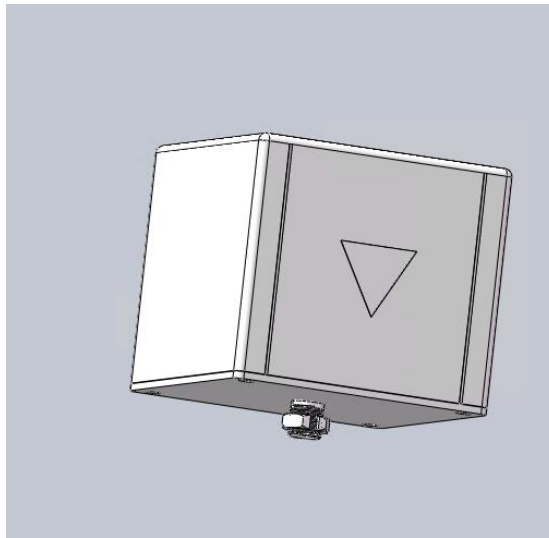




Maswell 5G 5 in 1 GNSS Combo MIMO Antenna Screw Mount

AN_Master_Cubic-4

Schematic picture



Maswell 5G 5 in 1 GNSS Combo MIMO Antenna

Screw Mount

AN_Master_Cubic-4

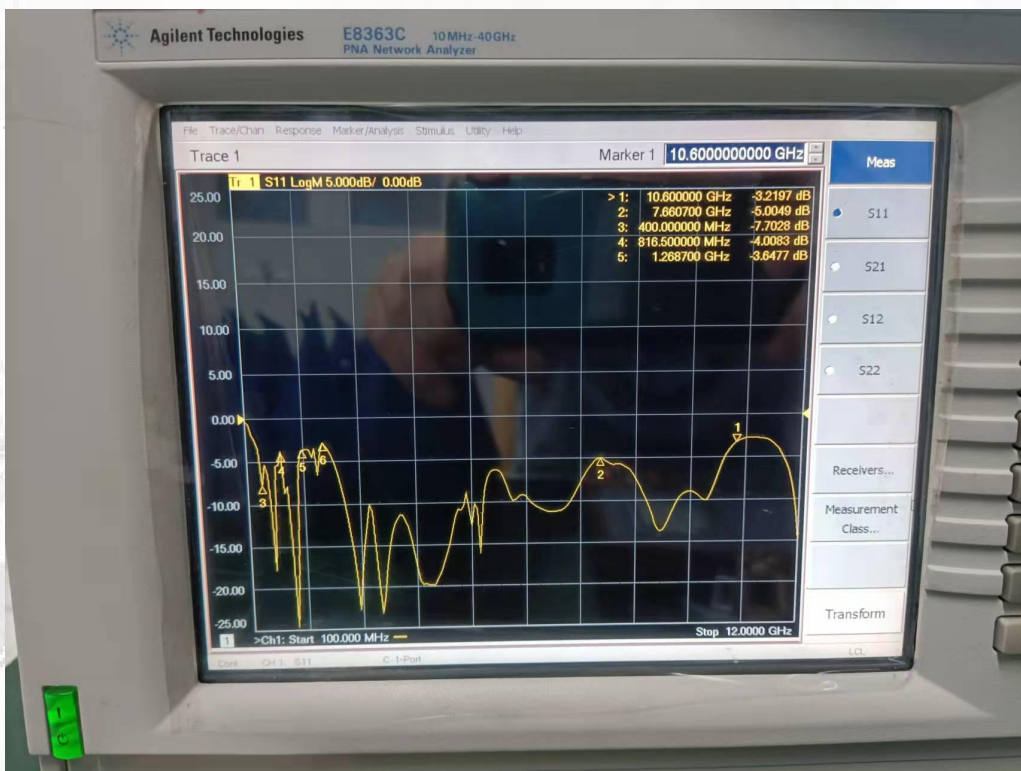
Specifications

Item		Specifications	
GNSS Antenna(GPS/GALILEO/LONASS/Beidou/Gaileo)	Dielectric Antenna	Frequency Range	1561.098~1602MHz
		Gain	5dBic@PCB (Zenith)
		Polarization	RHCP
		Efficiency	>50%
		Impedance	50Ω
		Axial Ratio	3dB(max)
	LNA	Gain	28±2dB
		Noise Figure	≤1.5dB
		Filter Insertion Loss	< 3dB
		Supply Voltage	3~5V DC
	Current Consumption	< 20mA	
	V.S.W.R	< 2.0	
Antenna 1: 5G/4G LTE/WiFi6E/UWB		Frequency Range	600MHz~8.0GHz
		Polarization	Linear
		Gain	Up to 6.8dBi
		V.S.W.R	average 3.0
		Efficiency	>50%
Antenna 2: 5G/4G LTE/WiFi6E/UWB		Frequency Range	600MHz~8.0GHz
