



External GPS/Glonass, 4G LTE & Wi-Fi Combo Antenna

Model: AW-9GS

V1.0 2016-05-14

Wide frequency range antenna support GNSS, Cellular 2G/3G/4G & Wi-Fi applications



©San Jose Technology, Inc. All specifications subject to change without notice.

Features:

- Low profile structure without a whip
- Screw through hole mount
- Support 2G, 3G ,4G & GPS/Glonass application bands
- Support dual-band Wi-Fi application(2.4GHz & 5GHz)

Applications:

- Vehicle tracking
- Asset tracking
- GPS Navigation
- Telemetry Application
- Fleet management

Specification:

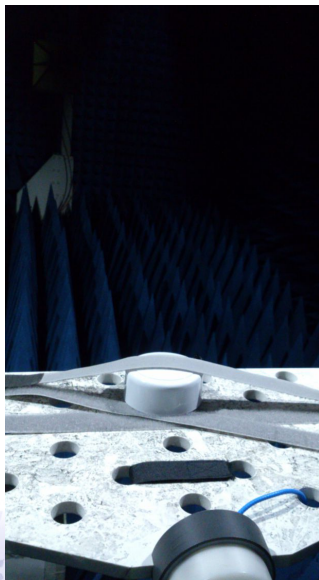
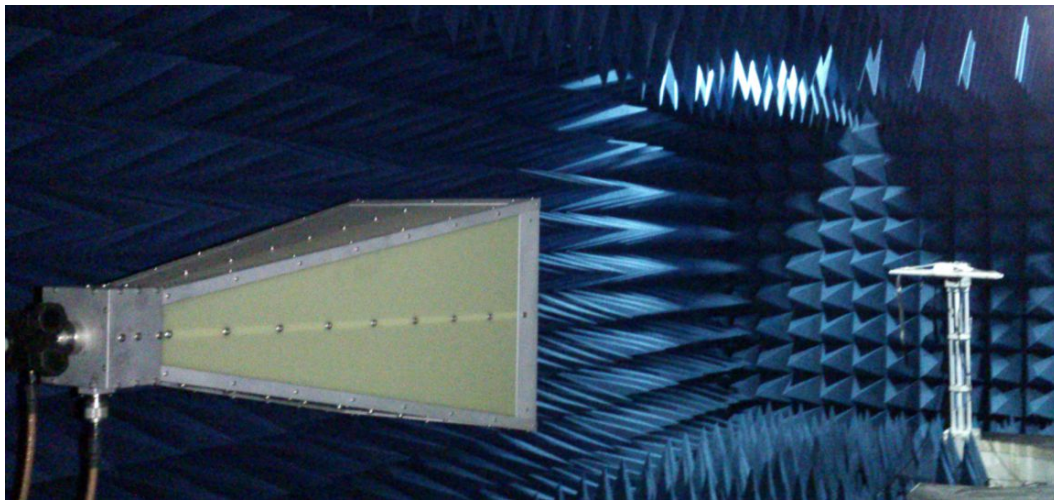
| Category | GPS / Glonass Antenna | LTE Main Antenna |
|----------------------------|---|--|
| Frequency | 1575.42 MHz (L1 BAND) 1602MHz (Glonass) | 704~960MHz; 1710~2690MHz |
| Gain | 27dB@3V DC | 6.1dBi @ 704~960MHz, 5.47dBi@ 1710~2690MHz |
| V.S.W.R | < 1.5. | <2.4 |
| Noise Figure | 1.2 Max | - |
| Band Width | 43MHz @ S11 ≤ -10dB | 256MHz: 704MHz~960MHz 980MHz: 1710MHz~2690MHz |
| Impedance | 50 Ohm | 50 Ohm |
| Cable/Connector | RG174/ SMA | RG-174 SMA(SP) or other standard connectors |
| Polarization | R.H.C.P | Linear, Vertical |
| Power supply | 3.0 ~ 5.5V DC | - |
| Power Consumption | 6.1~13mA | - |
| Power Handling Capacity | - | 10W |
| Operation Temperature | -40degC to +80degC | |
| Storage Temperature | -40degC to +185degC | |
| Category | WLAN Antenna | |
| Frequency | 2400~2500MHz;5100~5850MHz | |
| Gain (with 1m RG-58 cable) | 3.9dBi @ 2400~2500MHz, 3.3dBi @ 5100~5850MHz, | |
| V.S.W.R | <1.7 | |
| Band Width | 100MHz: 2400~2500MHz,750MHz: 5100~5850MHz | |
| Impedance | 50 Ohm | |
| Cable/Connector | RG-174 SMA(SP) / standard RF connectors | |
| Polarization | Linear, Vertical | |
| Power Handling Capacity | 10W | |
| Operation Temperature | -40degC to +80degC | |
| Storage Temperature | -45degC to +100degC | |
| Dimension | Ø80x43.75mm | |

