



Shenzhen XINHENG YANG Technology Co., Ltd

SPECIFICATION

Customer Name: Shenzhen Zhongsoft win Technology Co., LTD

Product Model: D1

Customer P/N:

XINHENG YANG P/N: CP. 21. 0000106 / CP. 21. 0000107

SPECIFICATIONS: WIFI 2.4GHZ-5.8GHZ+BT

Production date: 2024.09.12

Sample Version: V1

XINHENG YANG		
FICTION	DQE	R&D
Customer		
PUR	QC	R&D

Manufacturer: Shenzhen Xinhengyang Technology Co., LTD

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R & D, production and sales of professional wireless terminal antenna



1、The basic parameters

A. Electrical Characteristics	
Frequency	2400MHZ-2500MHZ 5150MHZ-5850MHZ
VSWR	ANT1: <2.0 ANT2: <2.0
Avg Efficiency	ANT1: > 33% ANT2: >45%
Impedance	50 ± 25 Ohm
Polarization	Linear
Peak Gain	ANT1: 2400MHZ: 0.85dBi ANT2: 2400MHZ: 2.77dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC+PET black
Cable Type	Four generations
Connector Type	Φ0.81 ANT1:L=260MM gray ANT2:L=75MM black
Dimension	/
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 30 °C ~ + 70 °C

2、Electrical Specification

Those specifications were specially defined for D1 model.

