

Antenna Spec.

Customer Name: NEXGO
GuoduProject Name: N96

Report version : 2023.08.23 A1

R&D: Gao Hui

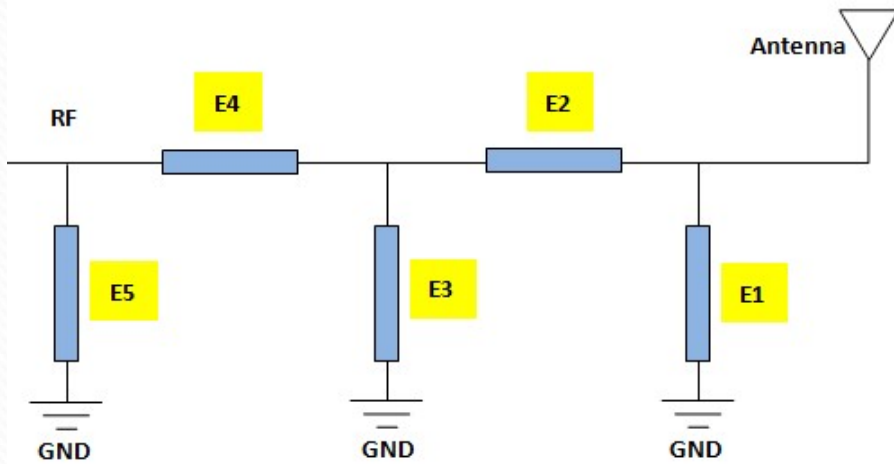
version	time	Update Description
A0	2023.02.22	Initial debugging of antenna active data
A1	2023.03.22	New machine retest antenna active data
A2	2023.04.18	Grading Impact Retest Antenna Active Data
A3	2023.05.18	Optimize antenna active data
A4	2023.06.16	Latest Rectification Light Cable Verification Data
A5	2023.09.08	Rectification of the validation data of the absorbing material for the light strip wire
A6		
A7		
A8		
A9		

Project Overview

Prototype status	debug machine
product type	POS
Number of antennas	
Antenna frequency band	4G LTE 2/4/5/7/12/13/14/41/66/71
	GPS/WIFI/BT
structural style	PCB with coaxial line
environmental treatment	YES
matching circuit	NA

Refer to Photos for Antenna Spc.

Main antenna main path matching



	Main antenna
Element	Value
E1	N/A
E2	0 Ω
E3	N/A
E4	0 Ω
E5	N/A



POS terminal

As shown in the figure,
the bottom of the
motherboard is grounded
with conductive foam and
screen bottom steel plate

Main antenna active data

Bright screen test

4G	Channel	TRP	TIS
LTE B2	L	19.72	-97.52
	M	19.94	-96.87
	H	19.81	-97.59
LTE B4	L	18.59	-96.21
	M	18.45	-96.08
	H	18.68	-95.97
LTE B5	L	18.96	-90.34
	M	18.6	-90.47
	H	18.24	-90.25
LTE B7	L	20.63	-94.92
	M	19.22	-95.06
	H	19.73	-94.66
LTE B12	L	17.48	-91.75
	M	17.86	-91.32
	H	18.12	-91.34
LTE B13	L		
	M	18.98	-90.74
	H		

4G	Channel	TRP	TIS
LTE B14	L		
	M	18.9	-92.69
	H		
LTE B25	L	19.63	-94.76
	M	19.87	-94.28
	H	20.11	-94.78
LTE B26	L	18.65	-93.61
	M	18.52	-93.25
	H	18.03	-93.87
LTE B41	L	19.1	-95.28
	M	19.54	-94.96
	H	19.18	-95.18
LTE B66	L	17.69	-96.35
	M	18.15	-95.77
	H	19.12	-95.86
LTE B71	L	17.06	-90.36
	M	17.51	-90.27
	H	18.07	-90.15

Refer to Photos for Antenna Spc.



1. Attach an absorbing material at this location to shield the magnetic head from interference。



2. The light strip area at the bottom of the antenna is coated with absorbing materials to shield interference.

GPS antenna data

GPS	Maximum signal strength	Number of search stars	Average positioning time	
	46	36	30S	sunny day
BT ()	Clear call distance			
	front > 10M			

Refer to Photos for Antenna Spc.

