

SPECIFICATION

Daxian Communication Technology Limited



Shenzhen Daxian Technology Co., Ltd.

GenHigh M1 WIFI antenna assembly

Product specification

Guest households	GenHigh	frequency band	2400MHz~2500MHz
Project name	M1	version	V01
Material No.	1M-1XXXX-045	color	Black
Customer part number	D090-0012-0001		
R F design	Chuan.Shen	structure design	NingPing.Lai
Quality Manager	Jin.Yang	R & D director	Lei.Zhang
Date	2023-10-10		

client confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

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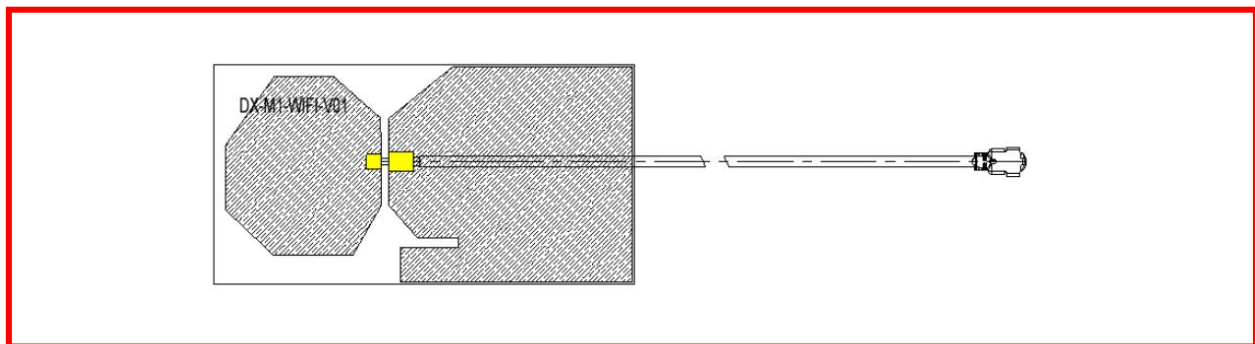
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— Project description

Customer name:	GenHigh
Whole machine type:	sweeper
Antenna band:	2400 ~ 2500MHz
Antenna form:	FPC+coaxial line
Feed form:	weld

一、WIFI antenna

This report provides a variety of measurements of the electrical performance of the M1 antenna. Figure 1 shows the antenna designed by the display.



antenna appearing diagram

Figure 1

1.1 Electrical specification standard

The frequency range of the antenna is 2400 ~ 2500 MHz. The following table indicates the electrical performance specifications of the antenna. The antenna is designed and manufactured by a large display.

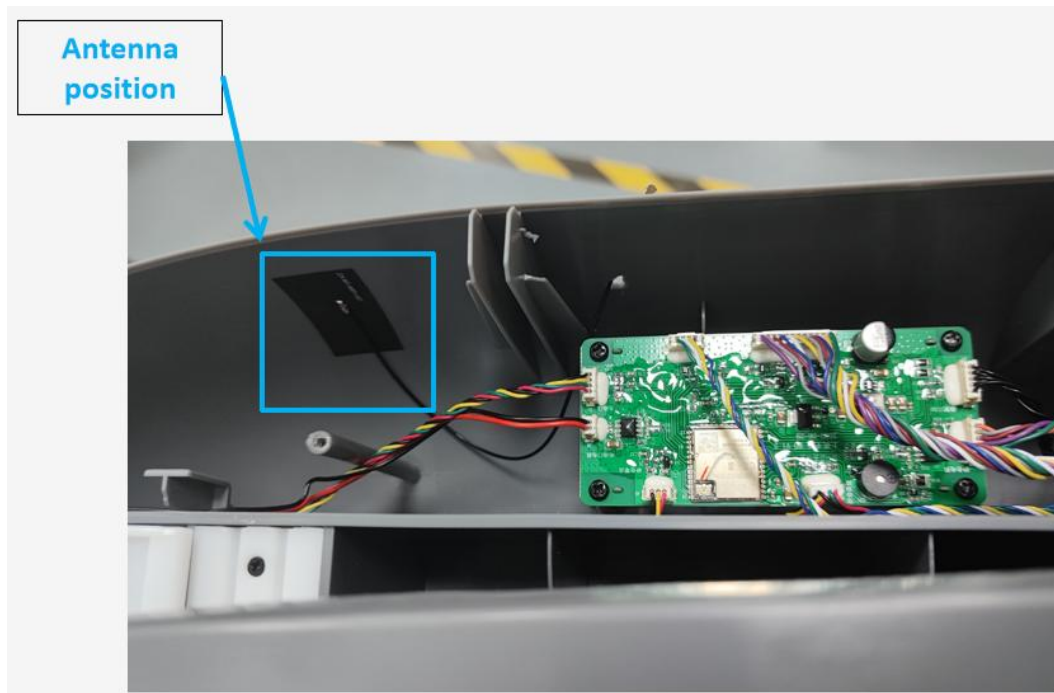
Frequency Range	Frequency (MHz)	VSWR
WIFI	2400 ~ 2500	≤ 2

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1.2 Antenna position picture



1.3 Antenna composition

The antenna is mainly composed of FPC+coaxial line.

