Product Brief

ANT-W63-FPC-UFL-100
Flexible Embedded WiFi 6 Antenna

The Linx W63-FPC antenna is a flexible embedded multiband antenna offering excellent performance for WiFi 6E applications in the 6 GHz band (5.925 GHz to 7.125 GHz) plus 2.4 GHz and 5 GHz WiFi/WLAN for WiFi 5 and WiFi 6 solutions.

The W63-FPC provides a ground plane independent dipole embedded antenna solution comparable in performance to an external antenna. The flexibility and adhesive backing makes the W63-FPC antenna 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 (3.94 in) long, 1.13 mm coaxial cable terminated in an MHF1/U.FL-compatible plug connector.

Features

- Performance at 5925 MHz to 7125 MHz
  - VSWR: ≤ 2.6
  - Peak Gain: 6.9 dBi
  - Efficiency: 67%
- Ground plane independent dipole antenna
- Compact, low-profile
  - 110 mm x 20 mm x 0.2 mm
- MHF1/U.FL-compatible plug (female socket) on 100 mm of 1.13 mm coaxial cable
- Adhesive backing permanently adheres to non-metal enclosures using 3M 467MP™/200MP adhesive
- Flexible to fit in challenging enclosures

Applications

- Complete WiFi/WLAN coverage
  - 802.11b/g
  - WiFi 4 (802.11n)
  - WiFi 5 (802.11ac)
  - WiFi 6 (802.11ax)
  - WiFi 6E (802.11ax)
- U-NII bands 1-4 and 5-8 (proposed)
- 2.4 GHz ISM applications
  - Bluetooth®
  - ZigBee®
- Internet of Things (IoT) devices
- Smart Home networking
- Sensing and remote monitoring

Ordering Information

Part Number	Description
ANT-W63-FPC-UFL-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

ANT-W63-FPC-UFL-100	ISM/WiFi	U-NII 1-3	U-NII 5-8
Frequency Range	2400 MHz to 2485 MHz	5150 MHz to 5850 MHz	5925 MHz to 7125 MHz
VSWR (max.)	1.2	3.3	2.6
Peak Gain (dBi)	6.1	6.1	6.9
Average Gain (dBi)	-1.2	-1.5	-1.9
Efficiency (%)	80	74	69
Polarization	Linear		
Radiation	Omnidirectional		
Max Power	2 W		
Wavelength	1/2-wave		
Electrical Type	Dipole		
Impedance	50 Ω		
Connection	MHF1/U.FL-compatible plug (female socket) on 100 mm (3.94 in) of 1.13 mm coaxial cable.		
Weight	1.5 g (0.05 oz)		
Dimensions	110.0 mm x 20.0 mm x 0.2 mm (4.33 in x 0.80 in x 0.01 in)		
Operating Temp. Range	-40 °C to +85 °C		

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.

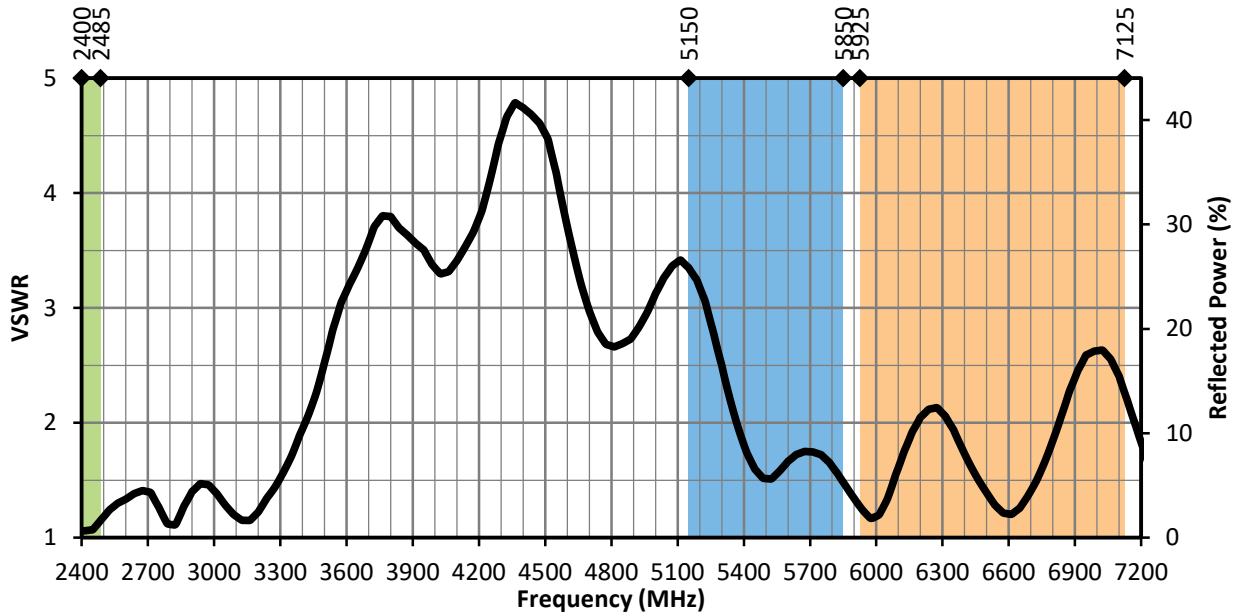

Figure 1. W63-FPC Antenna VSWR with Frequency Band Highlights