

TO :

TECHNICAL SPECIFICATION

Name: 10.1 Inch EM Touch Board

MODEL NO.: TP-101S01-H1S1-GT

Material Code: 810011234

The content of this information is subject to be changed without notice.
Please contact HANVON or its agent for further information.

☐ Customer's Confirmation

By _____

Date _____

☐ HANVON's Confirmation

APPROVED	CHECKED	CHECKED	DESIGNED

Revision History

Rev.	Issued Date	Revised Contents
1.0	2016-6-8	Preliminary

TECHNICAL SPECIFICATION

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1. Scope

This specification is applicable to Hanvon PenTech Electromagnetic Touch Board designed.

2. Features

- Without affecting the screen display
- High screen resolution
- High pressure levels
- High position accuracy
- Low power consumption
- Commercial temperature range
- Support battery-free, cordless and pressure sensitive pens

3. General Specifications

	Parameter	Specifications	Unit	Note
Sensor Board	External Dimension	256.73(L)×114.35(W)) ×3.2(H)	mm	±0.2mm(L,W) ±0.05mm(H)
	Effective Diagonal Size	10.1	inch	
	Active Area	217.59(L) × 136.36(W)	mm	
	Material	PI	-	
	Resolution	10206*7422	-	
	Coordinate Accuracy	±0.5 (center) ±0.8 (Edge)	mm	
	Detectable Height	>10	mm	
	Pressure Level	1024		
	Physical Interface	8 Pins Connectors		
	Data Sending Rate	>150	dots/s	7Bytes/dot
	Response Time	<100	ms	
	Voltage/Current	3.3V/<60mA	-	USB

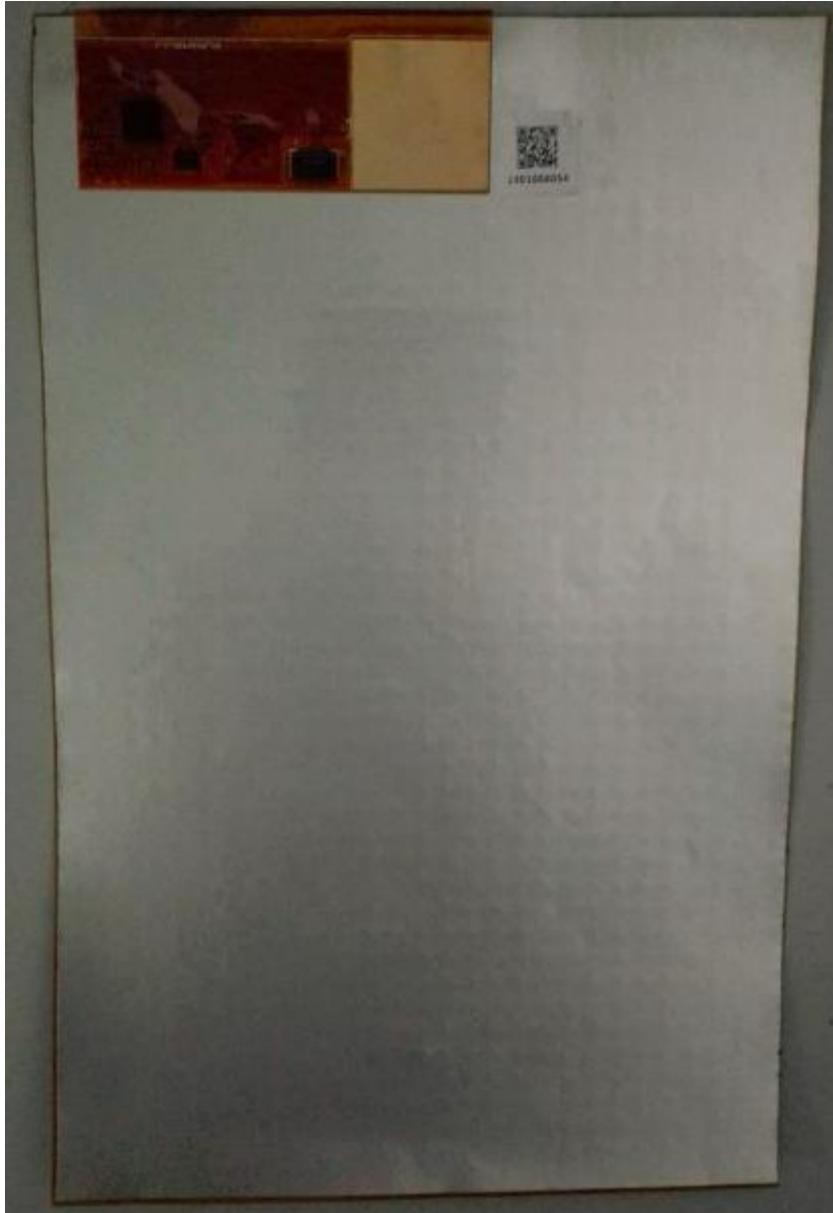
Others	Module Weight		g	TBD
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Note:

- 1、 *This specification is for standard module. For better performance, it needs to be customized by customer's system.*
- 2、 *Maximum different error in pressure values < 2LSB*
- 3、 *Maximum Coordinate jitters < 1 point*

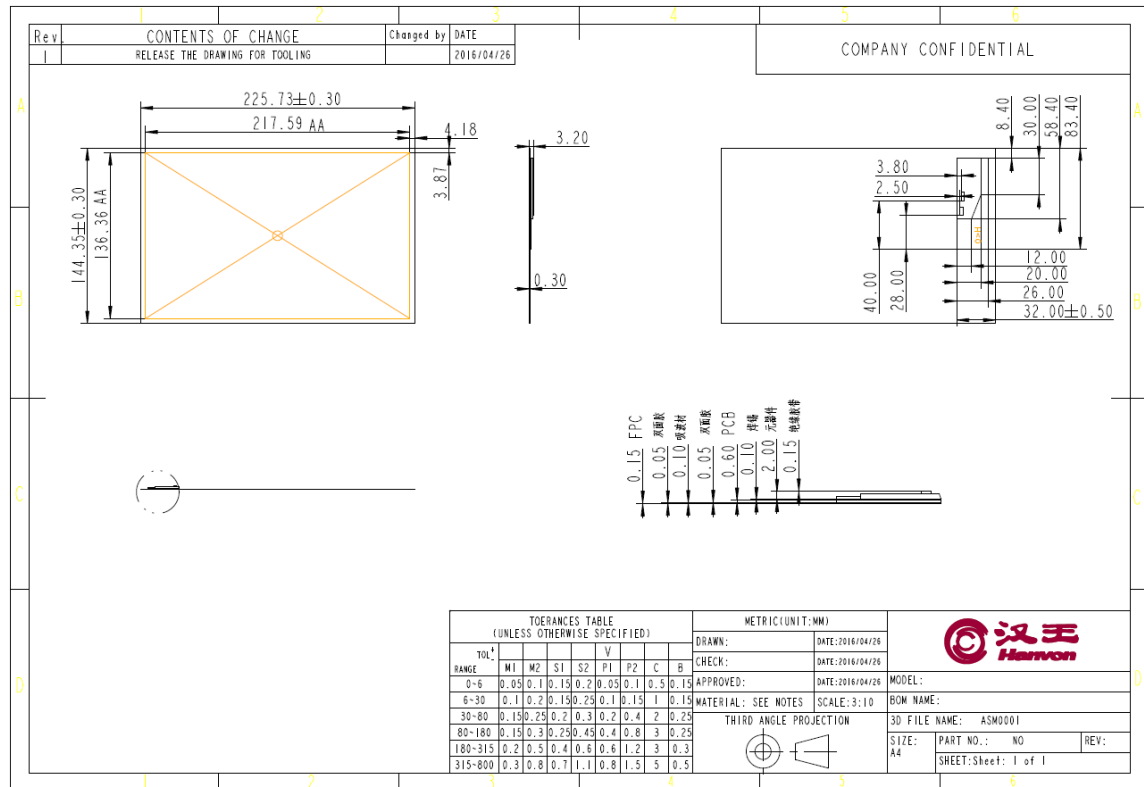
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4. Appearance