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2、 The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (m)

Agilent 8960 E5515c

Network analyzer-R&S ZVL



Figure 2

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3 test

3.1 The Test of standing Wave (VSWR)

3.1.1 The Test of standing Wave (VSWR): In turn, the connection of the VSWR testing device is as follows: RES ZVL Network Analyzer / testing Line / testing tool

Actual measurement (with diagram)

3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS)

3.2.1 Test site:

Large-scale microwave darkroom. The test frequency range is 400MHz / 6GHz, the static range is 50cm circumferential and the reflectivity is less than-50 dB..

3.2.2 Test instrument:

Rs ZVL Network Analyzer, Agilent8960 E5515C, Standard Horn Antenna, French SATIMO-SG24SYSTEM system, Printer, etc.

3.2.3 test data : In microwave anechoic chambers, the power and sensitivity values measured are shown in the following table:

OTA active testing - stationary state:

802.11 B rate 11M	WIFI 2.4G		
CH	1	6	11
TRP	17.39	17.80	17.51
TIS	-85.69	-85.71	-85.62
802.11 G rate 54M			
CH	1	6	11
TRP	16.23	16.55	16.41
TIS	-71.20	-72.04	-71.96
802.11 N rate MCS7			
CH	1	6	11
TRP	15.07	15.18	15.11
TIS	-69.22	-69.47	-69.03

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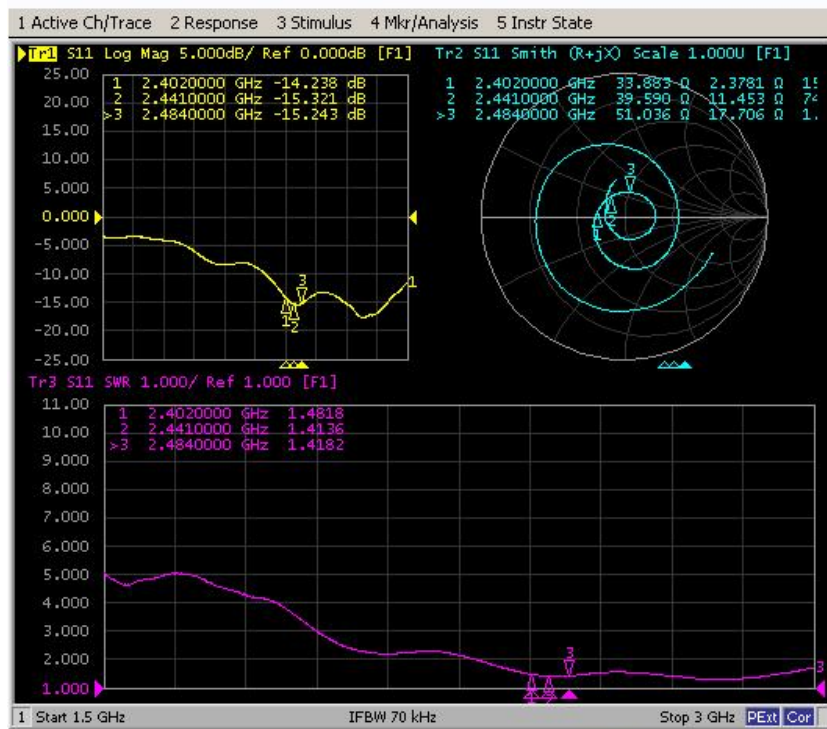
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OTA Passive Efficiency&Gain Test:

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	52.51	-2.80	2.28
2410	52.72	-2.78	2.22
2420	53.55	-2.71	2.51
2430	53.59	-2.71	2.16
2440	53.61	-2.71	2.37
2450	54.11	-2.67	2.67
2460	54.47	-2.64	2.47
2470	53.78	-2.69	2.41
2480	53.41	-2.72	2.56
2490	53.36	-2.73	2.34
2500	52.98	-2.76	2.51

