Antenna Test report

Model Name: POS-960

Date: 12st July, 2023

Shenzhen Xinlingke Technology Co., Ltd.

www.kpantenna.com

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Catalogue

BTantenna

CONTENT

01.Project Introducation and Photoes-Project Introducation

RF Engineer	Engineer Kong	Email	2532625702@qq.com
		Mobile	18477016343
Antenna Overview			
Status of Sample machine	Whole machine	Project Name	POS-960
Antenna Type	PIFA	Structure mode	FPC+4th Generation coaxial line+cannula
Main Antenna			
Other Antenna	2.4G/5.8GWIFI		

02.Report Versions

Version	Report Time	Commissioning Overview
A0	2023.06.02	Antenna Test Report
A1	2023.07.06	Antenna Test Report
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		

03.Introduction of Company and Test Environment- Company

Company Experience

Shenzhen Xinlingke Technology Co., Ltd. owns 12 years of experience in R & D and production of various mobile communication terminals. Company has established a joint RF device laboratory with universities. Company is proficient in antennas of 5G NSA and SA, ultra thin mobile phones, NB IOT / EMTC, and base station.

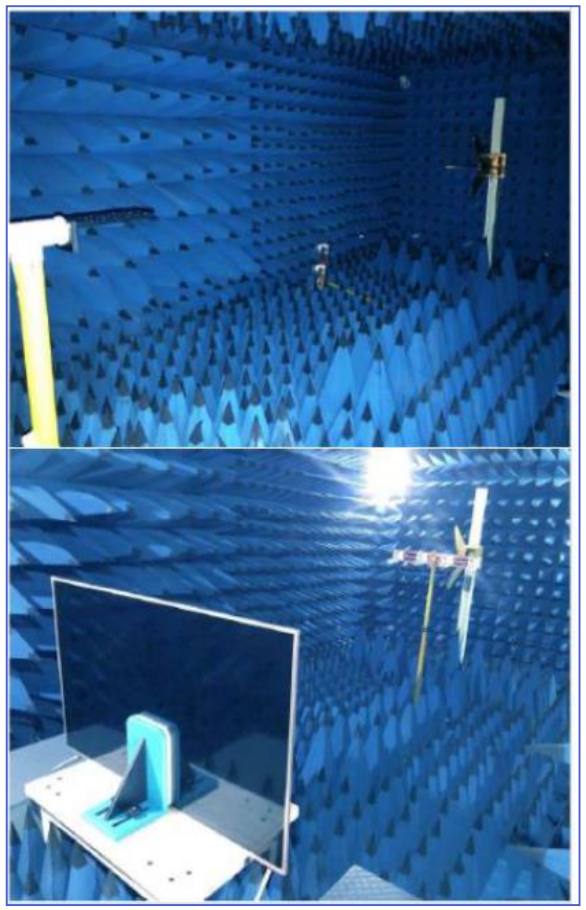
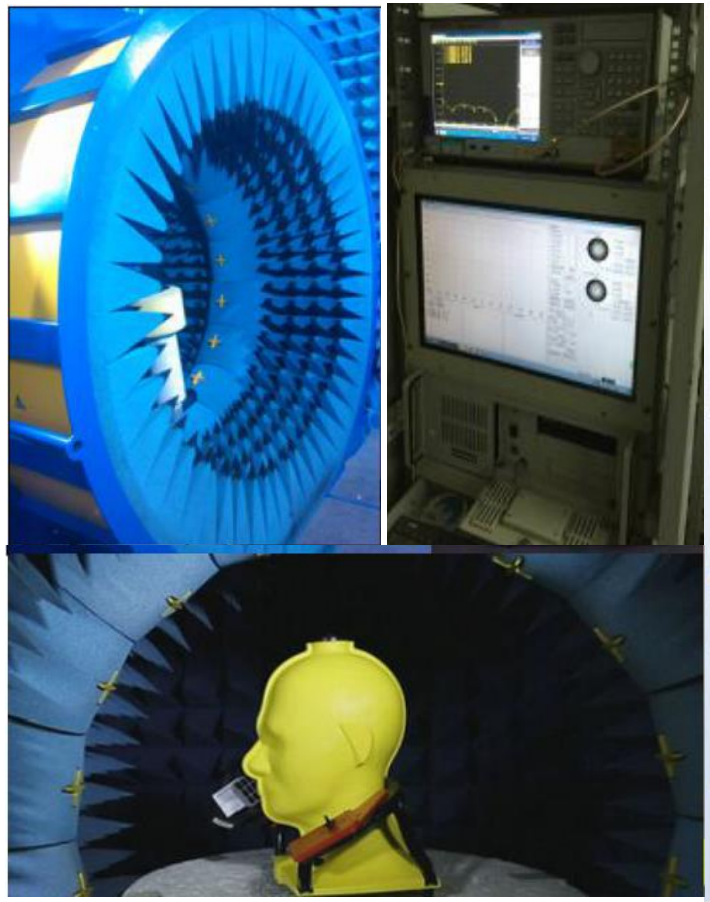
Product Range

