

GNSS & LTE MIMO Combo Antenna

Model: AU-9-DL

Wide frequency range antenna support 2G, 3G & 4G & GNSS applications



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- Features:

1. Low profile structure without a whip
2. Screw through hole mount
3. Support 2G, 3G ,4G & GNSS application bands
4. **Two LTE antennas to improve the communication performance**

- Applications:

1. Vehicle tracking
2. Asset tracking
3. GNSS Navigation
4. Telemetry Application
5. Fleet management

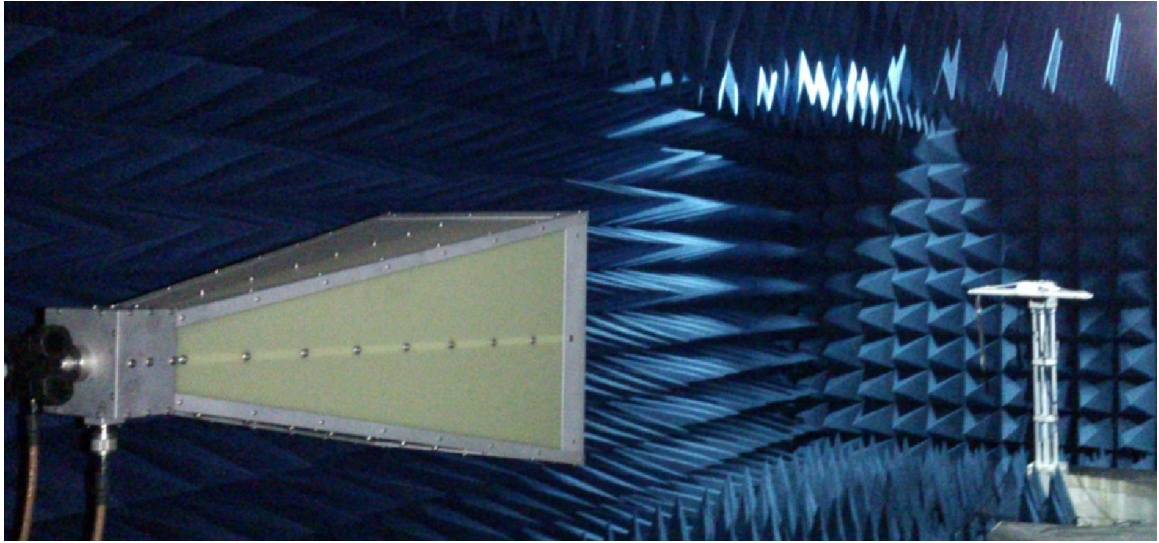


- Specification:

Category	GNSS Antenna	LTE Main Antenna	LTE Sub-Antenna
Frequency	GPS: 1575.42MHz * GLONASS: MHz 1602 MHz (Optional)	704~960MHz; 1710~2690MHz	
Gain	27dB	6.1dBi @ 704~960MHZ 5.47dBi@ 1710~2690MHz, with 3m RG-58 cable	4.91dBi @ 704~960MHz 4.45dbi @ 1710~2690MHz, with 3m RG-58 cable
V.S.W.R	< 2.0	<2.4	<2.4
Noise Figure	1.5 Typical	-	
Band Width	43 MHz min @S11≤-10dB	256MHz for 704MHZ~960MHz 980MHz for 1710MHZ~2690MHz	
Impedance	50 Ohm	50 Ohm	
Cable/Connector	3 Meter- RG174 / SMA	3 Meter- RG-58 , SMA(SP) or other standard connectors	
Polarization	R.H.C.P	Linear	
Power supply	3.0 ~ 5V DC	-	
Power Consumption	10.6 mA @ 3V, 21 mA@ 5V (Typical)	-	
Power Handling Capacity	-	10W	
Dimension	80mm(Dia.) x 41.5mm (H)		
Mounting	Bulkhead mount with 0.8 inch threaded wing nut		
Operation Temperature	-40degC to +80degC		
Storage Temperature	-45degC to +100degC		

Note: This specification is subject to change without prior notice

- Antenna Testing



The direction rotation table & horn antenna

Note:
The Test is completed in San Jose Technology, Inc.
Anechoic chamber, under the CTIA regulations.

