

SPECIFICATION FOR APPROVAL

RoHS

CUST. PT/NO:
Risintech PT/NO: RC-3300C / RC-3300U
SUBMIT NO:

APPROVAL BY:

DATE: April 17, 2008



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

1 ▪ *Name Definition:*

- 1.1 RC-3300C: 4 wires + 5Wires & USB+RS232 interface Combo.
- 1.2 RC-3300U: 4 wires + 5Wires & USB interface.

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 (RC-3300C only)
 - 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 Conversion Time

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

6 Serial Communication Protocol

- 6.1 RITOUCH: Default for RS-232.
- 6.2 HID 1.1: Default for USB.

7 Reliability

- 7.1 MTBF greater than 300,000 hours per MIL-HDBK-217-F2 using the parts stress calculation method for ground benign environment with an ambient temperature of 25°C

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 Shock and Vibration

- 3.1 Three axis sine wave, 50 Hz to 2kHz, 1 G, 2 minutes/Octave with dwell on resonance

4 ESD

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

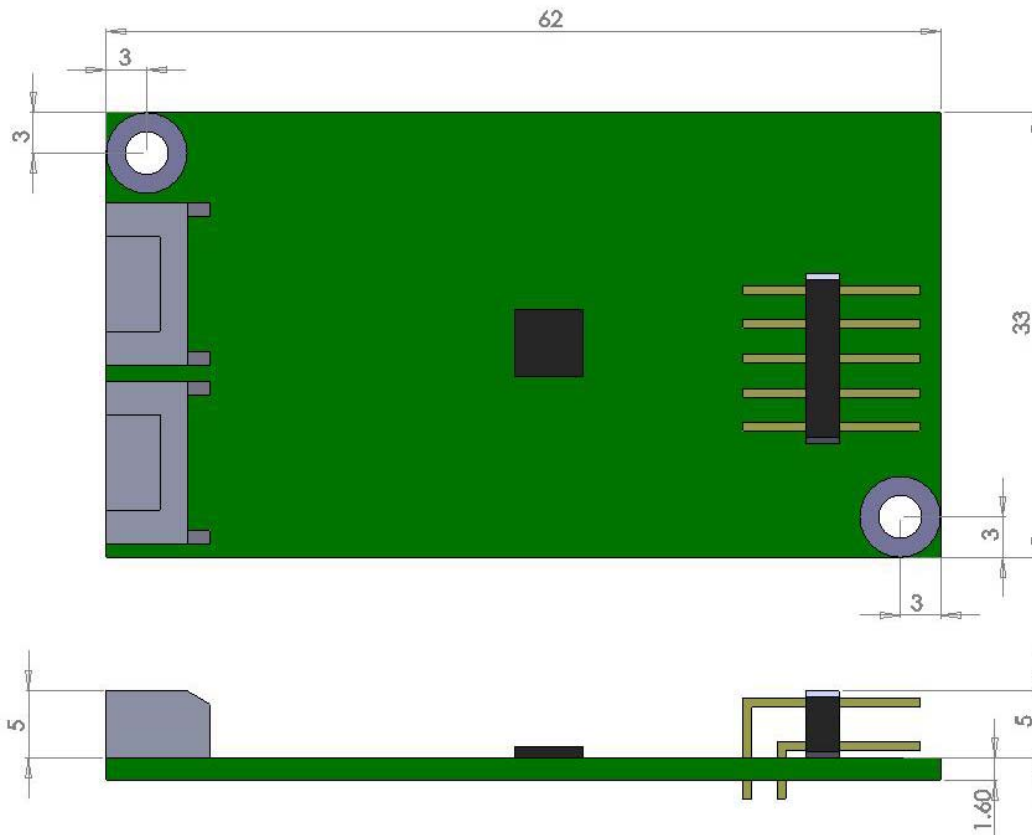
5 Flammability

- 5.1 The printed circuit board substrate is rated 94V0. All plastic components, such as headers and connectors, are also rated 94V0.