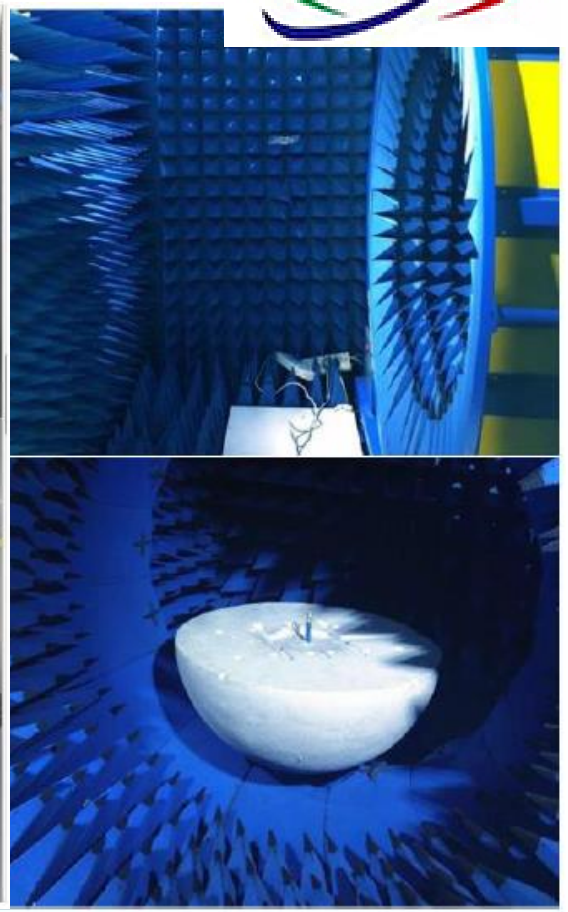
The products of company cover many fields, such as smart home, Internet of vehicles, smart wear, mobile phones, pad, base station etc.

Core Task

Company has been committed to improving our long-term competitiveness by providing whole RF solution, insisted on taking customer demand as the first place.