Note:

RG-58 cable is not supported.

This specification sheet is subject to change without prior notice

Antenna Testing:



The direction of rotation table & horn antenna

Note:

The test is completed in San Jose Technology, Inc. anechoic chamber, under the CTIA regulations.

Detail Antenna Gain Table of AW-9GS:

< LTE Antenna >

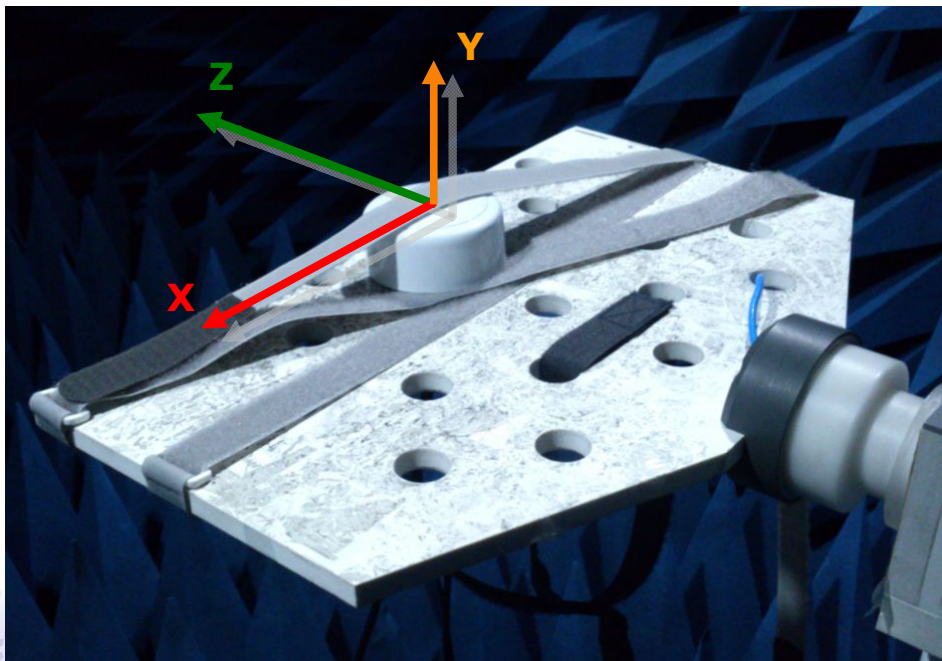
| Frequency (MHz) | 704 | 734 | 756 | 768 | 787 | 824 |
|-------------------|-------|-------|-------|-------|-------|-------|
| Efficiency (%) | 21.82 | 44.08 | 49.33 | 46.28 | 45.36 | 32.66 |
| Gain (dBi) | 0.31 | 4.02 | 6.1 | 4.92 | 4.86 | 2.76 |
| Average Gain (dB) | -6.61 | -3.56 | -3.07 | -3.35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