- Detail Antenna Gain Table

< LTE Main Antenna >

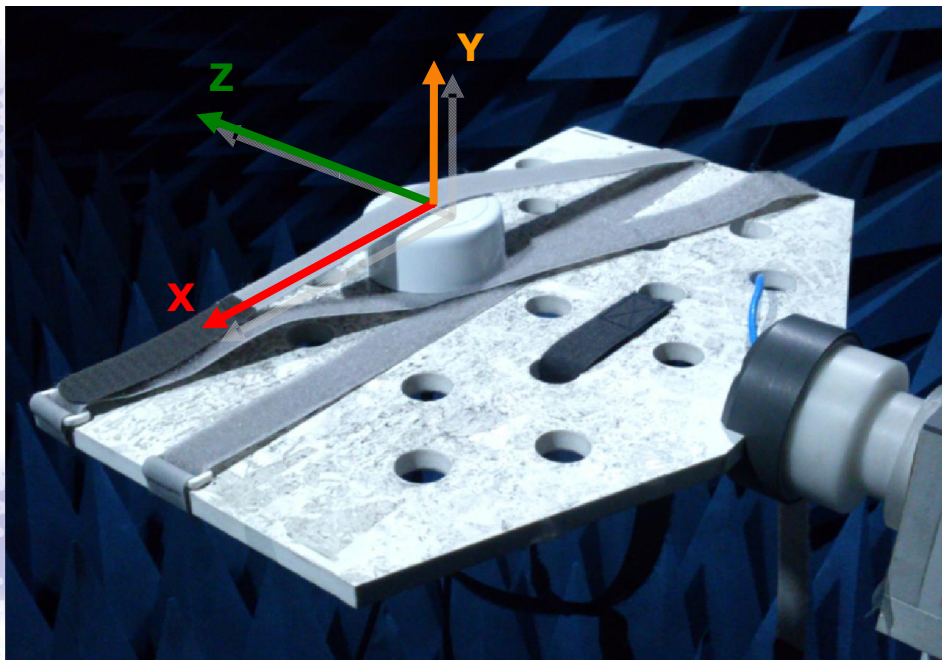
Frequency (MHz)	704	734	756	768	787	824
Efficiency (%)	21.82	44.08	49.33	46.28	45.36	32.66
Gain (dBi)	0.31	4.02	6.1	4.92	4.86	2.76
Average Gain (dB)	-6.61	-3.56	-3.07	-3.35	-3.43	-4.86

Frequency (MHz)	868	880	915	960	1710	1785
Efficiency (%)	27.45	23.75	39.36	45.05	36.29	52.78
Gain (dBi)	3.11	1.68	3.06	2.5	2.39	4.43
Average Gain (dB)	-5.61	-6.24	-4.05	-3.46	-4.4	-2.77

