



Featured Product:

P A N O R A M A  *A N T E N N A S*

Combination Antenna Solutions
Custom Kits for Customer Specific Builds

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4x4 MiMo 4G/5G

Reef Sharkee® Antenna

SHK[X]4-7-49[X]

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Sleek sharkfin design

4x4 MiMo 698-960/1427-4900MHz

Up to 4x4 MiMo WiFi 6e (optional)

GPS/GNSS L1/L5 or L1 only 30dB / 26dB LNA (optional)

Meets IP69K

The SHK[X]4-7-49[X] MiMo Reef Sharkee® antenna is designed to be a discrete one size fits all solution for mobile applications. The robust low profile housing contains 4x 4G LTE / 5G NR elements covering 698-960/1427-4900MHz. Versions of the product also contain up to 4x optional WiFi elements supporting WiFi 6e 2.4/5.150-7.125GHz and optional L1 only or L1/L5 GPS/GNSS module.

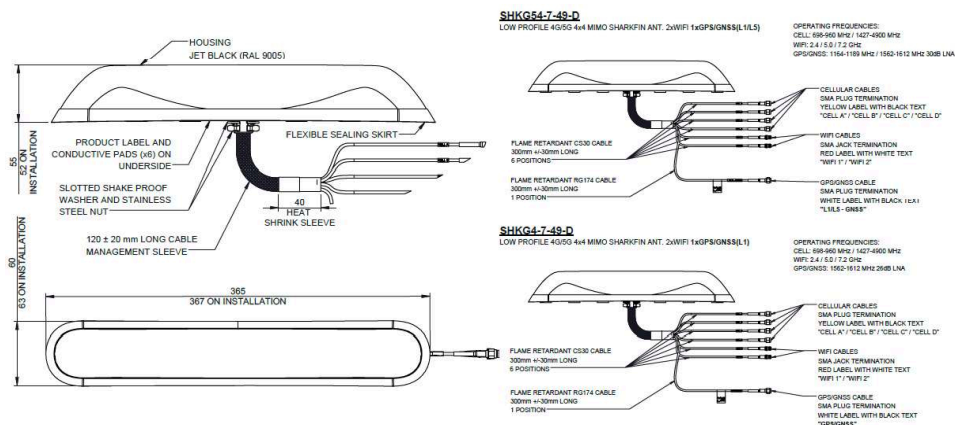
The sleek sharkfin design has low visual impact and at only 52mm (2") high the antenna can comply with certain state laws regarding light-bar obscuration on police vehicles. .

The product is supplied with low loss flame retardant pigtail cables approved to UN ECE R118 and a variety of extension cables are available for different applications.

The SHK[X]4-7-49[X] can be installed on conductive or non-conductive panels.

Technical Drawing

SHK[X]4-7-49[X] Shown



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Multifunction MiMo Antenna

GPSD

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GPSD

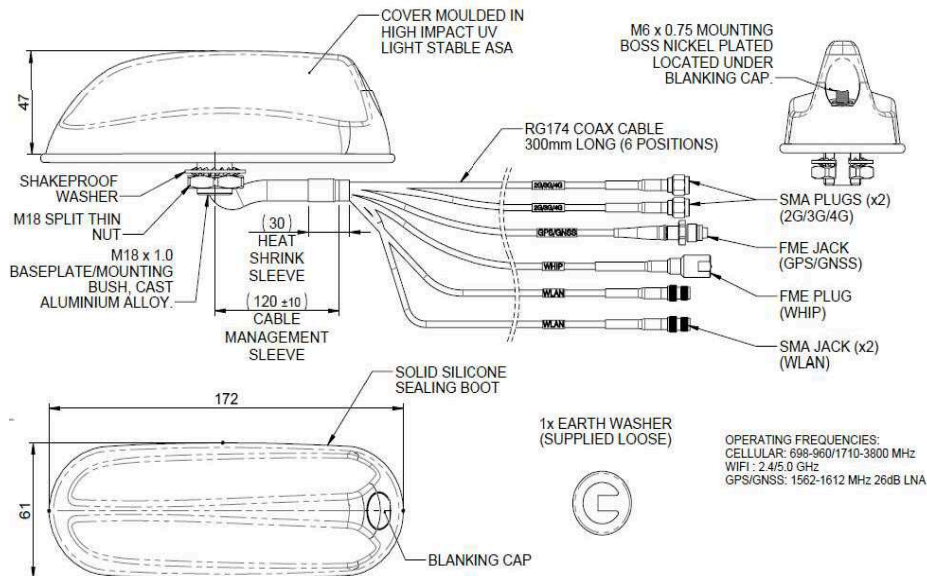
- OEM shark fin styling
- GPS/GNSS, MiMo 4G/3G/2G & Optional MiMo 2.4/4.9-6GHz
- Support for VHF or UHF external antenna