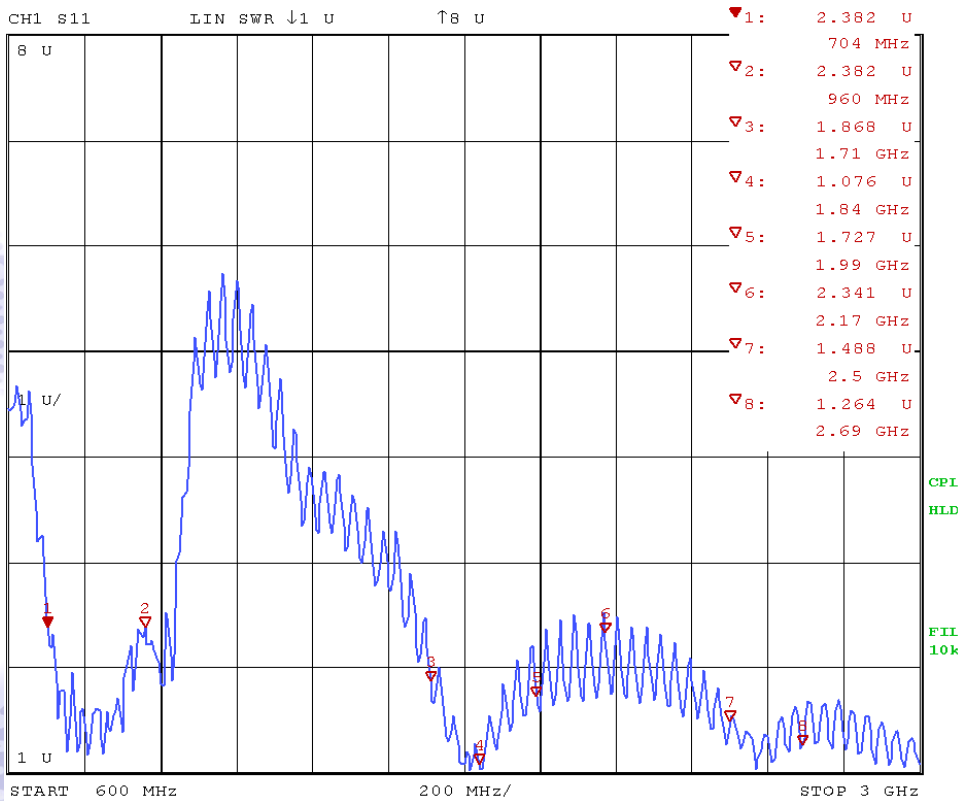
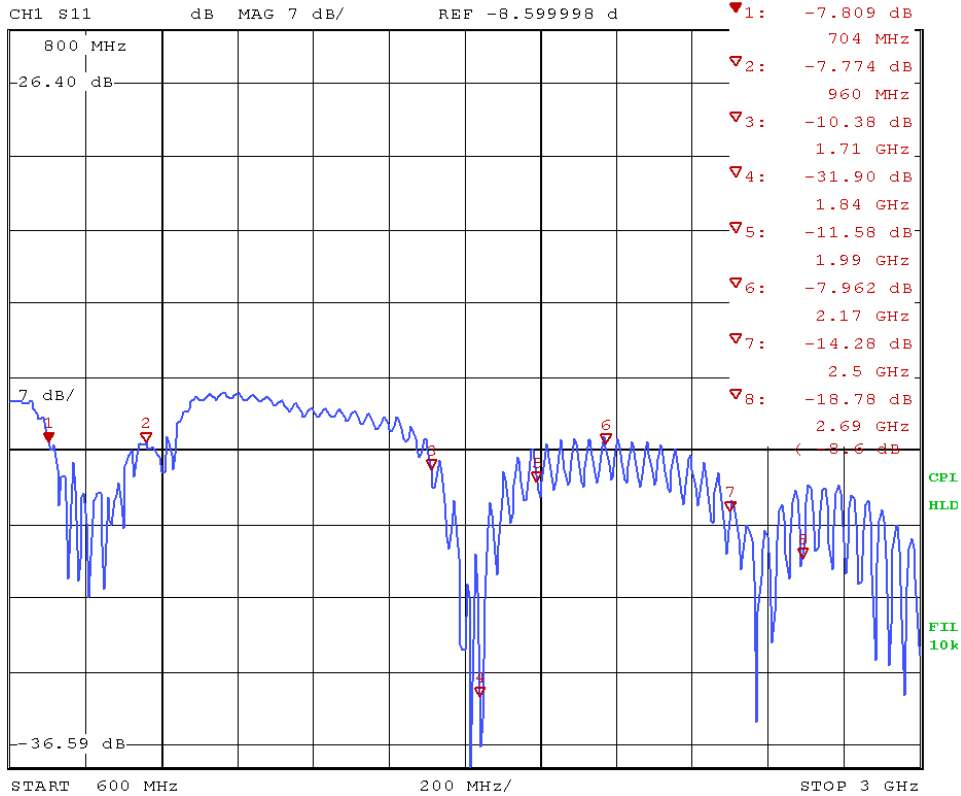
| Frequency (MHz) | 1805 | 1850 | 1880 | 1920 | 1990 | 2110 | 2140 |
|-------------------|-------|-------|-------|-------|-------|------|-------|
| Efficiency (%) | 54.86 | 55.35 | 45.21 | 43 | 38.38 | 26.3 | 29.1 |
| Gain (dBi) | 5.47 | 4.63 | 4.19 | 3.73 | 3.49 | 1.95 | 2.57 |
| Average Gain (dB) | -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 Antenna):

