MULTIMAX™ 4G 3-in-1

High Performance External Antenna for Panasonic

A vehiclular antenna, MULTIMAX 4G 3-in-1 is equipped for the CF-20 or any Panasonic notebook or tablet that includes MIMO LTE but does not have a dedicated GPS modem. It has two high gain Cellular/ LTE antennas, including support for FirstNet™ LTE Band 14, and a GNSS antenna. All three antennas connect with the use of a Power Divider that takes the Cellular/LTE and GNSS signals, allowing them to connect to the dual pass through docking station. This provides a GNSS external antenna solution for the GPS that is running through the embedded Aircard.

The MULTIMAX 4G 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. This product's rugged low-profile design provides greater protection against 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

- Three embedded antenna elements that operate over multiple bands in one IP65 rated housing
- 2 x Wideband Cellular LTE elements with multiple carrier switching, including support for FirstNet™ on LTE Band 14
- 1 x GNSS element
- Available in black or white

ADVANTAGES

- High gain provides bigger cellular footprint
- 5 year limited warranty included[1]
- Covered by one or more patents and pending applications[2]

[1]See terms and conditions at https://airgain.com/antenna plus-support/
[2]For a list of the patents covering this product please visit https://airgain.com/product-support/patents/

PART NUMBER(S)

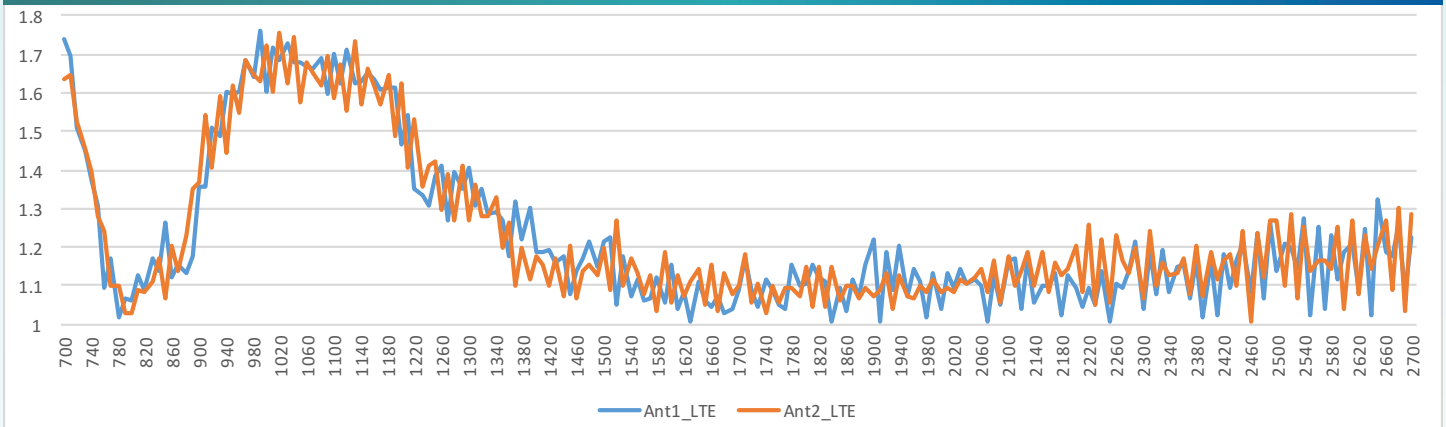
CONFIGURATION	CELLULAR ELEMENTS	GNSS	PART NUMBER	DESCRIPTION
3-in-1	2	1	AP-PAN-MMF-CCGPD-Q-BL-19 Panasonic P/N: AI-3MDCBL19	Cell/LTE x 2 & GNSS, Threaded Bolt Mount, SMA on Cell/LTE & GNSS, Black, 19 ft coax
			AP-PAN-MMF-CCGPD-Q-WH-19 Panasonic P/N: AI-3MDCWH19	Cell/LTE x 2 & GNSS, Threaded Bolt Mount, SMA on Cell/LTE & GNSS, White, 19 ft coax

