

ANT-191-XXX

Quad-System L1 GNSS Through Hole Antenna



Applications

- Navigation
- Automatic Vehicle Location (AVL)
- Autonomous Vehicles
- Mobile Robots
- Drones
- Boats



Product Features

- Low Profile Permanent Mount GNSS Puck Antenna
- Supports Worldwide GNSS Bands:
 - GPS L1
 - GLONASS L1/G1 & L1OC
 - Galileo E1
 - BeiDou B1c
- SMA Male Connector
- Integrated 27 dB Low Noise Amplifier (LNA)
- Small & Compact – 2.1 x 0.87 in
- Weatherproof – IP67 Rated
- TAA Compliant – Made in Taiwan

Ordering Information

Part No.	Description
ANT-191-003	Screw Mount GNSS Antenna R/A SMA Male on 3.3 ft Coax
ANT-191-007	Screw Mount GNSS Antenna SMA Male on 6.6 ft Coax

General Description

Proxicast's low-profile active/passive multi-constellation single-band (L1/E1/B1) GNSS screw-mount antenna is designed for use in fleet management, automatic vehicle location (AVL), position tracking for autonomous farm equipment, robots and drones, precision timing, mobile video and recreational navigation applications that require peak gain in a compact, vandal resistant form factor.

The antenna receives global navigation satellite signals across multiple international constellations. This antenna is ideally suited for vehicular GNSS-enabled modems/routers/receivers using bands:

- GPS L1 (US)
- GLONASS L1/G1 & L1OC (Russia)
- Galileo E1 (Europe)
- BeiDou B1c (China)

The antenna can be used with passive or active GNSS equipment via its integrated 27 dB low noise amplifier (LNA) which is compatible with 3~5 VDC receivers.

The antenna permanently mounts via a 1/2 in (12 mm) hole with internal nut. Low-loss RG174 coax is fed through center mounting post and pre-terminated with an SMA Male connector. A rubber disk on the underside creates an IP67 water-tight seal. This vandal-resistant antenna is not removable from outside and there is no exposed coax cable once installed.

This antenna's color, coax lead length and connector type can be customized – minimum order quantities apply.

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Operation of this device outside the parameter ranges given below may cause permanent damage.

Electrical Specifications

Parameter	Rating
Frequency Range	1560 – 1610 MHz
Center Frequencies	1575.42 ± 1.023 MHz 1568 - 1578 / 1596 - 1606 MHz
Supported GNSS Bands	GPS L1 GLONASS L1/G1 & L1OC Galileo E1 BeiDou B1c
LNA Gain	27 dB Typical
Passive Gain	90° : 2.0 dBi Min. 20° : -5.0 dBi Min.
Minimum Ground Plane	2.75 x 2.75 inches (70 mm x 70 mm)
Axial Ratio	3 dB (max @ 90°)
VSWR (max)	≤ 2.0:1
Impedance	50 Ohm
Polarization	RHCP
Noise Figure	1.5 dB Max. (+25°C ± 5°C)
LNA Supply Voltage	3 - 5 VDC
Current Consumption	At 3.0 V Typical: 13mA - Max: 16mA At 5.0 V Typical: 18mA - Max: 22mA
Ex-Band Attenuation	for = 1575.42/1602.00 MHz for ± 20 MHz 7dB MIN for ± 30 MHz 12dB MIN for ± 50 MHz 20dB MIN for ± 100 MHz 30dB MIN

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Mechanical Specifications

Parameter	Rating
Connector Type	SMA Male (plug) – Right Angle (-003) or Straight (-007)
Coax Cable	RG174 low-loss coax – 3.3 ft (-003) or 6.6 ft (-007)
Materials	ABS / Brass / Steel / Copper / Rubber / RoHS compliant
Dimensions	2.1 x 0.87 in (52.5 x 22 mm) when mounted
Mounting Post	Diameter: 0.47 in (12 mm) Length: 0.79 in (20 mm) Nut: M12 x 1 Fine Pitch
Weight (excluding cable)	3 oz (85 g)
Antenna Color	Black
Operating & Storage Conditions	Temperature: -40°F to 194°F (-40°C to +90°C) Humidity: 10 to 95% RH
Environmental Rating	IP67 (waterproof)