		Polarization	Linear
		Gain	Up to 6.8dBi
		V.S.W.R	average 3.0
		Efficiency	>50%
Antenna 3: 5G/4G LTE/WiFi6E/UWB		Frequency Range	600MHz~8.0GHz
		Polarization	Linear
		Gain	Up to 6.8dBi
		V.S.W.R	average 3.0
		Efficiency	>50%
Antenna 4: 5G/4G LTE/WiFi6E/UWB		Frequency Range	600MHz~8.0GHz
		Polarization	Linear
		Gain	Up to 6.8dBi
		V.S.W.R	average 3.0
		Efficiency	>50%
Mechanical		Dimension	83mm *75mm*1.6mm
		Connector	SMA female
Environmental		Operating Temperature	-40°C~+85°C
		Relative Humidity	Up to 95%
		Vibration	10 to 55Hz with 1.5mm amplitude 2hours
		Environmentally Friendly	ROHS Compliant

Maswell 5G 5 in 1 GNSS Combo MIMO Antenna Screw Mount

AN_Master_Cubic-4

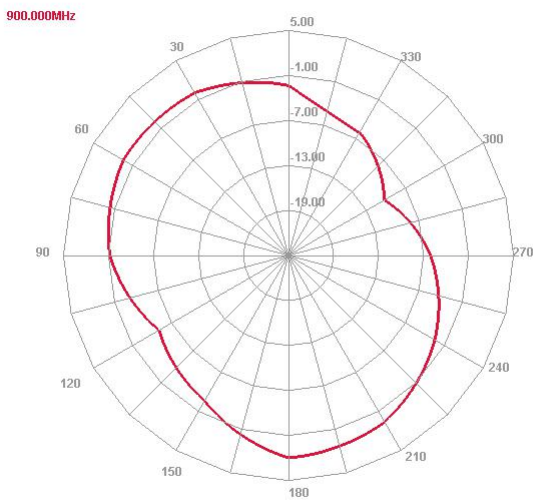
S11



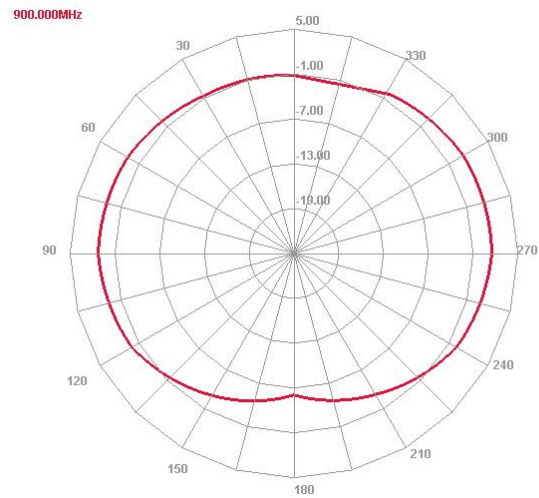
Maswell 5G 5 in 1 GNSS Combo MIMO Antenna Screw Mount