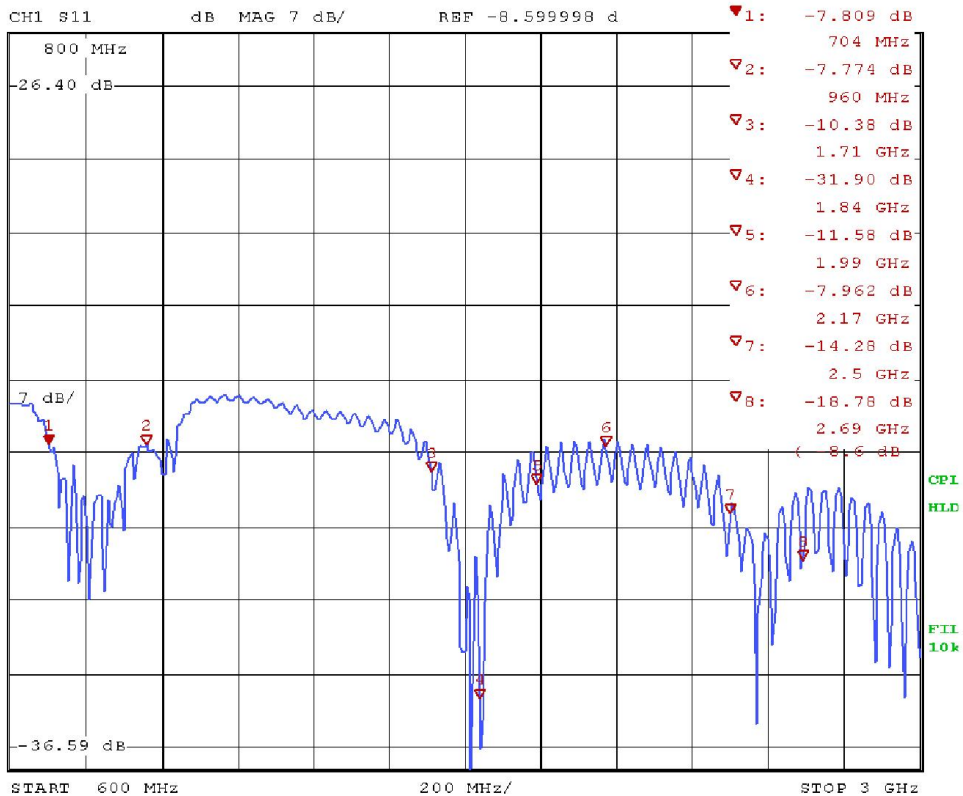
Frequency (MHz)	1805	1850	1880	1920	1990	2110	2140
Efficiency (%)	54.86	55.35	45.21	43	38.38	26.3	29.1
Gain (dBi)	5.47	4.63	4.19	3.73	3.49	1.95	2.57
Average Gain (dB)	-2.61	-2.57	-3.45	-3.67	-4.16	-5.8	-5.36

Frequency (MHz)	2170	2300	2400	2500	2570	2620	2690
Efficiency (%)	27.18	36.41	32.95	33.89	33.44	29.79	30.22
Gain (dBi)	2.25	3.3	3.12	2	1.95	1.62	1.69
Average Gain (dB)	-5.66	-4.39	-4.82	-4.7	-4.76	-5.26	-5.2