The GPSD has a compact OEM style shark fin housing that contains 2x2 MiMo antenna function for 4G/3G/2G and an active antenna for GPS/GLONASS/Galileo/Beidou with 26dB gain LNA. In addition, there is an integral stud mount for an external antenna whip that can support a range of VHF, UHF or 700/800MHz antennas. A blanking cover is supplied for when an external whip is not required. A further version of GPSD is available that adds 2x2 MiMo antenna function for 2.4/5.8GHz WIFI.

The GPSD shark fin style design provides multiple antenna functions while remaining discreet and is suitable for public safety (overt/covert), industrial and transport applications where a cost effective, efficient and robust antenna is essential. Requiring only a single hole mounting, the GPSD reduces vehicle damage, installation time & cost and visual impact whilst protecting a vehicle's resale value.

Technical Drawing

GPSD-7-27-24-58 shown



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8x8 MiMo 4G/5G Dome Combination Antenna Range

Megalodon 4G/5G Antenna

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- Low Profile 2x 4x4 MiMo 4G/5G
- Up to 8x8 MiMo Dual Band WiFi 6e / 7
- Up to 2 GPS/GNSS L1 or L1/L5 bands
- Meets IK10 and IP69K



The industry leading Megalodon range has been developed to provide 2x 4x4 MiMo 4G/5G antenna systems covering 617-960/1427-6000MHz within a robust low profile package. Covering global cellular bands for future-proof performance, the antenna provides effective functionality for 2x 4G Cat 18/20 and/or 5G modems. This can be combined with a number of other functions including single/dual band GPS/GNSS and up to 8x8 MiMo WiFi elements covering 2.4-7.2GHz (WiFi 6e/7).

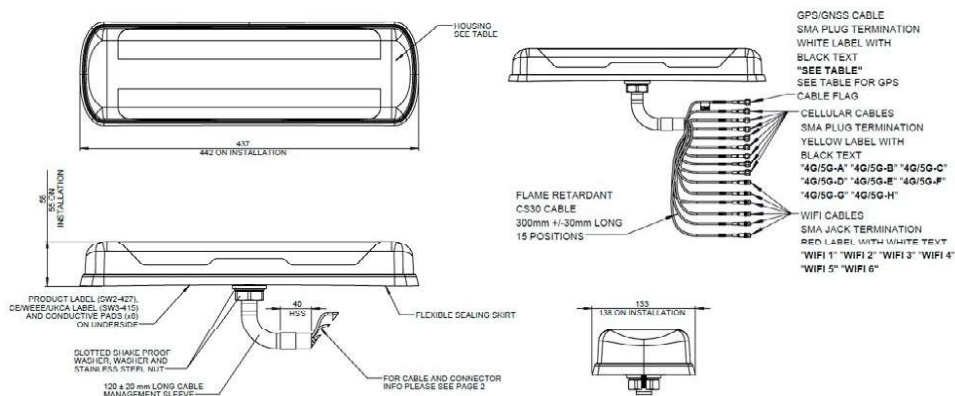
The antenna is designed to be panel mounted and can be fitted on a conductive or non-conductive panel. Supplied with integrated flame retardant low-loss CS30 cables (Compliant to UN ECE R118) and a halogen free, flame retardant radome, the antenna is suitable for many environments and applications, including public safety and transportation.

The LGM variants have an integrated GPS/GNSS module supporting either L1 only or L1/L5 frequencies. This GPS module features advanced filtering for LTE B13/14 designed to minimise potential in band interference.

The antenna is available with a black or white radome which meets IK10 for vandal resistance and IP69K for Ingress protection.