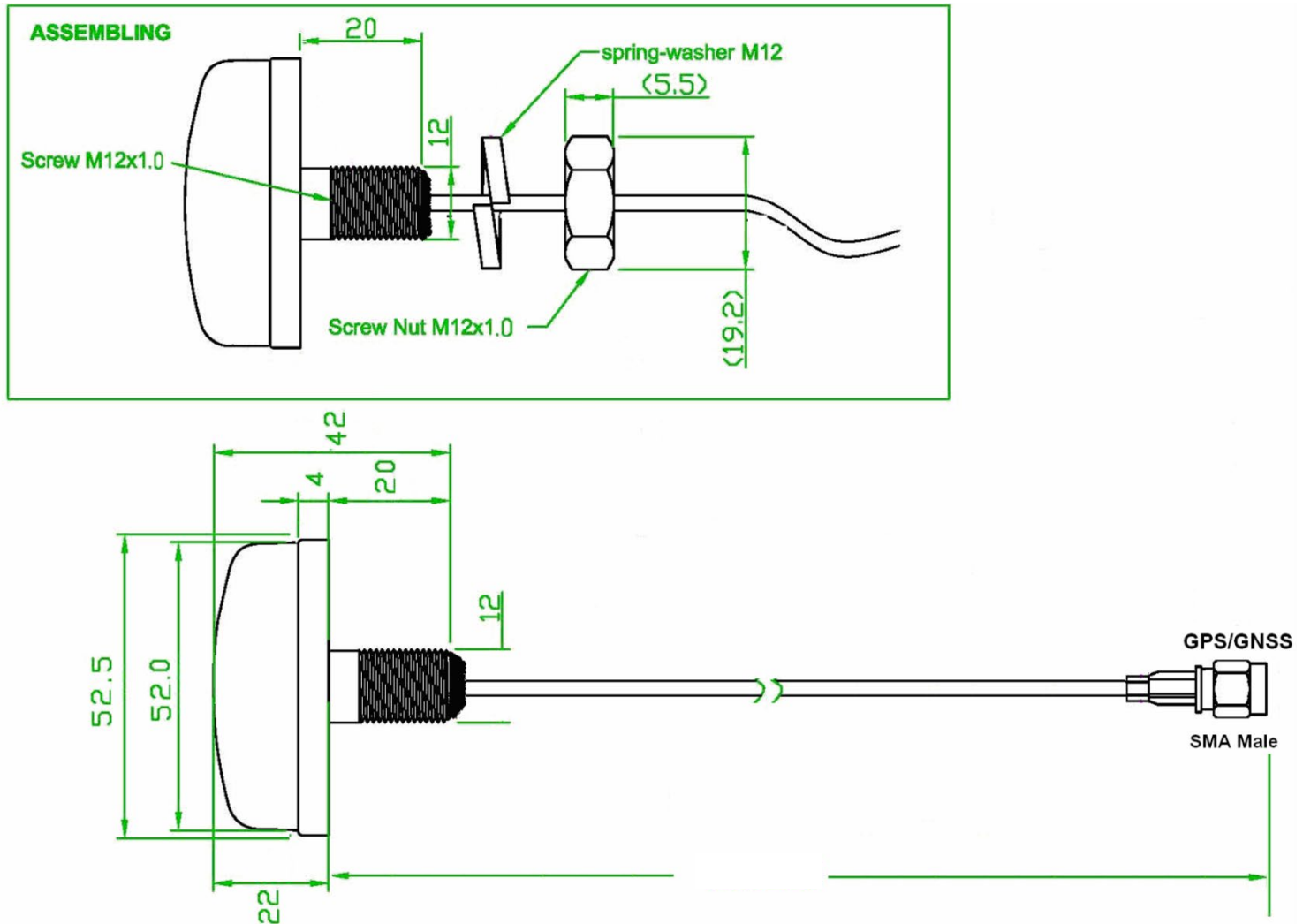
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Mechanical Dimensions

Dimensions in millimeters



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Product Images



Installation Instructions

- Drill a 0.5" (12 mm) hole in flat horizontal metal surface
- Remove mounting nut & washer and feed coax cables through hole
- Press antenna into hole and tighten nut & washer from underneath
- Optionally apply a thin bead of silicone caulk around the antenna rim

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Contact Information

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