



# GPS & LTE MIMO Combo Antenna

## Model: AU-9-LTE

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



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### Features:

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

### Applications:

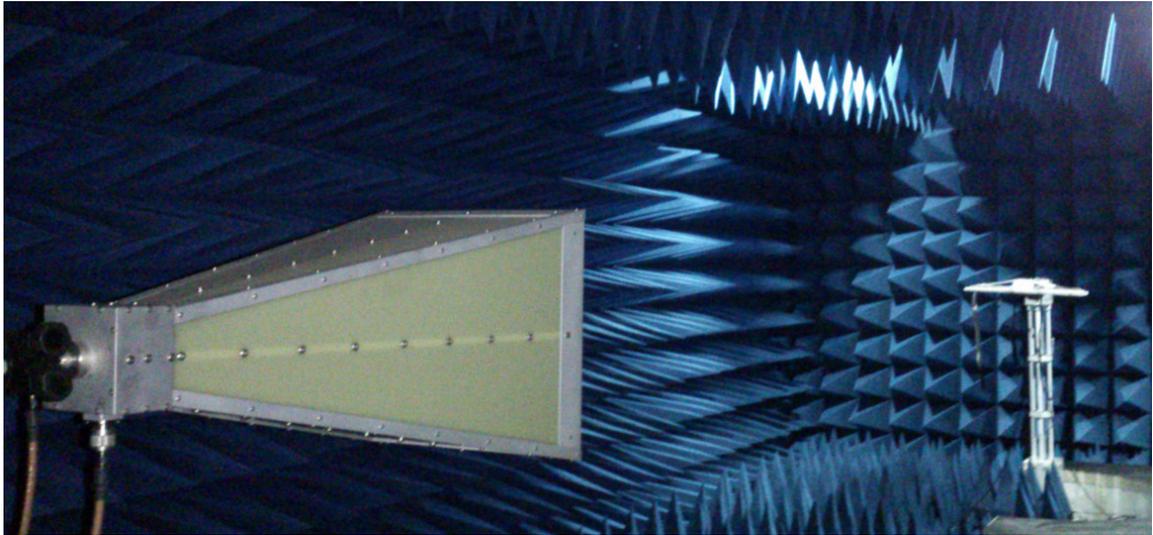
1. Vehicle tracking
2. Asset tracking
3. GPS Navigation
4. Telemetry Application
5. Fleet management

### Specification:

Category	GPS Antenna	LTE Main Antenna	LTE Sub-Antenna
<b>Frequency</b>	1.57542GHz (L1 BAND)	704~960MHz; 1710~2690MHz	
<b>Gain</b>	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
<b>V.S.W.R</b>	< 1.8.	<2.4	<2.4
<b>Noise Figure</b>	2.0 Max	-	
<b>Band Width</b>	2 MHz	256MHz for 704MHZ~960MHz 980MHz for 1710MHz~2690MHz	
<b>Impedance</b>	50 Ohm	50 Ohm	
<b>Cable/Connector</b>	3 Meter-RG174/ SMA	3 Meter-RG-58, SMA(SP) or other standard connectors	
<b>Polarization</b>	R.H.C.P	Linear	
<b>Power supply</b>	3.0 ~ 5.5V DC	-	
<b>Power Consumption</b>	12mA	-	
<b>Power Handling Capacity</b>	-	10W	
<b>Dimension</b>	Ø80 x 53.5(L) mm		
<b>Operation Temperature</b>	-40°C~+80°C		
<b>Storage Temperature</b>	-45°C~+100°C		

**Note:** This specification is subject to change without prior notice

## Antenna Testing



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**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 for AU-9-LTE