Technical Drawing

LGMHM8-6-60 Shown



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Multi-function Sharkfin Antenna *PANORAMA ANTENNAS*

GPSB5G / Sharkee™

- OEM Sharkfin styling
- GPS/GNSS, 4G/5G and dual band WiFi in one housing
- Active GPS/GNSS antenna 26dB LNA
- Optional VHF or UHF Whip



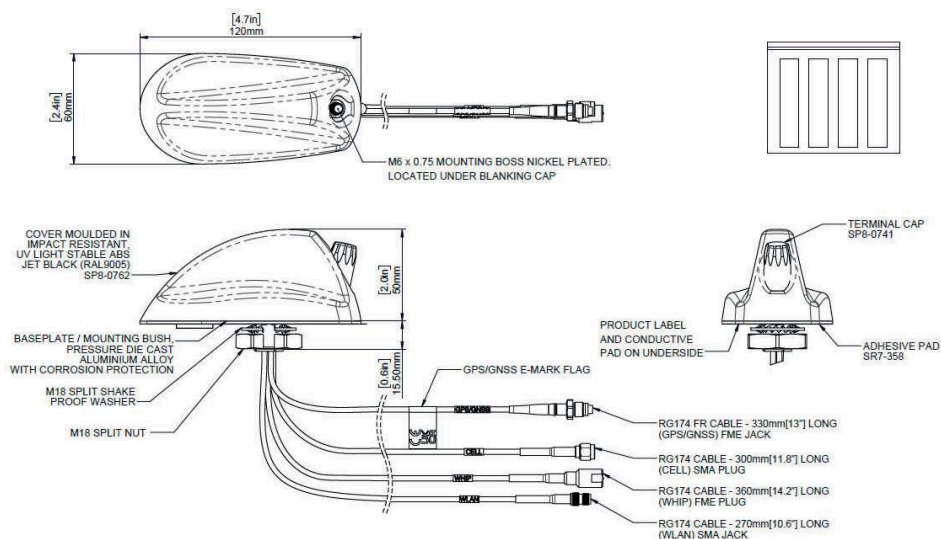
The GPSB5G Sharkee™ provides antenna coverage for multiple technologies within one antenna housing. The GPSB range is trusted by public safety, utilities and transportation companies all over the world and the GPSB5G upgrades the range with an improved GPS/GNSS module with advanced filtering and 4G/5G coverage.

The GPSB5G offers three internal antenna systems, GPS/GNSS, 4G/5G cellular (698-960/1710-3800MHz), dual band WiFi (2.4/5.0GHz) and an optional whip mounting for VHF or UHF whips.

Requiring only a single hole fixing, the GPSB5G reduces vehicle damage, cost of installation and visual impact whilst protecting vehicle resale value.

The GPSB5G is suitable for the public safety (covert and discreet), industrial and transportation sectors, where a cost effective, efficient and robust antenna is essential to the application. Fitted with flame retardant pigtail cables compliant to UNECE R118 the GPSB5G is suitable for fitment to M3 category vehicles.

Technical Drawing



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Internal MiMo Multi-Function Antenna

BAT[G]M-7-60[-24-58]

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Internal MiMo 4G/5G Antenna with optional GPS/GNSS & WiFi

- Mount on/under dashboard or other non-metallic surface
- 2x2 MiMo 4G/5G function
- Optional SiSo or 2x2 MiMo WiFi
- Optional GPS/GNSS 26dB gain LNA
- Suitable for M2 & M3 Category Vehicles

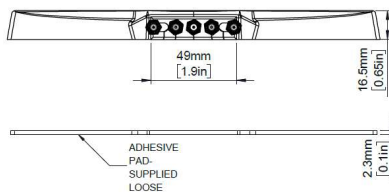
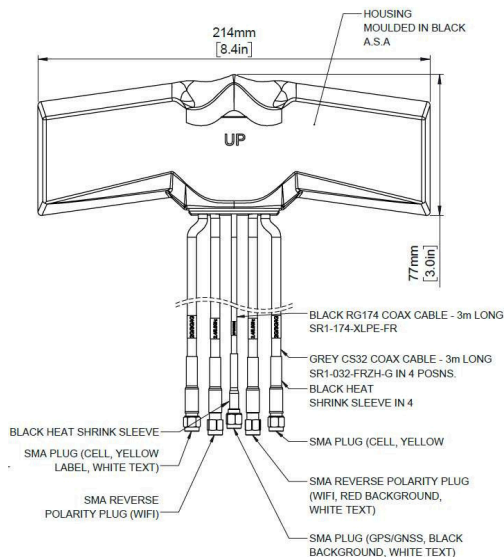
The Panorama BAT[X]M-7-60 product line is range of internal discrete/covert 'all in one' antennas with 2x2 MiMo 4G / 5G (including Band 71), with option of GPS/GNSS, and dual band SiSo or 2x2 MiMo WiFi 2.4/5.0-6GHz.

