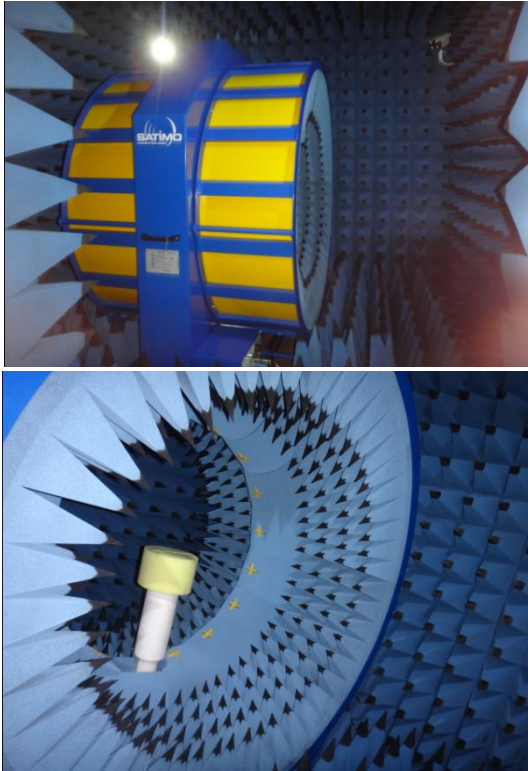


Antenna specification



Customer Name	Small cool	Project Name	K18
Commissioning frequency band	G4P/W1 2 4 5 8/B1 2 3 4 5 7 8 12 13 17 25 26 28 66 38 40 41 71	Structure mode	FPC
RF Engineer	Xiang Yi	Structural Engineer	Du Qiang
Antenna Type	LOOP	Date	2025/4/3



The original imported French SATIMO StarLab 3D laboratory can accurately and quickly test the TRP, TIS, efficiency, gain, Apple diagram, directional diagram and other parameter data of communication terminal products such as mobile phones, tablet computers and notebooks.