### < LTE Main Antenna >

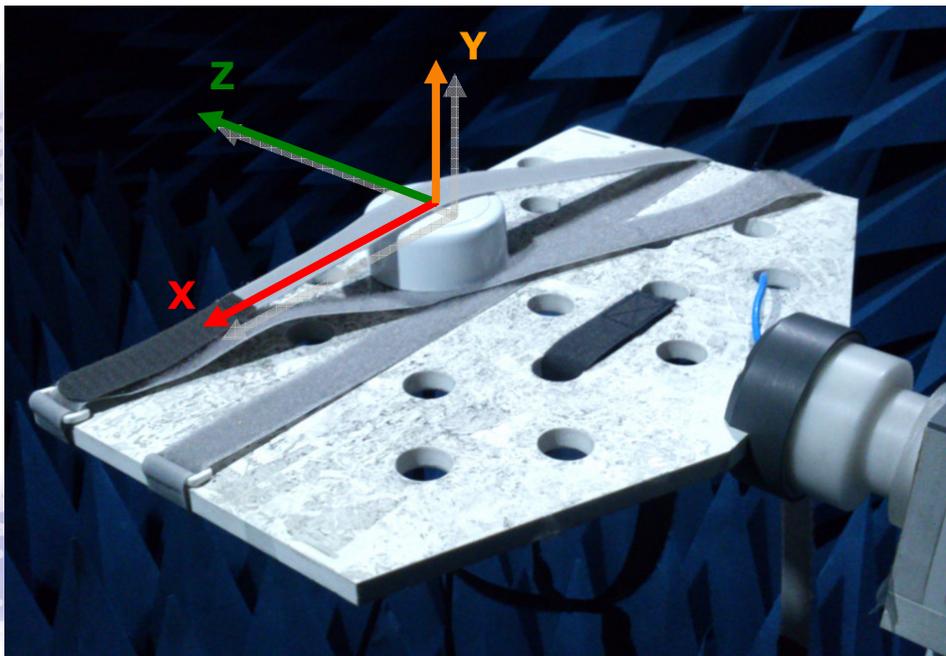
Frequency (MHz)	704	734	756	768	787	824
Efficiency (%)	21.82	44.08	49.33	46.28	45.36	32.66
Gain (dBi)	0.31	4.02	6.1	4.92	4.86	2.76
Average Gain (dB)	-6.61	-3.56	-3.07	-3.35	-3.43	-4.86

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

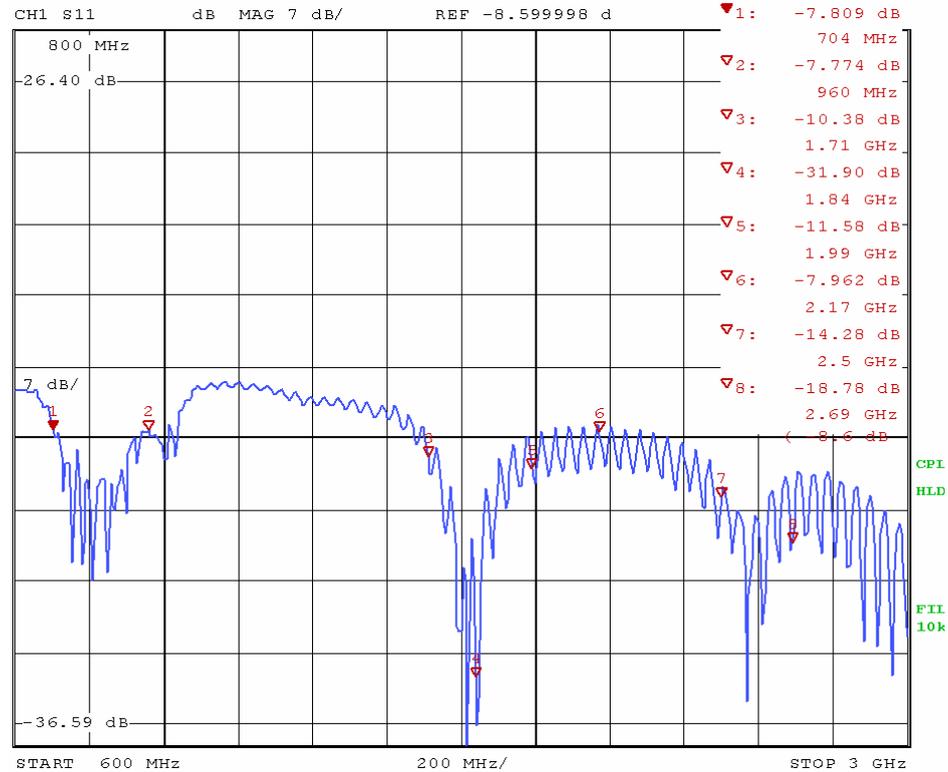
Frequency (MHz)	2170	2300	2400	2500	2570	2620	2690
Efficiency (%)	27.18	36.41	32.95	33.89	33.44	29.79	30.22
Gain (dBi)	2.25	3.3	3.12	2	1.95	1.62	1.69
Average Gain (dB)	-5.66	-4.39	-4.82	-4.7	-4.76	-5.26	-5.2

### 3 Axis of antenna

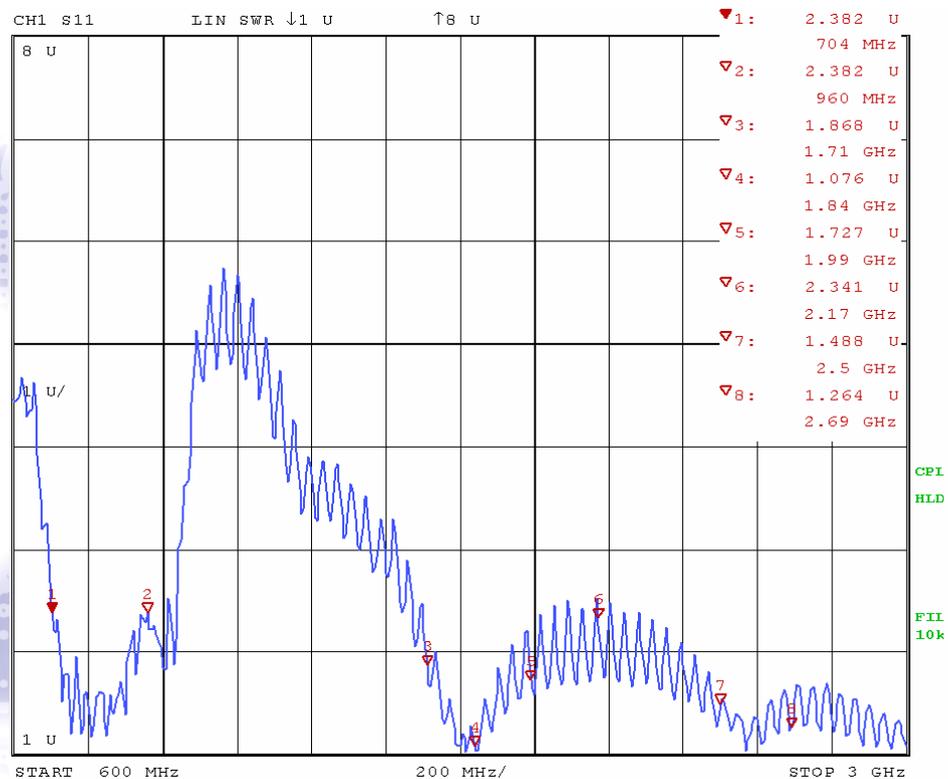


## VSWR & Return (LTE Main Antenna)

### Antenna Return Loss



### Antenna VSWR



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## Detail Antenna Gain Table for AU-9-LTE

### <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

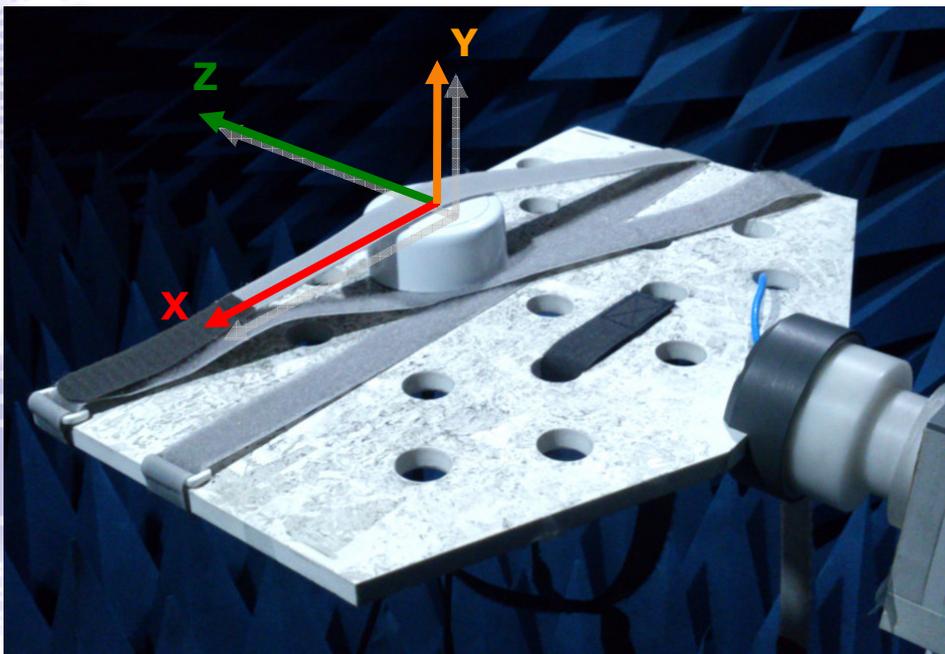
Frequency (MHz)	868	880	915	960	1710	1785
Efficiency (%)	37.1	31.64	40.64	42.12	33.63	50.95
Gain (dBi)	1.82	0.99	1.7	2.11	0.01	1.48
Average Gain (dB)	-4.31	-5	-3.91	-3.76	-4.73	-2.93

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

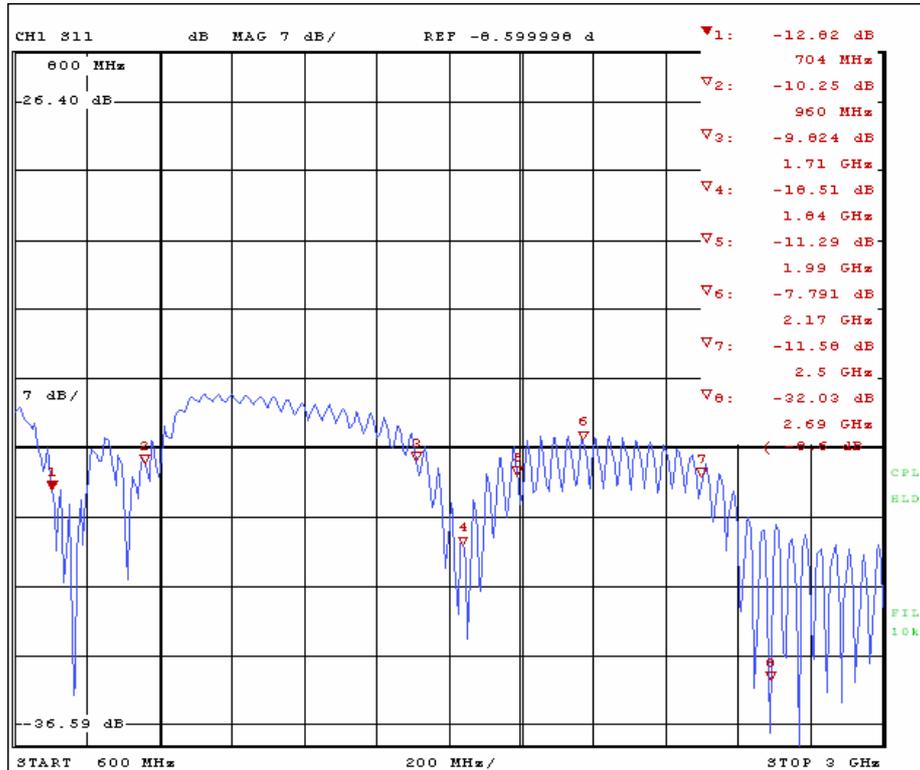
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### 3 Axis of antenna

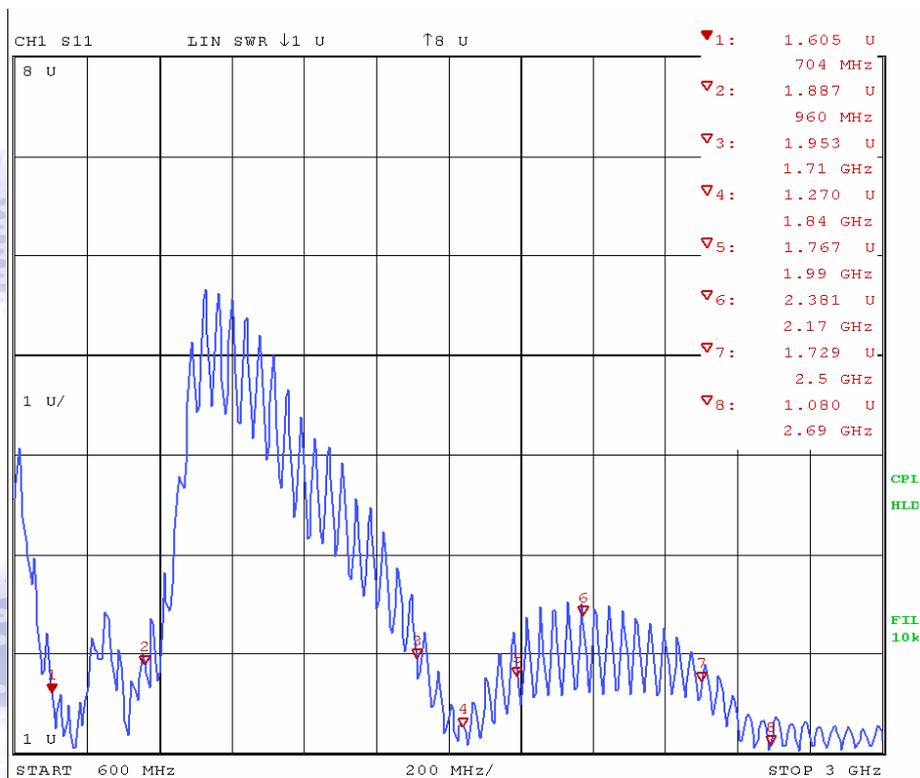


## VSWR & Return (LTE Secondary Antenna)

### Antenna Return Loss



### Antenna VSWR

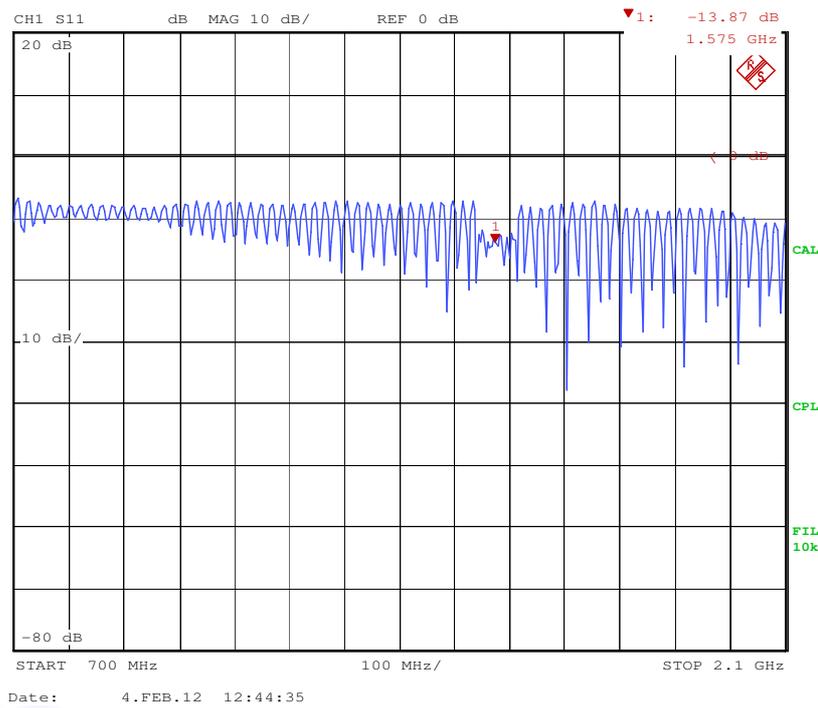


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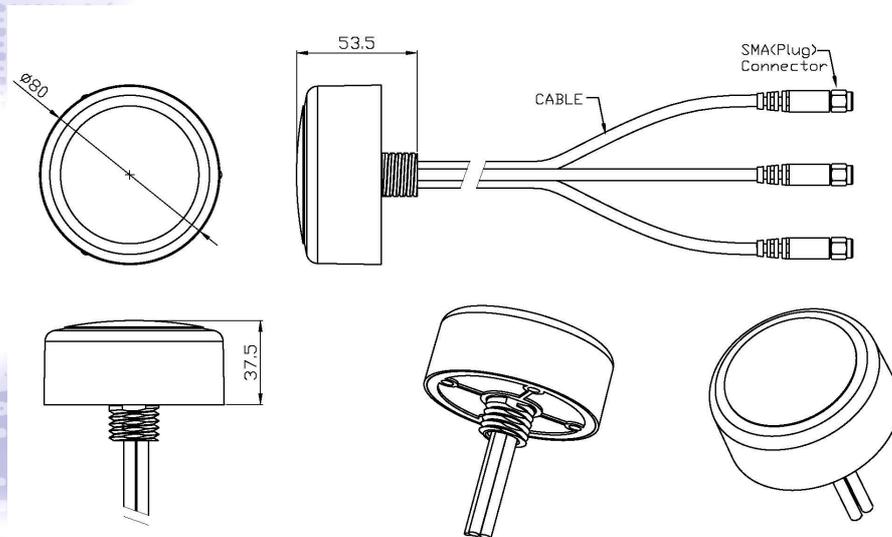
## Detail Antenna Gain Table for AU-9-LTE <GPS Antenna>

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

### Antenna Return Loss



### Antenna Mechanism



Unit: mm

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