5. Mechanical Drawing



6. Signal Assignment

NO.	J1(USB)
1	NC
2	USB-
3	USB+
4	PDCT
5	SLEEP
6	NC
7	VCC+3.3V
8	GND

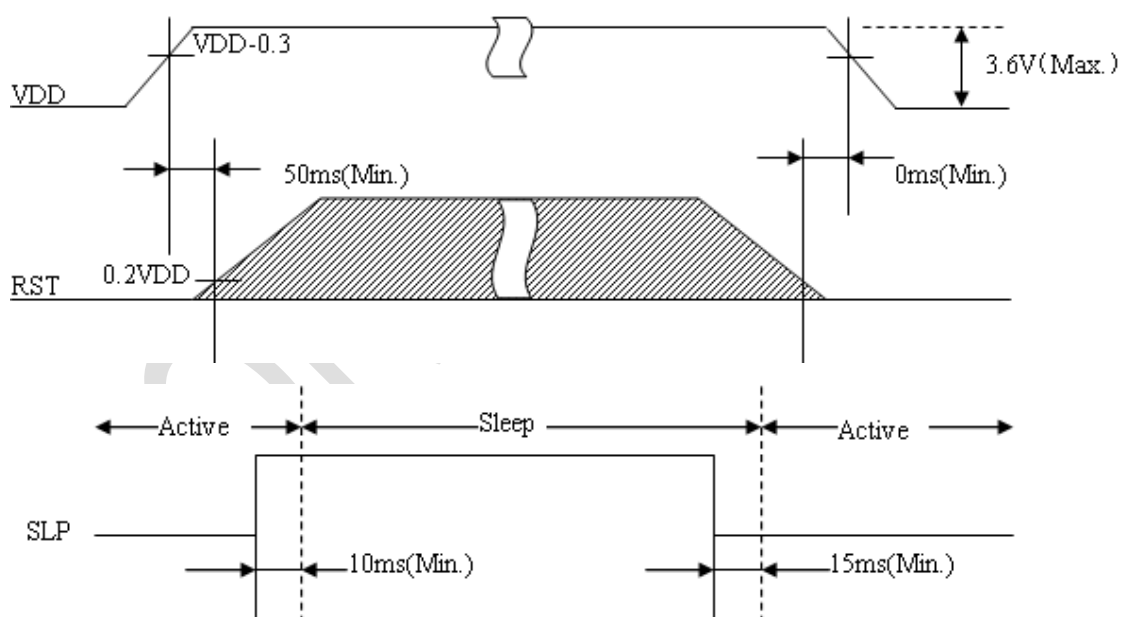
Note:

1 Logic Low: $0 < U_L < 0.2 \times V_{DD}$;

Logic High: $V_{DD}-0.3 < U_H < V_{DD}$.

7. Electrical Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Ground	GND	-	-	0	-	V
Digital Power Supply	V _{DD}	-	-	3.3	-	V
	I _{VCC}	V _{CC} =3.3V	20	40	60	mA
Sleep Power	SLP	SLP = '1'; V _{CC} =3.3V	0.10	0.33	0.70	mW
Reset Time	RST	I = 10mA	50	70	100	ms
Sleep Time	SLP	SLP = '1'; V _{CC} =3.3V	10	20	50	ms
Awake Time	SLP	SLP = '0'; V _{CC} =3.3V	15	20	50	ms
Power Cycle	-	V _{CC} =3.3V	50	100	150	ms

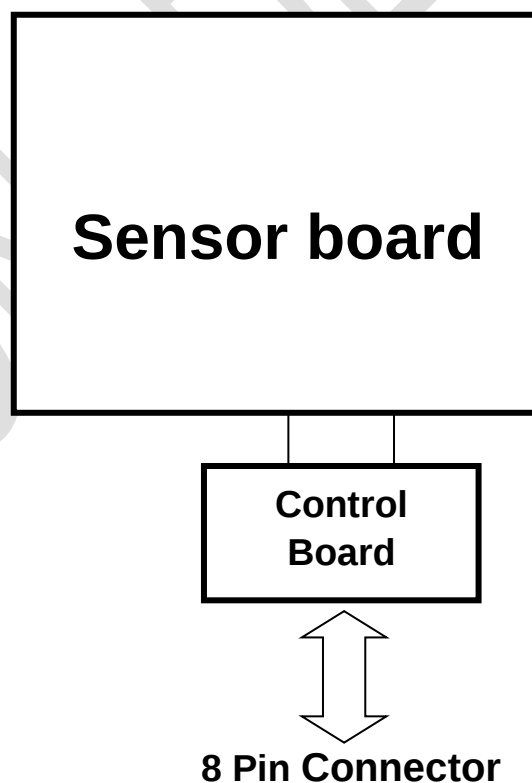


8. Idle Mode*

If the board does not find the pen in 5 seconds, the board enters idle mode (Max. current < 20mA), Support selective suspend mode, followed WHQL 8.0/8.1

Note: The power consumption in Idle mode and performance need to be defined after the joint debugging.

