



SPECIFICATION FOR APPROVAL/产品承认书

Customer Name

客户名称:

艾体威尔电子技术（北京）有限公司

Customer P/N.

客户料号:

3012001000116

Product Description

产品描述:

A99(7861)_4G_CN/EN/AU
A99(7861)_GPS

BGS P/N

博格斯料号:

ATL-195A（RB版）

Manufacturer

制造商:

深圳市博格斯通信技术有限公司

Approve Date

承认日期:

2026年1月13日

BGS Sign and Seal/博格斯签章	Customer Sign and Seal/客户签章

Change the content/变更内容	Version/版本	Date/日期
初版	RA	2025/10/29
变更线路	RB	2025/12/29

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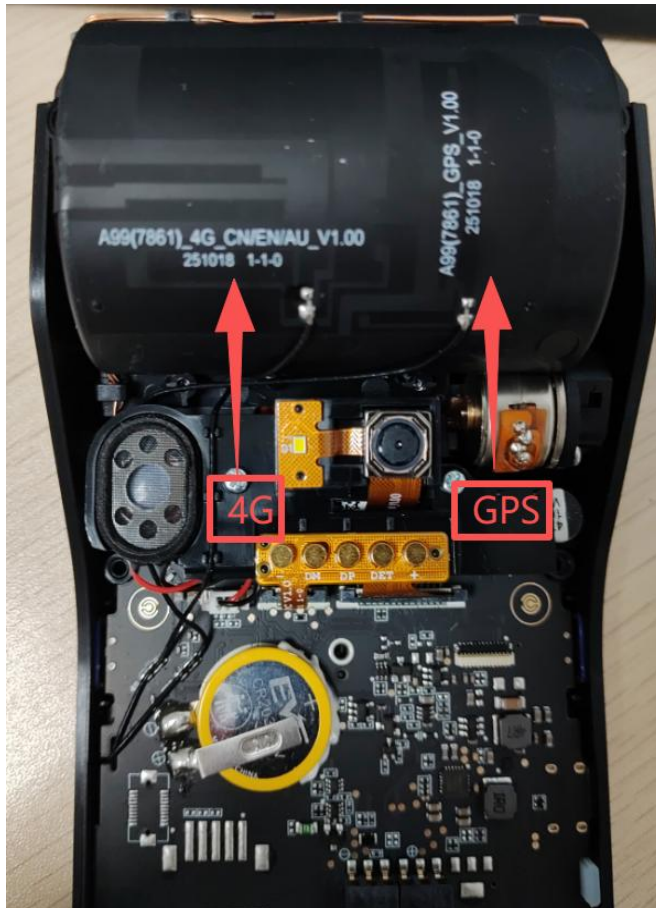


6. Antenna Picture/天线图片

6.1: Antenna Picture/天线图片



2.2: Installation Instructions/安装说明



Antenna Test Report

4G antenna test data				Built-in WIFI antenna test data			
Band	Channel	TRP	TIS	Band	Channel	TRP	TIS
LTE1 (10M)	Low	20.25				11g/6M	11g/54M
	Mid	19.81		WIFI 2.4G	Low	9.94	-68.02
	High	19.73	-92.62		Mid	11.39	-67.75
LTE2 (10M)	Low	19.03			High	12.1	-65.38
	Mid	19.27				11a/6M	11a/54M
	High	19.2	-92.03	WIFI 5G	Low	6.01	-63.45
LTE3 (10M)	Low	19.36			Mid	7.95	-65.5
	Mid	19.39			High	6.68	-64.18
	High	19.22	-91.21				
LTE4 (10M)	Low	19.28					
	Mid	19.38					
	High	19.03	-93.46				
LTE5 (10M)	Low	14.79					
	Mid	15.53					
	High	15.92	-84.03				
LTE7 (10M)	Low	19.64					
	Mid	19.97					
	High	19.8	-91.03				
LTE8 (10M)	Low	17.23					
	Mid	17.17					
	High	17.17	-80.14				