04.Introduction of Company and Test Environment-Test Environment

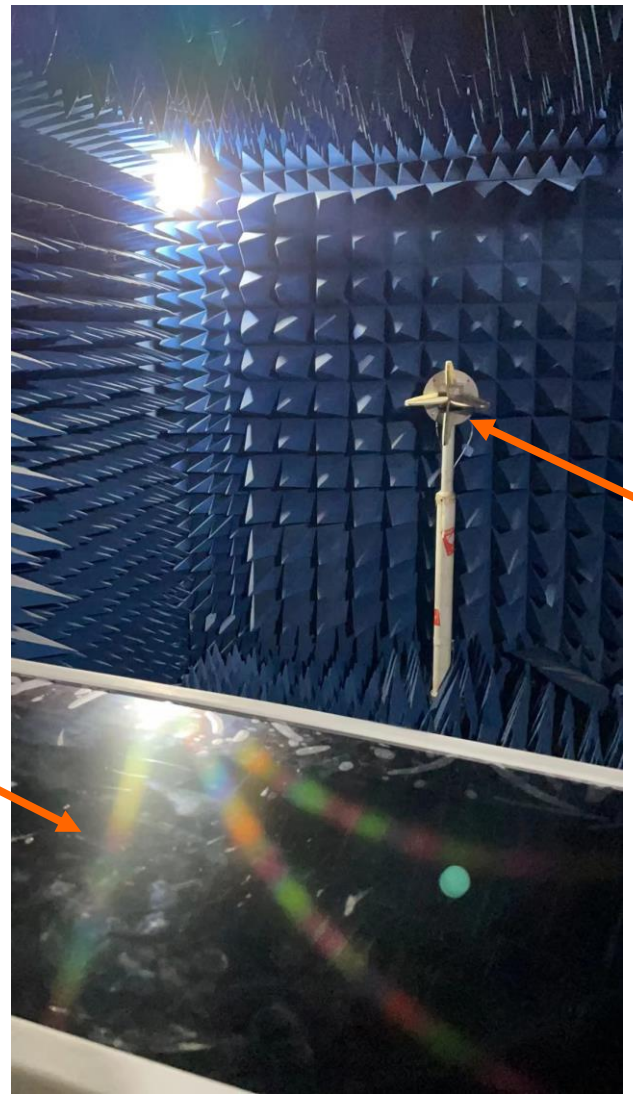





The company owns several OTA darkrooms whose frequency bands covers from 400mhz to 8.5ghz.

- Providing OTA test for whole machine which include but not be limited to 5G NSA, SA(trp/tis), WiFi active test (supporting 11b/11g/11n/11ax mode), bluetooth/GPS active test
- Providing antenna gain and efficiency
- Providing2D pattern / Apple chart analysis
- Providing upper and lower hemisphere efficiency
- Providing mutual interference correlation coefficient test items.

05.Environment Test



06.Antenna OTA Data

Antenna OTA data

WIFI OTA 1#

2.4GWIFI	802.11b（11M）		
channel	1	6	11
TRP	12.7	12.2	12.3
TIS	-77.4	-77.6	-76.6

5GWIFI	802.11a（54M）		
channel	149	157	165
TRP	11.5	11.4	11.5
TIS	-70.5	-67.9	-69.4

WIFI OTA 2# VFD

2.4GWIFI	802.11b（11M）		
channel	1	6	11
TRP	13.5	13.5	13.7
TIS	-77.5	-78.8	-77.8

5GWIFI	802.11a（54M）		
channel	149	157	165
TRP	11.5	11.7	11.6
TIS	-67.1	-67.5	-67.5

WIFI OTA 3# Single display

2.4GWIFI	802.11b（11M）		
channel	1	6	11
TRP	13.8	13.9	13.8
TIS	-79.6	-78.9	-75.5

5GWIFI	802.11a（54M）		
channel	149	157	165
TRP	11.5	11.8	11.7
TIS	-67.3	-67.7	-67.8

07. Antenna Passive data

Passive data

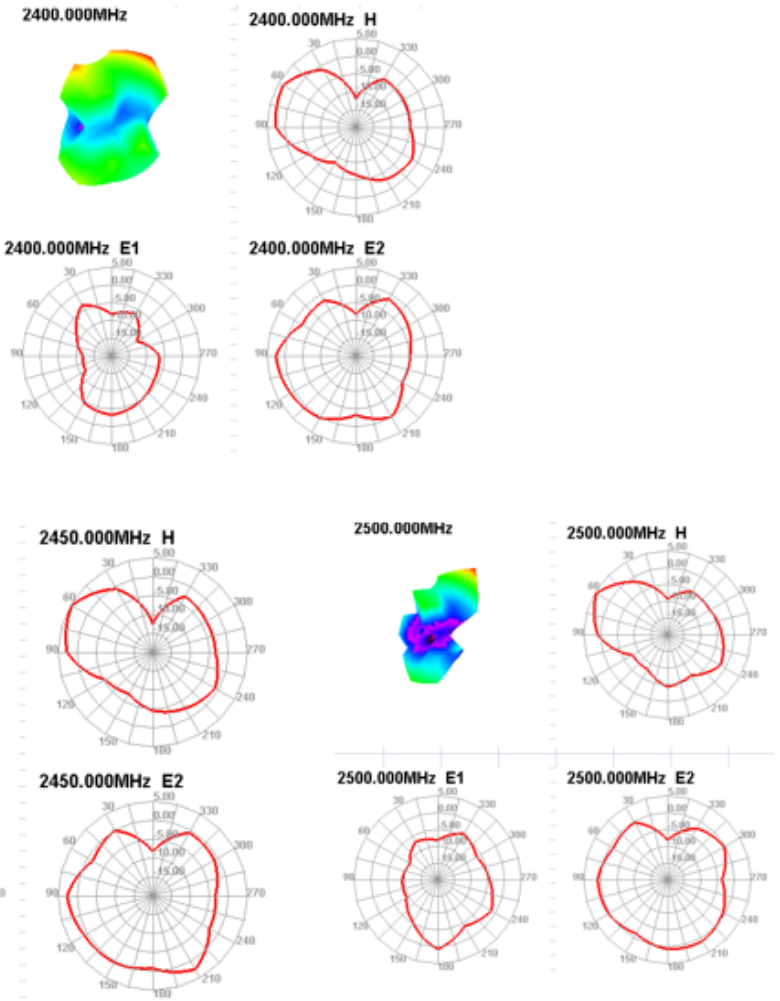
WIFI standing wave，Return loss，Smith circle diagram （Module 1 antenna）