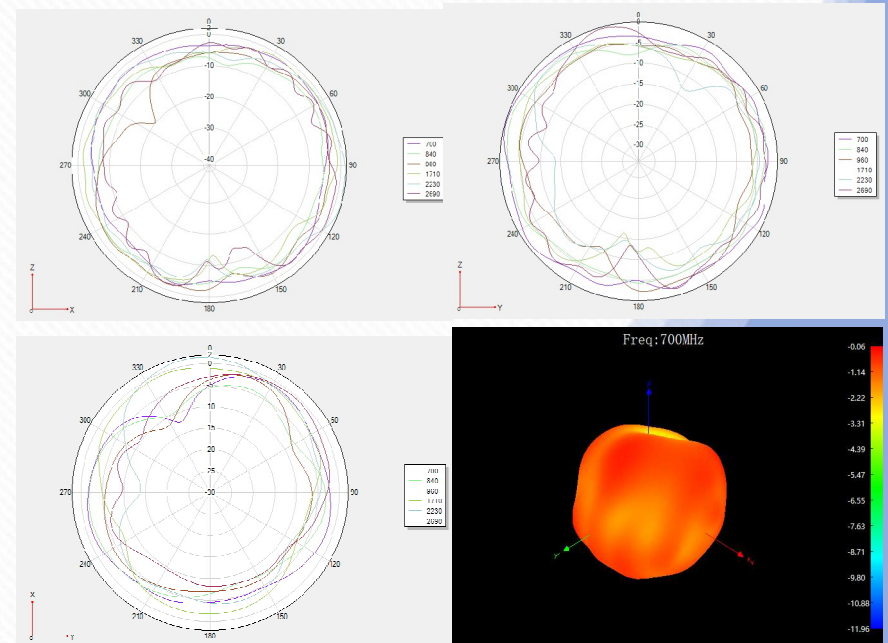
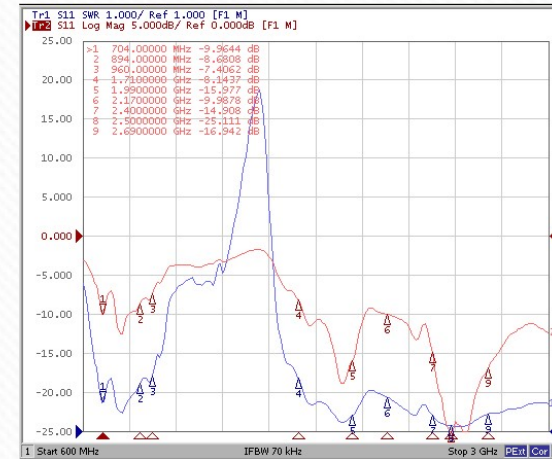
MAIN antenna passive data

Freq (MHz)	Effi (%)	Gain (dBi)
660	27.51	-0.85
680	28.07	-0.79
700	28.92	-0.67
720	32.16	-0.86
740	34.21	-1.01
760	36.73	-1.05
780	35.97	-0.99
800	35.89	-1.38
820	36.81	-1.58
840	34.99	-1.65
860	34.43	-1.72
880	35.56	-1.81
900	37.5	-1.11
920	36.81	-0.69
940	37.84	-0.62
960	39.99	-0.95

Freq (MHz)	Effi (%)	Gain (dBi)
1700	42.95	1.97
1720	42.95	1.97
1740	43.95	1.72
1760	44.67	1.78
1780	45.71	1.46
1800	45.71	1.35
1820	45.39	1.39
1840	44.26	1.46
1860	42.46	1.21
1880	41.78	1.31
1900	39.72	1.17
1920	39.72	1.27
1940	39.54	1.24
1960	39.99	1.22
1980	40.36	0.83
2000	41.59	0.81
2020	42.56	0.76
2040	44.06	0.88
2060	46.45	1.21
2080	48.31	1.29

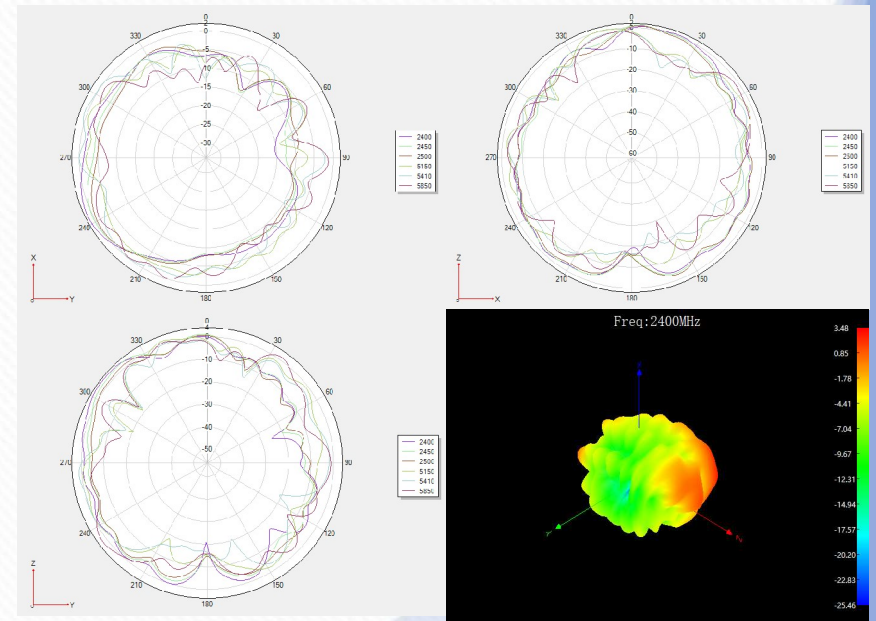
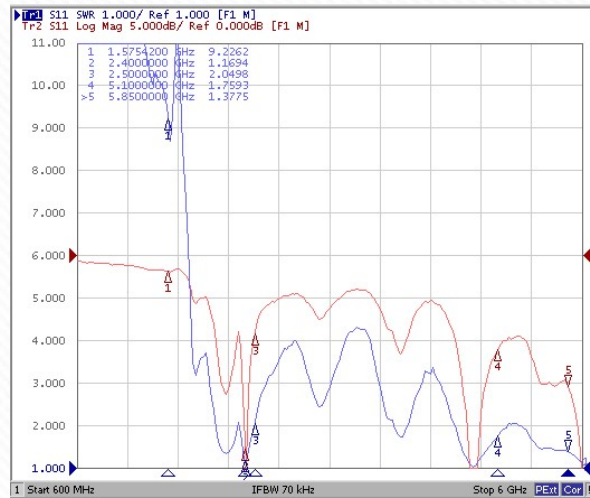
2100	41.59	0.77
2120	42.07	0.46
2140	41.3	0.38
2160	41.3	0.55
2180	40.18	0.47
2200	40.18	0.7
2220	39.26	0.52
2240	38.9	0.51
2260	38.73	0.31
2280	38.99	0.29
2300	39.63	0.55
2320	38.99	0.72
2340	38.19	0.85
2360	37.67	0.79
2380	37.93	0.97
2400	38.02	0.93
2420	37.67	1.09
2440	37.07	0.93
2460	36.14	1.09
2480	40.18	0.9

