



ULTRAMAX™ B

Up to 7-in-1 High Performance External Antenna

ULTRAMAX B is designed to provide high performance connectivity for Fleet and Public Safety vehicles and assets. Equipped with up to 7 ports, this antenna connects to virtually any vehicular router or modem.

The ULTRAMAX B builds on the best-in-class RF performance, leading design features, and extended operational life of Airgain's highly successful Fleet and Public Safety Antenna products. Like all our antennas, this product features a rugged design to withstand the most common natural hazards a vehicle can face, including (but not limited to): vibration, hot, cold, ice, salt, dirt, car washes, and tree branch sweeps.

FEATURES

- Up to seven embedded antenna elements with powerful MIMO technology that operate over multiple bands in a single rugged and compact housing
- Up to 2 x Wideband Cellular LTE elements, with support for FirstNet™ on LTE Band 14
- Up to 4 x 2.4 & 4.9-6 GHz Wi-Fi elements
- Optional GNSS element
- Available in black or white

ADVANTAGES

- High gain provides bigger cellular footprint
- Built-in ground plane (to accommodate installation on non-metal surfaces)
- 5 year limited warranty included¹
- Covered by one or more patents and pending applications²

¹See terms and conditions at airgain.com/antenna-plus-support/

²For a list of the patents covering this product please visit <https://airgain.com/product-support/patents/>

PART NUMBER(S)

CONFIGURATION	CELLULAR ELEMENTS	Wi-Fi ELEMENTS	GNSS	PART NUMBER	DESCRIPTION
7-in-1	2	4	Yes	AP-CCWWWWGx-S2222222-RP3456-BL	MIMO Cell/LTE x 2, Wi-Fi x 4 & GNSS, SMA on Cell/LTE & GNSS, RP-SMA on Wi-Fi, Black, 15ft coax
6-in-1	2	3	Yes	AP-CCWWWWG-B[x]-S2222222-RP345-BL	MIMO Cell/LTE x 2, Wi-Fi x 3 & GNSS, SMA on Cell/LTE & GNSS, RP-SMA on Wi-Fi, Black, 15ft coax
5-in-1	2	3	No	AP-CCWWWW-B[x]-S222222-RP345-BL	MIMO Cell/LTE x 2, Wi-Fi x 3, SMA on Cell/LTE, RP-SMA on Wi-Fi, Black, 15ft coax

5-in-1	2	2	Yes	AP-CCWWG-B[x]-S22222-RP34-BL	MIMO Cell/LTE x 2, Wi-Fi x 2 & GNSS, SMA on Cell/LTE & GNSS, RP-SMA on Wi-Fi, Black, 15ft coax
4-in-1	2	2	No	AP-CCWW-B[x]-S2222-RP34-BL	MIMO Cell/LTE x 2, Wi-Fi x 2, SMA on Cell/LTE, RP-SMA on Wi-Fi, Black, 15ft coax
4-in-1	2	1	Yes	AP-CCWG-B[x]-S2222-RP3-BL	MIMO Cell/LTE x 2, Wi-Fi x 1 & GNSS, SMA on Cell/LTE & GNSS, RP-SMA on Wi-Fi, Black, 15ft coax
3-in-1	2	1	No	AP-CCW-B[x]-S2222-RP3-BL	MIMO Cell/LTE x 2, Wi-Fi x 1, SMA on Cell/LTE & GNSS, Black, 15ft coax
3-in-1	2	0	Yes	AP-CCG-B[x]-S222-BL	MIMO Cell/LTE x 2 & GNSS, SMA on Cell/LTE & GNSS, Black, 15ft coax
3-in-1	1	1	Yes	AP-CWG-B[x]-S222-RP2-BL	Cell/LTE x 1, Wi-Fi x 1 & GNSS, SMA on Cell/LTE & GNSS, RP-SMA on Wi-Fi, Black, 15ft coax
2-in-1	2	0	No	AP-CC-B[x]-S22-BL	MIMO Cell/LTE x 2, SMA on Cell/LTE, Black, 15ft coax
2-in-1	1	0	Yes	AP-CG-B[x]-S22-BL	Cell/LTE x 1 & GNSS, SMA on Cell/LTE & GNSS, Black, 15ft coax
Single Cellular	1	0	No	AP-C-B[x]-S2-BL	Cell/LTE x 1, SMA, Black, 15ft coax

MOUNTING OPTIONS [x]	DESCRIPTION
Q	Threaded Bolt Mount
A	Adhesive Mount
M	Magnetic Mount

Also available in color white, customizable cable lengths up to 35 feet, and other variations.

