

# MULTIMAX™ FV 2-in-1

Single Cell LTE and GNSS Sharkfin IP67 Antenna  
designed for Panasonic

MULTIMAX FV 2-in-1 is our full outdoor sharkfin antenna designed specifically for any Panasonic rugged notebook or tablet including the CF-33 that has an embedded LTE and a **dedicated GNSS** modem. This antenna offers a high gain cellular/LTE antenna which includes LTE Band 14 support for FirstNet, and a GNSS antenna inside a single robust and compact housing.

- 1 x Wideband Cellular/LTE Elements
- 1 x GNSS Element
- Two 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
- USA factory ensures fast turnaround customizations
- High gain provides bigger cellular footprint
- Must be mounted on metal
- Available in black or white
- US Patent 10109918

## Descriptions/Applications

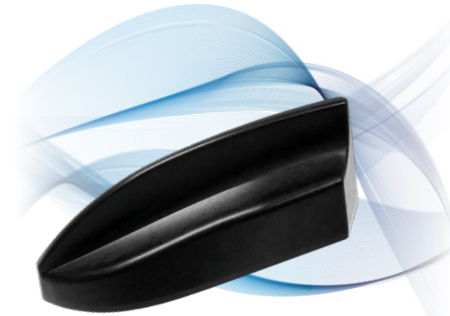
The MULTIMAX FV 2-in-1 antenna builds on the best in class RF performance, leading design features, and extended operational life of our highly successful Fleet and Public Safety Antenna products. This new product line also offers a rugged low-profile design which gives you greater protection against all 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.

## Standard Configurations

**AP-MMF-CG-Q-S11-BL-15**

Cell/LTE & GNSS, Threaded Bolt Mount, TNC on Cell/LTE & GNSS, Black, 15ft coax

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



Full Outdoor  
Installation Ready



Compact and Robust  
UV Resistant Housing



GNSS



Customizable Cables  
and Connectors to  
Connect to Any Modem



Fast custom  
turnaround time



Low loss cable  
accessories



Bolt Mount with  
Adhesive Pad

## Electrical Data

Frequency Range	Element 1	698-960/1700-2700 MHz	
	Element 2	1550~1610 MHz	
Operational Bands	Element 1	LTE/Cellular	
	Element 2	GPS L1/GALILEO E1/GLONASS G1/BeiDou B1/QZSS L1	
Peak Gain: Isotropic	Element 1	698-960 MHz	3 dBi
		1710-2700 MHz	6.5 dBi
	Element 2	30.50 dBi	

## 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
Water Ingress	IP67
Military Spec	MIL-STD 810 conformance to vibration

## Mounting Data

Dimensions	Height	2.47" (62.6mm)
	Width	2.44" (62.1mm)
	Length	6.34" (161mm)
Color	Black (BL) or White (WH)	

## Cable Data- Cell/LTE

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

## Cable Data- GNSS

Type	RG-174U
Diameter	0.100" (2.54 mm)
Length	1 foot (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