

Soward Antenna Commissioning Report

Customer name: Jixinwei

Project name: N50W Hunting machine -
Module NT96675-8189ES

Date: 2022.08.18

Project contact information

Customer contact: Luo Gong
cell phone:
Mail:

Thorward Structure: Yang Wende
cell phone:
Telephone:
Mail:

Soward Radio frequency: Xiao Chunyan
Mobile phone:
Tel: 0755-29985185
Mail box: swdrd005@szsward.com

Project Description

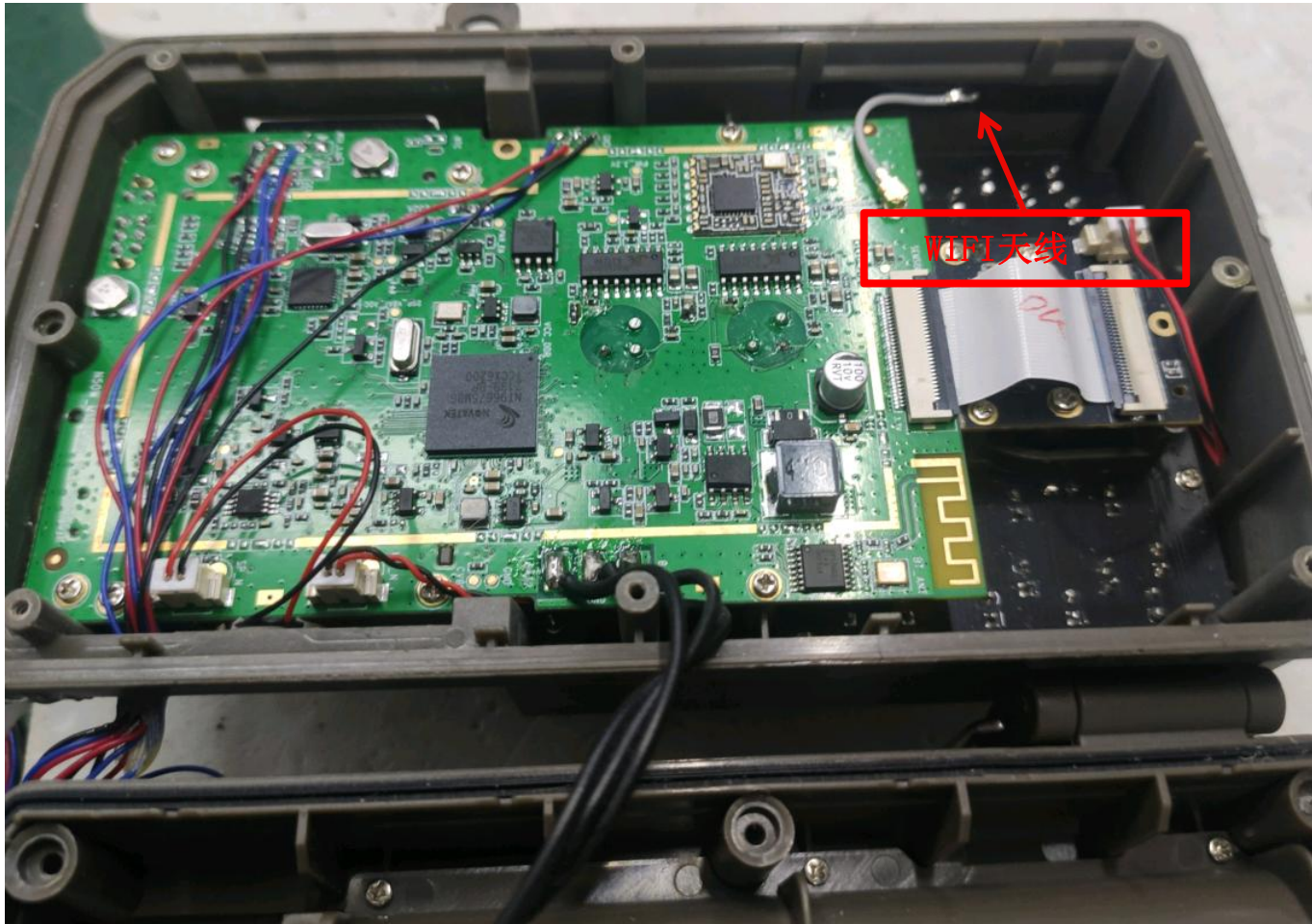
1. Project Overview

Project Antenna Number	Machine type
1	wifi recorder
Shell material: plastic shell (plastic parts at both ends of the antenna)	

