

## Product Brief



### ANT-8/9-SPS1 Series Panel Mount 868/915 MHz LPWA Antenna

The ANT-8/9-SPS1 antenna is an external panel mount puck-style multiband antenna designed for use in 868 MHz and 915 MHz frequency bands for low-power, wide-area (LPWA) applications such as LoRaWAN®, Sigfox® and WiFi HaLow™ as well as ISM and remote control applications.

The ANT-8/9-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 862 MHz to 876 MHz
  - VSWR:  $\leq 1.6$
  - Peak Gain: 5.1 dBi
  - Efficiency: 34%
- Performance at 802 MHz to 930 MHz
  - VSWR:  $\leq 2.4$
  - Peak Gain: 5.2 dBi
  - Efficiency: 32%
- 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

- Low-power, wide-area (LPWA) applications
  - LoRaWAN®
  - Sigfox®
  - WiFi HaLow™ (802.11ah)
- Remote control, monitoring and sensing
- Internet of Things (IoT) devices
- ISM applications

#### Ordering Information

Part Number	Description
ANT-8/9-SPS1-1	1 meter (39.37 in) LPWA 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-8/9-SPS1-2	2 meters (78.74 in) LPWA 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-8/9-SPS1-3	3 meters (118.11 in) LPWA 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 Linx Technologies and select distributors and representatives.

Table 1. Electrical Specifications

ANT-8/9-SPS1	868 MHz	915 MHz
Frequency Range	862 MHz to 876 MHz	902 MHz to 930 MHz
VSWR (max.)	1.6	2.4
Peak Gain (dBi)	5.1	5.2
Average Gain (dBi)	-6.0	-5.1
Efficiency (%)	34	32
Polarization	Linear	
Radiation	Omnidirectional	
Max Power	15 W	
Wavelength	1/2-wave	
Electrical Type	Dipole	
Impedance	50 Ω	

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-8/9-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

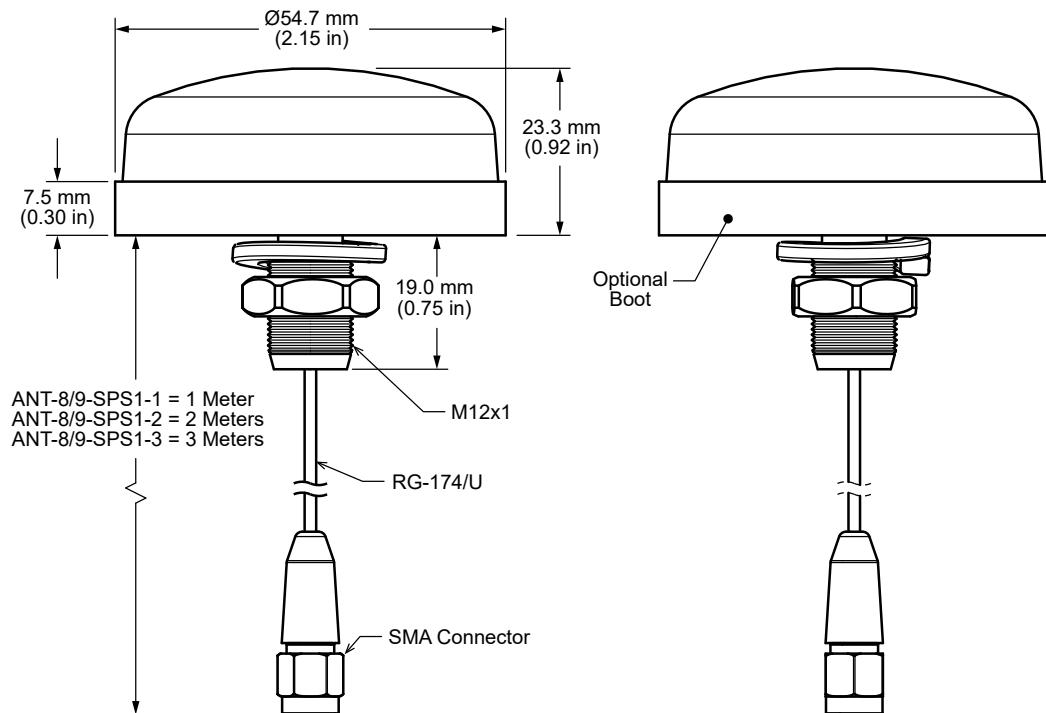


Figure 1. ANT-8/9-SPS1 Dimensions

## 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.

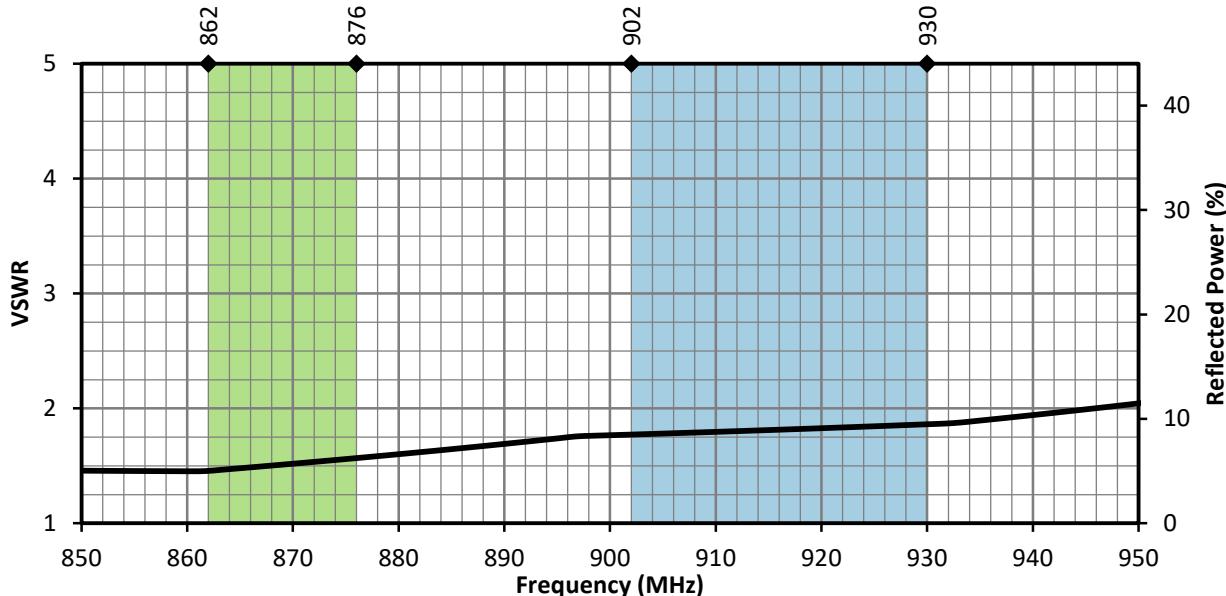


Figure 2. ANT-8/9-SPS1 Antenna VSWR with Frequency Band Highlights

## Packaging Information

The ANT-8/9-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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