9. Block Diagram



10. Pen Accuracy

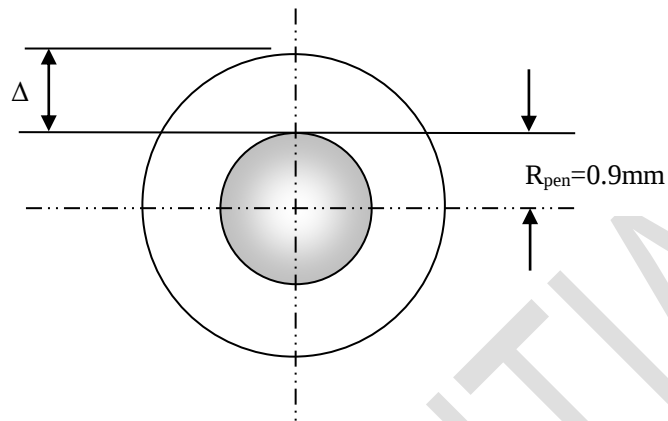


Figure 1 R_{pen} and Δ

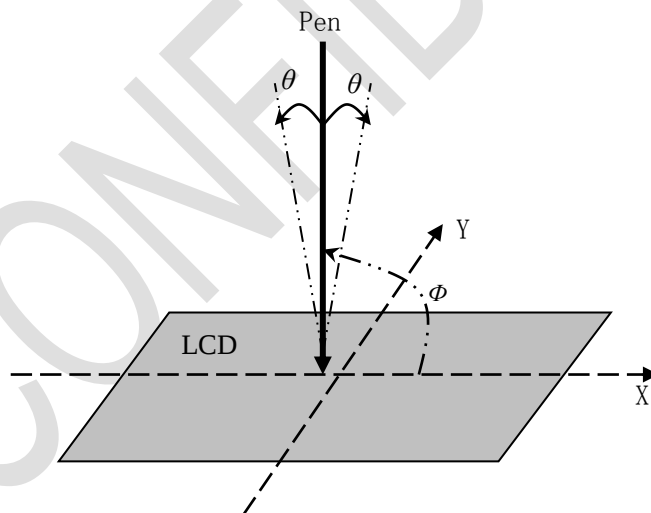


Figure 2 $\Phi = 90^\circ, \theta = 15^\circ: \Delta \leq 0.5\text{mm}$

Note 1: If noise exists, Δ will increase.

Note 2: At the edge of the sensor board, $\Delta \leq 0.8\text{mm}$.

Note 3: Writing angle(Φ) must be greater than 40 degrees.