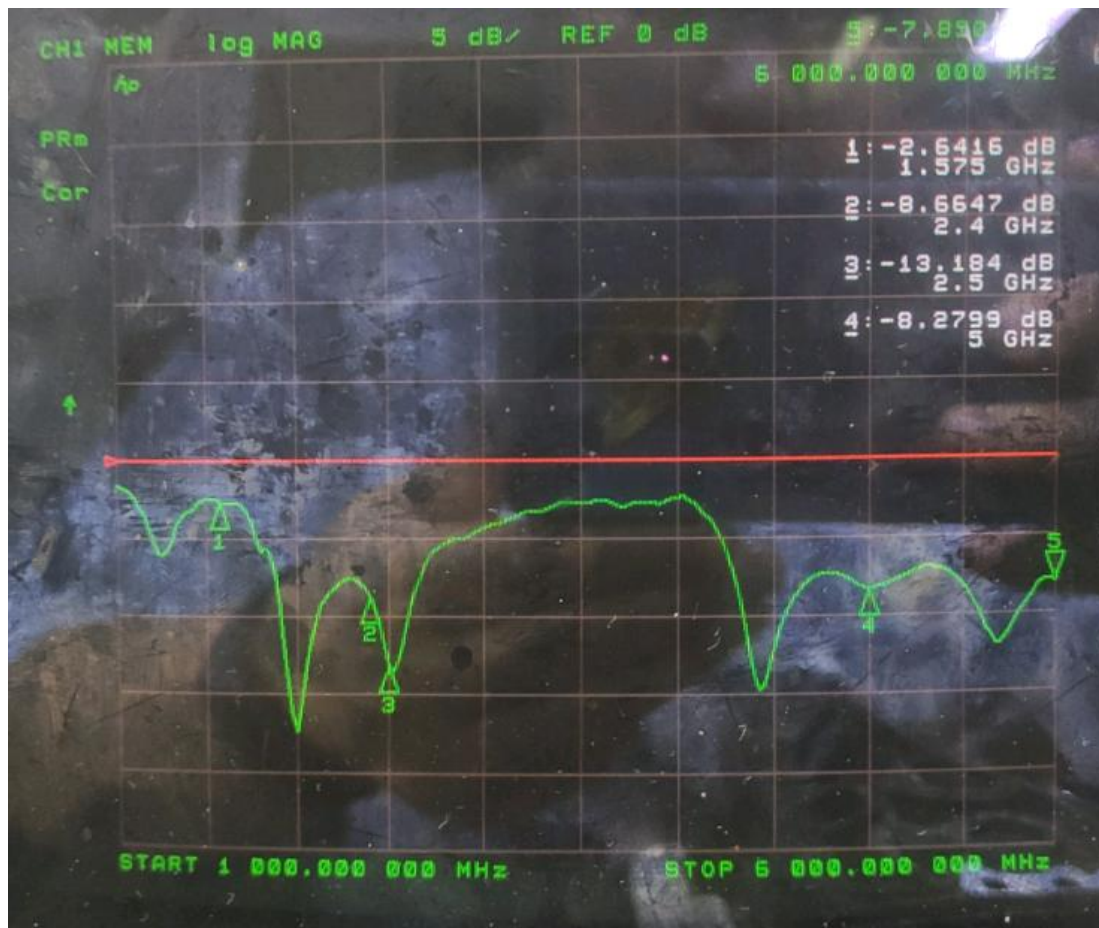
2. Antenna Brief

Antenna number	name	Working frequency/MHZ	Material/Structure
1	WIFI & BT	2400MHz / 2500MHz	FPC