WIFI standing wave，Return loss，Smith circle diagram （Module 2 antenna）

08. Antenna Passive data

2.4GWIFI efficiency(Module 1 antenna)

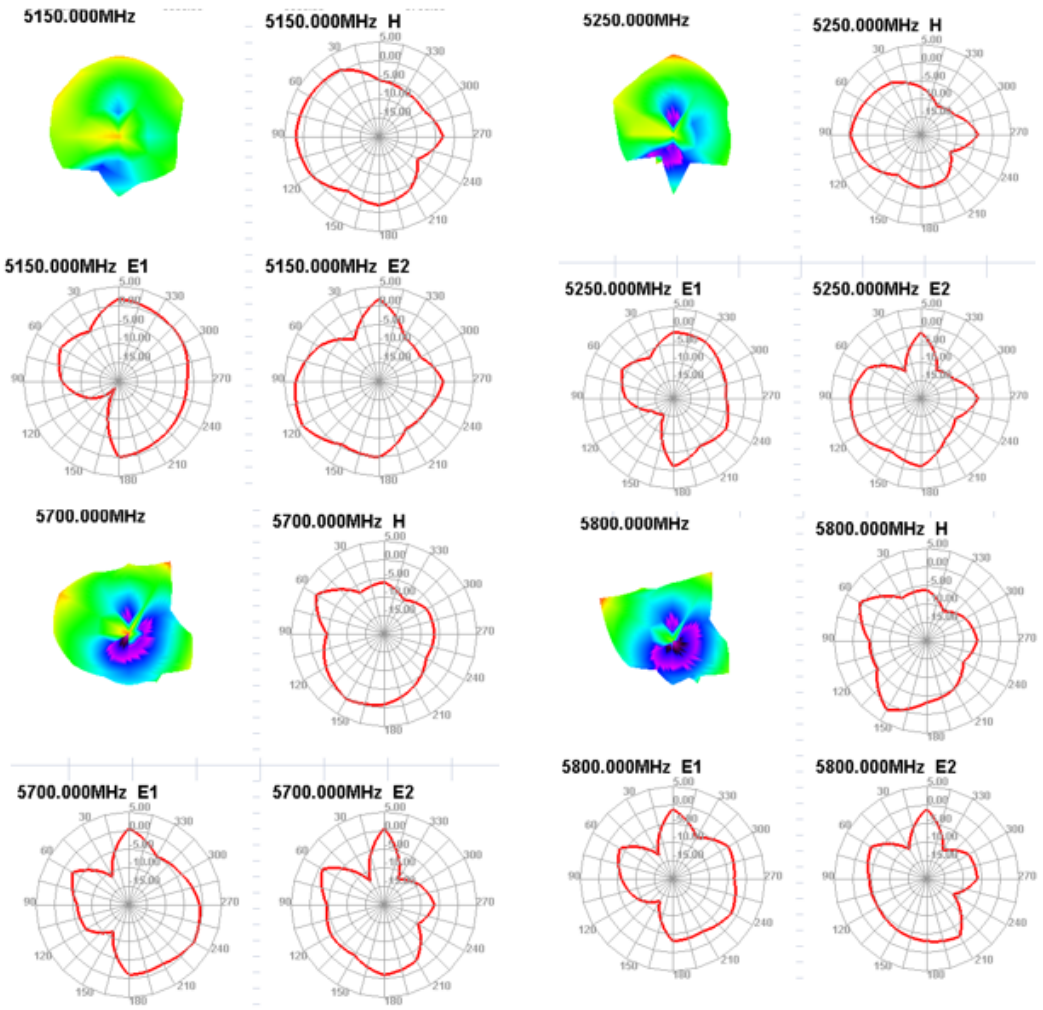
Passive Test For WIFI2.4		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	42.08	1.43
2410	43.1	1.98
2420	43.96	1.94
2430	43.92	1.8
2440	43.48	2.15
2450	43.82	2.58
2460	42.64	2.33
2470	42.54	2.04
2480	42.55	2.16
2490	42.17	2.08
2500	41.38	2.4