Physical Characteristics

1 Construction

1.1 Two-layers surface-mount design. (Unit: mm)



2 Dimensions

- 2.1 Total Width: 33 mm
- 2.2 Total Length: 62 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 I/O connector, J1, is a tow-rows by 10-pins header with pins spaced on 2.00mm centers. Refer to the following figure for pin number locations.

Figure-1
surfaces

RC-3300C: Pin diagram for RS-232 connector, J1, as viewed from connector mating

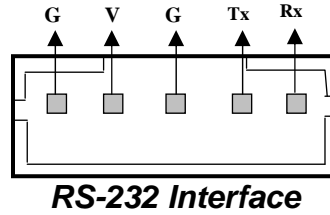
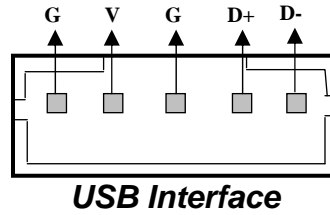


Figure-2
surfaces

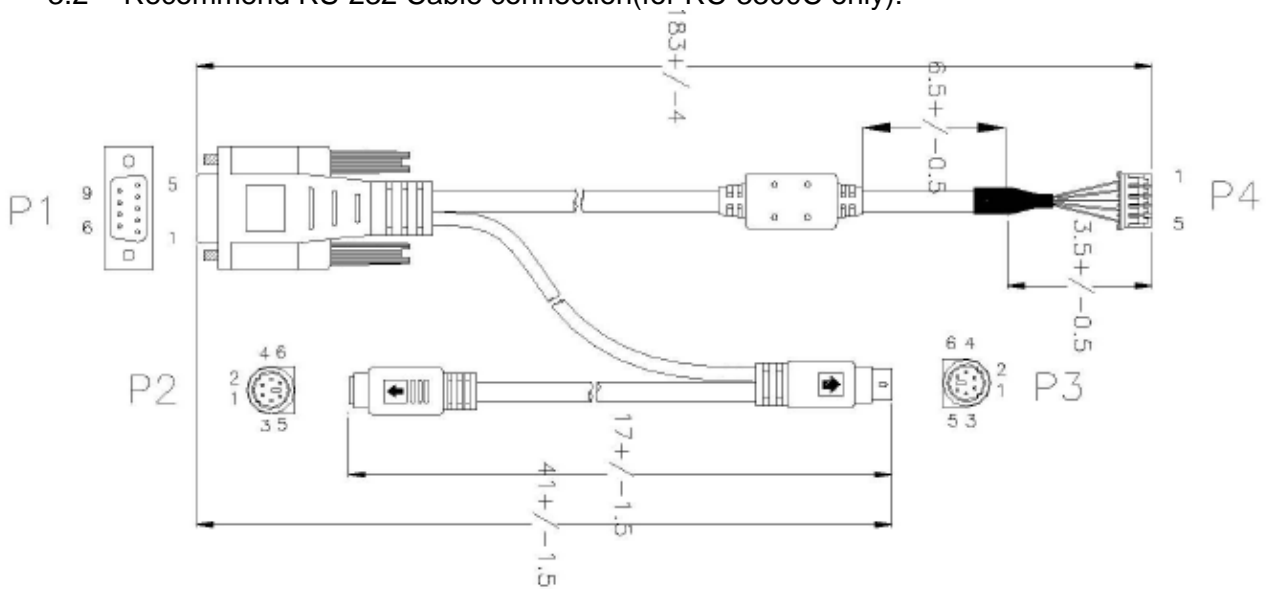
RC-3300U: Pin diagram for USB connector, J1, as viewed from connector mating