Antenna layout



WIFI&BT antenna S11



WIFI antenna measured distance & download rate

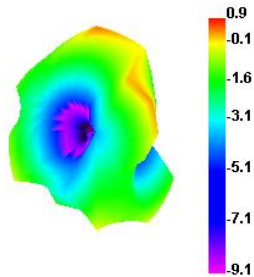
Measured effect	
Model number	1
Test environment	Soward Research and Development Center
Test equipment	Redmi K20 Pro
Test distance	15 m

Download rate	
Model number	1
Test environment	Soward Research and Development Center -1 m
Test equipment	Redmi K20 Pro
Test distance	2.9Mbps~3.1Mbps

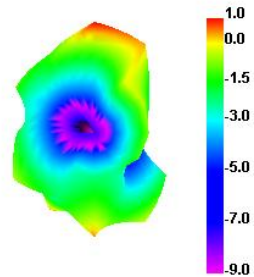
WIFI Antenna efficiency

Passive Test For 2.4Gwifi								
Freq	Effi	Effi	Gain	Gain	UHS	DHIS	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(%)	(%)	(dB)	(dB)
2400	45.45	-3.42	0.9	-1.25	23.661	21.79	0.9	-14.54
2410	46.52	-3.32	0.84	-1.31	24.082	22.435	0.84	-14.32
2420	47.24	-3.26	0.93	-1.22	24.254	22.981	0.93	-15.3
2430	44.98	-3.47	0.72	-1.43	22.777	22.206	0.72	-15.54
2440	46.15	-3.36	0.86	-1.29	23.093	23.054	0.86	-14.66
2450	48.42	-3.15	1.01	-1.14	24.014	24.403	1.01	-13.65
2460	50.64	-2.95	1.39	-0.76	25.255	25.386	1.39	-13.62
2470	51.85	-2.85	1.73	-0.42	26.212	25.643	1.73	-13.07
2480	55.6	-2.55	2.42	0.27	28.784	26.818	2.42	-12.23
2490	58.58	-2.32	2.73	0.58	30.627	27.955	2.73	-11.31
2500	56.92	-2.45	2.58	0.43	29.832	27.093	2.58	-10.8

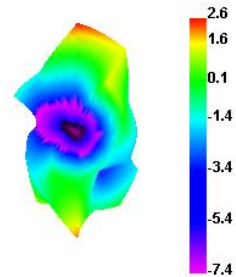
2400.000MHz



2450.000MHz



2500.000MHz



WIFI antenna signal intensity measured picture (data)



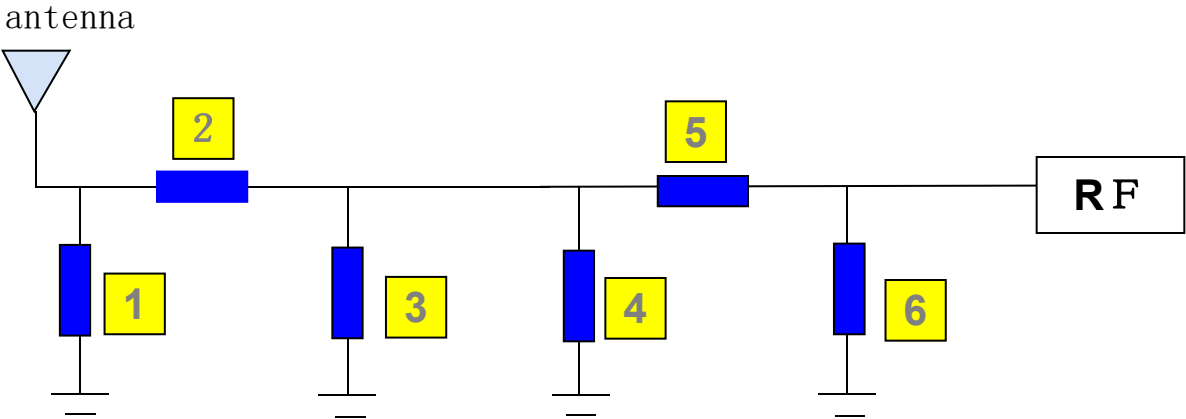
Test location: R&D office of our
company

