

Product Brief



ANT-5GW-SPNF1 Panel Mount Cellular Sub-6 5G Antenna

The 5GW-SPNF1 is a dipole, panel mount dome-style antenna for 5G New Radio, LTE, and cellular IoT (LTE-M, NB-IoT) applications. As a 5G NR antenna, the 5GW-SPNF1 performs in the 617 MHz to 960 MHz low band, and excels in the 2496 MHz to 2690 MHz and 3300 MHz to 5000 MHz ranges for CBRS private networking, 4.9 GHz public safety and emerging 2.5 GHz and C-band applications.

The 5GW-SPNF1 provides a ground plane independent dipole antenna solution which mounts permanently to metallic and non-metallic surfaces using the integrated N jack (female socket) connector while enabling an environmentally sealed enclosure and protection from tampering.



Features

- Performance at 3.3 GHz to 3.8 GHz
 - VSWR: ≤ 4.1
 - Peak Gain: 6.5 dBi
 - Efficiency: 92%
- Ground plane independent dipole antenna
- N jack (female socket)
- External mount, includes all hardware for installation including 5/8"-24UNEF hex nut, washer and optional boot
- IP67 rating
- Impact resistant UV stabilized ABS radome material

Applications

- Worldwide 5G/4G/3G/2G
- Cellular IoT: NB-IoT and LTE-M (Cat-M1)
- Private cellular networks
 - Citizens Broadband Radio Service (CBRS)
- 4.9 GHz Public Safety
- Emerging 5G C-Band applications
- Emerging 5G 2.5 GHz EBS applications
- Internet of Things (IoT) devices

Ordering Information

Part Number	Description
ANT-5GW-SPNF1	Cellular 5G panel mount antenna with N jack (female socket)

Available from Linx Technologies and select distributors and representatives.

Table 1. Electrical Specifications

ANT-5GW-SPNF1	Frequency Range	VSWR (max.)	Peak Gain (dBi)	Avg. Gain (dBi)	Efficiency (%)
Band 71	617 MHz to 698 MHz	7.0	1.3	-3.1	56
Band 12, 13, 14, 17, 26, 28, 29	698 MHz to 803 MHz	3.0	3.3	-0.7	89
Band 5, 8, 20	791 MHz to 960 MHz	3.0	3.3	-0.6	92
Band 1, 2, 3, 4, 25, 66	1710 MHz to 2200 MHz	1.7	5.1	-0.7	89
Band 30, 40	2300 MHz to 2400 MHz	1.6	4.5	-0.3	96
Band 7, 41	2496 MHz to 2690 MHz	1.7	5.1	-0.4	96
Band 22, 42, 43, 48, 49, 52, n77, n78	3300 MHz to 3800 MHz	4.1	6.5	-0.5	92
CBRS	3550 MHz to 3700 MHz	4.1	6.5	-0.4	93
C-Band	3700 MHz to 4200 MHz	3.6	6.8	-0.5	94
Band n79	4400 MHz to 5000 MHz	1.8	8.4	-0.7	90
Polarization	Linear	Radiation		Omnidirectional	
Max Power	10 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-5GW-SPNF1			
Connection	N jack (female socket)	Weight	63.9 g (2.25 oz)
IP Rating	IP67	Operating Temp. Range	-30 °C to +70 °C
Dimensions	70.8 mm x Ø40.2 mm (2.79 in x Ø1.58 in)		

Product Dimensions

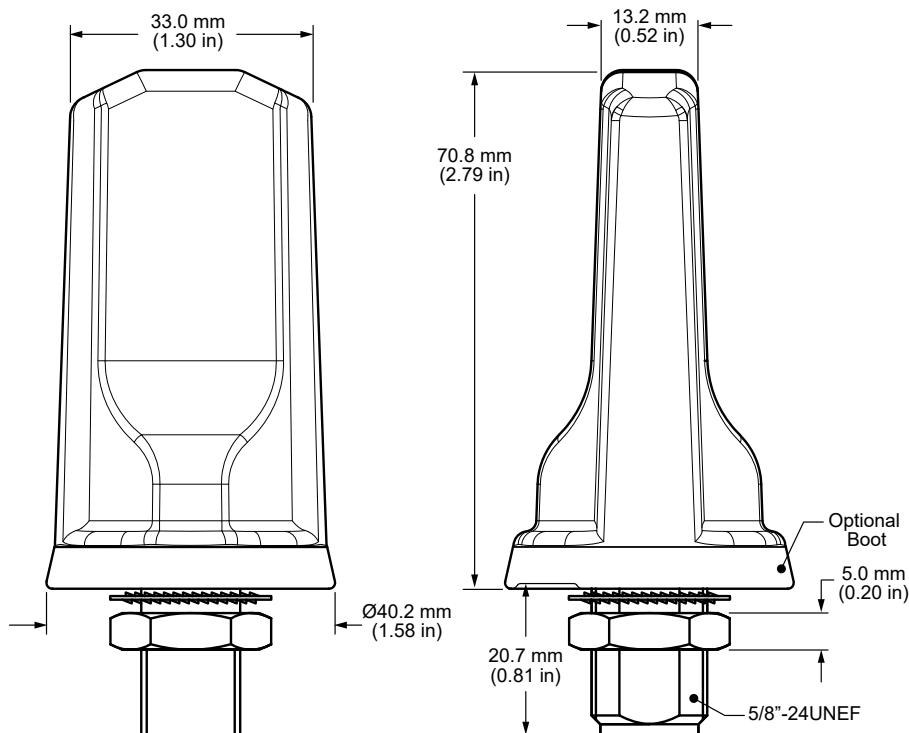


Figure 1. ANT-5GW-SPNF1 Antenna Dimensions

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.

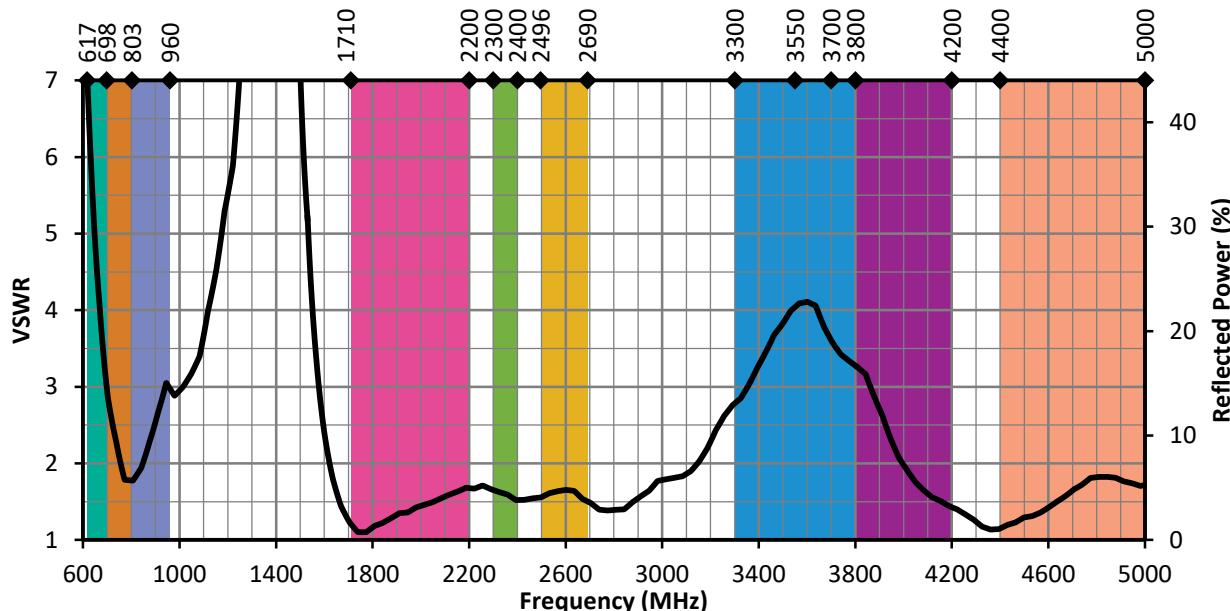


Figure 2. ANT-5GW-SPNF1 Antenna VSWR with Frequency Band Highlights

Packaging Information

The ANT-5GW-SPNF1 antenna is individually placed in a polyethylene bag. 10 pcs. are sealed in larger polyethylene bags. Larger quantities are shipped in cartons of 60 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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