AN_Master_Cubic-4

Radiation Pattern 900MHz

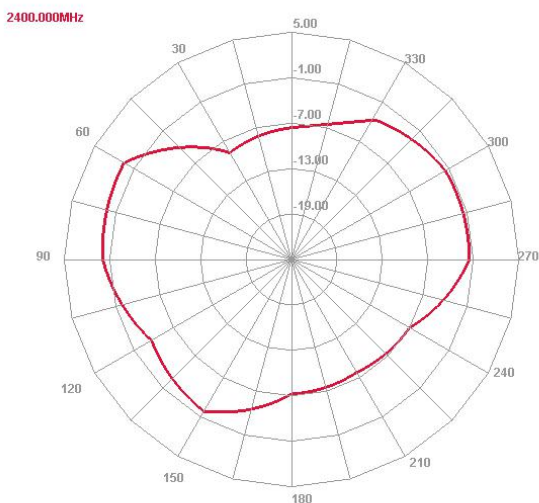


E plane

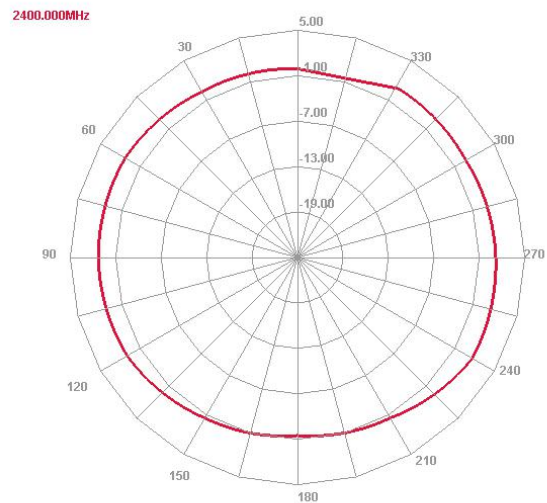


H plane

2400MHz



E plane

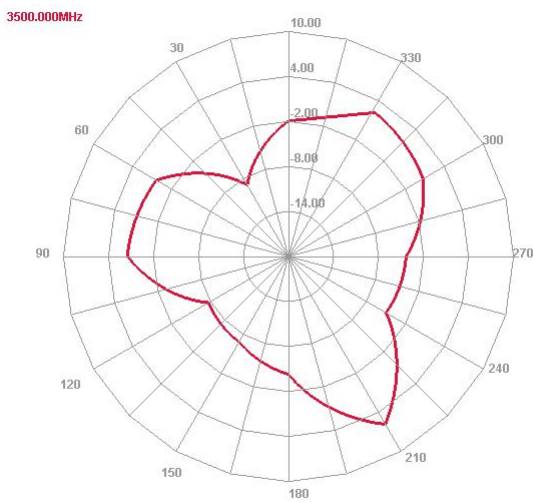


H plane

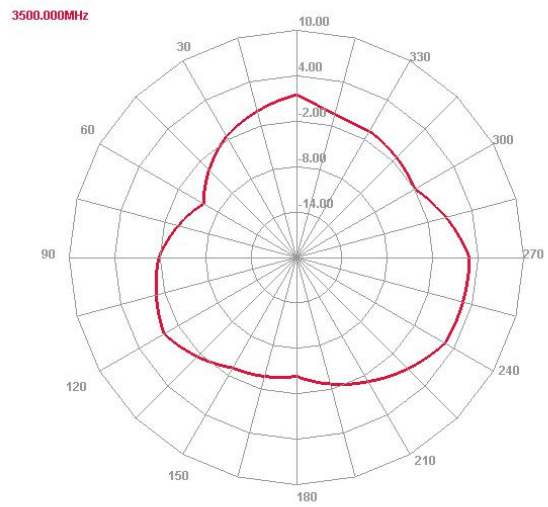
Maswell 5G 5 in 1 GNSS Combo MIMO Antenna Screw Mount