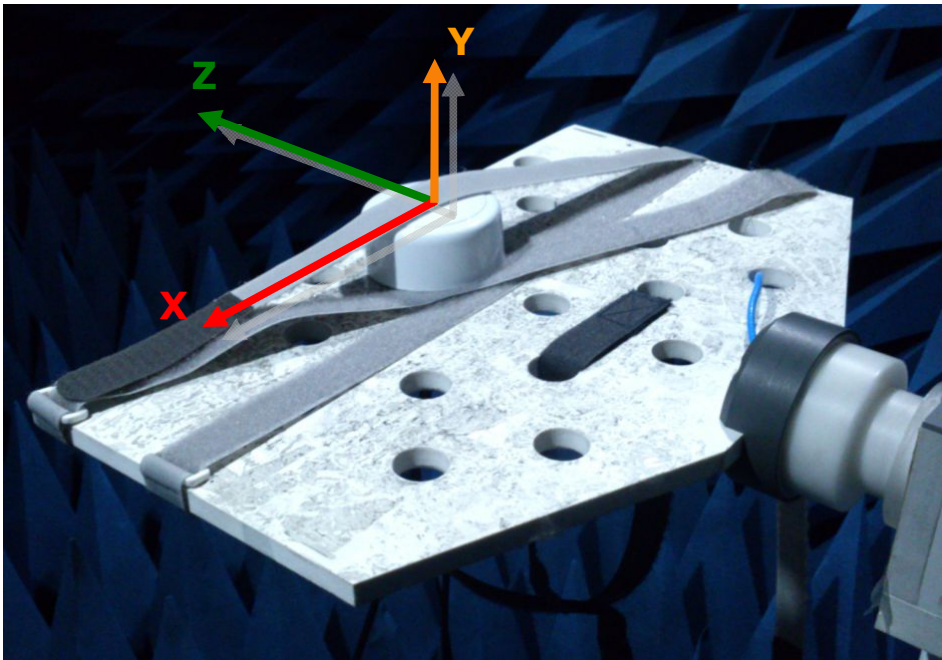


Detail Antenna Gain Table of AW-9GS:

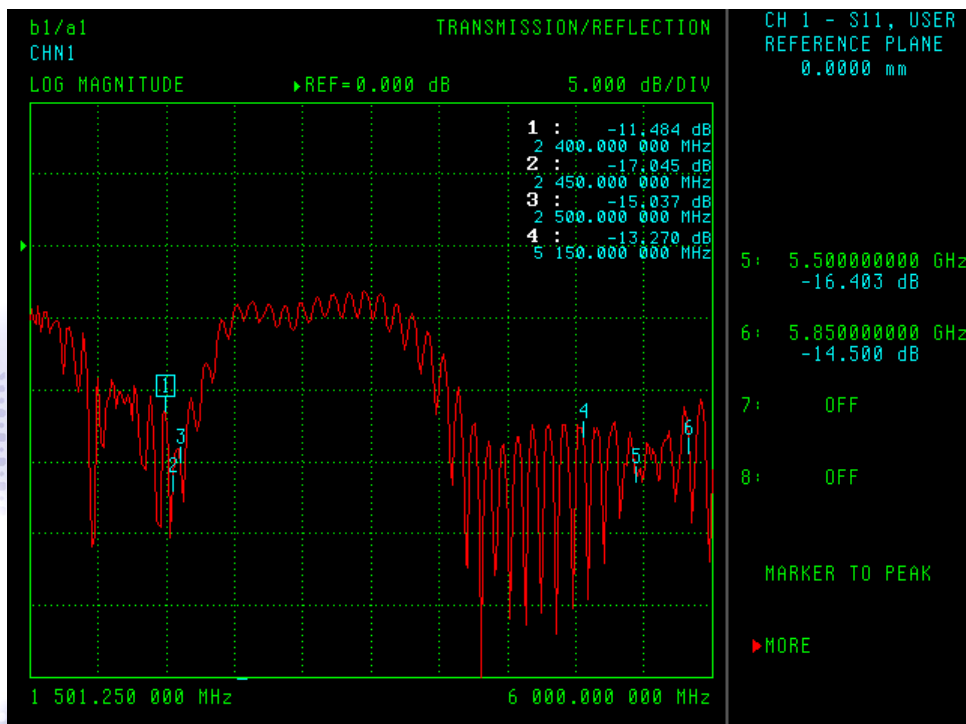
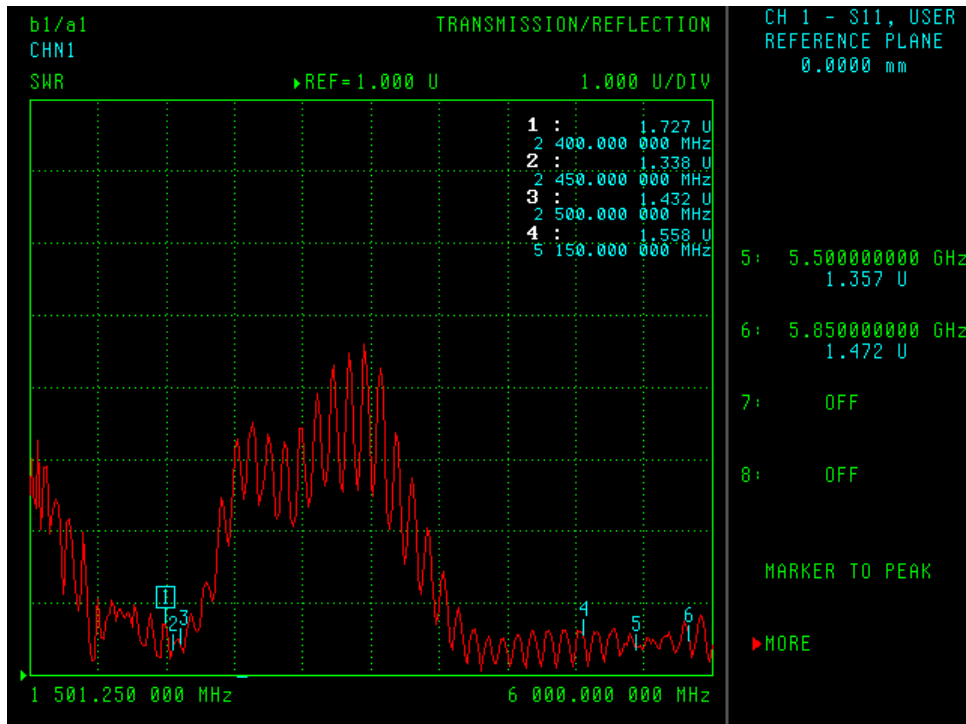
<Wi-Fi Antenna>