The 4G/5G antennas cover 617-960/1427-6000MHz and provide isolation and low correlation coefficient values for effective MiMo function. The optional GPS/GNSS antenna features a 26dB gain LNA with advanced filtering.

The antenna is designed to be mounted on or under a vehicle dashboard but can be mounted on any non-conductive surface. The BATGM is supplied with low loss cables which are flame retardant and meet the requirements of UN ECE 118 and EN45545-2.

Technical Drawing

BATGM-7-60-24-58 Shown



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Private Mobile Radio

Covert Vehicle Dipole Antenna

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Dipole construction

Covert bumper mounting

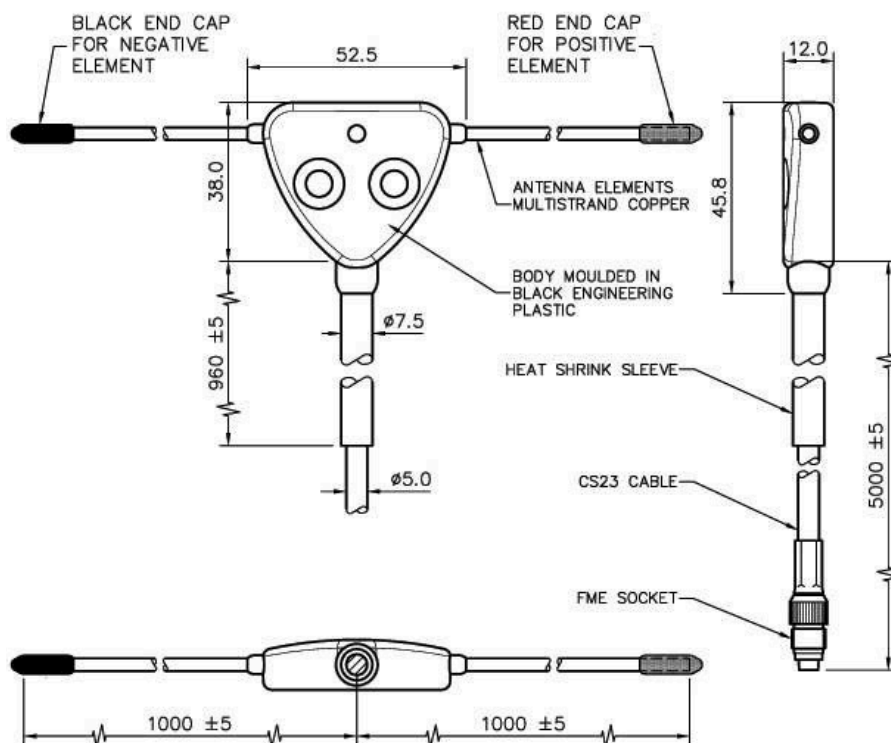
Flexible wire elements for easy positioning

The covert vehicle dipole antenna is specifically designed for installations where the presence of an antenna must be undetectable.

This specialist antenna can be tuned across a range of frequencies from VHF and UHF when fitted simply by cutting down the radiating elements. Tuning on the vehicle ensures that a good VSWR match can be achieved in the installed location [with a bandwidth of approximately 8% of centre frequency.]

Technical Drawing

Covert Vehicle Dipole Antenna



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TETRA UHF

Bumper Mount Antenna
BMP1-[UHF]

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BMP1-[UHF]

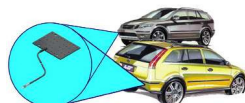
- Covert bumper mounted antenna
- Fully overmoulded construction
- Adhesive fitment inside bumper

The Panorama Bumper Mount Antenna is designed for covert operations and other applications which require a vehicle antenna that is effectively invisible.

