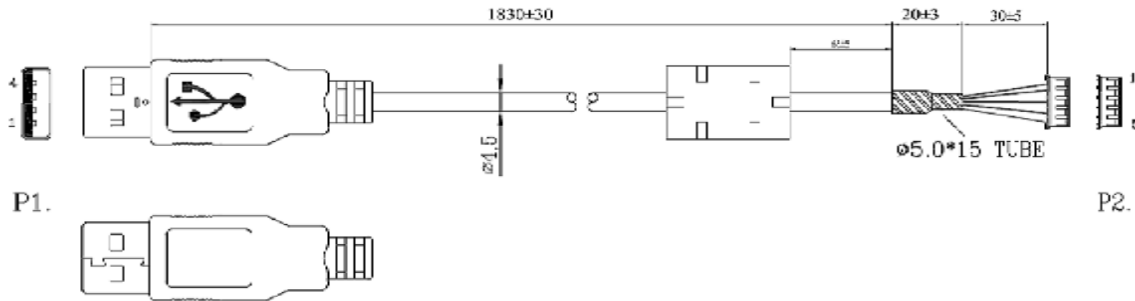
Table 1. Host Connector, J1/J6, signal names and functions

3.2 RS-232 Cable connection:





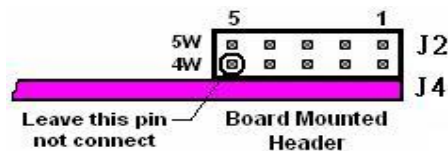
3.3 USB Cable connection:



3.4 Touch screen connector, J2 /J4 and signal descriptions

The touch screen connector, J2/J4, is a dual row by five-position header with 2.54mm pitch. 5W sensor must be connected to the upper row of the connector. 4W sensor must be connected to the low row of the connector. The pins are numbered as shown in the figure.

Pin diagram for touch screen connector, J2/J4, as viewed from connector mating surfaces



The 5 Wire Touch screen connector, J2, upper row, and signal descriptions
 *Note : Pin 5,4,2,1 can be redefinition using autodetect.exe utility software.

Signal name	J2 pin	Signal function
LR(Y-)	5	Connect to touch screen Lower Right Conner of glass layer
LL(X-)	4	Connect to touch screen Lower Left Conner of glass layer
WIPPER	3	Connect to touch screen film layer
UR(Y+)	2	Connect to touch screen Upper Right Conner of glass layer
UL(X+)	1	Connect to touch screen Upper Left Conner of glass layer

Table 2. Touch screen connector, J2(J4) upper row, pins and signal names.

The 4 Wire Touchscreen connector, J4, lower row, and signal descriptions
 *Note : Pin 4,3,2,1 can be redefinition using autodetect.exe utility software.

Signal name	J4 pin	Signal function
None	5	Leave this pin not connect.
Y-	4	Connect to 4 Wire touchscreen Y-
X-	3	Connect to 4 Wire touchscreen X-
Y+	2	Connect to 4 Wire touchscreen Y+
X+	1	Connect to 4 Wire touchscreen X+

Table-3 Touch screen connector, J4, lower row, pins and signal names