4、 Attachment chart

4.1 VSWR parameter diagram

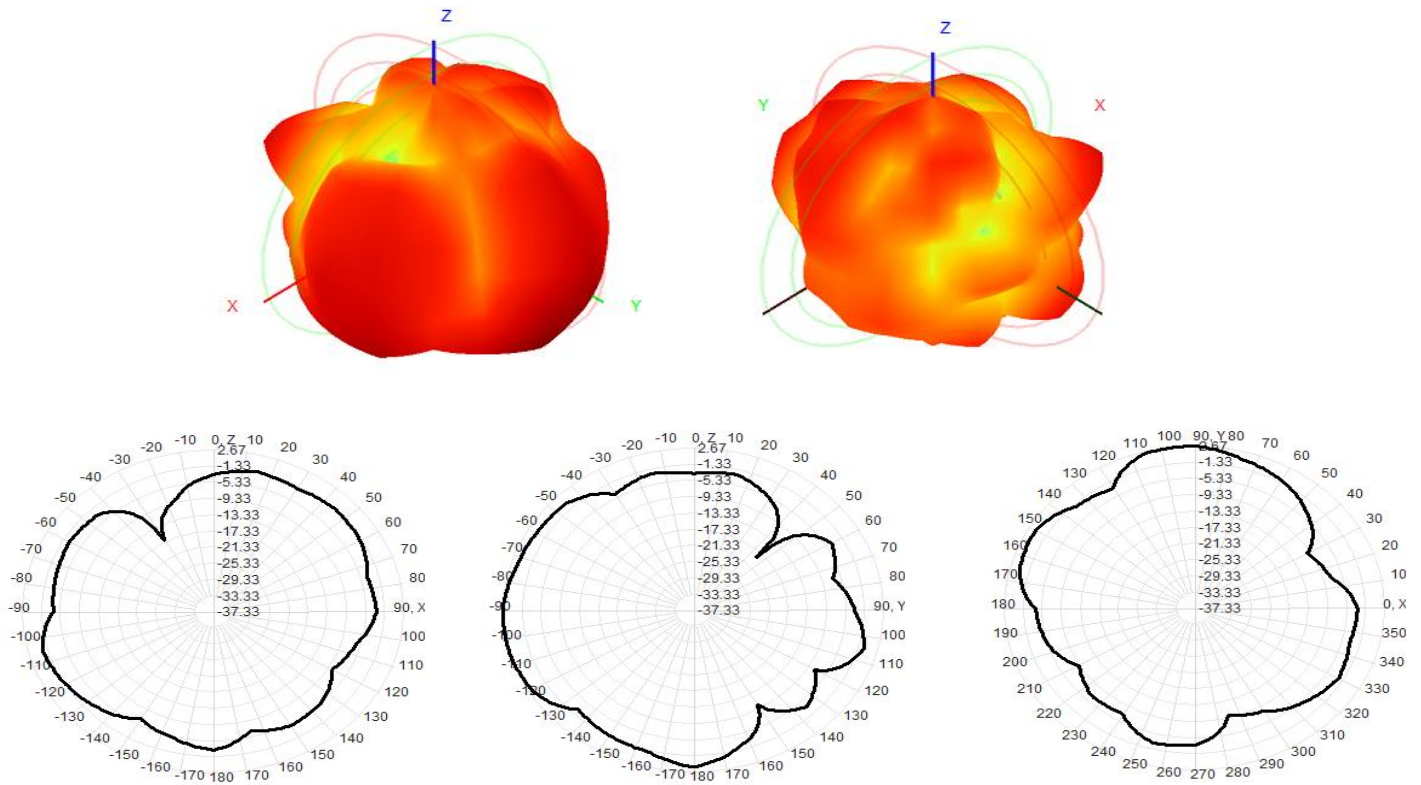


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5、Antenna 2D&3D field pattern diagram



6、 conclusion:

This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

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Technical drawing of a WIFI antenna assembly, showing two views (A and B) and a detailed view of the primary terminal.

View A: Shows the antenna assembly with dimensions: $\phi 43.30 \pm 0.15$ (overall width), $\phi 22.50 \pm 0.15$ (inner width), and $\phi 1.13 \pm 0.05$ (terminal port diameter). The terminal port faces down. The drawing is labeled "Black oil character white".

View B: Shows the antenna assembly with dimensions: $\phi 200 \pm 2.0$ (overall length), 3 ± 0.30 (terminal port length), 1.5 ± 0.30 (terminal port width), and 0.8 ± 0.30 (terminal port thickness).

Primary terminal: Detailed view of the terminal port, showing dimensions: 3 ± 0.30 (length), 1.5 ± 0.30 (width), and 0.8 ± 0.30 (thickness).

Note:

1. " " " " is the key size
2. Please follow the drawing if the dimensions are not marked;
3. No false welding, missing welding, short line, broken line and other bad operation;
4. Comply with RoHS requirements.

Table 1: Material and Color

NO.	Part name	Material	Color	Remark
B	Terminal coaxial line	Cable线	Black	
A	FPC	Electrolytic copper PI	Black	

Table 2: Shenzhen Topant Technology Co., Ltd. Information

Type of aircraft	M1	Colour	Black	Date	2023/10/09
Item coding	CM-1XXXX-045	Die surface treatment		MD	
Part name	WIFI antenna finished drawing	Third perspective		RF	Shen Chuan
Part coding	1M-1XXXX-045	Unit	mm	Scale	1:1
Material quality	FPC+ coaxial line	Give permission to Lei Zhang			
Save path					Current version A