

# Bullet™ GG Multi-GNSS Antenna

## Multi-Constellation

The Bullet™ GG antenna provides a perfect solution for manufacturers who need a fixed-site, rooftop multi-GNSS antenna. The Bullet GG supports GPS and GLONASS constellations. The antenna is also a high-quality solution for adding GNSS RF signals for marine GNSS navigation systems.

## Put It Anywhere

The antenna is housed in weatherproof packaging designed to withstand exposure to shock, excessive vibration, extreme temperatures, rain, snow and sunlight.

The dome is all plastic, and the threaded socket in the base of the antenna. The socket accepts either a 1"-14" straight thread (typical marine antenna mount) or a 3/4" pipe thread.

The F-type or TNC antenna connector is located inside the threaded socket, which allows the antenna cable to be routed inside a mounting pole and protects the cable connection for added reliability.

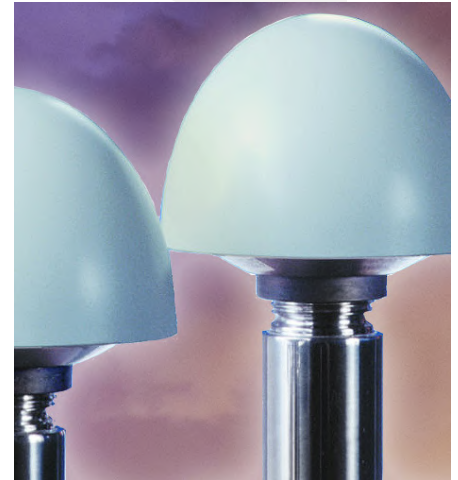
## Strong Performance

The Bullet GG antenna is an active GPS & GLONASS antenna with 32dB preamp (5V DC), 30dB preamp (3.3 VDC). The high-gain preamp allows the Bullet GG antenna to be used with up to 75 feet of RG-58 or RG-59 cable. The Bullet GG filtering improves impunity to other RF signals for reliable performance in hostile RF jamming environments.

## Proven Reliability

For over 20 years, Protempis has sold GPS antennas renowned for their survivability in tough environments. The Bullet GG antenna is the fifth generation of the proven Bullet antenna family and offers all the reliability and performance benefits that are required for GNSS installations.

In unforgiving environments, an antenna failure could be disastrous. Don't risk it. select a proven GNSS antenna – the Protempis Bullet GG antenna



## Key Features

- GPS & GLONASS
- Extended temperature range (-40°C / +90°C)
- Weatherproof housing
- Filtering for RF Jamming environments
- Available in 3.3V (TNC) or 5V (TNC or F)
- RoHS-II Compliant

### Disclaimer

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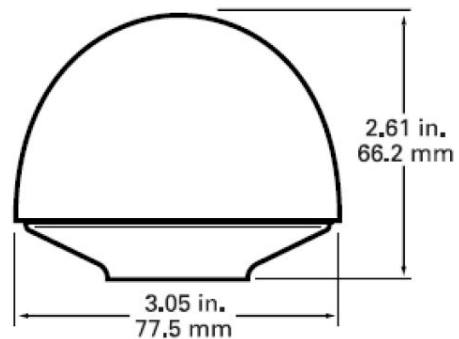
## Specification

Operating Temperature.....-40°C to +90°C  
 Storage Temperature.....-40°C to +90°C  
 Vibration.....10 – 200 Hz Log sweep  
 3g (Sweep time 30 minutes) 3 axes  
 Shock.....50g vertical, 30g all axes  
 Humidity Soak.....+60°C @ 95% RH, 96 hours  
 Corrosion Salt Resistant.....5% Salt spray tested, 96 hours

### PHYSICAL CHARACTERISTICS – 3.3V & 5V DC ANTENNAS

Dimensions.....3.05”D x 2.61” H (77.5mm x 66.2mm)  
 Weight.....6.0oz (170 grams)  
 Enclosure.....Off-white plastic  
 Connector.....F-type & TNC (5V) – TNC (3.3V only)  
 Mounting.....1” – 14” thread or ¾” pipe thread

## Mechanical



## Connectors



Please go to [www.protempis.com](http://www.protempis.com) for the latest documentation and tools, part numbers and ordering information.

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Feature	3.3V	5.0V
Prime Power	3.3V DV (±10%)	5.0V DV (±10%)
Power Consumption	<20mA	30mA maximum
Gain	30dB @ 25°C	32dB ± 3dB
Output Impedance	50Ω	50Ω
Frequency	1588 ± 3MHz	1588 ± 3MHz
Polarization	RHCP	RHCP
VSWR	2.0 maximum	2.0 maximum
Axial ratio	90°: 4.0dB max 10°: 6dB max	90°: 4.0dB max 10°: 6dB max
Noise	3.3dB max (25°C ± 5°C)	3.3dB max (25°C ± 5°C)
Pass-band width	50 MHz	
Out of Band rejection	fo=1575.42MHz ~ 1602MHz fo ±50 MHz: 30 dB min fo ±100 MHz: 35 dB min	
Blocking 1dB Compression Point	100MHz to 1.5GHz >+15dBm 1.5GHz to 1.575GHz Linear decrease from +15dBm to -40dBm over frequency range 1.575GHz to 1.65GHz Linear increase from -40dBm to +15dBm over frequency range 1.65GHz to 3GHz >+15dBm	
Azimuth coverage	360° (omni-directional)	360° (omni-directional)
Elevation coverage	0°-90° elevation (hemispherical)	0°-90° elevation (hemispherical)

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