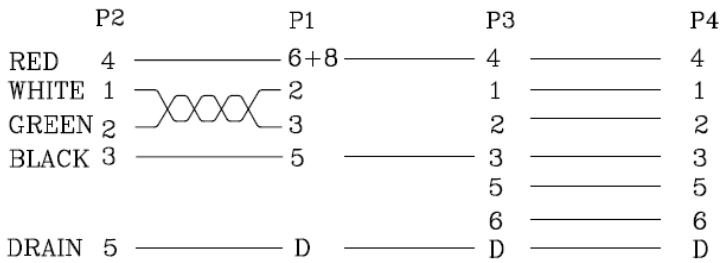
Signal definition for RS-232 interface, RC-3300C		
Signal Name	J1 pin	Signal Function
RxD	5(low)	serial data from host to controller
TxD	4(low)	serial data from controller to host
G	3(low)	signal ground
V	2(low)	+5V power drain from host side.
G	1(low)	signal ground
Signal definition for USB interface, RC-3300C & RC-3300U		
D-	5(high)	USB bus signal D-
D+	4(high)	USB bus signal D+
G	3(high)	signal ground
V	2(high)	+5V power drain from host USB port
G	1(high)	signal ground

Table-1 Host Connector, J1, signal names and functions

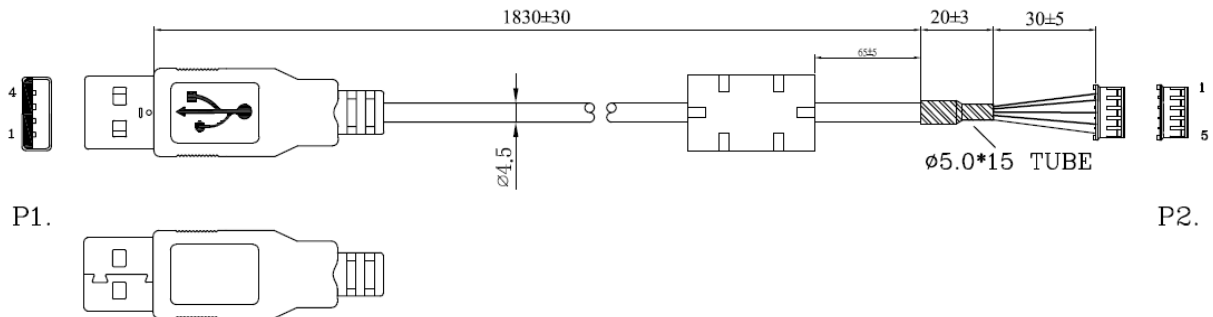
3.2 Recommend RS-232 Cable connection(for RC-3300C only):



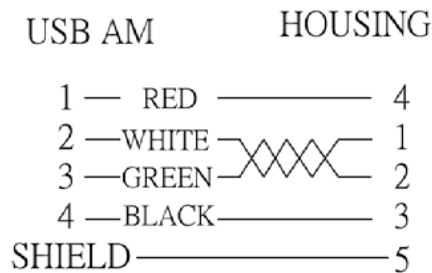
WIRING DIAGRAM



3.3 USB Cable connection(for RC-3300C and RC-3300U):



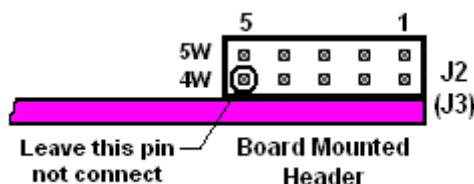
PIN ASSIGNMENT



3.4 Touch screen connector, J2 (90 dual row) and signal descriptions

The touch screen connector, J2(J3 for RC-3300C), is a dual row by five-position header with 0.025-inch square pins spaced on 0.100 centers. 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.

Figure 2. Pin diagram for touch screen connector, J2(J3 for RC-3300C), as viewed from connector mating surfaces



3.4.1 The 5 Wire Touch screen connector, J2 (J3 for RC-3300C) upper row, and signal descriptions

*Note : Pin 5,4,2,1 can be redefinition using **autodetect.exe** utility software.

Signal name	J2(J3) 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 Touchscreen connector, J2 (J3) upper row, pins and signal names.

3.4.2 The 4 Wire Touchscreen connector, J2 (J3) 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 Touchscreen connector, J2 (J3) lower row, pins and signal names