GNSS 实测搜星：

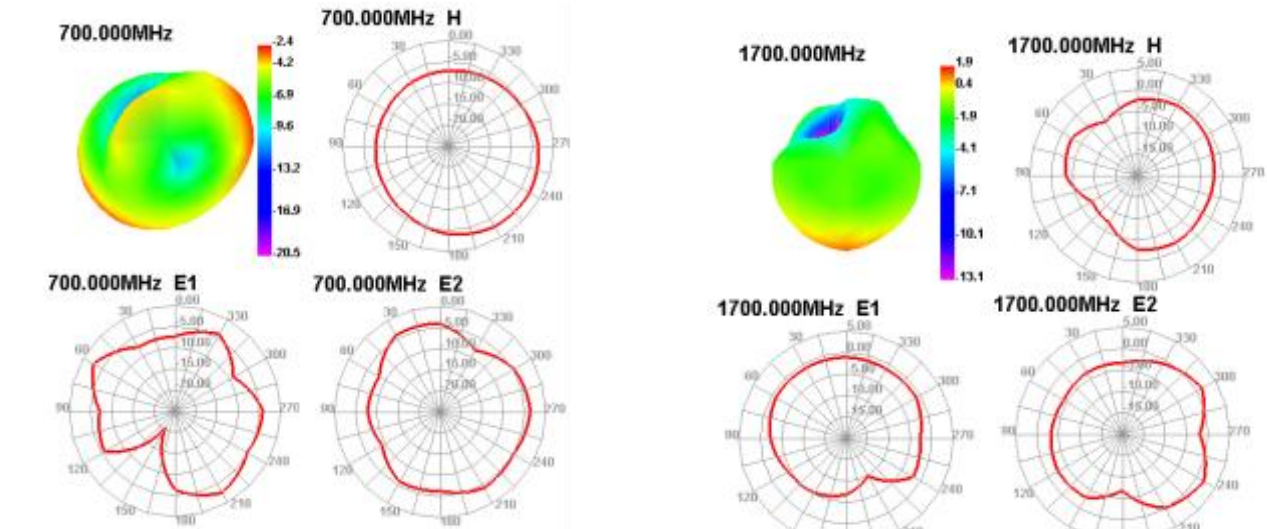


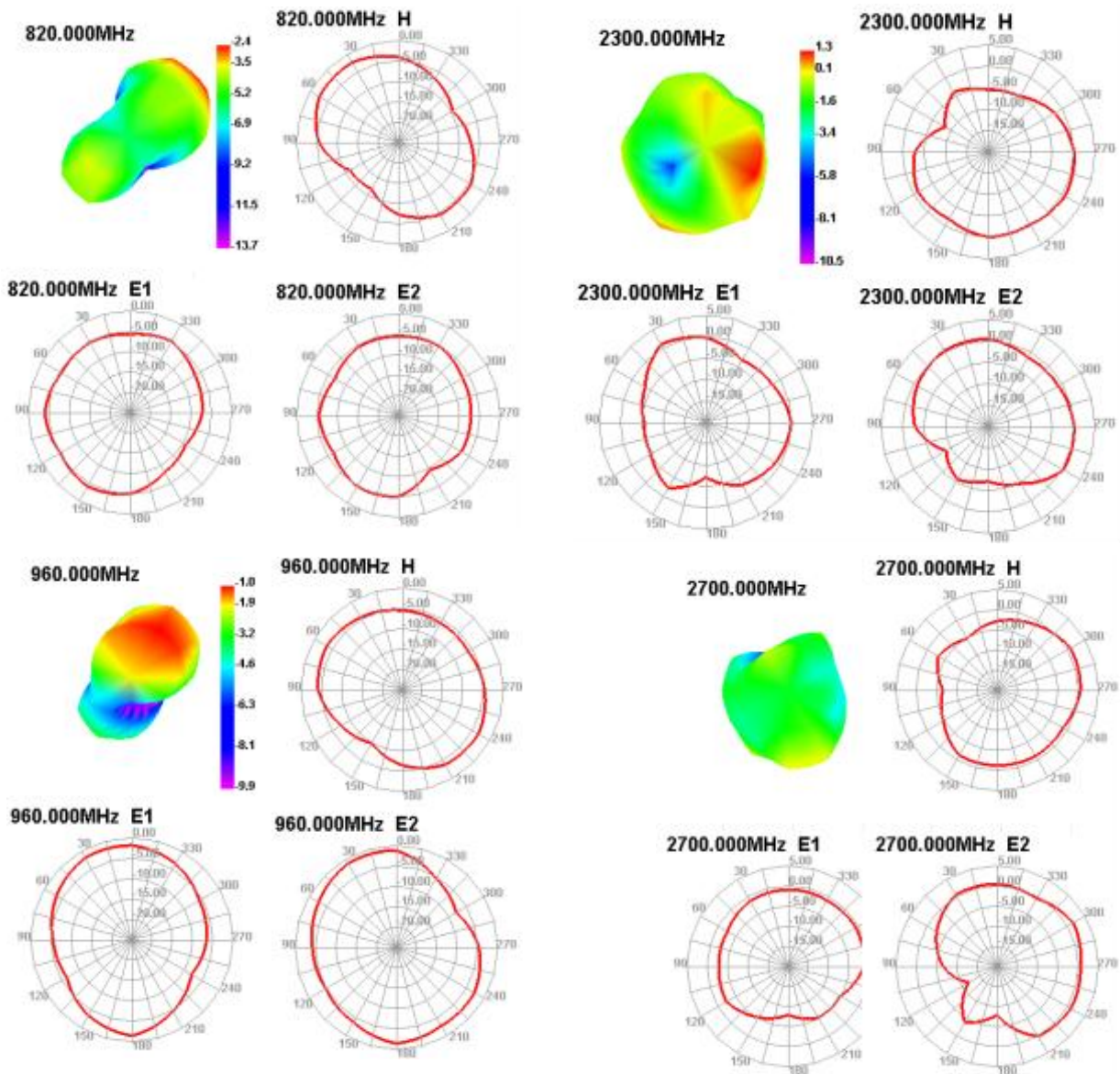
LTE28 (10M)	Low	14.43	
	Mid	15.77	
	High	15.92	-69.17
LTE38 (20M)	Low	19.34	
	Mid	19.92	
	High	19.7	-90.09