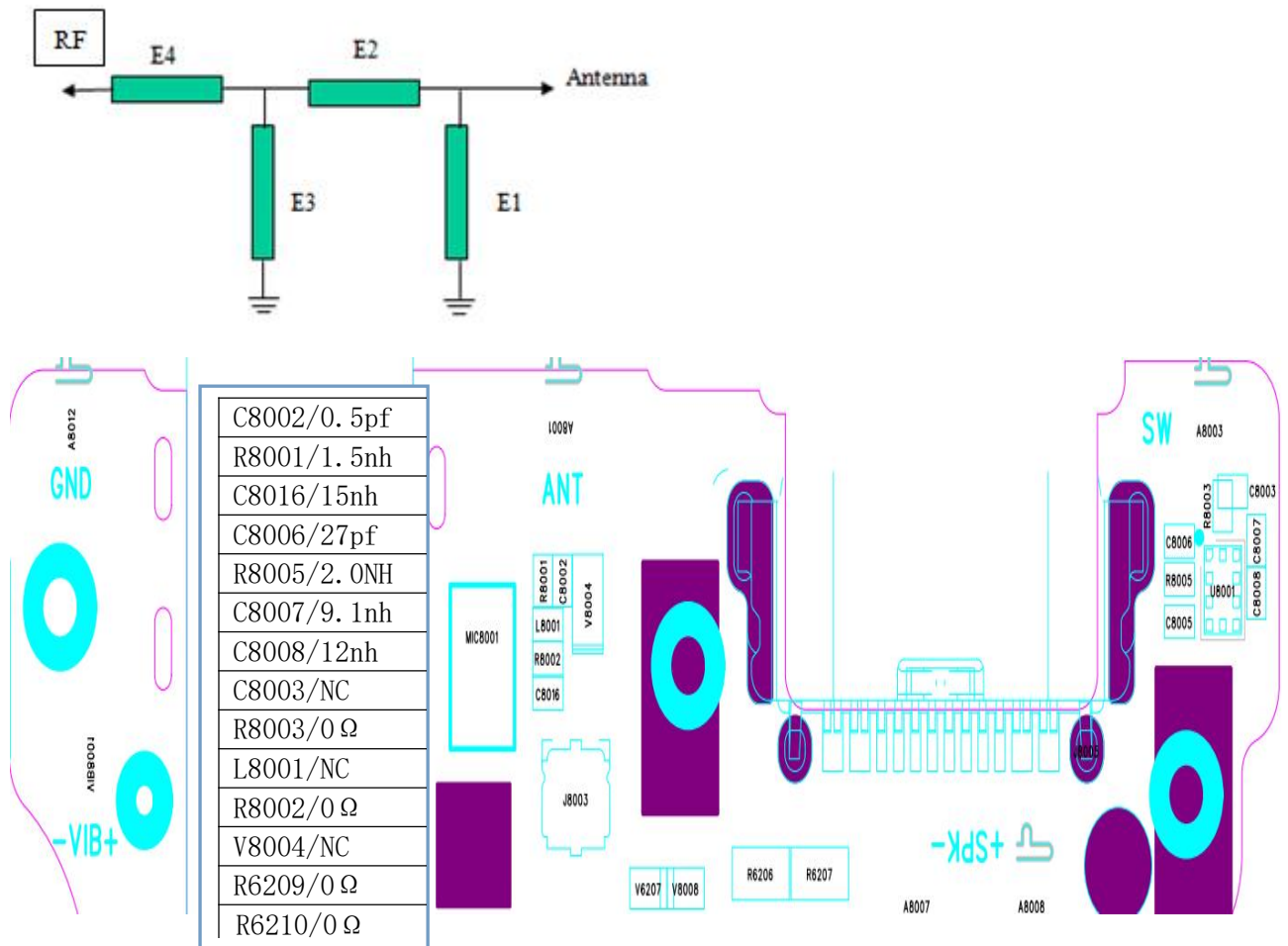
Report version feed

Version	Date	Content Overview
V1.0	2024/12/12	Debugging antenna test report
V2.0	2024/12/26	Antenna optimization test report of pilot production machine
V3.0	2024/12/30	Antenna optimization test report of pilot production machine
V4.0	2025/3/29	Antenna certification data
V5.0	2025/4/1	Antenna certification data
V6.0	2025/4/3	Antenna certification data

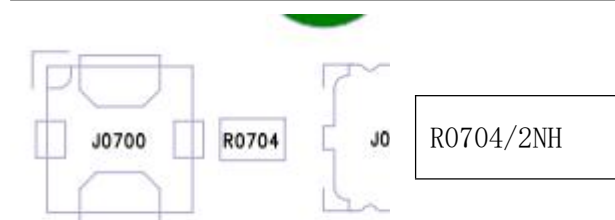
main antenna matching circuit

Element	E1	E2	E3	E4
Value	Nc	0 Ω	12nh	

Division I did not change the main antenna matching circuit! !



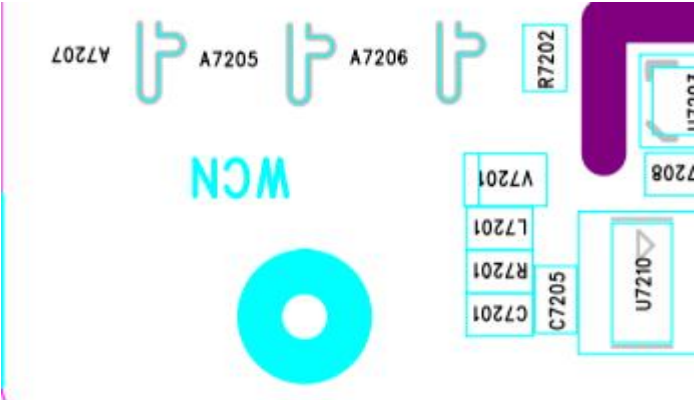
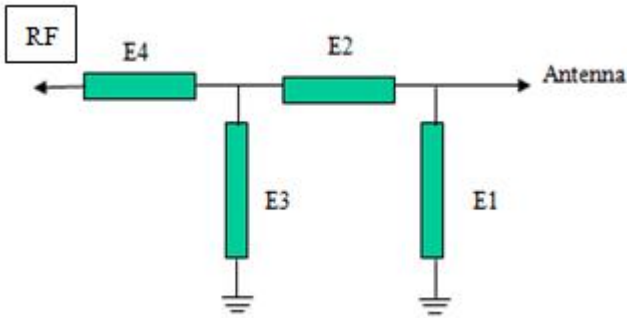
Elemenet	Band
RF1	900/1800/1900/W1 2 4 8/B1 2 3 4 7 8 25 38 40 41 66
RF2	850/W5/B5 26
RF3	B12 13/17 28
RF4	B71



three-in-one antenna matching circuit

Element	E1	E2	E3	E4
Value	NC	0 Ω	NC	

Division I to make changes to the three-in-one antenna matching circuit!