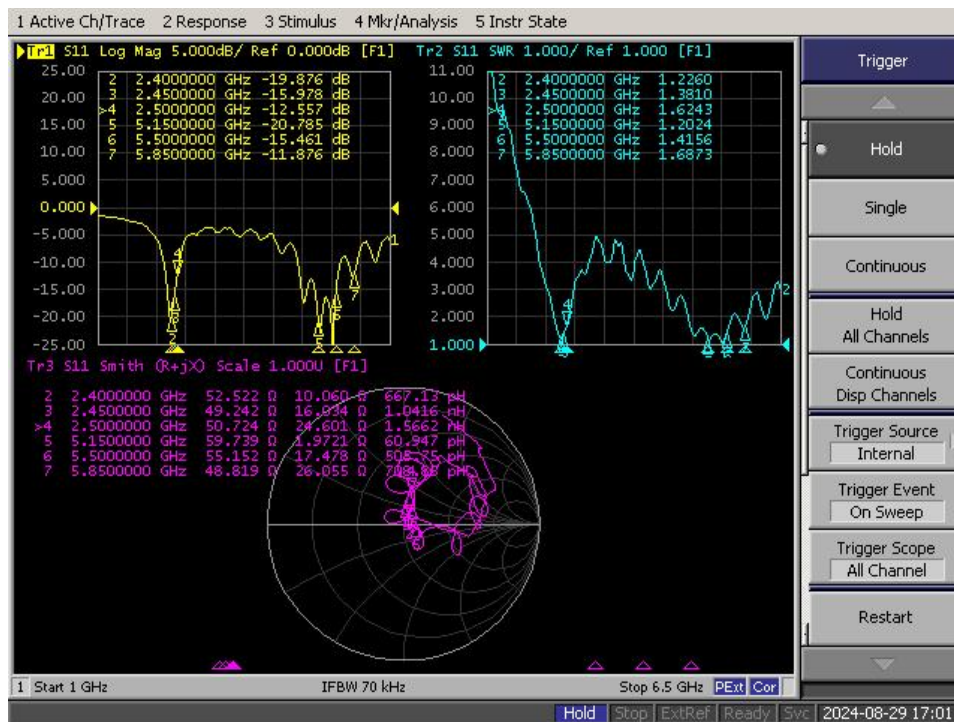
3、VSWR

1 Measuring Method

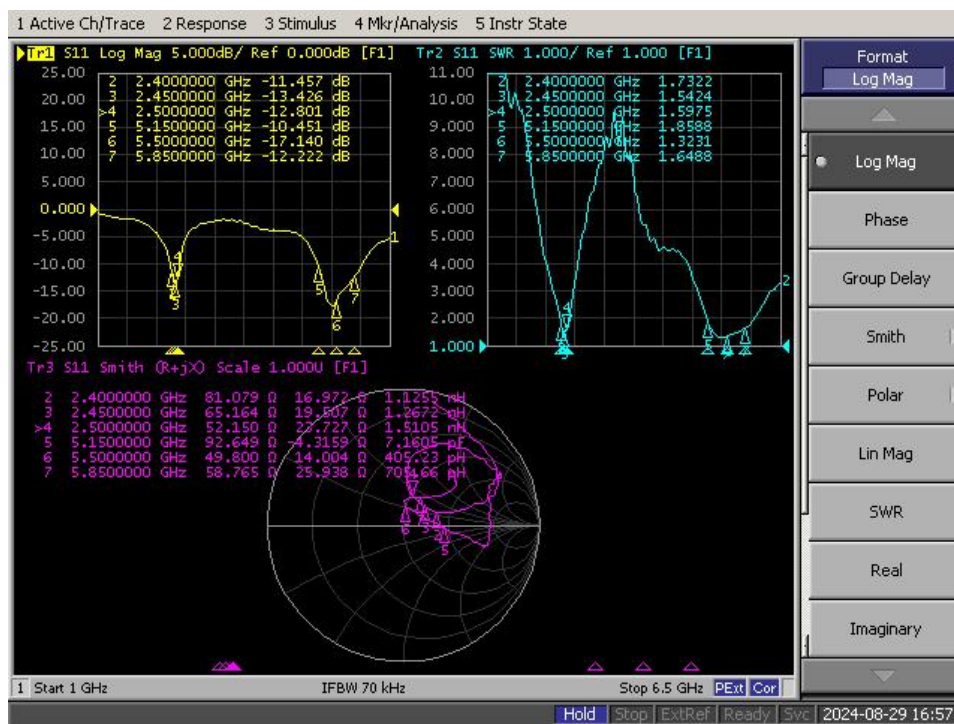
- 1.A 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
- 2.Keeping this jig away from metal at least 20cm

2 Measurement frequency points and VSWR value

ANT1



ANT2



4、 Anechoic chamber

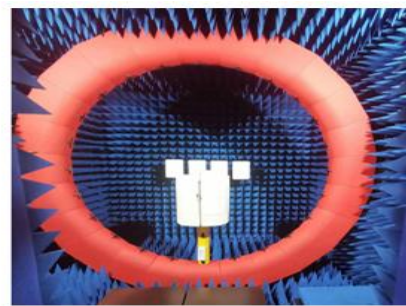
Introduction:

Microwave darkroom and no reflection chamber, absorbing short wave darkroom dark room. Microwave darkroom by electromagnetic shielding room, filtering and isolation, grounding device, the ventilation duct, indoor distribution system, monitoring system, ceiling wave material part. It is based on the wave absorbing material as the lining of the shield room, it can absorb the most of the electromagnetic energy into the six wall is a better simulation of the free space conditions.

The main working principle of microwave anechoic chamber is according to the electromagnetic wave in the medium from the low magnetic guide magnetic direction of propagation rules, absorbing materials to guide the electromagnetic wave using high permeability, through resonance, a substantial absorption of electromagnetic wave radiation energy, by coupling the electromagnetic energy into heat energy.

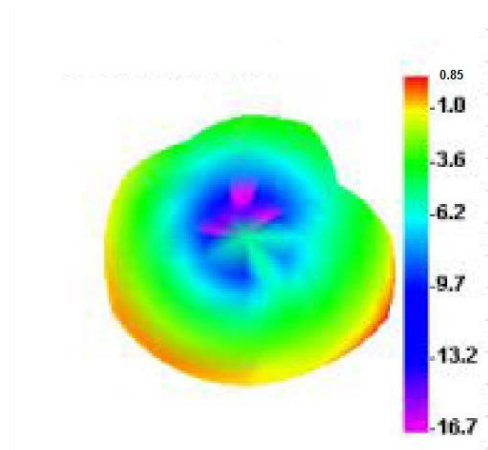
main performance :

Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite)



