

Product Brief



ANT-W63-SPS1 Series Panel Mount WiFi 6 Antennas

The ANT-W63-SPS1 antenna is an external panel mount puck-style antenna designed for excellent performance in the 2.4 GHz, 5 GHz and 6 GHz bands supporting both WiFi 6 and WiFi 6E.

The ANT-W63-SPS1 provides a ground plane independent dipole antenna solution which mounts permanently to metallic and non-metallic surfaces.

The antenna terminates in an SMA plug (male pin) connector on 1 meter, 2 meter and 3 meter lengths of RG-174/U coaxial cable enabling an environmentally sealed enclosure and protection from tampering.



Features

- Performance at 5.15 GHz to 5.85 GHz
 - VSWR: ≤ 1.5
 - Peak Gain: 5.1 dBi
 - Efficiency: 44%
- Performance at 5.925 GHz to 7.125 GHz
 - VSWR: ≤ 1.4
 - Peak Gain: 4.0 dBi
 - Efficiency: 38%
- Ground plane independent dipole antenna
- External mount, includes all hardware for installation including M12x1 hex nut, washer and optional boot
- SMA plug (male pin) gold plated connection
- IP67 rating
- Impact resistant UV stabilized ABS radome material

Applications

- WiFi/WLAN coverage
 - WiFi 6E (802.11ax)
 - WiFi 6 (802.11ax)
 - WiFi 5 (802.11ac)
 - WiFi 4 (802.11n)
 - 802.11b/g
- 2.4 GHz ISM applications
 - Bluetooth®
 - ZigBee®
- U-NII bands 1-8
- C-V2X (Cellular Vehicle to Everything)
- DSRC (Dedicated Short Range Communications)
- Internet of Things (IoT) devices
- Smart Home networking
- Sensing and remote monitoring

Ordering Information

Part Number	Description
ANT-W63-SPS1-1	1 meter (39.37 in) WiFi 6 panel mount antenna with SMA plug (male pin) on RG-174/U coaxial cable and mounting hardware, including M12x1 hex nut, washer and rubber boot
ANT-W63-SPS1-2	2 meters (78.74 in) WiFi 6 panel mount antenna with SMA plug (male pin) on RG-174/U coaxial cable and mounting hardware, including M12x1 hex nut, washer and rubber boot
ANT-W63-SPS1-3	3 meters (118.11 in) WiFi 6 panel mount antenna with SMA plug (male pin) on RG-174/U coaxial cable and mounting hardware, including M12x1 hex nut, washer and rubber boot

Available from Linux Technologies and select distributors and representatives.

Table 1. Electrical Specifications

ANT-W63-SPS1	ISM/WiFi	WiFi/U-NII 1-4	WiFi 6E/U-NII 5-8
Frequency Range	2400 MHz to 2485 MHz	5150 MHz to 5850 MHz	5925 MHz to 7125 MHz
VSWR (max)	1.5	1.5	1.4
Peak Gain (dBi)	3.4	5.1	4.0
Average Gain (dBi)	-4.1	-3.9	-4.6
Efficiency (%)	41	44	38
Polarization	Linear		
Radiation	Omnidirectional		
Max Power	15 W		
Wavelength	1/2-wave		
Electrical Type	Dipole		
Impedance	50 Ω		
Operating Temp. Range	-40 °C to +70 °C		

Electrical specifications and plots measured with a 300 mm x 300 mm (11.8 in x 11.8 in) ground plane.

Table 2. Mechanical Specifications

ANT-W63-SPS1	
Connection	SMA plug (male pin)
Cable	1 meter (39.37 in), 2 meters (78.74 in) and 3 meters (118.11 in) of RG-174/U coaxial cable
Weight	63.4 g (2.24 oz)
Dimensions	23.3 mm x Ø54.7 mm (0.92 in x Ø2.15 in)
IP Rating	IP67
Operating Temp. Range	-40 °C to +70 °C