09. Antenna passive data

5GWiFi efficiency(Module 1 antenna)

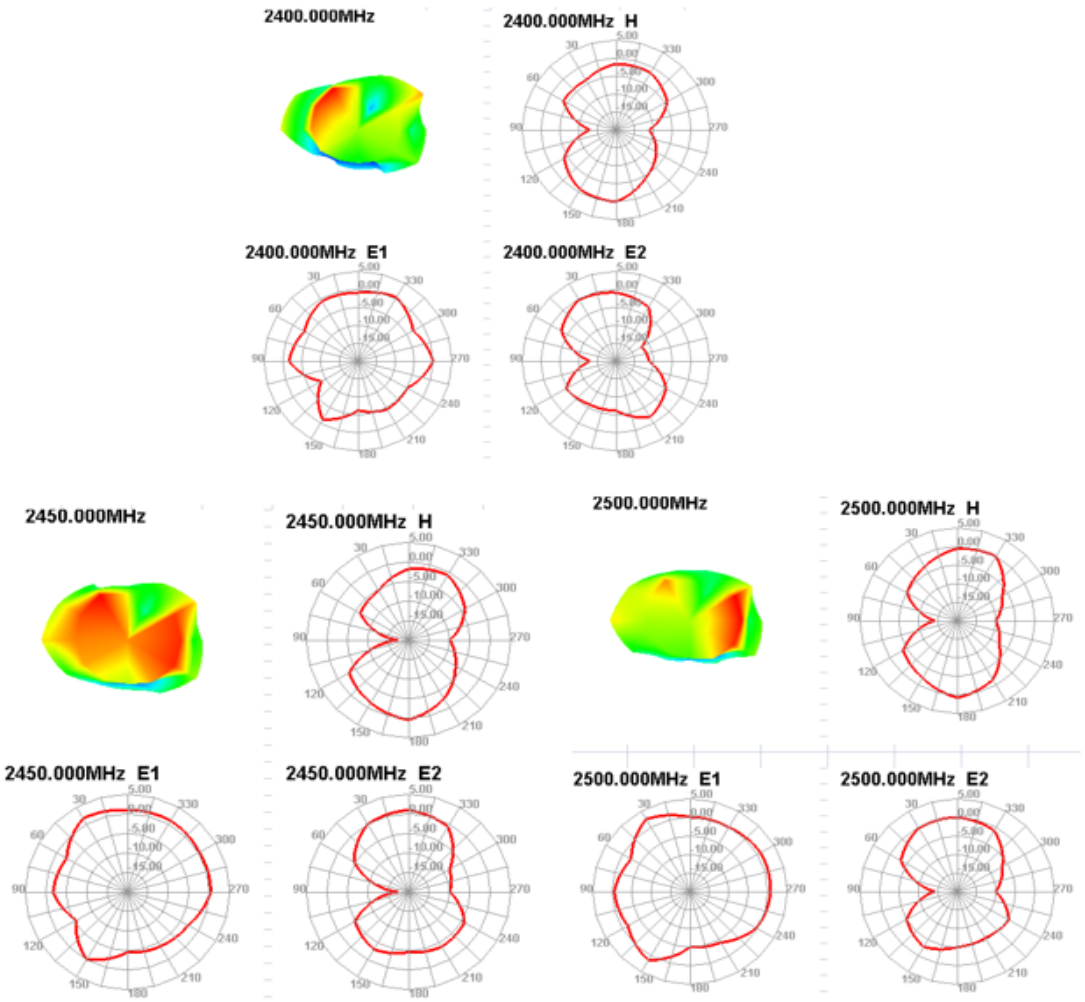
Passive Test For WIFI5.8		
Freq (MHz)	Effi (%)	Gain (dBi)
5150	39.71	1.39
5200	40.5	0.67
5250	36.53	0.56
5300	35.11	0.7
5350	38.64	0.02
5400	37.74	0.12
5450	36.47	0.73
5500	37.42	1.28
5550	38.45	1.28
5600	36.13	1.06
5650	39.26	1.85
5700	37.93	1.35
5750	36.07	1.93
5800	35.97	1.02
5850	36.88	1.21