TECHNICAL SPECIFICATIONS

ELECTRICAL

Frequency Range	Elements 1 up to 2	689-960/1700-2700 MHz
	Elements 3 up to 4	2.4/4.9-6.0 GHz
	Element 5 (optional)	1550~1610 MHz
Operational Bands	Elements 1 up to 2	LTE/Cellular
	Elements 3 up to 4	Wi-Fi
	Element 5 (optional)	GPS L1/GALILEO E1/GLONASS G1/BeiDou B1/QZSS L1
Peak Gain: Isotropic	Elements 1 up to 2	698-960 MHz, 4.9 dBi
		1710-2700 MHz, 7 dBi
	Elements 3 up to 4	2.4 GHz, 5.5 GHz, 7 dBi, 5 dBi
	Element 5 (optional)	30.50 dBi
Isolation	Elements 1 up to 2	>10 dB
	Elements 3 up to 4	>30 dB
Correlation Co-efficient	Elements 1 up to 2	<0.1

ENVIRONMENTAL

Hazardous Substances	RoHS Compliant
Temperature	-40°C to 65°C (-40°F to + 149°F) Operating and Storage conformance to IEC 60068
Humidity (Non-Condensing)	5% to 96% Operating and Storage conformance to IEC 60068
Military Spec	MIL-STD 810 conformance to vibration

MOUNTING

Dimensions	Height	2.183" (55.4mm)
	Diameter	7.650" (194.3mm)
Color	Black (BL) or White (WH)	

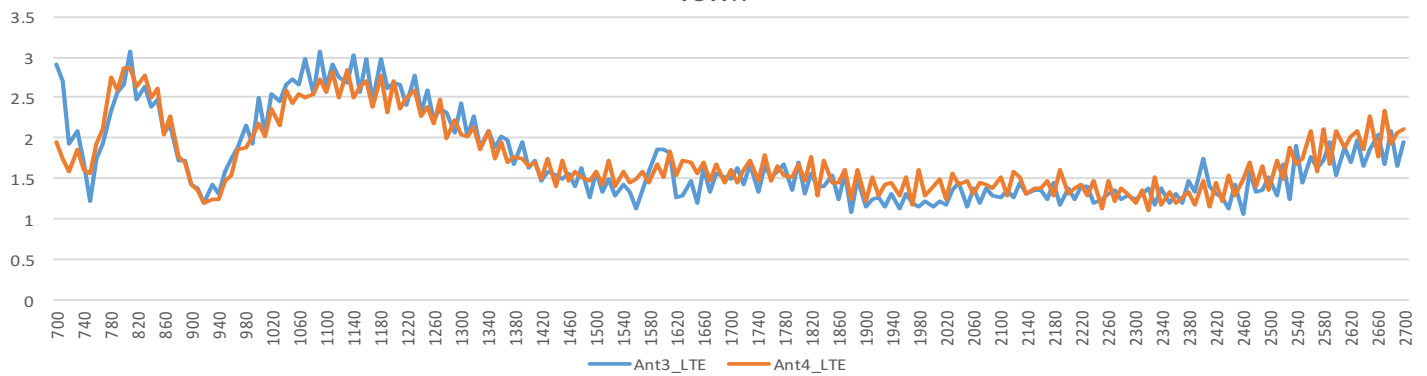
CABLE

Cell	Type	LMR-195 Low Loss
	Diameter	0.195" (4.953mm)
	Length	1 ft (0.3m)
	Termination	SMA Male
Wi-Fi	Type	LMR-195 Low Loss
	Diameter	0.195" (4.953mm)
	Length	1 ft (0.3m)
	Termination	RP-SMA Male
GNSS	Type	RG-174U
	Diameter	0.100" (2.54mm)
	Length	1 ft (0.3m)
	Termination	SMA Male

