# **Data Sheet**



# Bullet™ GG Multi-GNSS 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



### **Multi-Constellation**

The Trimble® Bullet GG antenna provides a perfect solution for manufactures 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 threat (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, Trimble 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 Trimble Bullet GG antenna



# Bullet™ GG - GPS & GLONASS Antenna

### **ENVIRONMENTAL SPECIFICATIONS**

<b>Operating Temperatu</b>	re40°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 Resista	nt5% Salt spray tested, 96 hours

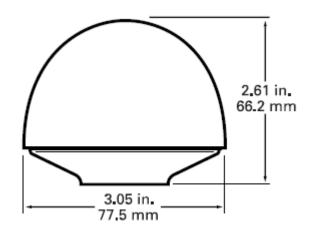
### PHYISCAL CHARCTERISTICS - 3.3V & 5V DC ANTENNAS

Dimensions	3.05"D x 2.61" H (77.5mm x 66.2mm)
Weight	6.0oz (170grams)
Enclosure	Off-white plastic
Connector	F-type & TNC (5V) - TNC (3.3V only)
Mounting	1" – 14" thread or $\frac{3}{4}$ " pipe thread

## **TECHNICAL / PERFORMANCE SPECIFICATIONS**

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	50 MHz
Out of Band rejection	fo=1588 MHz fo ±20 MHz: 7 dB min fo ±30 MHz: 12 dB min fo ±50 MHz: 20 dB min fo ±100 MHz: 30 dB min	fo=1588 MHz fo ±20 MHz: 7 dB min fo ±30 MHz: 12 dB min fo ±50 MHz: 20 dB min fo ±100 MHz: 30 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)

### **MECHANICAL**



### **CONNECTORS**





### **ORDERING INFORMATION AND ACCESSORIES**

Please go to www.trimble.com/timing for the latest documentation and tools, part numbers and ordering information.

Trimble has relied on representations made by its suppliers in certifying this product as RoHS-II compliant.

Specifications subject to change without notice.

Trimble Navigation Limited is not responsible for the operation or failure of operation of GNSS satellites or the availability of GNSS satellite signal.

NORTH AMERICA

Trimble Navigation Limited Corporate Headquarters 935 Stewart Drive Sunnyvale, CA 94085 Phone: +1 703 237 7400 timing@trimble.com EUROPE

Trimble Navigation Europe Phone: +4670-544-1020

KOREA

Trimble Export Ltd. Korea Phone: +82-2-555-5361

CHINA

Trimble Navigation Ltd. China Phone: +86-10-8857-7575