10. Antenna passive data

2.4GWIFI efficiency(Module 2 antenna)

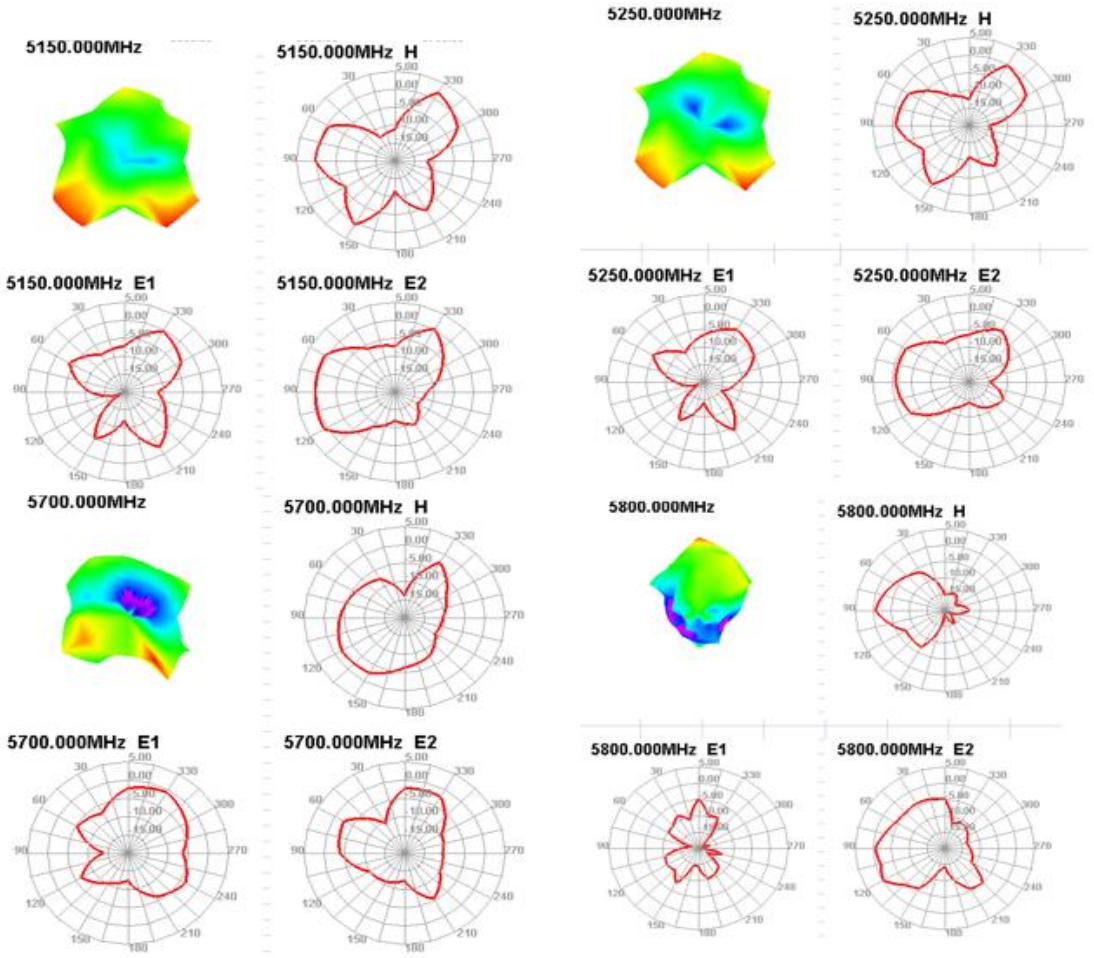
Passive Test For WIFI2.4		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	42.48	1.33
2410	41.41	1.89
2420	41.92	1.42
2430	41.96	1.03
2440	42.27	1.44
2450	41.51	1.03
2460	40.8	1.73
2470	40.9	1.61
2480	41.48	1.62
2490	42.34	1.8
2500	40.78	1.56