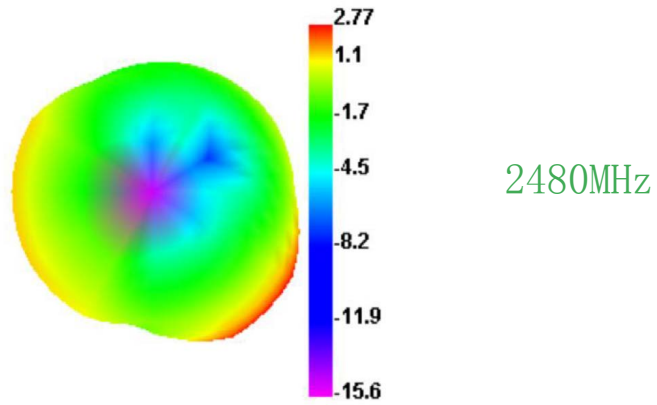
5、 Gain table of Antenna

Passive field pattern-ANT1-2400MHZ-2500MHZ



2470MHz

Passive field pattern-ANT2-2400MHZ-2500MHZ



Passive efficiency gain

ANT1-2400MHZ-5850MHZ					
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	33.60	-0.66	5250	45.73	1.99
2410	34.53	-0.89	5300	44.58	2.16
2420	35.61	0.05	5350	46.80	1.86
2430	36.71	0.33	5400	46.29	1.46
2440	38.22	0.51	5450	46.52	1.46
2450	39.24	0.47	5500	46.55	2.00
2460	39.77	0.57	5550	48.30	1.77
2470	39.75	0.85	5600	49.93	2.26
2480	39.56	0.13	5650	50.25	2.10
2490	38.03	0.22	5700	48.55	2.54
2500	38.43	0.44	5750	48.11	2.22
5150	46.74	2.35	5800	49.63	2.45
5200	45.86	2.14	5850	50.44	2.64

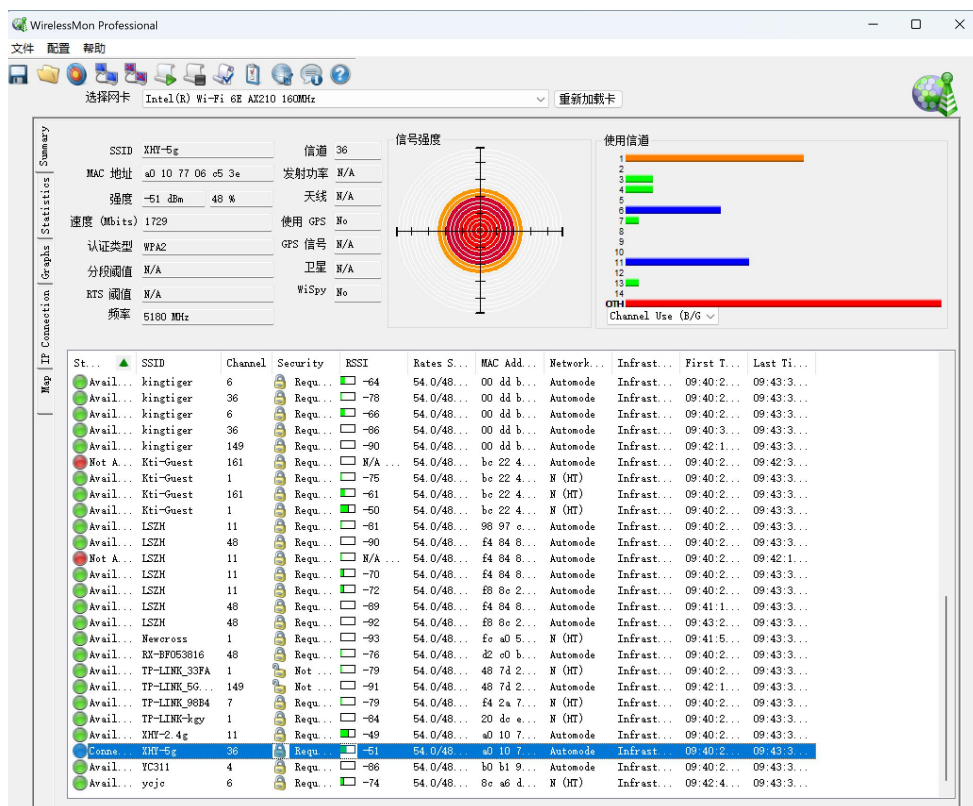
ANT2-2400MHZ-5850MHZ					
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	45.88	0.70	5250	59.13	1.30
2410	47.95	1.13	5300	61.50	1.77
2420	48.09	1.26	5350	63.81	1.78
2430	51.98	1.51	5400	66.94	1.99
2440	54.80	1.87	5450	61.63	2.48
2450	53.87	2.28	5500	67.79	2.44
2460	53.92	2.50	5550	69.45	2.64
2470	54.98	2.47	5600	61.57	2.41
2480	55.80	2.77	5650	67.98	2.59
2490	55.70	2.38	5700	64.40	2.54
2500	56.95	2.19	5750	65.64	2.51
5150	51.32	1.06	5800	64.45	2.30
5200	51.39	2.91	5850	60.05	2.03



