

ULTRAMAX™ MIMO 3-in-1

High Performance External Antenna

ULTRAMAX MIMO 3-in-1 is a full outdoor antenna equipped with three ports, designed specifically to provide high performance connectivity for Fleet and Public Safety vehicles and assets connecting to almost any vehicular router or modem. This antenna is configurable and offers up to two high gain cellular/LTE/MIMO antennas, which include support for LTE Band 14 for FirstNet, and a GNSS antenna inside a single robust and compact housing.

- 2 x Wideband Cellular/LTE Elements (MIMO)
- 1 x GNSS Element
- Three embedded antenna technologies that operate over multiple bands in one housing
- Leading LTE performance while in coexistence with multiple other embedded antenna technologies
- Lower profile and smaller footprint than competing solutions
- High gain provides bigger cellular footprint
- Must be mounted on metal
- Available in black or white
- US Patent 10109918



Optimal MIMO Performance for LTE



Compact and Robust UV Resistant Housing



Full Outdoor Installation Ready



Customizable Cables and Connectors to Connect to Any Modem



Flexible Mounting Options



GNSS



Low loss cable accessories



Fast custom turnaround time

Descriptions/Applications

The ULTRAMAX MIMO antenna builds on the best in class RF performance, leading design features, and extended operational life of our highly successful Fleet and Public Safety Antenna products. Like all our antennas, this product has been designed to be robust to withstand the natural hazards a vehicle faces including vibration, hot, cold, ice, salt, dirt, car washes, and tree branch sweeps. Our antennas typically outlast the life of a vehicle.



Bolt Mount



Adhesive Mount



Magnetic Mount

Standard Configurations

AP-CCG-M-S222-BL-15	MIMO Cell/LTE x 2, & GNSS, Magnetic Mount, SMA on Cell/LTE & GNSS, Black, 15ft coax length
AP-CCG-A-S222-BL-15	MIMO Cell/LTE x 2, & GNSS, Adhesive Mount, SMA on Cell/LTE & GNSS, Black, 15ft coax length
AP-CCG-Q-S222-BL-15	MIMO Cell/LTE x 2, & GNSS, Threaded Bolt Mount, SMA on Cell/LTE & GNSS, Black, 15ft coax length

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

Electrical Data

Frequency Range	Elements 1 & 2	698-960/1700-2700 MHz	
	Element 3	1550~1610 MHz	
Operational Bands	Elements 1 & 2	LTE/Cellular	
	Element 3	GPS L1/GALILEO E1/GLONASS G1/BeiDou B1/QZSS L1	
Peak Gain: Isotropic	Elements 1 & 2	698-960 MHz	4.9 dBi
		1710-2700 MHz	7 dBi
	Element 3	2.50 dBi	28 dB
Isolation	Elements 1 & 2	> 10 dB	
Correlation Co-efficient	Elements 1 & 2	< 0.1	

Environmental Data

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 Data

Dimensions	Height	2.220" (56.4mm)
	Width	3.831" (97.3mm)
	Length	7.000" (178.3mm)
Color	Black (BL) or White (WH)	

Cable Data- Cell/LTE

Type	CFD195 Low Loss
Diameter	0.195" (4.953 mm)
Length	1 feet (0.3 m)
Termination	SMA Male

Cable Data- GNSS

Type	RG-174U
Diameter	0.100" (2.54 mm)
Length	1 feet (0.3 m)
Termination	SMA Male

GNSS Data - Ceramic Patch Antenna Specification

Bandwidth	1561 – 1602 MHz
Gain@Zenith	2.5 dBi
Polarization	R.H.C.P.
Axial Ratio	3.0 dB Typ.

GNSS Data - LNA Specification

Noise Figure	1.2 dB
Gain	28 dBi
Voltage	3.3V~5.6V
Current	9.6±1mA@3.3V