V7201
L7201/NC
R7201/0 Ω
C7201/NC
C7205/Ω



深圳市无限智联科技有限公司

Shenzhen wiselink technology co.,ltd

Free Space OTA

Band	Channel	TRP (dBm)	TIS (dBm)	Band	Channel	TRP (dBm)	TIS (dBm)
GSM900	L	23.6		DCS1800	L	24.5	
	M	24.2			M	25.3	
	H	25.5	-95.0		H	24.8	-101.2
GSM850	L	24.2		PCS1900	L	24.2	
	M	24.3			M	24.5	
	H	24.8	-101.5		H	24.0	-103.0
W850	L	15.2		W900	L	15.3	
	M	15.5			M	15.5	
	H	15.5	-103.0		H	15.0	-100.0
W1700	L	17.4		W1900	L	16.0	
	M	17.2			M	16.2	
	H	16.5	-104.0		H	16.5	-105.1
W2100	L	17.0		B13 (10MHz)	L		
	M	17.5			M	15.1	-90.3
	H	17.5	-104.7		H		
B1 (10MHz)	L	17.0		B17 (10MHz)	L	16.1	
	M	17.5			M	16.1	
	H	17.5	-92.5		H	16.2	-90.4
B2 (10MHz)	L	16.5		B25 (10MHz)	L	16.5	
	M	16.6			M	16.5	
	H	16.5	-92.8		H	16.6	-92.7
B3 (10MHz)	L	16.6		B26 (10MHz)	L	15.7	
	M	16.5			M	16.2	
	H	16.0	-91.9		H	15.8	-91.0
B4 (10MHz)	L	16.5		B28 (10MHz)	L	16.2	
	M	16.3			M	16.3	
	H	15.8	-93.2		H	16.2	-89.1
B5 (10MHz)	L	15.7		B66 (10MHz)	L	16.4	
	M	16.2			M	16.7	
	H	15.8	-90.5		H	16.5	-93.0
B7 (10MHz)	L	16.7		B38 (20MHz)	L	16.6	
	M	16.7			M	16.5	
	H	16.1	-94.0		H	16.8	-89.5
B8 (10MHz)	L	16.1		B41 (20MHz)	L	16.4	
	M	15.5			M	16.6	
	H	15.0	-86.2		H	17.7	-89.1
B12 (10MHz)	L	15.8		B40 (20MHz)	L	17.6	
	M	16.3			M	17.0	
	H	16.2	-90.0		H	16.0	-89.1
B71 (10MHz)	L	16.1					
	M	16.1					
	H	16.2	-88.2				

Address: Room 302, 3rd Floor, Building B, Gangshen Innovation Park, No.40 Huaning Road, Dalang Street, Longhua District, Shenzhen

WiFi active data bright screen test

Band	Channel	TRP(dBm)	TIS(dBm)
2.4G(B mode) 11M	1	9.0	
	7	10.3	
	13	9.7	-80.1

GPS measurement



(Company roof test, GPS search star results as shown in the figure above.).

Address: Room 302, 3rd Floor, Building B, Gangshen Innovation Park, No.40 Huaning Road, Dalang Street, Longhua District, Shenzhen

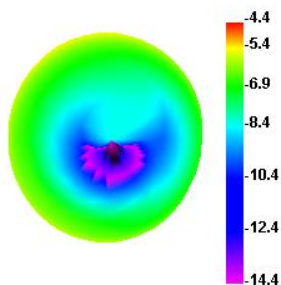
Antenna gain (Antenna Gain)