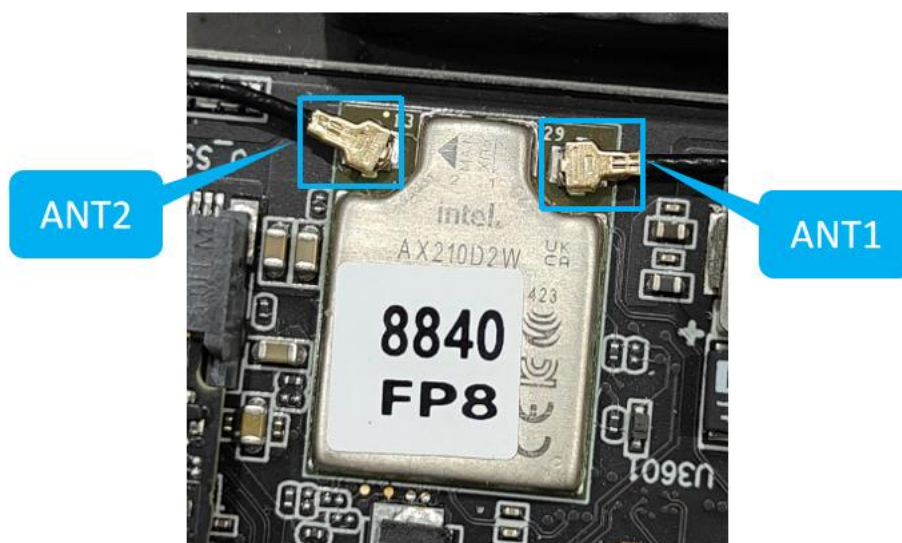
OTA active

Test Condition		Free Space	
band	Channel	TRP (dBm)	TIS (dBm)
802.11B 11Mbps	1	11.23	-83.19
	6	10.67	-82.77
	11	11.02	-82.85
802.11G 54Mbps	1	11.02	-73.19
	6	12.13	-71.90
	11	12.32	-71.05
802.11N MCS7	1	10.93	-66.81
	6	11.78	-67.33
	11	12.24	-66.30
802.11A 54Mbps	149	11.86	-75.29
	157	12.00	-76.05
	165	11.02	-73.19

Measured-data



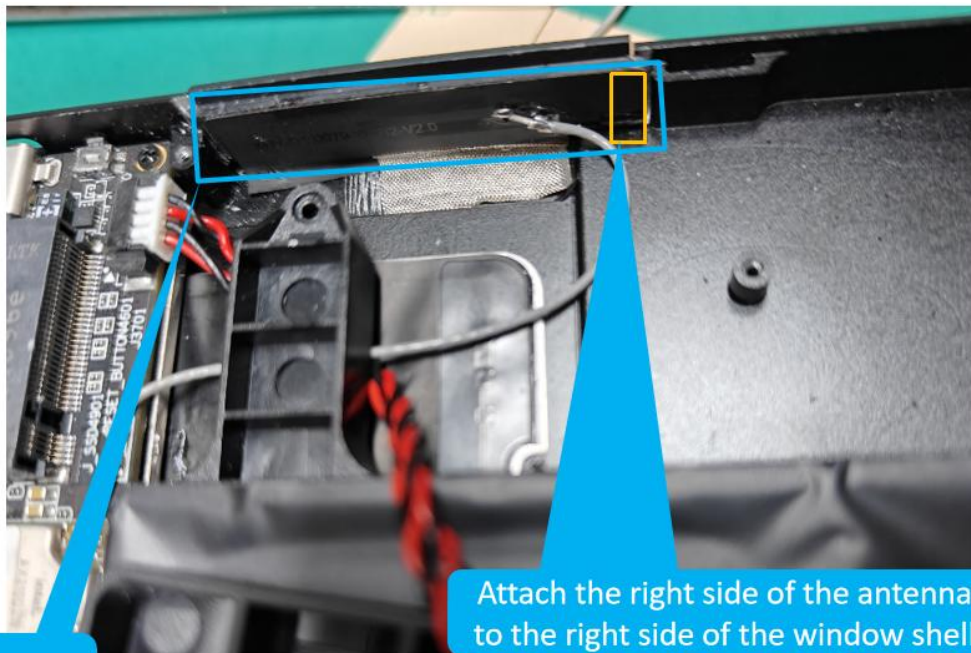
6, Antenna assembly drawing





ANT1

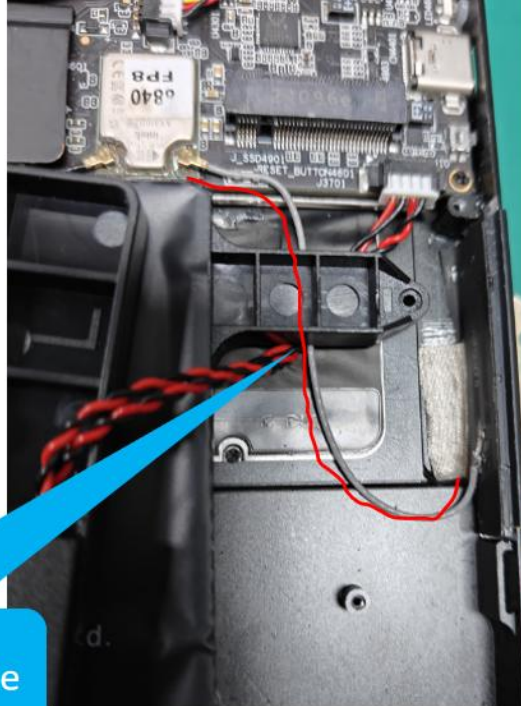
Align the left side of the antenna with the left side of the window shell