4G antenna passive data					
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
700	23.14	-2.42	1700	55.99	1.88
710	22.7	-2.14	1720	62.84	2.48
720	20.22	-1.95	1740	58.75	2.16
730	19.63	-2.02	1760	56.08	2.02
740	18.8	-2.38	1780	53.54	1.64
750	16.11	-3.08	1800	51.14	1.67
760	15.6	-3.57	1820	53.82	2.37
770	15.49	-3.41	1840	55.42	2.69
780	16.7	-2.87	1860	54.45	2.4
790	18.1	-1.82	1880	54.48	2.22
800	20.61	-2.17	1900	55.54	2.3
810	17.4	-2.46	1920	55.81	2.36
820	18.83	-2.35	1940	56.42	2.38
830	20.6	-2.02	1960	54.25	2.59
840	24.61	-1.38	1980	53.1	2.95
850	26.7	-1.04	2000	59.7	3.09
860	28.71	-0.8	2020	58.99	2.49
870	30.4	-0.36	2040	48.01	1.01
880	31.38	-0.11	2060	48.45	0.84
890	33.25	0.09	2080	49.06	2.11
900	34.81	0.27	2100	49.38	2.5
910	33.61	0.29	2120	54.3	2.76
920	32.31	0.16	2140	52.18	2.47

930	31.39	-0.34	2160	53.9	1.77
940	30.58	-0.73	2180	54.63	1.6
950	28.49	-1.1	2200	51.22	0.69
960	29.04	-0.99	2220	54.84	1.81
			2240	56.43	1.86
			2260	56.76	1.82
			2280	58.54	1.54
			2300	60.46	1.32
			2320	63.24	1.49
			2340	62.68	1.6
			2360	61.38	1.67
			2380	60.44	1.71
			2400	61.79	1.46
			2420	63.96	1.75
			2440	65.94	2.76
			2460	65.9	3.19
			2480	66.35	3.61
			2500	64.67	3.41
			2520	64.79	3.34
			2540	63.95	3.3
			2560	60.48	3.25
			2580	59.42	2.95
			2600	62.71	3.16
			2620	62.11	3.19
			2640	61.93	3.08
			2660	63.49	2.96
			2680	64.02	3.08
			2700	66.93	3.19

