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FP20 auto & FP40 auto

Assembly and Installation Instructions

MULTI-PORT VEHICLE ANTENNAS

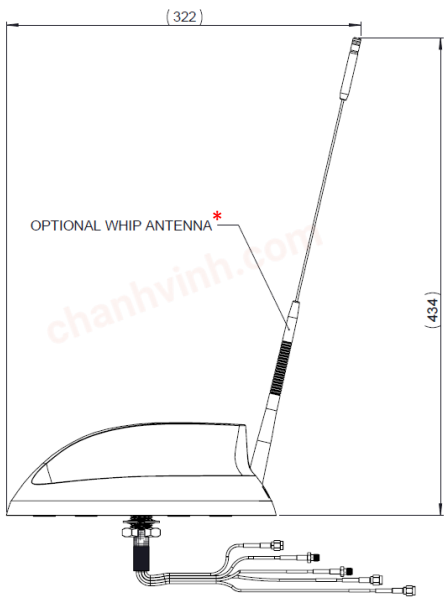
These antennas are designed for intelligent transportation and public safety applications for 5G LTE communication combining devices with two-way radio capabilities.

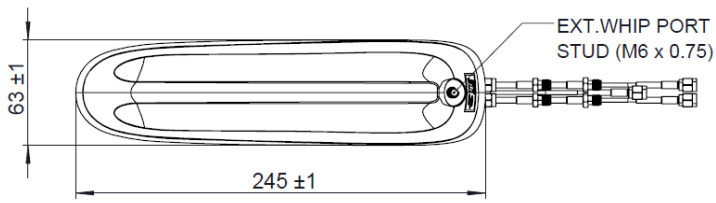
A single housing with options for MIMO 4G/5G LTE cellular, MIMO Wi-Fi 6E and GNSS. Plus, an external whip port for VHF, UHF, 7/800 MHz or tri-band (VHF, UHF, 7/800MHz) whip antennas.

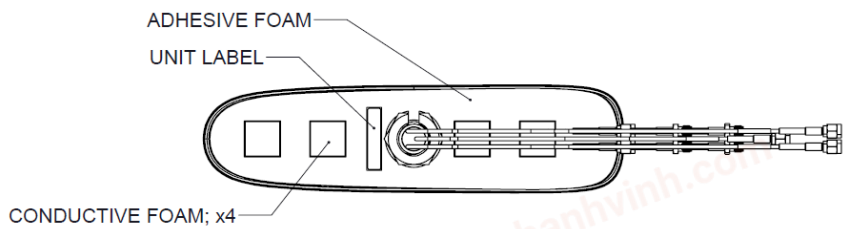
SPECIFICATIONS	
Operating Frequency (MHz)*	LTE: 617-698, 698-960, 1427-1511, 1690-4000, 4000-7200 WI-FI: 2400-2500, 4900-6000 GNSS: 1561.098±2.046, 1559-1610, 1166-1186, 1602±5 External Whip: VHF, UHF, 7/800 MHz and Tri-Band (VHF, UHF, 7/800MHz) Options
Nominal Impedance (Ohms)	50
Number of Ports	6 to 9 port options
Dimensions – L x W x H – mm (in.)	No External Whip: 245 X 63 X 84 (9.6 X 2.5 X 3.3) With External Whip: Height varies by whip model
Cable Length/Connector	- Staggered exposed pigtail cables (200mm to 320mm) with SMA connectors - 5M extension cable terminated with a variety of connector options
Antenna Radome Material	PC, UL94-V0
Antenna Baseplate Material	Aluminum
Antenna Color	Black
Operating Temp. (°C)	-40 to +85

* Subject to antenna model

MOUNTING & OUTLINE







* Some FP20 auto/FP40 auto antennas are available without a whip port

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SAFETY

The antennas and all associated equipment should be installed in accordance with all applicable local and national electrical code guidelines to ensure safe operation.

LOCATION

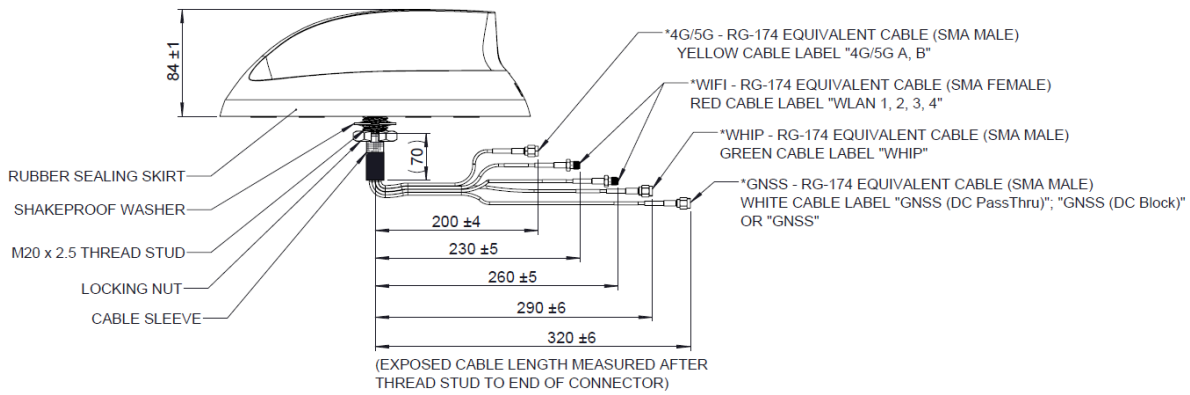
The antenna should be mounted on the desired location before connecting the cable. This is to ensure that the cable is not twisted or damage during the mounting of the antenna.

APPLICATION

The antenna provides an excellent solution for Public Safety, Transportation and Aftermarket Fleet applications with an integration of a wide range of frequencies within one aerodynamic housing. The maximum port configurations allow for MIMO operations over 4G/5G frequencies, MIMO operations over both Low/High Band Wi-Fi, GNSS (L1 + L5) global navigational services and 1x external Tri-band whip covering either VHF, UHF, 7/800MHz or a dedicated single band whip antennas for a combination of VHF, UHF and 7/800 MHz.

MOUNTING

1. The mounting area should be clean of any debris, clear from obstructions and as flat as possible.
2. Punch or drill a 21 mm in the roof of the vehicle noting that a 300 mm clearance radius around the antenna is recommended.
3. The recommended orientation is facing the front of the vehicle with cables facing the rear: see illustration below.
4. Feed the cables from the bottom of the antenna through the topside of the 21 mm hole. Peel the adhesive covering on the bottom side of the antenna's gasket. Place the threads of the antenna through the hole so that the gasket of the antenna is flat on the vehicle surface. Slide the lock-nut and washer around the 5 cables and finger-tighten to the stud of the antenna. Tighten the nut with a wrench using 10 Nm of torque.
5. Use a short service loop (slack) with tie-downs to secure the antenna cables such that any force or movement will not be transmitted to the antenna connectors or the apparatus. Minimum bending radius for the cable exiting the bottom of the antenna is 10 mm.



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