

A Touch Technologies Co., Ltd.



Specification of Infrared Touchscreen

A. Application

This specification applies to the **Infrared Touchscreen**.

B. Environmental Conditions

- 1. Operating Temperature Range**
-20°C ~ 70°C
- 2. Operating Humidity Range**
0% to 95% RH (no dew falls)
- 3. Storage Temperature Range**
-40°C ~ 85°C
- 4. Storage Humidity Range**
0% to 95% RH (no dew falls)
- 5. Ambient Light**
 - Direct sunlight perpendicular to $\pm 30^\circ$ to the display surface
 - Touch detection operational
 - Direct sunlight all angles to display surface
 - Free of false touch reports
- 6. Thermal Shock Cycling**
– 40°C (1 hr.) to 85°C (1 hr.), 50 cycles
(temperature changing rate : not to exceed 2°C per minute)

C. Electrical Characteristics

- 1. Supply Voltage and Current**
 - +5VDC, nominal.
 - Average 150 mA at +5VDC.
 - Supply must be capable of sourcing 350mA, minimum.
- 2. Conversion Time**
Less than 20 ms.
- 3. Electrostatic Discharge Protection**
15 kV air / 8 kV contact discharges.
(per EN61000-4-2, 1995 : Meets Level 4)
- 4. Interface**



INFRARED TOUCHSCREEN

Serial RS-232. Baud Rate: 9600,
8 Data Bits, 1 Stop Bit, No Parity, Full Duplex

D. Mechanical Characteristics

1. Cable and Connector

- Panel cable typically exits from the right side, terminating in a Mini USB 4 Pin Female, A Type connector.
- Standard RS-232 cable connecting the infrared touchscreen with the computer serial port. Refer to Appendix A

2. Controller

Integration inside touchscreen.

3. Touch Activation Force

No minimum touch activation force is required.

4. Optical Element Pitch

6.0 (W) × 6.0 (H) mm

5. Detection Pitch

3.0 (W) × 3.0 (H) mm

6. Touchpoint Density

Based on controller resolution, up to 4096 × 4096

7. Minimum Touch Medium Size

6.5 (W) × 6.5 (H) mm (take 15" flat display for instance)

E. Optical Performance

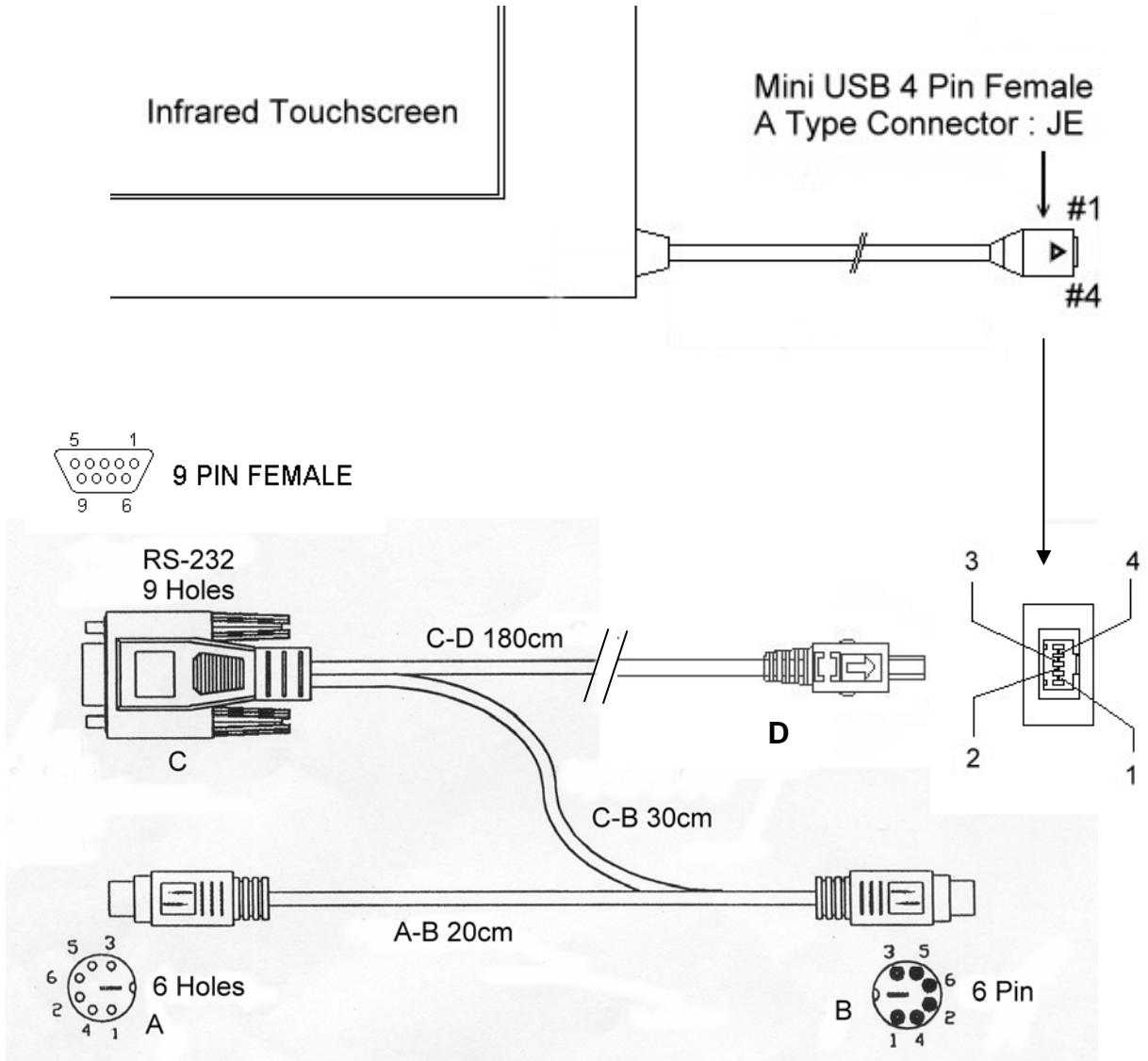
Light Transmission over 90% (per ASTM D1003)

F. Software Driver

Under Windows : Mouse emulation
Support Operating System

- Microsoft Windows NT4.0/XP/2000/ME/98/95
- Linux : Red Hat 9.0, Mandrake 9.1

Appendix A : Panel Cable Standard RS-232 Cable



Connecting to PS2 keyboard cable

Connecting to PS2 keyboard plug on the host

JE pins and signal names

Pin	Signal Name
1	TXD
2	RXD
3	GND
4	Vcc



INFRARED TOUCHSCREEN

Contact Position

A			B			C			D			
1	---	Orange	---	1		2	---	Orange	---	1		
2	---	Brown	---	2		3	---	Brown	---	2		
3	---	Yellow	---	3								
4	---	Black	---	4	---	GND	---	5	---	Black	---	3
5	---	Red	---	5	---	+5V	---	1+6+8	---	Red	---	4
6	---	Green	---	6								
G	---	GND	---	G	---	GND	---	G				