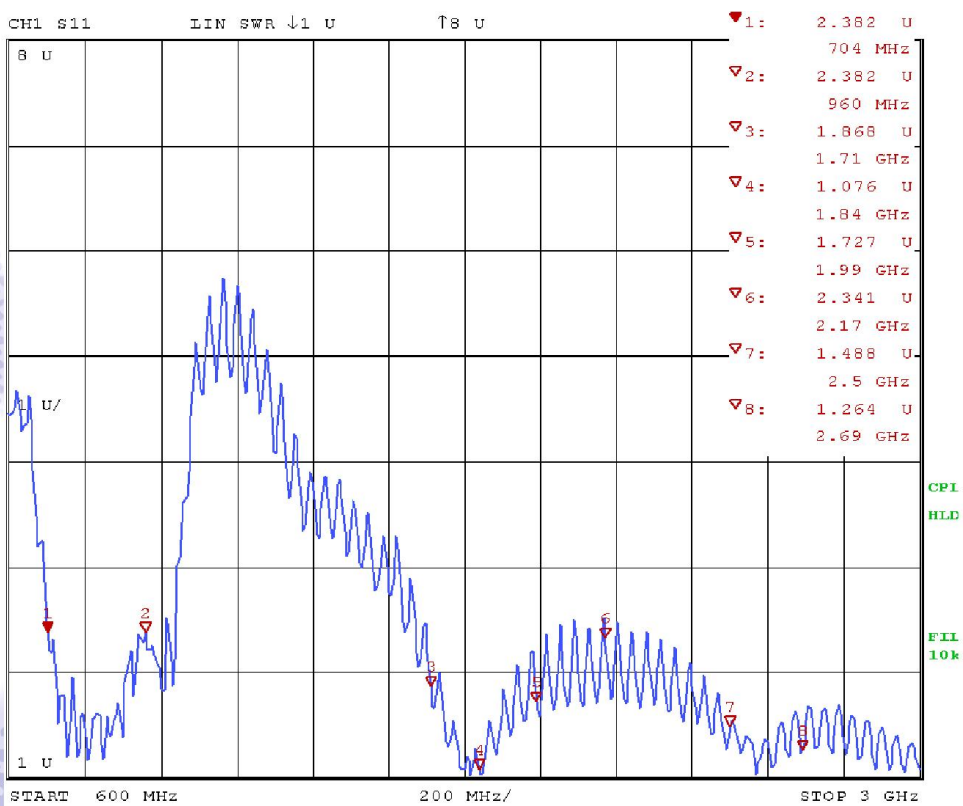
- 3 Axis of antenna



- VSWR & Return (LTE Main Antenna)



Return Loss



VSWR

- Detail Antenna Gain Table

<LTE Secondary Antenna>

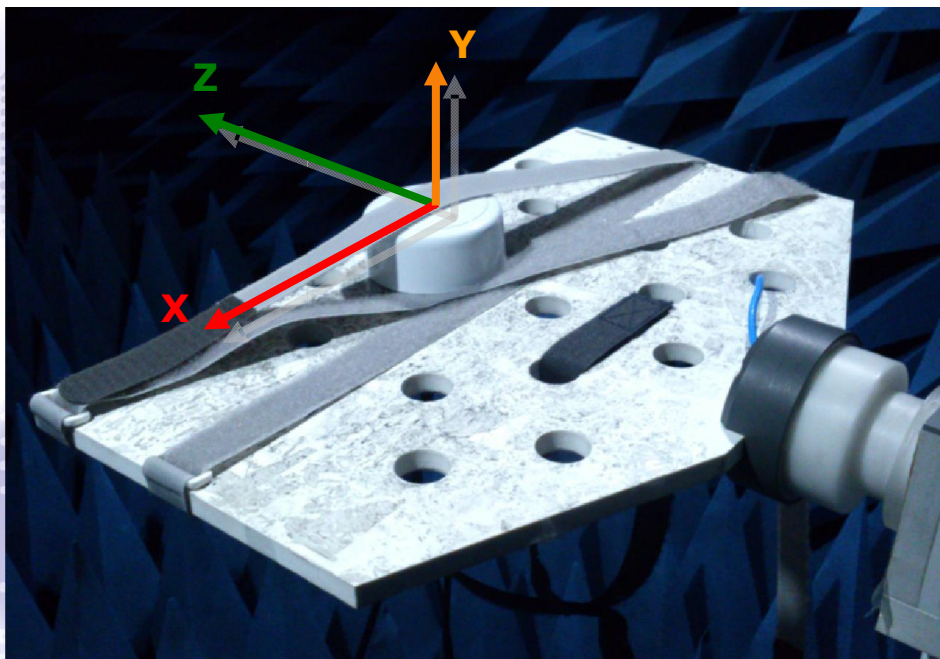
Frequency (MHz)	704	734	756	768	787	824
Efficiency (%)	25.93	54.28	77.84	62.49	61.65	45.06
Gain (dBi)	0.27	4.35	4.91	4.1	3.69	2.45
Average Gain (dB)	-5.86	-2.65	-1.09	-2.04	-2.1	-3.46

Frequency (MHz)	868	880	915	960	1710	1785
Efficiency (%)	37.1	31.64	40.64	42.12	33.63	50.95
Gain (dBi)	1.82	0.99	1.7	2.11	0.01	1.48
Average Gain (dB)	-4.31	-5	-3.91	-3.76	-4.73	-2.93