AN_Master_Cubic-4

Radiation Pattern 3500MHz

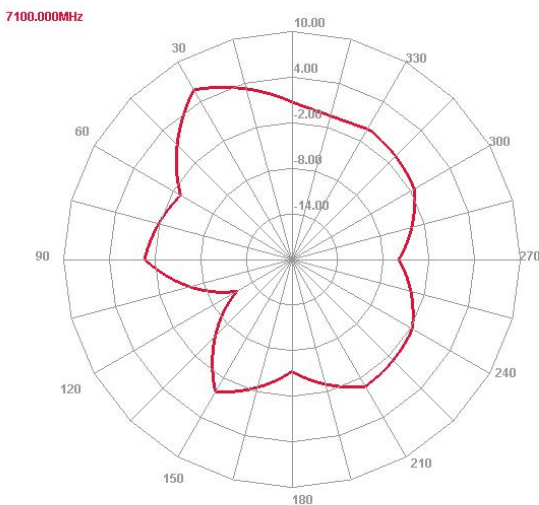


E plane

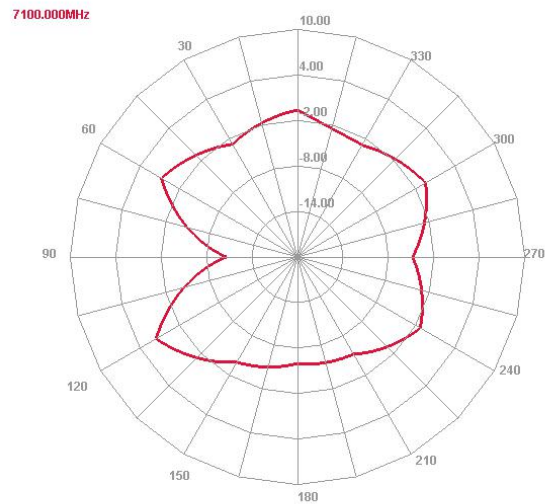


H plane

7100MHz



E plane



H plane

Maswell 5G 5 in 1 GNSS Combo MIMO Antenna Screw Mount

AN_Master_Cubic-4

Measured Results Gain

Freq (MHz)	Effi (%)	Gain (dBi)
600	25.11	0.23
650	41.31	0.62
700	43.94	3.73
750	66.98	3.86
800	68.98	2.22
850	73.16	1.71
900	71.23	2
950	86.93	2.15
1000	107.07	3.05
1050	101.08	3.02
1100	91.33	2.21
1150	103.11	3.52
1200	109.64	3.26
1250	97.87	3.01
1300	101.25	3.21
1350	96.5	2.73
1400	98.73	3.7
1450	98.09	3.59
1500	74.45	2.88
1550	54.62	1.63
1600	41.4	-0.58
1650	35.01	-0.83
1700	27.24	-2.16
1750	28.78	-2.3
1800	23.51	-2.21
1850	29.43	-0.99
1900	35.17	-0.66
1950	35.1	-0.58
2000	36.88	0.27
2050	43.65	-0.09
2100	53.61	1.65
2150	39.59	0.42

Freq (MHz)	Effi (%)	Gain (dBi)
2200	44.25	-0.02
2250	52.58	0.64
2300	59.16	1.1
2350	69.35	1.28
2400	71.77	1.65
2450	70.19	1.52
2500	75.59	1.96
2550	76.28	1.71
2600	75.89	1.44
2650	75.31	1.17
2700	71.44	1.32
2750	69.22	1.49
2800	92.12	2.83
2850	86.71	2.37
2900	95.66	2.71
2950	89.51	3.19
3000	86.87	3.34
3050	94.63	4.44
3100	92.58	5.01
3150	89.58	4.55
3200	98.29	5.52
3250	95.44	5.23
3300	95.56	4.95
3350	106.68	6.07
3400	106.55	6.67
3450	99.97	6.23
3500	102.72	6.34
3550	101.67	6.73
3600	101.08	6.29
3650	106.91	6.15
3700	104.05	6.27
3750	99.75	5.29

Maswell 5G 5 in 1 GNSS Combo MIMO Antenna Screw Mount

AN_Master_Cubic-4

Measured Results Gain

Freq (MHz)	Effi (%)	Gain (dBi)
3800	95.26	4.32
3850	95.74	4.37
3900	96.94	4.58
3950	96.05	4.83
4000	97.26	4.48
4050	93.96	4.36
4100	90.43	4.38
4150	87.84	4.18
4200	90.05	4.45
4250	89.82	4.37
4300	90.19	4.34
4350	84.21	4.26
4400	81.78	3.83
4450	77.79	3.72
4500	74.08	3.55
4550	72.68	3.38
4600	64.53	2.85
4650	64.99	3.23
4700	63.88	3.12
4750	61.46	2.62
4800	69.32	3.26
4850	68.56	2.85
4900	74.88	3.48
4950	75.84	3.64
5000	82.01	4.1
5050	77.68	3.95
5100	76.49	3.59
5150	72.43	3.27
5200	65.26	2.81
5250	67.56	3.06
5300	63.49	2.81
5350	68.9	3.08

Freq (MHz)	Effi (%)	Gain (dBi)
5400	71.5	3.3
5450	69.27	3.16
5500	71.74	3.29
5550	71.99	3.48
5600	71.74	3.66
5650	70.91	3.75
5700	68.95	3.56
5750	68.56	3.33
5800	63.67	3.14
5850	66.67	2.96
5900	64.41	2.84
5950	81.86	4.2
6000	83.66	4.5
6050	88.14	5.37
6100	75.6	5.04
6150	67.36	4.62
6200	56.38	3.94
6250	48.5	3.44
6300	44.86	3.1
6350	47.37	3.38
6400	51.92	3.81
6450	57.09	4.16
6500	71.88	4.95
6550	85.27	5.42
6600	93.02	6.01
6650	84.78	5.81
6700	77.41	5.53
6750	61.98	4.62
6800	52.69	4.35
6850	53.38	4.36
6900	52.84	4.46
6950	57.27	5.07

Freq (MHz)	Effi (%)	Gain (dBi)
7000	62.16	5.24
7050	71.52	5.62
7100	78.32	5.79
7150	78.97	5.76
7200	83.85	5.79
7250	82.36	5.75
7300	79.49	5.43
7350	74.19	5.1
7400	75.13	5.43
7450	72.04	5.79
7500	73.12	5.92
7550	80.08	6.13
7600	76.22	5.71
7650	72.14	5.13
7700	78.58	5.27
7750	84.91	5.34
7800	89.09	5.4
7850	83.26	5.14
7900	95.32	5.91
7950	105.06	6.65
8000	105.07	6.89