Standard	Band	Frequency(MHZ)	Gain(dBi)
LTE	FDD-B2	1850-1990	0.2
	FDD-B3	1710-1880	1.2
	FDD-B5	824-894	-5.4
	FDD-B7	2500-2690	-0.2
	FDD-B8	880-960	-4.4
	FDD-B12	699-746	-5.7
	FDD-B28	710-810	-5.7
	FDD-B13	746-787	-6.1
	FDD-B17	704-746	-5.7
	FDD-B25	1850-1995	0.2
	FDD-B26	814-894	-5.4
	FDD-B66	1710-2200	1.2
	FDD-B71	617-698	-5.2
	FDD-B4	1710-2155	1.2
	FDD-B1	1920-2170	1.3
	TDD-B40	2300-2400	-2.1
	TDD-B41	2496-2690	-0.2
	TDD-B38	2570-2620	-0.9
WCDMA	WCDMA-B1	1920-2170	1.3
	WCDMA-B2	1850-1990	0.2
	WCDMA-B4	1710-2155	1.2
	WCDMA-B5	824-894	-5.4
	WCDMA-B8	880-960	-4.4
GSM	GSM 850	824-894	-5.4
	GSM 900	880-960	-4.4
	DCS 1800	1710-1880	1.2
	PCS 1900	1850-1990	0.2
GPS		1559-1610	-0.1
2.4G WiFi/BT		2400-2480	-0.9

