

Antenna commissioning report

Project name: BL 001-10.1-inch-C66 motherboard

Issued Date: 2024.10.21

Project Introduction

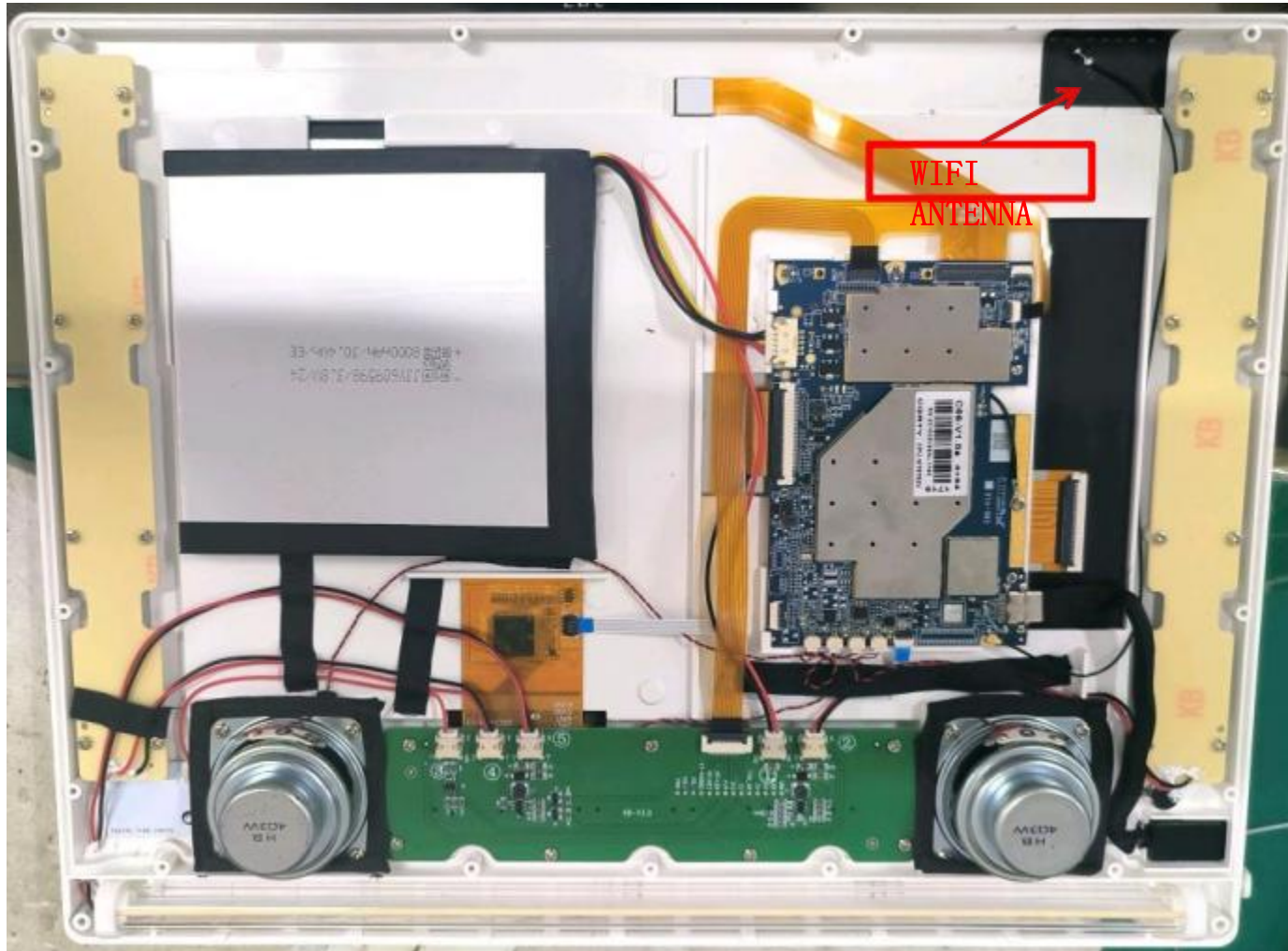
1. Project Description

Number of project antennas	Machine Type
1	WIFI TABLET
Machine shell material: 10.1 inch plastic shell	

2. Antenna Description

Antenna Number	name	Working frequency band/MHZ	Material/Structure
1	WIFI&BT&5G wi fi	2400MHz ~ 2500MHz & 5.8GHz	FPC

Antenna layout



WIFI antenna S11

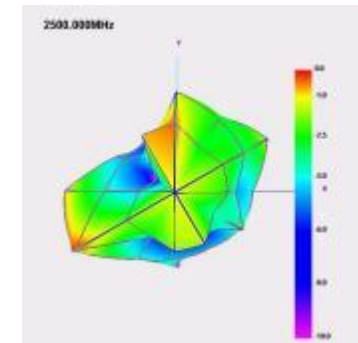
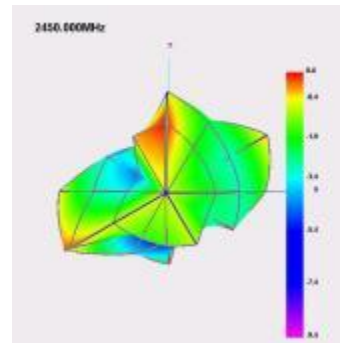
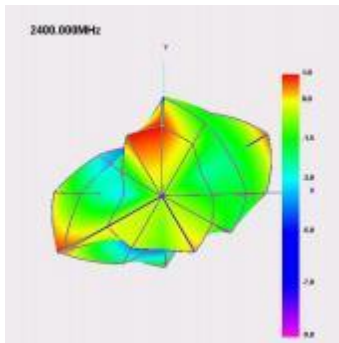


BT antenna measured distance

Measured results	
Model No.	1
Test environment	Soward Research and Development Center
Test equipment	Huawei AM08
Test distance	- M
Remark	Connection cannot be tested

WIFI & BT Antenna Efficiency——Main Antenna

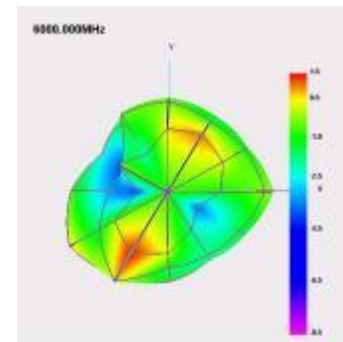
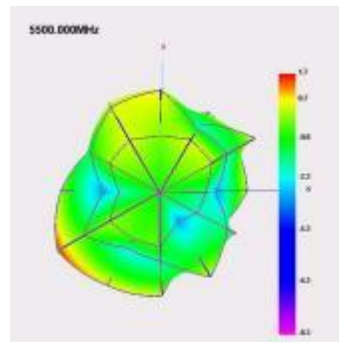
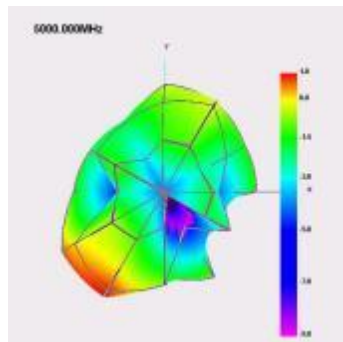
Passive Test For 2.4G wifi								
Freq	Effi	Effi	Gain	Gain	UHS	DHIS	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(%)	(%)	(dB)	(dB)
2400	41.42	-3.83	1	-1.15	23.704	17.716	1	-16.96
2410	41.44	-3.83	1.14	-1.01	23.685	17.752	1.14	-15.88
2420	43.93	-3.57	1.41	-0.74	24.934	18.994	1.41	-14.45
2430	44.23	-3.54	1.29	-0.86	24.951	19.282	1.29	-14.62
2440	43.28	-3.64	1.24	-0.91	24.271	19.005	1.24	-15.02
2450	37.35	-4.28	0.56	-1.59	20.779	16.569	0.56	-15.11
2460	37.13	-4.3	0.55	-1.6	20.659	16.466	0.55	-13.68
2470	35.82	-4.46	0.3	-1.85	19.851	15.97	0.3	-13.92
2480	37.89	-4.21	0.61	-1.54	20.811	17.08	0.61	-13.63
2490	36.81	-4.34	0.7	-1.45	20.098	16.714	0.7	-14.29
2500	33.01	-4.81	0.04	-2.11	17.966	15.048	0.04	-15.74



5G WIFI Antenna Efficiency - Main Antenna

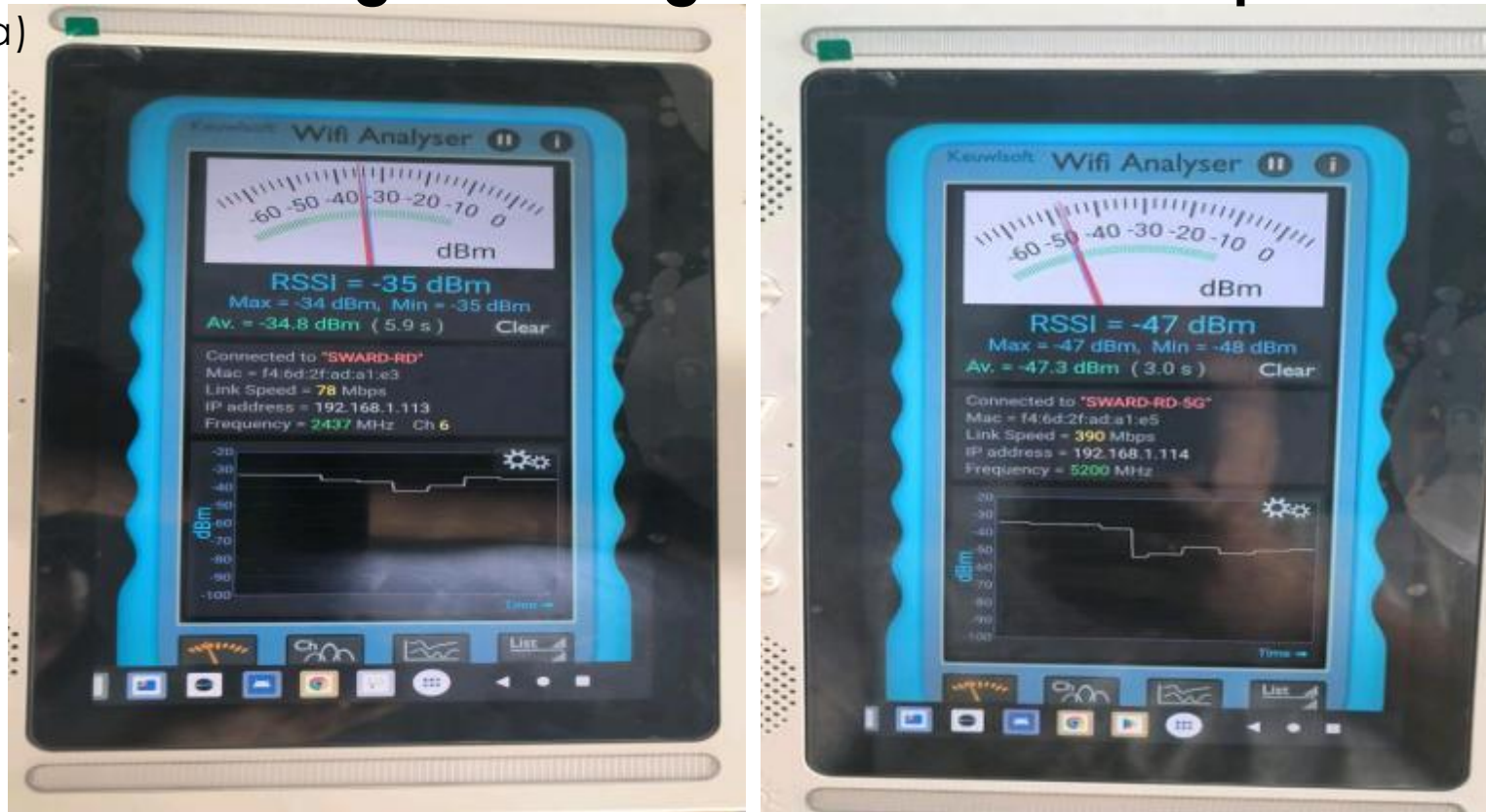
Passive Test For 5Gwifi

Freq	Effi	Effi	Gain	Gain	UHS	DHIS	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(%)	(%)	(dB)	(dB)
5000	48.67	-3.13	1.01	-1.14	25.183	23.482	1.01	-15.97
5100	48.77	-3.12	1.06	-1.09	24.322	24.444	1.06	-16.98
5200	43.41	-3.62	0.75	-1.4	22.292	21.116	0.75	-15.68
5300	47.86	-3.2	1.16	-0.99	23.571	24.291	1.16	-15.82
5400	50.82	-2.94	2.45	0.3	24.794	26.026	2.45	-10.99
5500	49.24	-3.08	1.67	-0.48	23.875	25.37	1.67	-19.85
5600	39.23	-4.06	0.77	-1.38	19.881	19.35	0.77	-14.13
5700	42.48	-3.72	0.68	-1.47	21.608	20.876	0.68	-14.54
5800	44.46	-3.52	1.03	-1.12	22.884	21.577	1.03	-13.57
5900	37.44	-4.27	0.93	-1.22	20.761	16.681	0.93	-16.33
6000	41.16	-3.86	1.46	-0.69	24.382	16.775	1.46	-18.76



WIFI antenna signal strength measurement picture

(data)



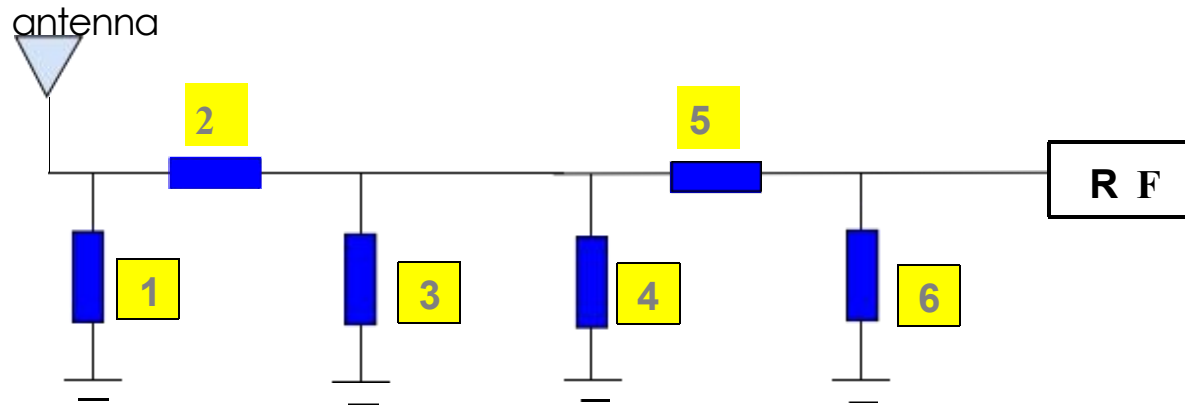
Test location: Our R&D office

Test time: 11:00-11:30

Test distance: 10m-15m

Signal strength: -49dB m to -35dBm

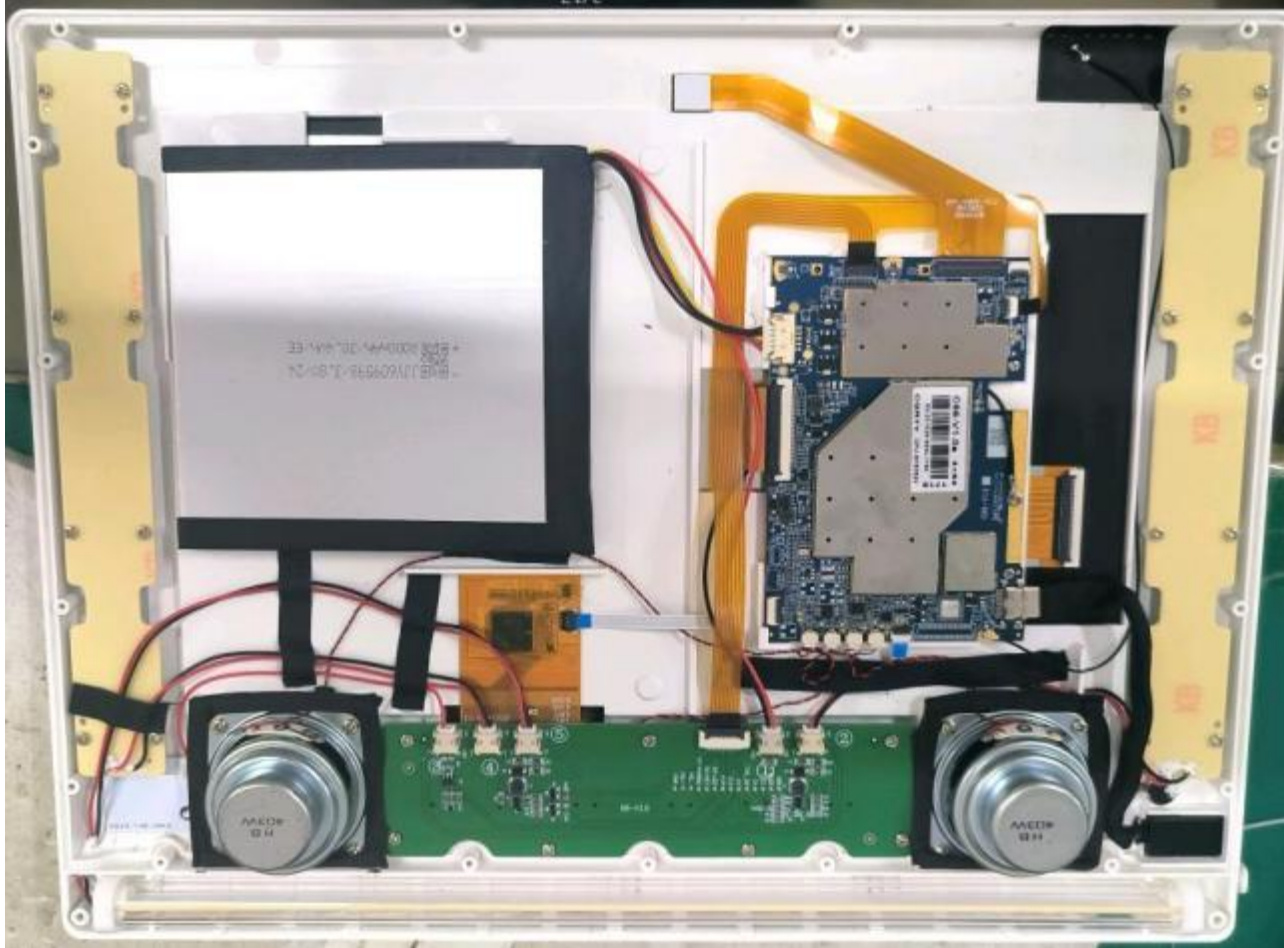
Antenna Matching



Antenna matching was not changed.

Main Antenna	1	2	3	4	5	6	Remark
Original Match							
Change Matching							

Environmental treatment and assembly instructions



The original machine environment processing has not been changed ;

- Note: 1. This report is based on the actual debugging and testing of the debugging prototype. The environmental treatment, antenna position and assembly position of each component cannot be changed at will;
2. If there are any changes in the materials used in the prototype, please promptly report to our company for re-verification;
3. List of sensitive devices:
TP (material, coating, routing, etc.)
Screen (amplifier circuit, LED , cable design, etc.)
Shell material (antenna assembly method, structural interference, shell material, antenna position height and area, etc.)
Mainboard (mainboard conduction, RF circuit matching, PA, duplexer, filtering, LNA , power supply circuit, etc.)
Camera, battery, motor, MIC, fingerprint recognition module, etc.
4. Due to the small number of debugging prototypes or only one, some probabilistic problems cannot be completely found out. It is recommended to conduct a small batch trial production before mass production to check for problems (such as screen flickering, speaker noise, TP jump point, black screen crash, signal diving, etc.)