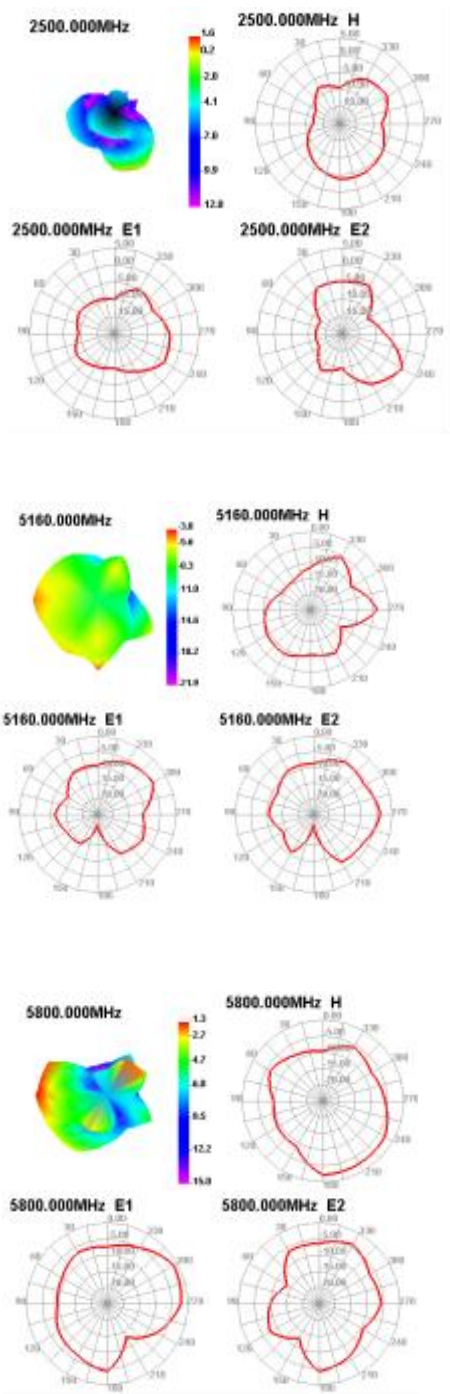
4G antenna pattern





Passive data from WiFi antenna						WiFi antenna pattern	
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)		
2400	20.25	0.73	5160	13	-3.79		
2410	21.1	0.72	5180	12.84	-4.04		
2420	20.47	0.36	5200	16.87	-2.92		
2430	21	0.33	5220	23.14	-1.69		
2440	22.05	0.51	5240	23.87	-1.58		
2450	24.41	0.93	5260	25.35	-1.23		
2460	24.83	0.93	5280	22.44	-1.77		

2470	24.82	0.94	5300	22.38	-2.11
2480	25.86	1.17	5320	22.82	-2.21
2490	26.13	1.36	5340	21.57	-2.08
2500	26.74	1.6	5360	20.72	-1.81
			5380	24.05	-0.93
			5400	28.05	0.57
			5420	31.8	1.93
			5440	32.65	2.11
			5460	32.26	1.72
			5480	31.28	1.01
			5500	27.11	-0.42
			5520	27.22	-1.32
			5540	25.15	-1.8
			5560	23.04	-1.45
			5580	23.34	-0.3
			5600	32.39	1.61
			5620	34.01	2.15
			5640	37.33	2.23
			5660	36.35	1.97
			5680	33.27	1.59
			5700	34.16	1.96
			5720	31.98	1.24
			5740	27.82	0.86
			5760	27.13	0.41
			5780	25.48	-0.54
			5800	23.92	-1.3
			5820	25.23	-0.34
			5840	30.08	0.83
			5860	30.43	0.84



Passive data from the GPS antenna			GPS antenna pattern		
Freq (MHz)	Effi (%)	Gain (dBi)			
1560	31.36	-0.4			
1561	31.35	-0.44			
1562	31.37	-0.47			
1563	31.42	-0.5			

1564	31.47	-0.5
1565	31.56	-0.52
1566	31.67	-0.55
1567	31.75	-0.55
1568	31.81	-0.57
1569	31.78	-0.6
1570	31.7	-0.64
1571	31.37	-0.72
1572	30.97	-0.8
1573	30.55	-0.9
1574	30.18	-0.97
1575	29.82	-1.04
1576	29.49	-1.13
1577	29.23	-1.2
1578	28.99	-1.24
1579	28.77	-1.31
1580	28.51	-1.37