Apple Chart

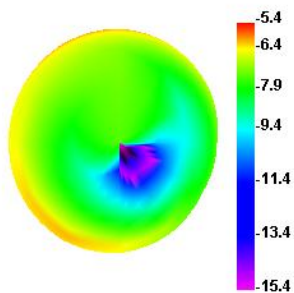
GSM900/W900/LTE-B8

930.000MHz



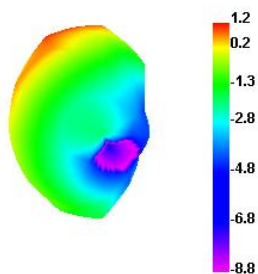
GSM850/W850/LTE-B5/26

880.000MHz



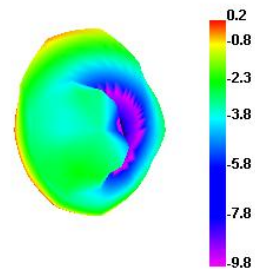
DCS1800/1700/LTE-B3/4/66

1760.000MHz

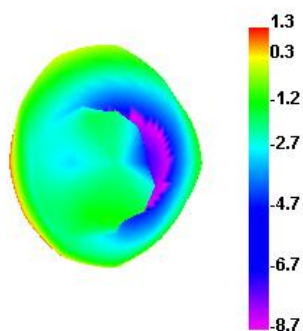


PCS1900/W1900/B2/25

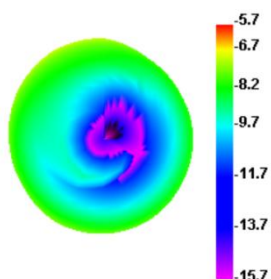
1920.000MHz



W2100/B1
1940.000MHz

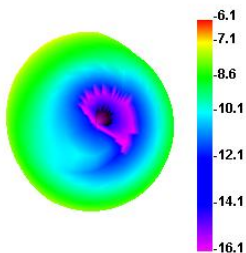


LTE-B28/12/17
720.000MHz



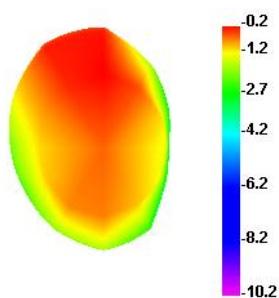
LTE-B13

760.000MHz



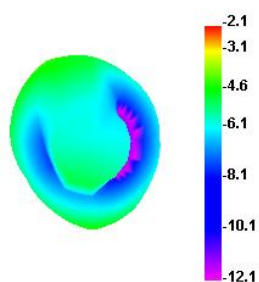
LTE-B7/41

2520.000MHz



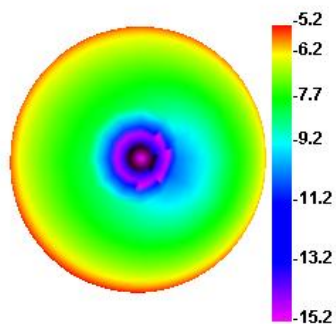
LTE-B40

2300.000MHz



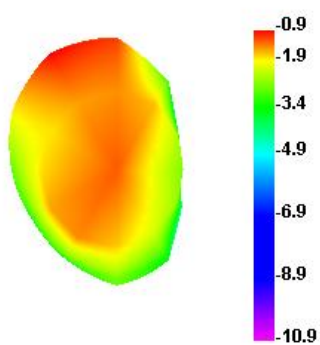
LTE-B71

690.000MHz



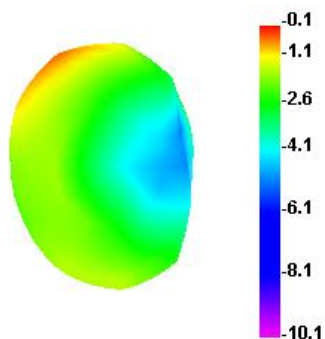
LTE-B38

2580.000MHz



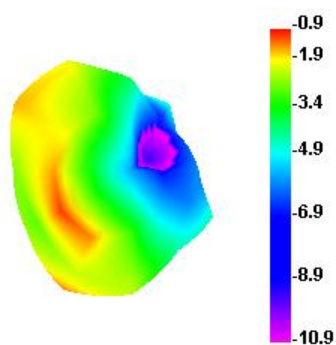
GPS

1575.000MHz



2.4G WIFI/BT

2470.000MHz





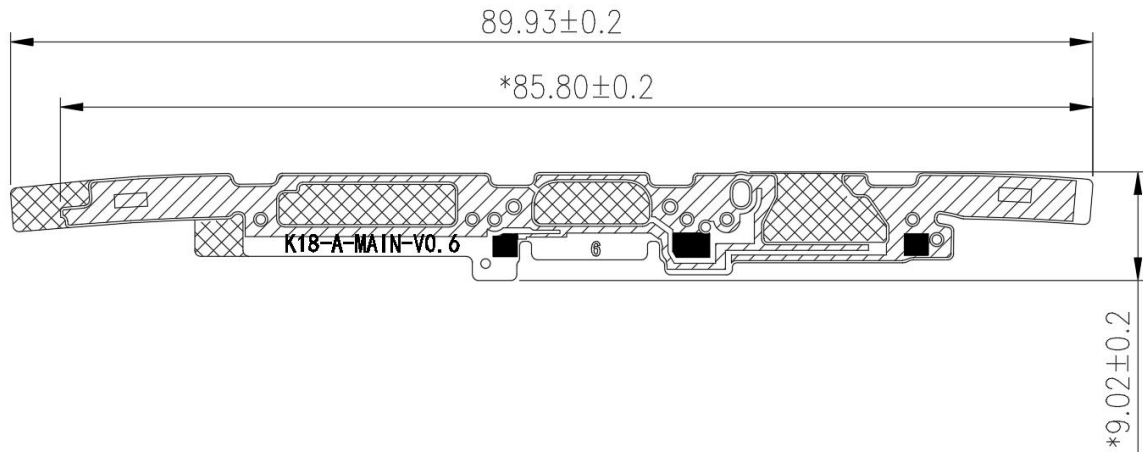
AFTtEch

深圳市无限智联科技有限公司

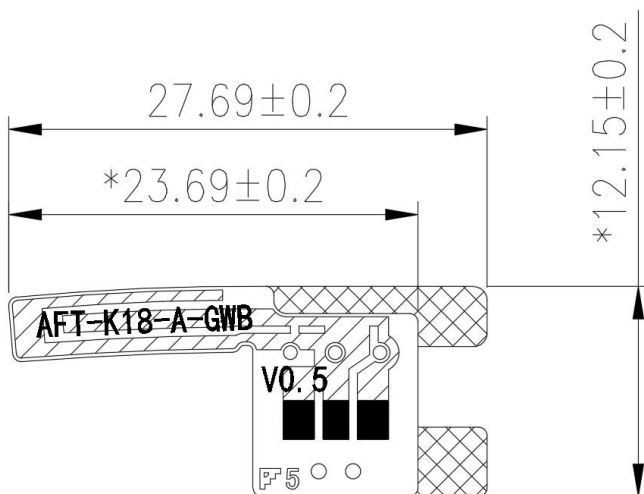
Shenzhen wiselink technology co.,ltd

Antenna size:

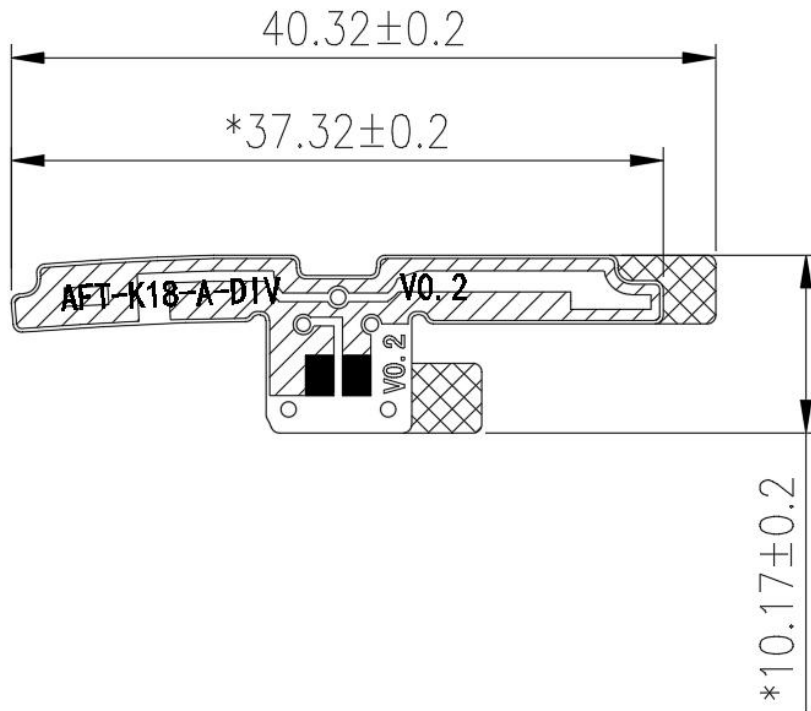
Main antenna:



Three-in-one antenna:



Diversity antenna:

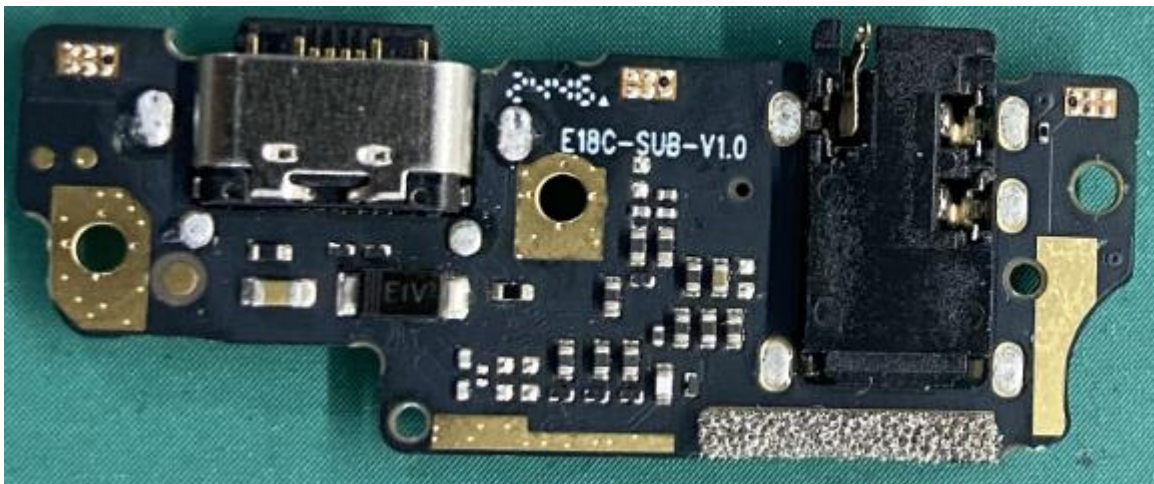


Environmental treatment:

Conductive sponges attached to both sides of the zinc alloy frame are grounded to the screen.



The small board is grounded with a conductive sponge and zinc alloy frame



Here the zinc alloy paste conductive sponge is grounded to the horn



Address: Room 302, 3rd Floor, Building B, Gangshen Innovation Park, No.40 Huaning Road, Dalang Street, Longhua District, Shenzhen

The zinc alloy conductive sponge in the middle frame is grounded to the shielding cover of the mainboard.
(The conductive sponge below the motherboard is recommended to be a little longer and thicker, so as to ensure that it is fully grounded with the motherboard)



Note:

- 1, this antenna is only suitable for debugging prototype, motherboard PCB or RF circuit material changes, accessories (such as camera, screen, horn, motor, battery, shell process) and other changes, must be tested and verified by our company before use.
2. If this project needs to be verified by the third party, please send the prototype to our company for retesting at least one working day in advance, and then send it to our company for testing, so as to avoid delays in the project progress after two or multiple tests!