2500	41.3	0.77
2520	40.18	0.46
2540	39.26	0.38
2560	38.9	0.55
2580	38.19	0.47
2600	37.67	0.7
2620	37.93	0.52
2640	38.02	0.51
2660	37.67	0.31
2680	37.07	0.29
2700	36.14	0.77



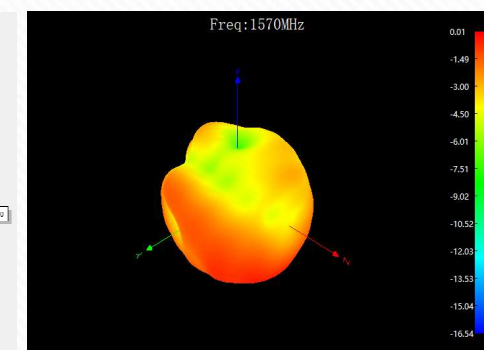
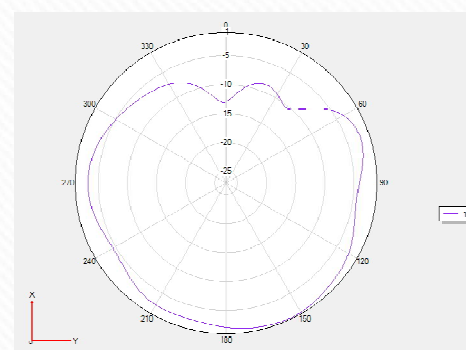
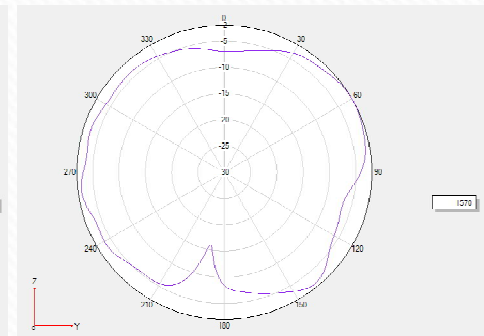
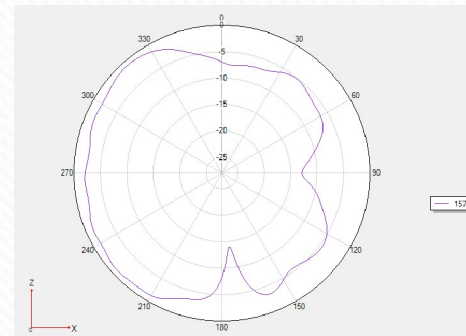
WiFi antenna passive data

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	44.77	2.48	5000	38.93	4.3
2410	42.95	2.33	5050	38.93	4.58
2420	44.26	2.36	5100	39.99	4.51
2430	42.56	2.34	5150	40.24	4.47
2440	41.98	2.18	5200	38.11	4.3
2450	40.83	2.28	5250	37.07	4.42
2460	43.93	2.07	5300	37.15	4.36
2470	41.11	2.14	5350	38.48	4.62
2480	41.81	2.05	5400	39.24	4.4
2490	42.73	2.15	5450	36.98	4.65
2500	43.11	2.48	5500	36.06	4.32
			5550	40.12	4.31
			5600	39.81	3.98
			5650	40.65	4.41
			5700	38.65	4.41
			5750	39.11	4.55
			5800	38.16	4.09
			5850	37.67	4.19



GPS antenna passive data

Freq (MHz)	Effi (%)	Gain (dBi)
1500	35.43	0.57
1510	38.16	0.66
1520	39.48	0.57
1530	39.9	0.64
1540	41.99	0.81
1550	43.64	0.65
1560	41.82	0.78
1570	42.63	0.71
1580	41.11	0.69
1590	39.9	0.82
1600	36.81	1.3



1. The overall data is OK, and the antenna has been arranged for sampling.