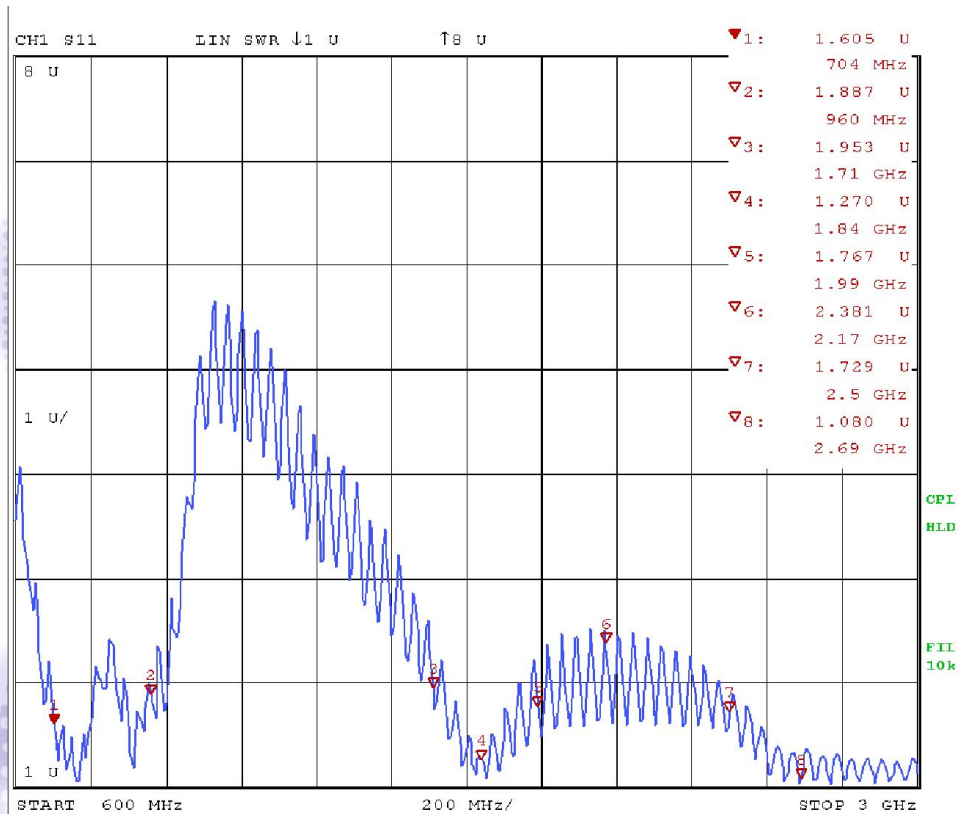
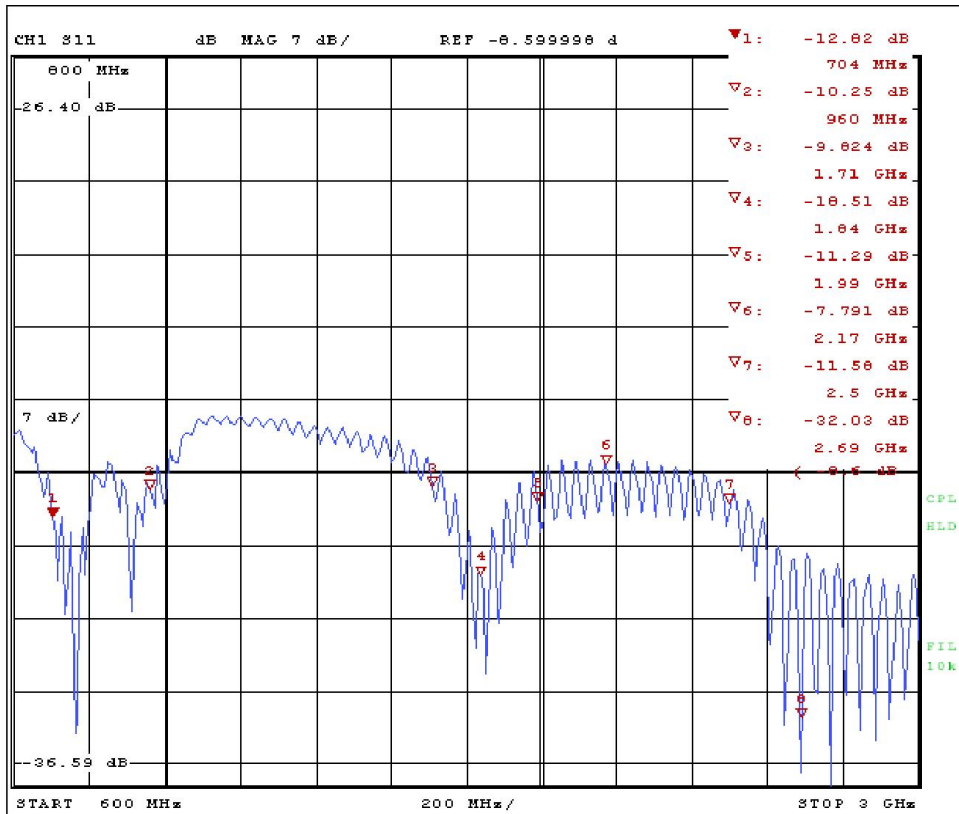
Frequency (MHz)	1805	1850	1880	1920	1990	2110	2140
Efficiency (%)	56.52	57.49	50.2	44.71	44.52	28.56	31.2
Gain (dBi)	3.92	3.79	4.45	3.7	3.46	2.27	3
Average Gain (dB)	-2.48	-2.4	-2.99	-3.5	-3.51	-5.44	-5.06

Frequency (MHz)	2170	2300	2400	2500	2570	2620	2690
Efficiency (%)	28.78	35.21	30.41	29.97	35.32	37.63	41.52
Gain (dBi)	2.69	3.79	3.18	0.85	1.45	2.63	2.88
Average Gain (dB)	-5.41	-4.53	-5.17	-5.23	-4.52	-4.24	-3.82

- 3 Axis of antenna



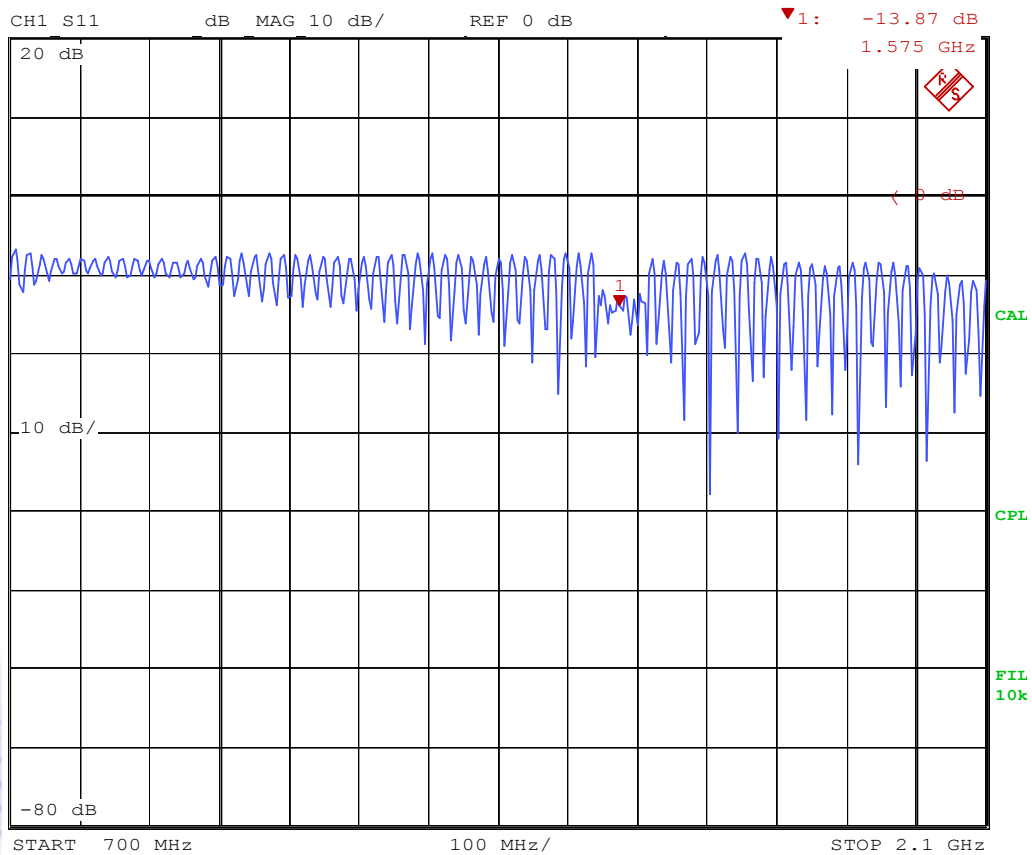
- VSWR & Return (LTE Secondary Antenna)



VSWR

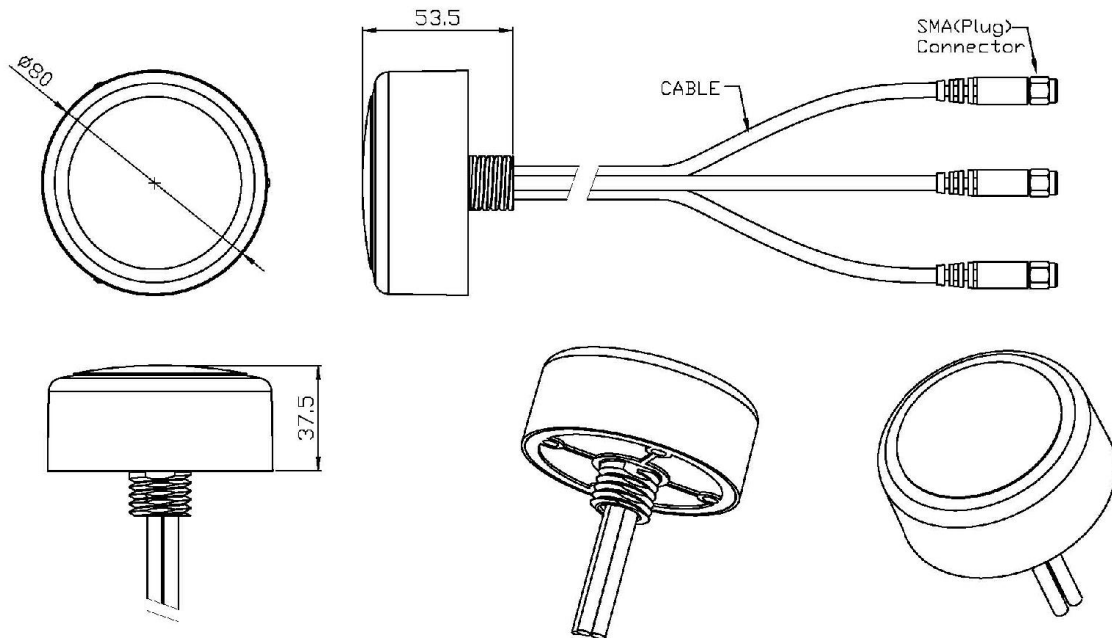
- Detail Antenna Gain Table
<GPS Antenna>

Frequency	Total			H			V		
	1565	1575	1585	1565	1575	1585	1565	1575	1585
Gain (dBi)	30.91	32.28	31.52	28.28	30.58	26.49	29.25	29.36	29.91
Average Gain (dB)	28.42	29.27	27.40	25.16	27.39	23.39	25.64	24.72	25.19



Return Loss

- Antenna Mechanism



Unit: mm