TECHNICAL SPECIFICATIONS

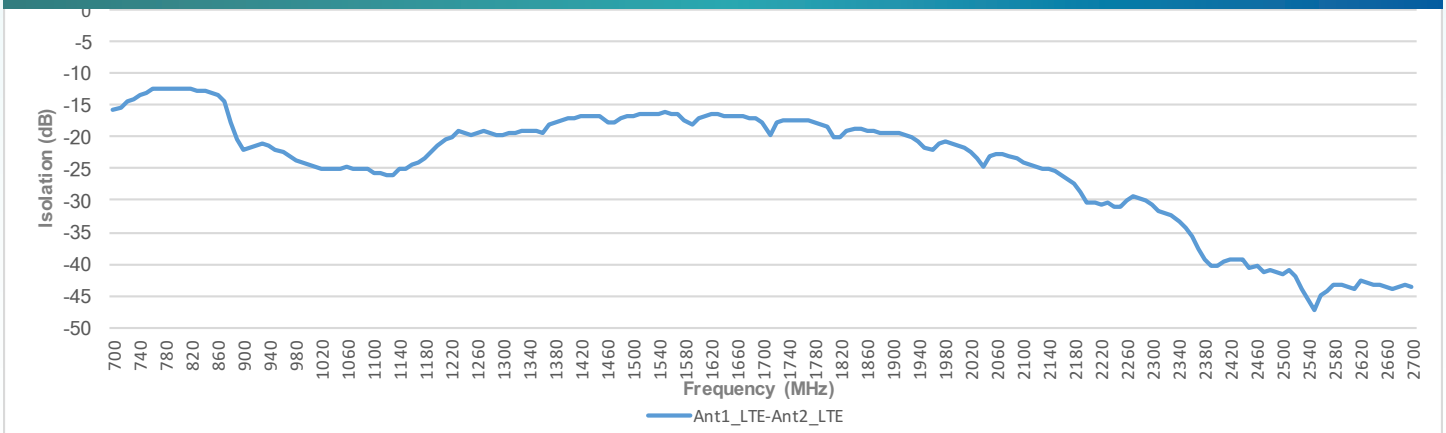
ELECTRICAL		
Frequency Range	Elements 1 & 2	698-960/1700-2700 MHz
	Element 3	1550~1610 MHz
Operational Bands	Elements 1 & 2	LTE/Cellular
	Element 3	GPS L1/GALILEO E1/GLONASS G1/BeiDou B1/QZSS L1
Peak Gain: Isotropic	Elements 1 & 2	698-960 MHz, 3 dBi
		1710-2700 MHz, 6.5 dBi
	Element 3	50 dB, 7dBi; 28 dB, 5 dBi
Isolation	Elements 1 & 2	> 10 dB
Correlation Co-efficient	Elements 1 & 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	
Water Ingress	IP65	
Military Spec	MIL-STD 810 conformance to vibration	
MOUNTING		
Dimensions	Height	2.47” (62.6mm)
	Width	2.44” (62.1mm)
	Length	6.34” (161mm)
Color	Black (BL) or White (WH)	

CABLE		
Cell	Type	CFD195 Low Loss
	Diameter	0.195” (4.953mm)
	Length	1 ft (0.3m)
	Termination	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

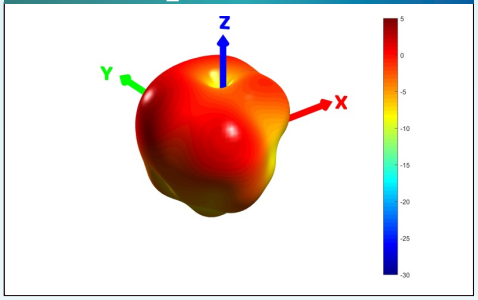
VSWR of LTE Antennas



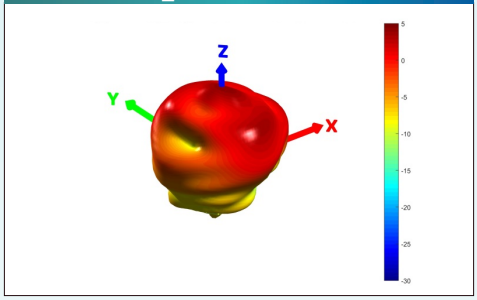
Isolation of LTE Antennas



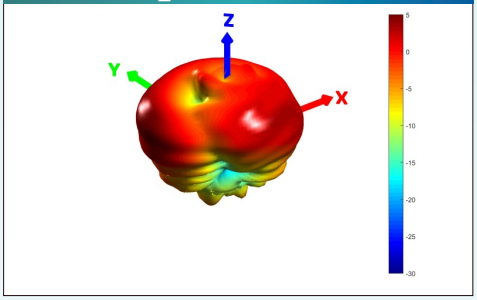
Ant1_LTE at 830MHz



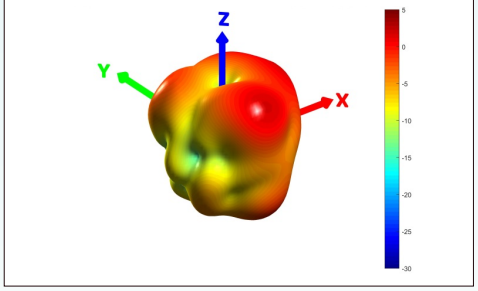
Ant1_LTE at 1960MHz



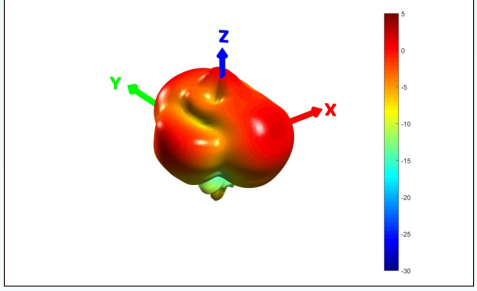
Ant1_LTE at 2600MHz



Ant2_LTE at 830MHz



Ant2_LTE at 1960MHz



Ant2_LTE at 2600MHz