

Installation Instructions



Raptor III Series

7-in-1 Permanent Mount Combination Antenna

A Introduction

The Taoglas Raptor III is an external combination antenna designed for mounting on the roof of a vehicle. The Raptor III can accommodate a combination of up to 7 antennas in one sleek housing. One 22mm(0.86") hole is required when installing this antenna. The cables are fed through this hole and secure the antenna to the surface with nut and washer.

The Raptor III is IP67 waterproof rated and includes a rubber base to provide a seal against water ingress.



Electrical Safety

The Raptor III MA1270 contains an active GPS/GNSS antenna.
Rated voltage: 3-5VDC Rated current: 24mA maximum

The supply to this device must be provided with over-current protection of 1A maximum.

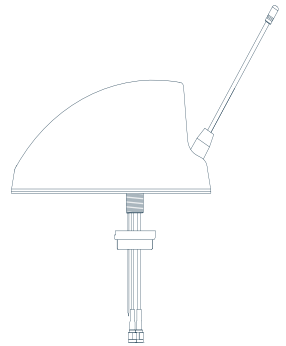
Power consumption@1.8V (mA) 4.5 mA

Power consumption@3.0V (mA) 10 mA

Power consumption@5.5V (mA) 24 mA

B Mounting & Location

The Raptor III can be mounted on any surface, without the need for a ground plane. When mounting on a vehicle roof panel ensure to mount on a flat surface. When mounting the Raptor III, it should be placed as far as possible away from other roof-mounted features such as the aircon unit, light bar etc.



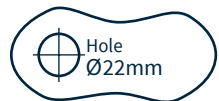
Sealing

In order to ensure that the installation is sealed against the mounting surface care must be taken regarding curvature of the mounting panel. It is highly recommended to install the antenna on a clean, flat and level surface. After installation the compression of the rubber boot against the mounting panel should be checked and a small bead of neutral cure silicone sealant can be applied around the periphery of the base of the antenna if required.

Mount on a flat surface

C Mounting Hole

When preparing to drill the hole, mask the area around the hole position to protect the surface. Drill a pilot hole through the panel and increase the hole size to 22mm(0.86") diameter. Ensure the drill bit does not contact the headliner. Deburr and clean the area around the hole carefully removing all waste. Remove paint and primer from under panel surface to ensure adequate earth contact by washer and nut. Apply petroleum jelly or paint around cut edge of the hole to prevent corrosion



D Installation of the Antenna

Feed the cables and thread through the hole. Position the antenna over the hole and press down onto the panel with pressure. A plastic washer with a slot for cable routing is added first followed by a split nut(M20). These provide options for vertical or horizontal cable routing. Secure the antenna in place by attaching the nut from the underside of the panel, only a final tighten by spanner is required.

Recommended Mounting Torque: 5N-m

E Routing and Connection of the Cables

The Cables supplied are RG-174 for the GNSS, AM/FM and TETRA feeds and 1.5SDS for the 5G/4G and Wi-Fi MIMO feeds. A power cable, colored red, is also supplied for powering the AM/FM. The heatshrink will denote which cable is which for ease of installation. Connect each individual connector to the correct port of the device, if any cable is unused please fit a 50Ω terminator to the individual connection.

G Notices



Caution

To comply with FCC RF Exposure requirements in section 1.1310 of the FCC Rules, antennas used with this device must be installed to provide a separation distance of at least 20 cm from all persons to satisfy RF exposure compliance.



Warning

Do not Operate the transmitter when someone is within 20 cm of the antenna.
Do not operate the equipment in an explosive atmosphere.



European Waste Electronic Equipment Directive 2002/96/EC

Please ensure that your old Waste Electricals and Electronics are recycled do not throw them away into standard waste.



Directive 2014/53/EU Radio Equipment Directive (RED)

Harmonised Standards and References:

EN 301 489-1 (V2.2.1): ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements. Referencing CENELEC EN 55032 Class B.

Waiver: This document represents information compiled by Taoglas to the best of our current knowledge. This is not intended to be used as a representation or warranty of fitness of the products described for any particular purpose. This document details guidelines for general information purposes only. When planning installations, always seek specialist advice and ensure that the products are always installed by a properly qualified installer in accordance with applicable regional laws and regulations.