Mounted in the vehicle's bumper, installation requires no drilling and is invisible from the outside of the car.

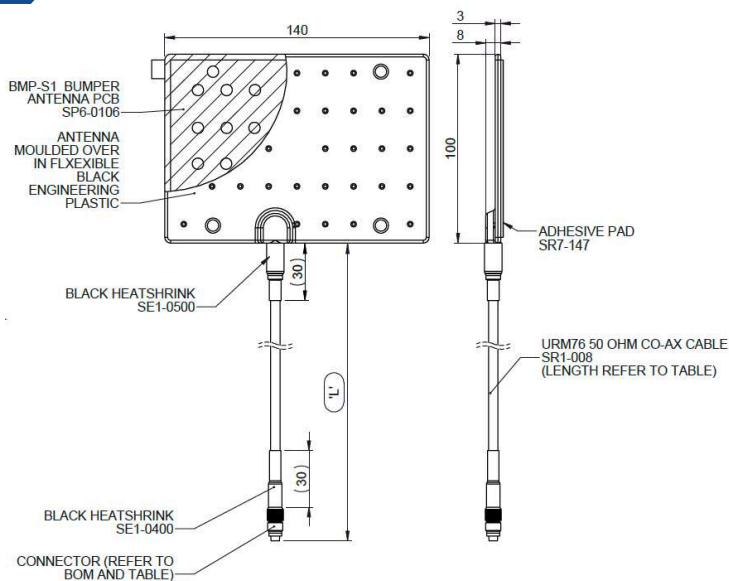
The antenna and cable joint are fully overmoulded with tough flexible TPU plastic for durability and environmental resistance and the cable is fitted with FME Jack (F) or BNC (m). Other connector types also available.

Note that two BMP antennas can be used with a power divider to provide optimal coverage around the vehicle.



Typical antenna positioning

Technical Drawing



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Internal Glass Mount Antenna

EF-[UHF] Series

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EF-[UHF] Series

- Covert application
- No-hole adhesive installation
- Can be removed without a trace

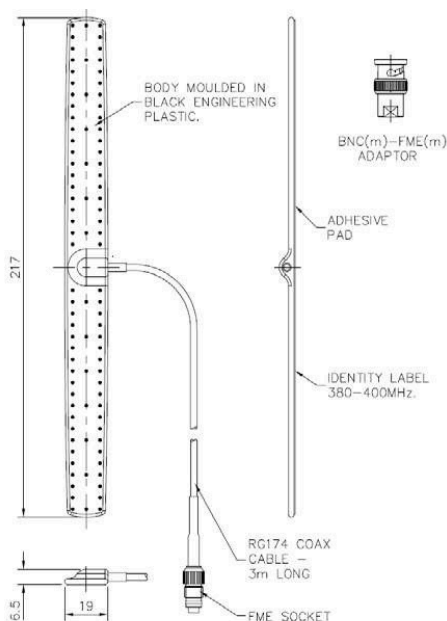
The EF series UHF internal glass mounting antenna provides a low visibility antenna solution for discreet and covert installations or simply where a simple adhesive fitment is desired.

The antenna tuning is optimised to match a range of different automotive glass types to provide consistent performance in a wide range of vehicles and mounting positions.

With a flexible form factor, the antenna will adapt to the curvature of the glass and is easy to install with the pre-fitted automotive grade adhesive pad. The antenna is completely over-moulded for durability and sealed connection of the supplied high-quality RG174 coaxial cable, which allows the fitment of a wide range of connectors.

Technical Drawing

EF-S1-3BL Shown



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Tetra UHF

Dual Bumper Mount Antenna with Power Divider
BMP2-[X]-DPD-[X]

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BMP2-[X]-DPD-[X]

- Covert application
- Optimise bumper antenna performance
- Improved coverage around vehicle

Panorama BMP bumper antennas are a fully covert solution for vehicle installation.

For optimum performance two bumper antennas can be installed, one at the front of the vehicle and one at the rear, helping to create an omni-directional pattern around the vehicle and enabling better network coverage.