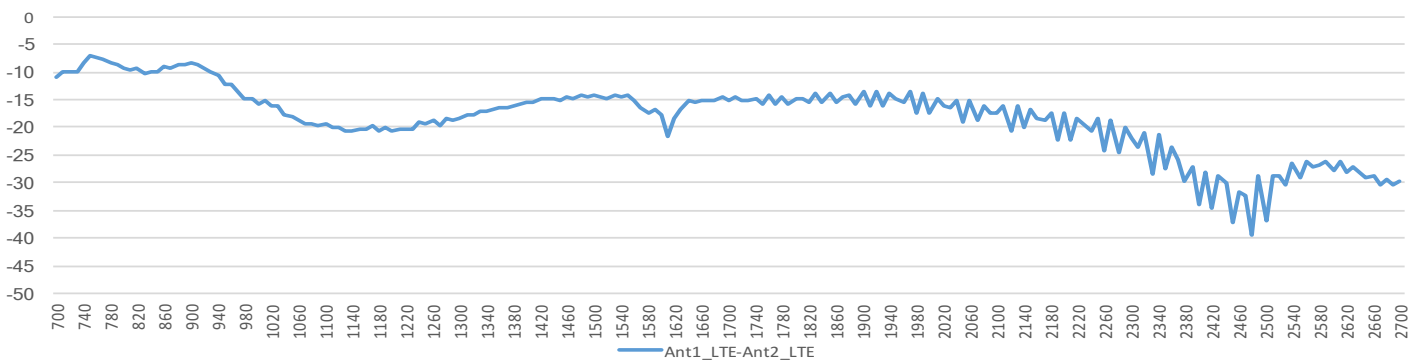
GNSS

Ceramic Patch Antenna Specification	Bandwidth	1561-1602 MHz
	Gain@Zenith	2.5 dBi
	Polarization	R.H.C.P.
	Axial Ratio	3.0 dB Typ.
LNA Specification	Noise Figure	1.2 dB
	Gain	28 dBi
	Voltage	3.3V~5.6V
	Current	9.6±1mA@3.3V