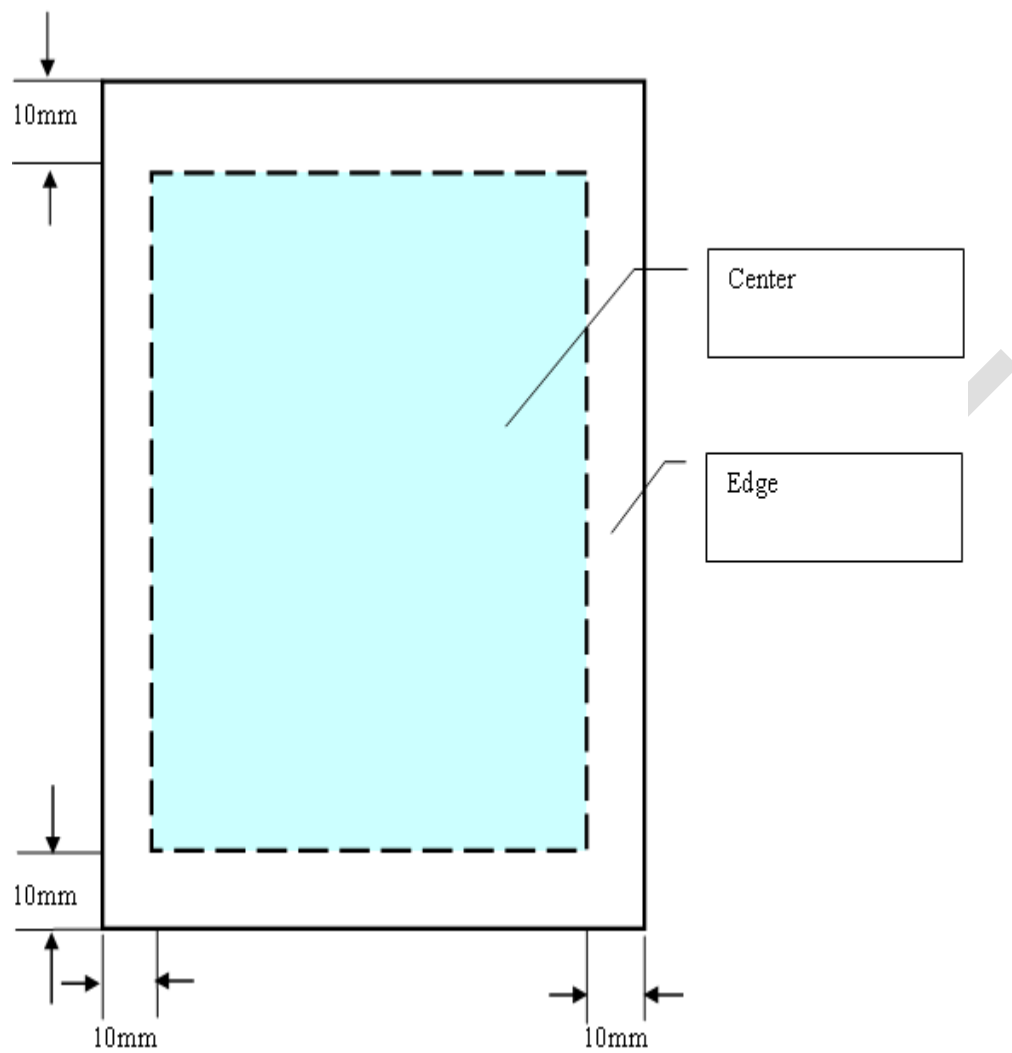


Figure 3 Center/Edge of the sensor board

11. Reliability test

(This is for your reference only. The final Reliability test for TP-101S01-H1S1-GT will be provided after we get final product)

Test Conditions:

1. The Electromagnetic Touch Board should be inspected as regular functional testing.
2. No condensing of water (moisture) is allowed on the Electromagnetic Touch Board.
3. For environmental tests, temperature gradient is 15°C/hour.
4. The number for the test samples is 10 units.

Item	Test condition	Criterion
Operating Environment	(1) High temperature 50°C 72hrs (2) High humidity 90%, temperature 60°C 72hrs (3) Low temperature 0°C 72 hrs After changing the environment, condition is brought back to normal (15 - 35°C, 25-75 %(RH). Another one or more hours later, functional test is performed.	No malfunction
Storing Environment	(1) High temperature 75°C 72hrs (2) High humidity 85%, High temperature 75°C 72hrs (3) Low temperature -10°C 72hrs After changing the environment, condition is brought back to normal (15 - 35°C, 25-75 %(RH). Another one or more hours later, functional test is performed.	No malfunction
Package Drop	(1) Height : 80cm (2) Floor surface : Concrete (3) Number of drops : A corner of the bottom panel 1 An edge between bottom and end panels 1 An edge between bottom and side panels 1 An edge between side and end panels 1 All six panels 6 Total 10 drops	No malfunction
Package Vibration	(1) Z axis : 2G (2) X and Y axis : 1G (3) Frequency : 5~200Hz Sweep	No malfunction

12. Labels

12.1 Green Label



Label Material: White color

Label Ink: Green

Label Location: Paste on the middle of the board backside

12.2 Bar Code Label



12.3 Shipping Mark Label

TBD

13. Packing

TBD