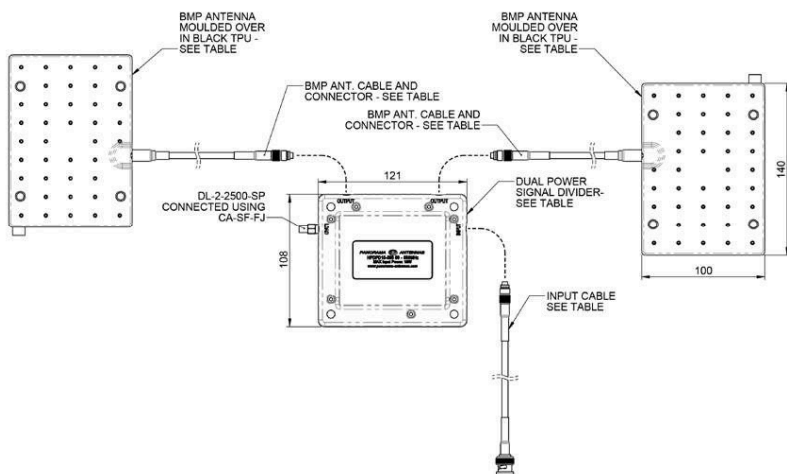
The BMP1 antennas included in the kit can be tuned to a variety of UHF frequencies and supplied with various cable lengths and connectors.

The high performance HPDPD power divider supplied as part of the kit has low loss characteristics and a low profile for easy installation.



Typical antenna positioning

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50-210MHz & 270-1000MHz

- Connect a dual band antenna to two radios
- Connect a dual band radio with single feed to two single band antennas
- Effective port to port isolation

The DPX-210-270 provides the possibility to use a single dual or multiband antenna with two radios. This conserves valuable vehicle real estate and saves on antenna installation costs.

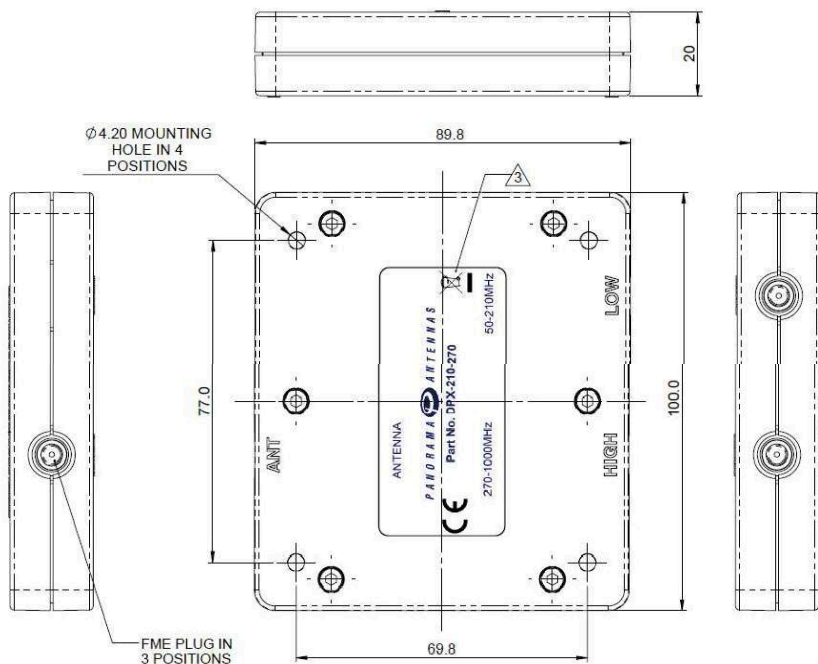
Alternatively, it allows the connection of a dual band radio, with a single connector, to two separate single band antennas.

This diplexer has low insertion loss and excellent port to port isolation to maintain good radio performance on each band.

The DPX-210-270 diplexer has a compact, durable housing, with integrated fme plug connectors, making it possible to locate in a vehicle headliner, adjacent to the antenna, if required.

Technical Drawing

DPX-210-270 Shown



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Common RF Coax Connectors - A Visual Guide

Type N

Plug "Male"



Jack "Female"



Reverse Polarity Plug



Reverse Polarity Jack



TNC

Plug "Male"



Jack "Female"



Reverse Polarity Plug



Reverse Polarity Jack



SMA

Plug "Male"



Jack "Female"



Reverse Polarity Plug



Reverse Polarity Jack



Note: Most Access Points have either Reverse Polarity SMA jacks or Reverse Polarity TNC jacks.



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