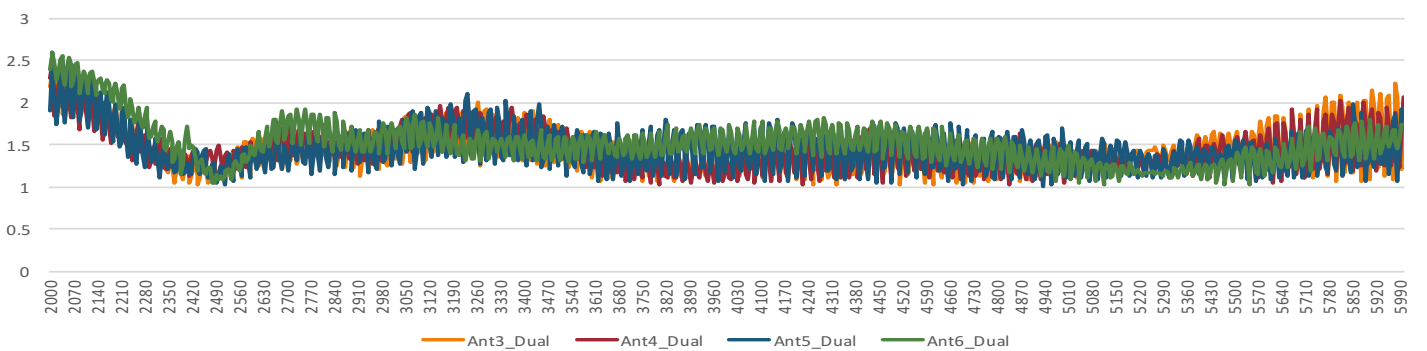
VSWR of LTE Antennas



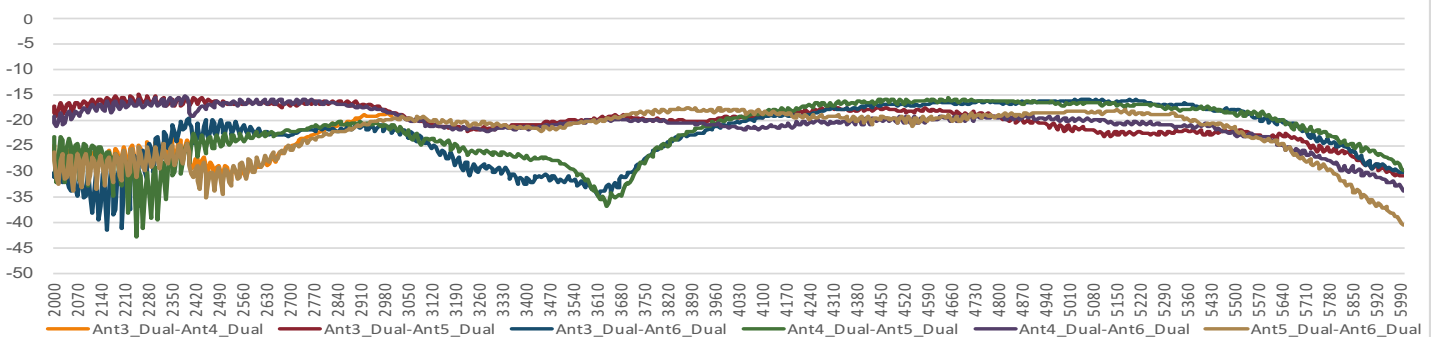
Isolation of LTE Antennas



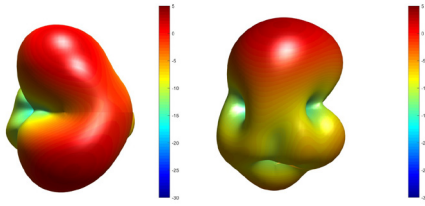
VSWR of Wi-Fi Antennas



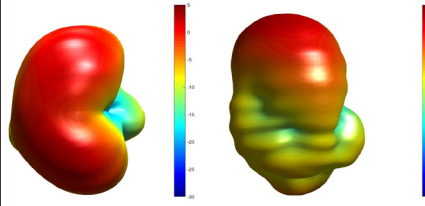
Isolation of Wi-Fi Antennas



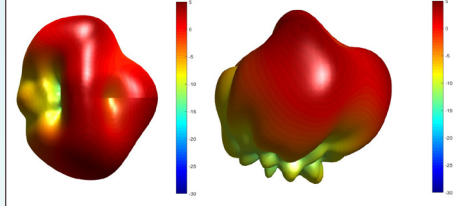
Ant1_LTE at 830MHz



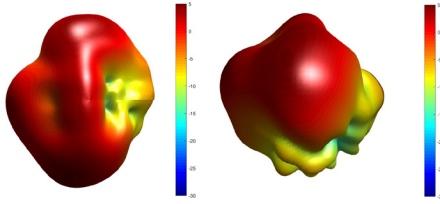
Ant2_LTE at 830MHz



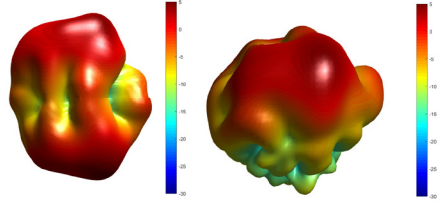
Ant1_LTE at 1960MHz



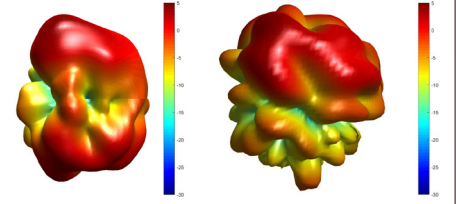
Ant2_LTE at 1960MHz



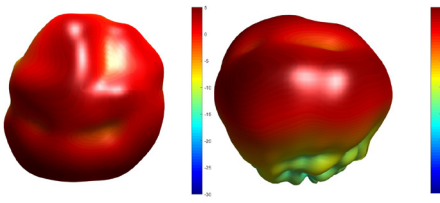
Ant1_LTE at 2600MHz



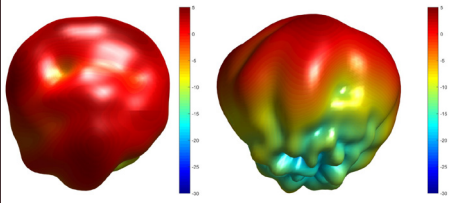
Ant2_LTE at 2600MHz



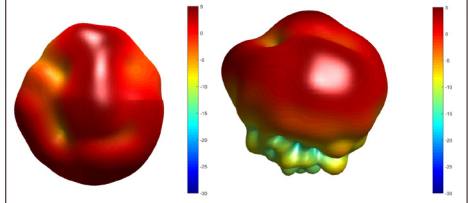
Ant3_Dual at 2.44GHz



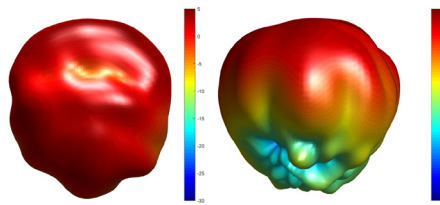
Ant4_Dual at 2.44GHz



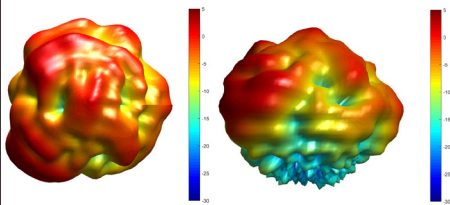
Ant5_Dual at 2.44GHz



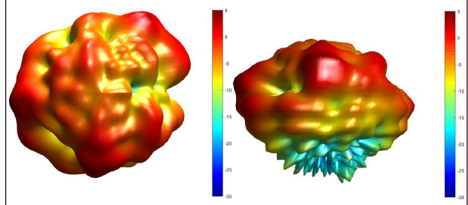
Ant6_Dual at 2.44GHz



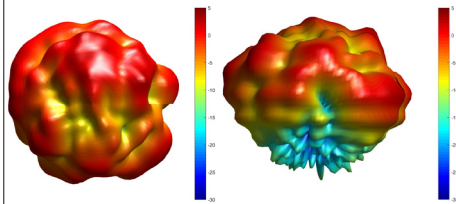
Ant3_Dual at 5.5GHz



Ant4_Dual at 5.5GHz



Ant5_Dual at 5.5GHz



Ant6_Dual at 5.5GHz