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5250 | 5350 | 5500 | 5650 | 5750 | 5850 |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Efficiency (%) | 45.17 | 50.64 | 49.91 | 25.67 | 34.8 | 29.79 | 38.12 | 37.18 | 37.67 | 46.2 |
| Gain (dBi) | 1.52 | 3.92 | 1.71 | 0.94 | 2.44 | 1.07 | 1.99 | 2.7 | 2.31 | 3.3 |
| Average Gain (dB) | -3.45 | -2.95 | -3.02 | -5.91 | -4.58 | -5.26 | -4.19 | -4.3 | -4.24 | -3.35 |

3 Axis of antenna



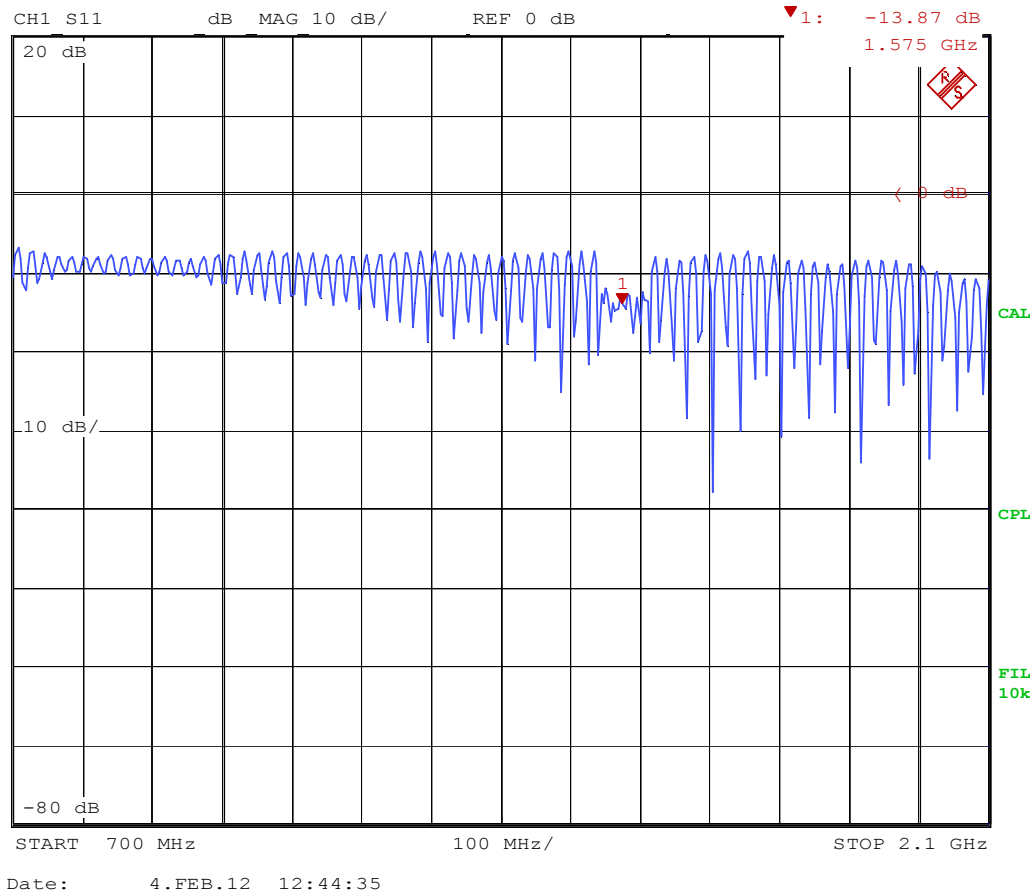
VSWR & Return (Wi-Fi Antenna):



Detail Antenna Gain Table of AW-9GS:

<GNSS Antenna>

Return Loss:



Antenna Mechanism:

