Product Brief

ANT-LPC-FPC-100
LTE/LPWA/GNSS Flexible Embedded Dipole Antenna

The ANT-LPC-FPC-100 (LPC) antenna is a flexible embedded multiband cellular and cellular IoT antenna (LTE-M and NB-IoT) ideal for use in LTE applications such as Citizens Broadband Radio Service (CBRS). The LPC also supports low-power, wide-area (LPWA) networking at 868 MHz, 915 MHz and global navigation systems (GNSS/GPS).

The LPC provides a ground plane independent dipole embedded antenna solution comparable in performance to an external antenna. The LPC's flexibility and adhesive backing makes it easy to mount in unique and custom enclosures, while enabling an environmentally sealed enclosure and protection from tampering or accidental antenna damage.

Connection is made to the radio via a 100 mm long, 1.13 mm coaxial cable terminated in an MHF1/U.FL compatible plug connector.

Features

- 3550 MHz to 3700 MHz (CBRS)
  - VSWR: ≤ 4.5
  - Peak Gain: 5.5 dBi
  - Efficiency: 70%
- 1553 MHz to 1609 MHz (GNSS)
  - VSWR: ≤ 1.7
  - Peak Gain: 3.3 dBi
  - Efficiency: 72%
- Compact, low-profile
  - 64 mm x 17 mm x 0.2 mm
- MHF1/U.FL compatible plug (female socket) on 100 mm of 1.13 mm coaxial cable
- Flexible to fit in challenging enclosures
- Adhesive backing permanently adheres to non-metal enclosures using 3M 467MP™/200MP adhesive

Applications

- Worldwide LTE, UMTS and GSM
- Cellular IoT:
  - LTE-M (Cat-M1)
  - NB-IoT
- Low-power, wide-area (LPWA) applications
  - LoRaWAN®
  - Sigfox®
- ISM: Bluetooth® and ZigBee®
- Global Navigation (GNSS)
  - GPS, GLONASS, Galileo, BeiDou
- Citizens Broadband Radio Service (CBRS)

Ordering Information

Part Number	Description
ANT-LPC-FPC-100	Antenna with 100 mm of 1.13 mm coaxial cable and MHF1/U.FL compatible plug (female socket)

Available from Linx Technologies and select distributors and representatives.

Electrical Specifications

Select Bands	Frequency Range	VSWR (max.)	Peak Gain (dBi)	Avg. Gain (dBi)	Efficiency (%)
LTE 12, 13, 14, 17, 26, 28, 29	698 MHz to 803 MHz	8.2	0.1	-6.4	25
LTE 5, 8, 20	791 MHz to 960 MHz	4.8	3.7	-4.5	43
LTE 1, 2, 3, 4, 10, 25, 66	1710 MHz to 2200 MHz	4.9	2.2	-3.6	49
LTE 30, 40	2300 MHz to 2400 MHz	3.5	3.3	-2.8	53
LTE 7, 41	2496 MHz to 2690 MHz	3.1	5.0	-2.7	59
LTE 22, 42, 43, 48, 49, 52	3300 MHz to 3800 MHz	2.0	5.7	-1.8	70
GNSS/GPS	1553 MHz to 1609 MHz	1.7	3.3	-1.5	72
ISM	2400 MHz to 2485 MHz	2.7	3.9	-4.1	43

Polarization	Linear	**Wavelength**	1/2-wave
Radiation	Omnidirectional	**Electrical Type**	Dipole
Max Power	2 W	**Impedance**	50 Ω
Connection	MHF1/U.FL compatible plug (female socket) on 100 mm of 1.13 mm coaxial cable		
Weight	0.76 g (0.03 oz)		
Dimensions	64.0 mm x 17.0 mm x 0.2 mm (2.52 in x 0.67 in x 0.01 in)		
Operating Temp. Range	-40 °C to +85 °C		
ESD Sensitivity	NOT ESD sensitive. As a best practice, Linx may use ESD packaging.		

VSWR

Figure 1 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.

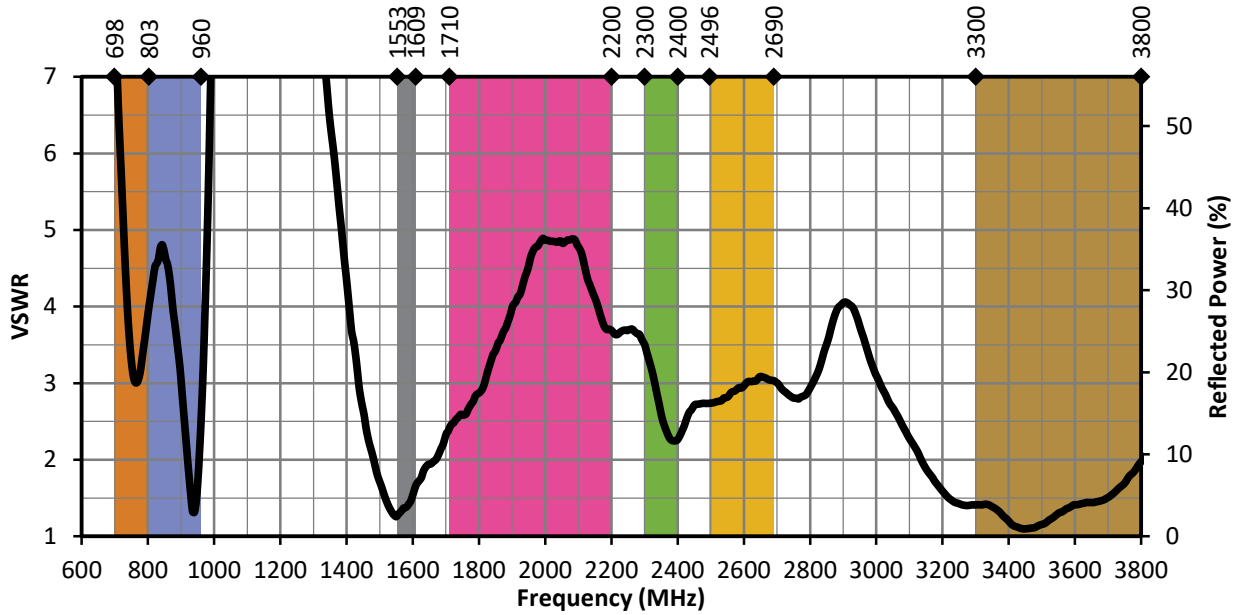

Figure 1. LPC Antenna VSWR with Frequency Band Highlights