Product Dimensions

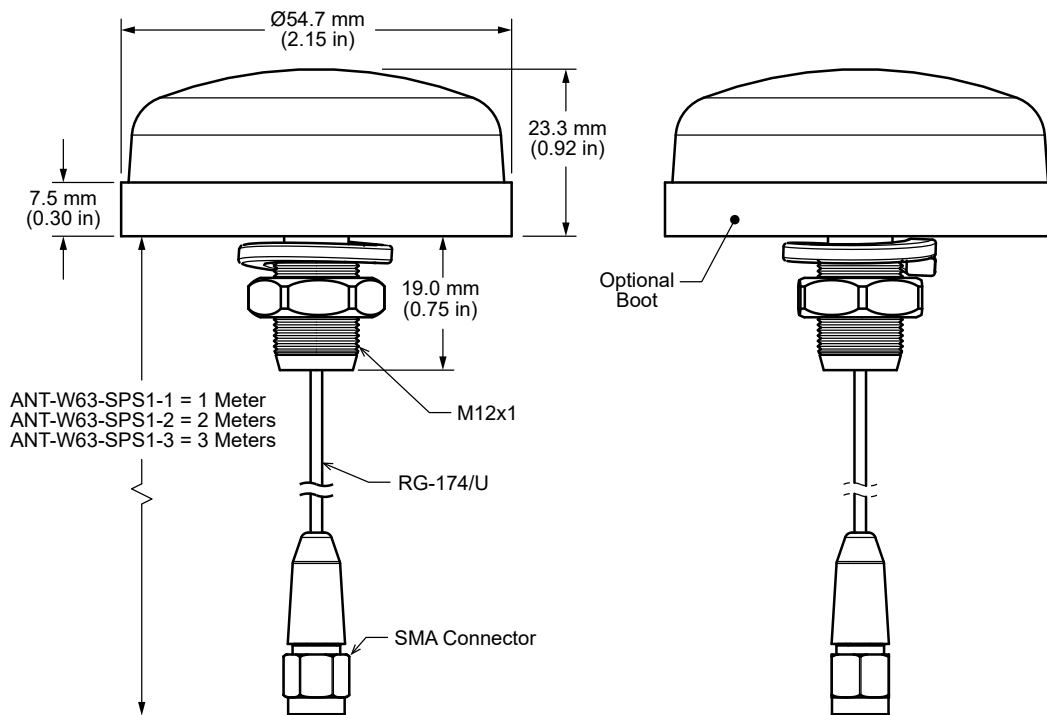


Figure 1. ANT-W63-SPS1 Dimensions

VSWR

Figure 2 provides the voltage standing wave ratio (VSWR) across the antenna bandwidth. VSWR describes the power reflected from the antenna back to the radio. A lower VSWR value indicates better antenna performance at a given frequency. Reflected power is also shown on the right-side vertical axis as a gauge of the percentage of transmitter power reflected back from the antenna.

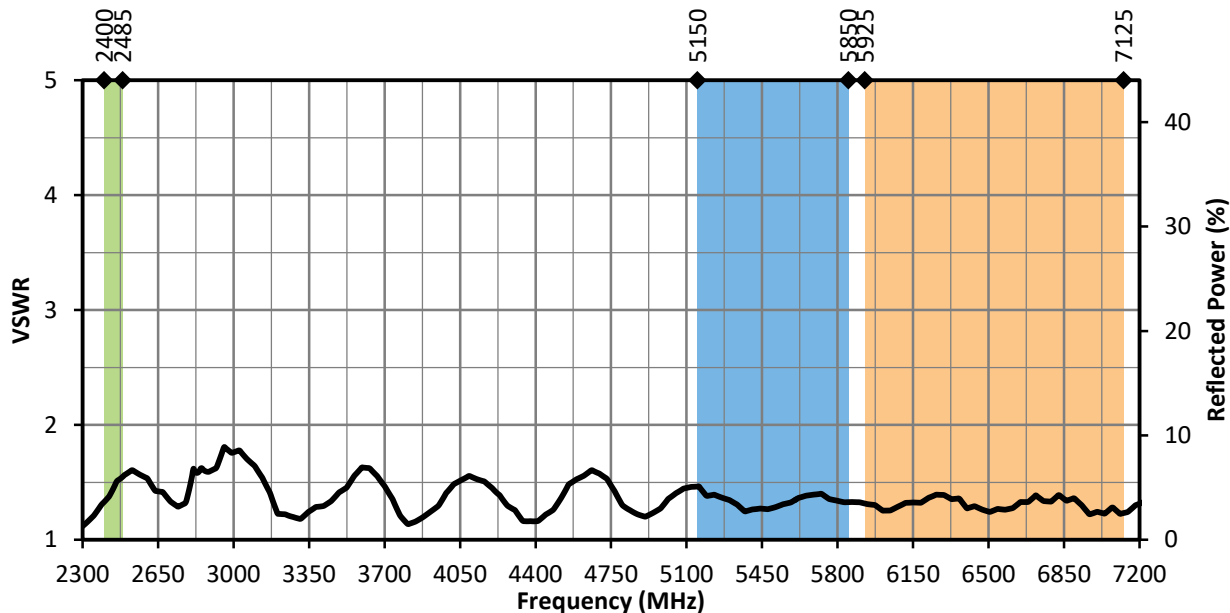


Figure 2. ANT-W63-SPS1 Antenna VSWR with Frequency Band Highlights

Packaging Information

The ANT-W63-SPS1 series antenna is individually placed in a polyethylene bag. 50 pcs. are sealed in larger polyethylene bags. Larger quantities are shipped in cartons of 100 pcs. Carton size = 320 mm x 250 mm x 230 mm (12.60 in x 9.84 in x 9.10 in). Distribution channels may offer alternative packaging options.

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