Test time: 14:40-15:20

Test distance: 1 m ~ 2 m

Average speed: 2.9MBps to 3.1MBps

Antenna matching

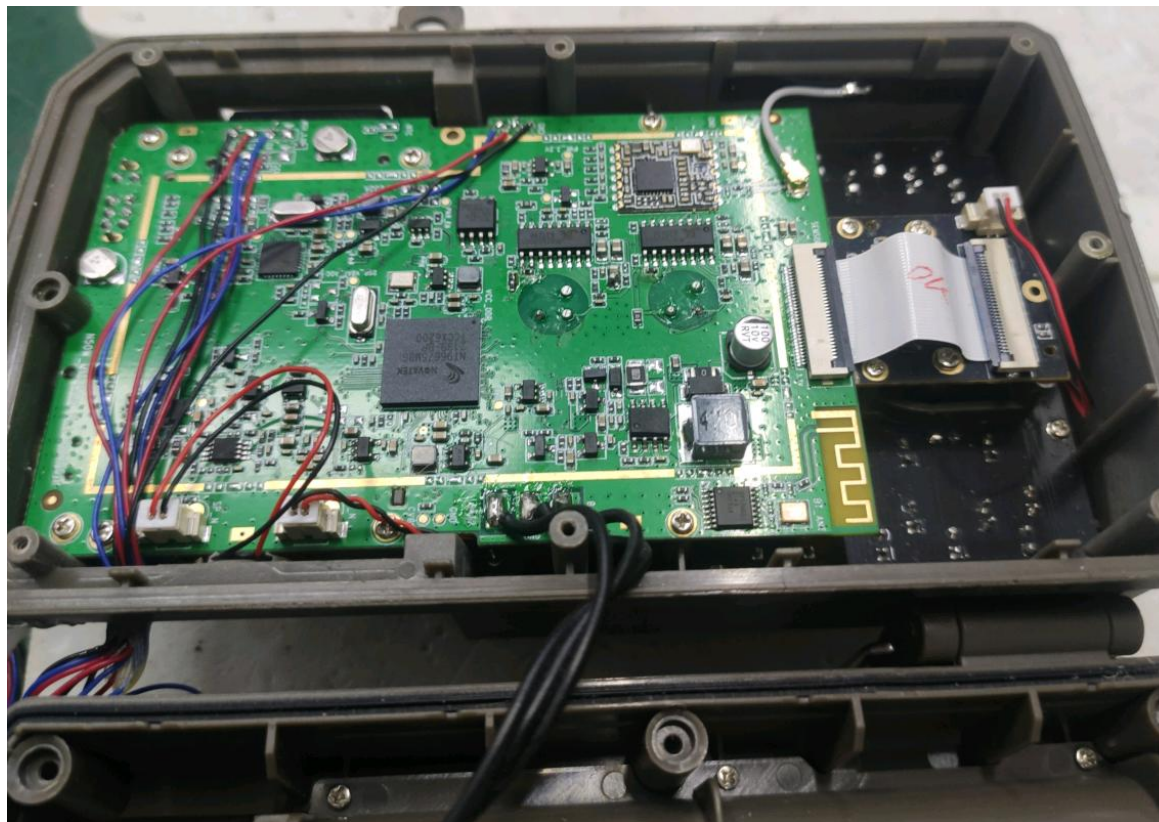


Antenna matching has not changed.

Main antenna	1	2	3	4	5	6	remarks
Original matching							
Change matching							

Environmental handling and assembly instructions

Environment processing has not changed.



Note: 1. This report is based on the actual debugging and testing of the debugging prototype, including environmental treatment, antenna position and assembly position of each device

cannot be changed at will;

2. If there is any change in the materials used in the prototype, it is necessary to timely feedback to our company for re-verification;

3. List of sensitive components:

TP (material, coating, wiring, etc.)

Screen (amplifying 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, filter, LNA, power 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. It is recommended to check the problem points in small batches before mass production (such as splash screen, noise from speakers, TP jump, black screen of death, signal diving, etc.)