

Product Specification
Capacitive Touch Panel

Ver. 1.1

HTD085C-1

Table Content

1	General Description.....	3
2	Specification.....	3
2.1	Accuracy.....	3
2.2	Operational Characteristic.....	4
2.3	Optical.....	4
2.4	Reliability.....	4
2.5	Durability.....	4
3	Cosmetic.....	5
4	Agency Approval.....	6
5	Label Nomenclature.....	6
6	Storage.....	8
7	Accessory.....	8
8	Package.....	8
9	Caution.....	8
10	Installation.....	9
11	Warranty.....	9
12	Appendix A.....	9

Importance Notice

It is essential for Users to evaluate Hantouch Capacitive Touch product to determine whether it is suitable for User's applications.

Hantouch products are warranted to meet their published specifications from the date of shipment to the date stated in the warranty period. Specifications are subject to change without notice.

1 General Description

Feature	Description
Type	Capacitive
Input Method	Finger
Glass Thickness	1.8 mm \pm 10% typical (glass only, not including tape, wires and solder if used)
Tail	FPC
Tail Exit	9:00
Connector	5-pin housing with latch
Dimension	Description
Outside Area	186.00 x 142.00 mm \pm 0.3 mm
View Area	173.00 x 130.60 mm \pm 0.3 mm
Precision Area	162.60 x 122.80 mm \pm 0.3 mm
Tail Length (FPC)	105 mm \pm 3mm

For detailed product illustrations, please refer to Appendix A for product drawing.

2 Specification

2.1 Accuracy

Accuracy	Description
Accuracy	Max 1% error of reported position in recommended precision area (diagonal & after 25-point calibration)

2.2 Operational Characteristic

Characteristic	Description
Operating Temperature (sensor only)	-40°C to 85°C
Storage Temperature (sensor only)	-40°C to 85°C

2.3 Optical

Optical	Description
Light Transmittance	90% ±3% per ASTM D1003
Haze(AG)	≤7%
Gloss R'60 (AG type)	110±20 GU

2.4 Reliability

Reliability	Description
High Temperature Test	80°C / 168hrs
Low Temperature Test	-40°C / 120hrs
High Humidity Test	60°C / 93±2% /240hrs
Thermal Shock Test	85°C / 30min <--> -50°C / 30min ; 41 cycles
Chemical Resistance	Soak 15 min, fit accuracy and external appearance specification (Follow ASTM F 1598-95,ASTM D 1308-87)
Static Pressure Test	>5Kgw/cm ² (Follow ASTM C147-86(2000))
Peel Resistance of FPC Tail	>5Kgw

2.5 Durability

Durability	Description
Abrasion Test	Fit accuracy specification (Follow MIL-C-675C)
Adhesion Test	No deterioration, Tape test (Follow ASTM D3359)
Surface Scratch Hardness	More than 9H per ASTM-D3363

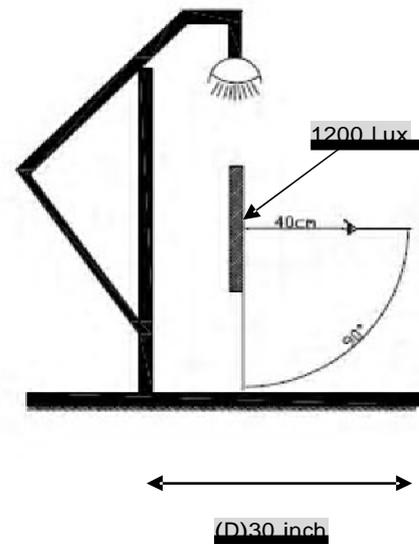
3 Cosmetic

3.1 Inspection environment

It's necessary to set up an applicable visual environment for sensor cosmetic inspection per following materials request

Light booth H 24" X D 30" X 42" W(Width \geq 42")

- ó Flat dark background
- ó Illumination on the surface of glass is 1200 Lux
- ó 5 x eye loupe with reticule
- ó Position front of touch screen 40 cm from your eye



3.2 Inspect specification

Item	Criteria	Within Specification
Opaque Anomaly	Circular \leq 1 mm	totally not over 5 of anomalies per panel
	Linear \leq 6.35 X 0.25 mm	
Translucent Anomaly	Circular \leq 1.7 mm	totally not over 5 of anomalies per panel
	Linear \leq 25.4 X 0.25 mm	

- ó Only anomalies in the viewing area are considered.
- ó Anomalies measured less than 0.13mm are not considered.

4 Agency Approval

Agency/Test Standard	Description
RoHS	RoHS compliance
FCC part 15, class B	Compliant when used in conjunction with a properly grounded controller.
CE compliance	Compliant when used in conjunction with a properly grounded controller

5 Label Nomenclature

There are 2 kinds of label sticker on the tail of sensor. One is part no. with 12 digits, another one is serial no with 14 digits. Both of label stickers with information showed on digits is as below for your reference.

5.1 Definition of Part No. with 12-digit

XA-BBBCDEFG-HI

- X: Display aspect ratio. Please check detail in table 1
- A: The sensor type. Please check detail in table2.
- B: The dimension of viewing area of the sensor. Please check the detail in table 3.
- C: Dimension serial no. Please check the detail in table 4.
- D: The thickness of the sensor. Please check the detail in table 5.
- E: Optical appearance. Please check the detail in table 6.
- F: Tail Type. Please check the detail in table 7.
- G: Version No. Please check the detail in table 8.
- H: Internal use.
- I: Product configuration. Please check the detail in table 9.

Table 1

Display Aspect Ratio	
F	4:3
W	16:9 or 16:10 wide

Table 2

Sensor Type	
1	Capacitive
2	Multi Touch
3	Button & Slider
4	PC Sheet

Table 3

VA Dimension	
108	10.8"
124	12.4"
157	15.7"
175	17.5"
194	19.4"

Table 4

Dimension serial No.	
1	01
2	02

Table 5

Thickness	
1	1.8mm
2	2.8mm
A	0.55mm
B	0.7mm
C	1mm

Table 6

Optical Appearance	
A	AG
C	Clear

Table 7

Tail Type	
F	FFC
P	FPC
X	Without Tail

Table 8

Version	
A	1 st Version

Table 9

Product Configuration	
0	Double-sided ITO
S	Single-sided ITO
L	Lamination
C	Lamination with LCF

5.2 Definition of Serial No. with 14-digit

PYYMMDDTAAAABC

P: The plant of the sensor manufactured

Y: The year of the panel was tested in (06=2006, 07=2007, etc.)

M: The month of the sensor was tested in (01=January 12=December)

D: The date of the sensor was tested on.

T: The type of the product. (Ex: "S" means this is the sensor and "C" means this is the controller.)

A: The sequence number of the sensor.

B: The machine of testing

C: Internal use

6 Storage

6.1 Temperature of $-40^{\circ}\text{C}\sim 80^{\circ}\text{C}$ is recommended for the storage of the touch panel when it is stored in the in the original container. (Relative humidity up to 90% is for $0^{\circ}\text{C}\sim 35^{\circ}\text{C}$;RH lower than 50% is suggested when the temperature is higher than 60°C)

6.2 Do not store the touch panel in the place condensation may form.

7 Accessory

Extension cable (optional)

Controller package (optional):

- < Controller
- < Y cable
- < USB or RS232 cable
- < CD (drivers and installation guide)

8 Package

Each carton contains 20pcs of capacitive touch panel. The capacitive touch panel is covered by film on both sides.

Accessory box contains cables for controller and driver CD (if you order controllers).

9 Caution

9.1 Do not stack the touch panels after unpacking them to avoid scratch lines caused by the edges.

9.2 Do not pull or hold the touch panel by the flat cable. It may damage the function.

9.3 Use clean soft cloth and cleaner to clean the touch panel. Do not use any gritty cloth and any caustic chemicals, alkaline or acidic solutions on the touch panel.

- 9.4** Do not use the tape thickness less than 1.5mm to mount touch panel on the LCD display module.
- 9.5** When routing the touch panel tail through the metal shield and rear display cover, avoid the inverter and other high noise sources.
- 9.6** Use the display with FCC, CE or similar certification to avoid the risk of electric shock.

10 Installation

Please refer to the Hantouch Capacitive Touch Panel Installation Guide on the CD title for complete information on touch screen installation.

11 Warranty

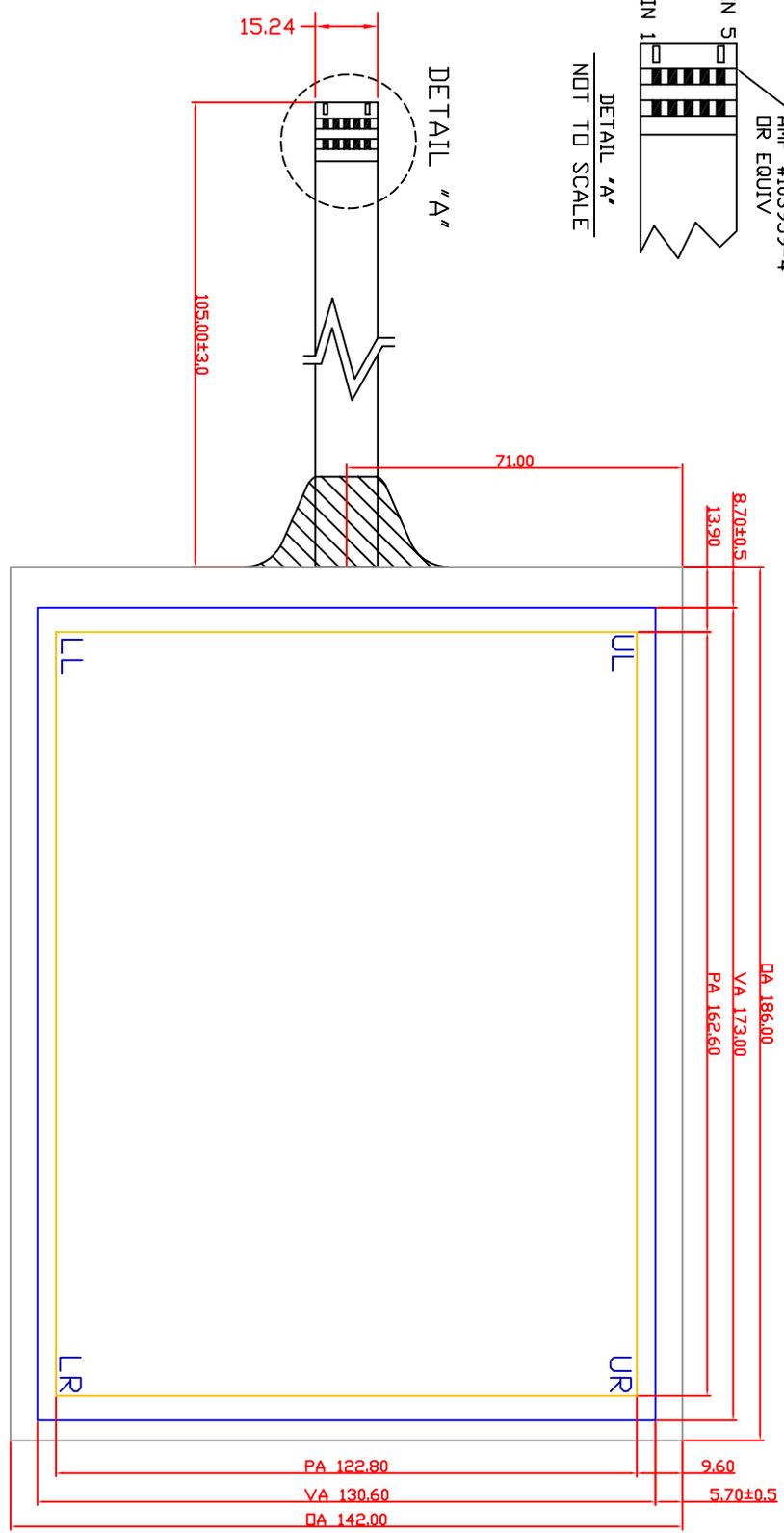
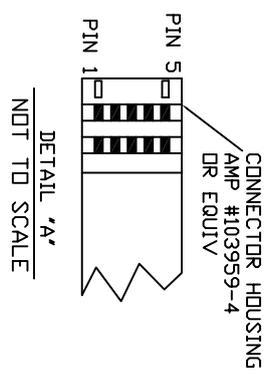
Hantouch warrants its capacitive touch panel to meet the specifications listed in section 2 of this specification. Hantouch grants customers a 2-year warranty for capacitive touch panel from the shipping date on invoice. In case of defects, the buyer only has a right to subsequent performance. This subsequent performance will include either repair or the delivery of a replacement product. Exchanged units or parts will be the property of Hantouch Co., Ltd. Evidence of the warranty must be provided in the form of proper proof of purchase (sales receipt or invoice and serial number). Damage caused by improper handling, operation storage or by force external influences is not covered by the warranty.

If you think that you need to make a claim on your Hantouch's product under the warranty, call your local supplier. Experienced staff will advise you and arrange how you should proceed. Please do not send any goods back to the Hantouch service center without obtaining an RMA number from your local distributor or the service center first, as otherwise the goods will be returned un-repaired or refused receiving.

All remedy costs from Hantouch cannot exceed the total value of purchase price. Hantouch shall not be liable in any way related to the products for any loss or damages (including loss of profit, downtime, or goodwill) regardless the legal theory asserted.

12 Appendix A

DA DIAGONAL : 234.01(REF)
 VA DIAGONAL : 216.76(REF)
 PA DIAGONAL : 203.76(REF)



NOTES:
 The tail is FPC.

PINDUT	
1	LR
2	LL
3	SHIELD
4	UL
5	UR

DIMENSIONS	MM
Hein touch.com	
NOTICE OF PROPRIETARY RIGHTS	

TITLE	Capacitive Touch Sensor
SIZE	186.00 X 142.00 X 1.80

THIRD ANGLE PROJECTION	
P/N	HTD085C-1
Drawn By:	Hursten Yu
Drawn Date:	04-30-2008

SCALE	1 : 1
REV	A
SHEET	1 of 1