11. Antenna Passive data

5GWiFi efficiency(Module antenna 2)

Passive Test For WIFI5.8		
Freq (MHz)	Effi (%)	Gain (dBi)
5150	39.7	0.64
5200	38.88	0.51
5250	37.1	0.69
5300	35.52	0.23
5350	43.43	0.88
5400	36.28	0.02
5450	38.02	0.19
5500	37.71	0.29
5550	30.74	-0.34
5600	28.44	-0.33
5650	28.49	-0.19
5700	33.51	0.66
5750	26.93	-0.19
5800	29.17	0.16
5850	28.7	-0.41



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12. Antenna location diagram

Module 2-port antenna

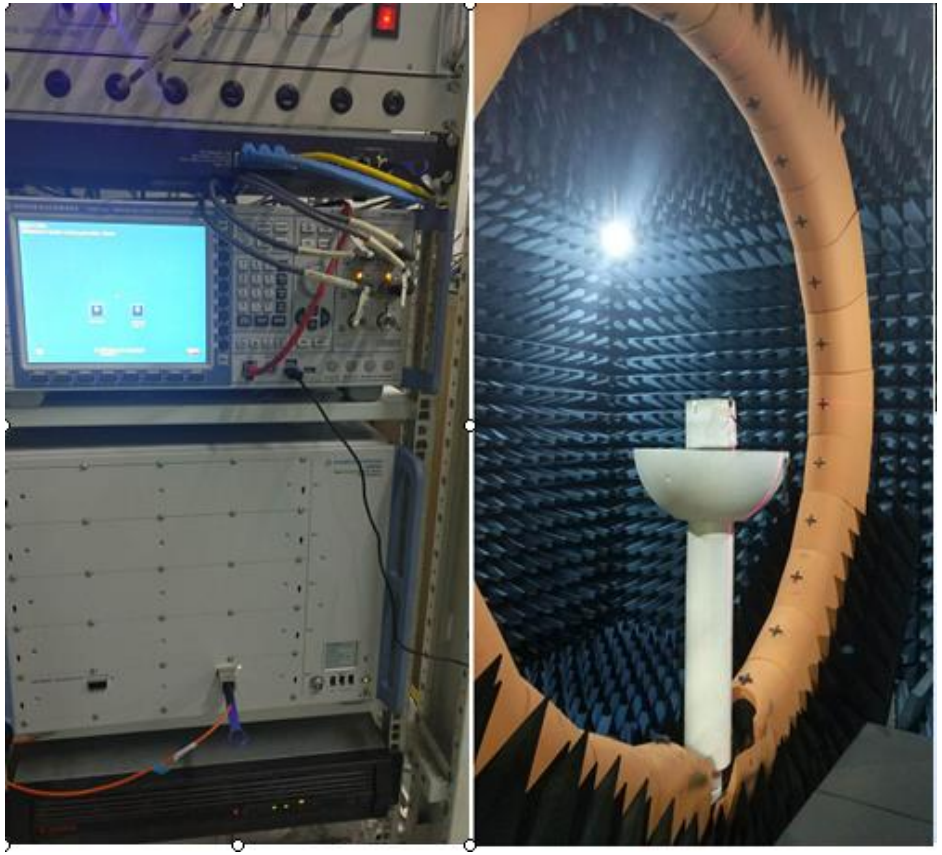
Module 1-port antenna

13. Environmental treatment

Original processing, unchanged

14.Conclusion

The software and hardware of batch prodution should be the same as the sample machine.



THANKS!

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