ANT2

Attach the right side of the antenna to the right side of the window shell

7, Coaxial line out direction



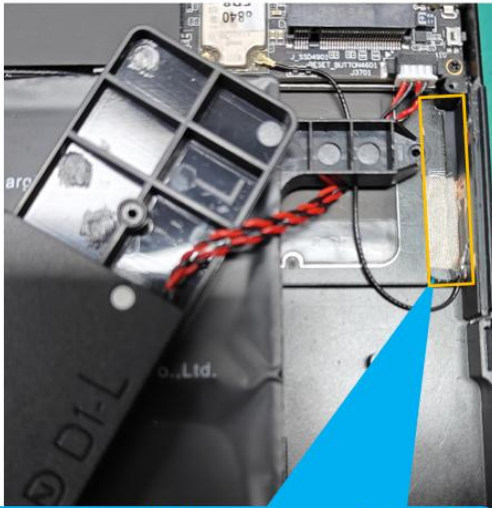
The coaxial line of antenna 2 is shown in the figure

8, Horn cable outlet direction



The horn wire is drawn as far to the left as possible, away from the antenna

9, Metal shell leakage copper treatment



The copper leakage area shown in the figure frame is washed out for antenna grounding



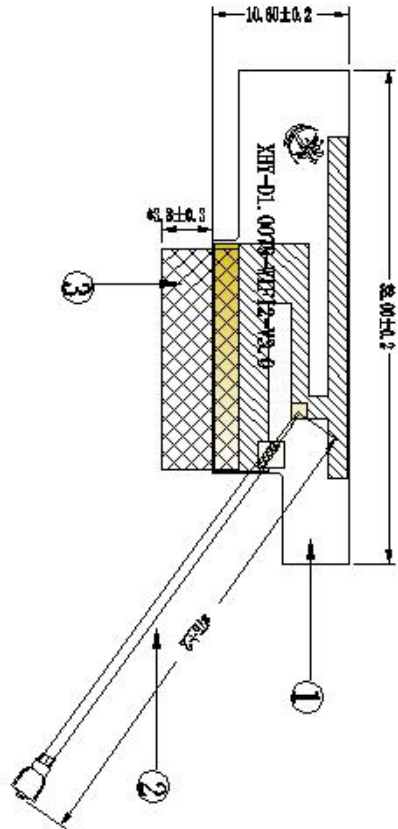
The copper leakage area shown in the figure frame is washed out for antenna grounding

10, Machine picture



11、 Antenna drawing size

[illegible]



REV	DATE	DESCRIPTION

3	导电布	带胶导电布 本色	1
2	同轴线	0.81*75mm双锡线黑色+4代端子	1
1	FPC	电解码/哑黑/一对半/3M300背胶	1
序号	名称	规格描述	数量

<div><div></div><div>深圳市鑫恒阳科技有限公司</div></div>											
Φ第三角法				机种		D1		日期		2024-9-25	
0~10		±0.10		○		0.02		品名		WiFi-2-成品天线	
10~20		±0.12		◎		Φ0.03		料号		CP. 21. 00000107	
20~40		±0.15		△		0.02		材料		/	
40~		±0.20		▽		0.04		客户料号			
		□		0.02		客户料号		确认			
单位		mm		比例		1:1		版本		R1	

- 技术要求
1. 标“*”尺寸为重点管控尺寸；
 2. 没有标注尺寸参见CAD图纸；
 3. 无虚焊、假焊、连锡、断路等焊接不良现象；
 4. 所有部件符合ROHS要求；
 5. 成品需全检性能；



12、 ROHS

Antenna CP. 21. 0000106 / CP. 21. 0000107 meets RoHS requirements.

13、 Product packing instructions

A. packing should meet the moistureproof, vibration, pressure and mildew proof, etc.

B. the smallest packing unit logo must have the manufacturer trademarks, product model, name, code and quantity.

C. in the attached packing list, certificate of approval, and the factory inspection report.

*****END*****