

GPS Bullet Active Antenna

Waterproof and corrosion-resistant housing
filtering for harsh RF jamming environments

5V 35db (TNC or F) or 3.3V 30db (TNC)



Revision 4

The specifications in this document are subject to change without Notice.

ZTI Communications is not responsible for the operation or failure of operation of GPS satellites or the availability of GPS satellite signals.

Key Features

- Waterproof and corrosion-resistant housing filtering for harsh RF jamming environments
- Proven extra rugged, reliable
- Available in 5V (TNC or F connector) or 3.3V (TNC)
- RoHS-Compliant (Pb-free)



Presentation

Whatever the environment, the Timing Bullet GPS antenna will perform, year after year. The Timing antenna provides a perfect solution for fixed-site, rooftop, GPS Timing systems. This antenna is also a high-quality solution for adding GPS RF signals for GPS 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 is corrosion resistant. The threaded 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.

The Bullet antenna is an active GPS antenna with 35dB preamp (5V DC), 30dB preamp (3.3V DC). The high-gain preamp allows the Bullet antenna to be used with up to 75 feet of RG-59 cable. The Bullet filtering improves immunity to other RF signals for reliable performance in hostile RF jamming environments.

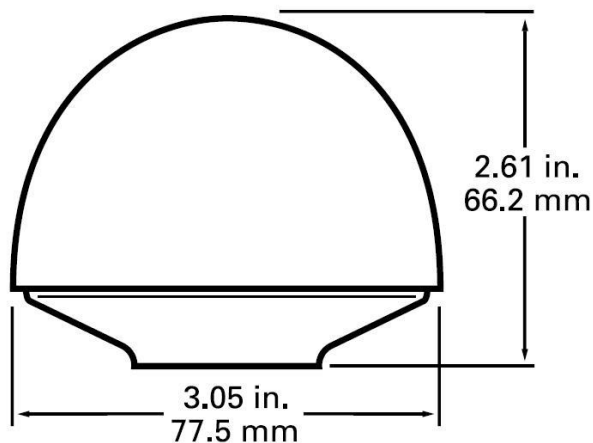
SUMMARY OF THE CHARACTERISTICS

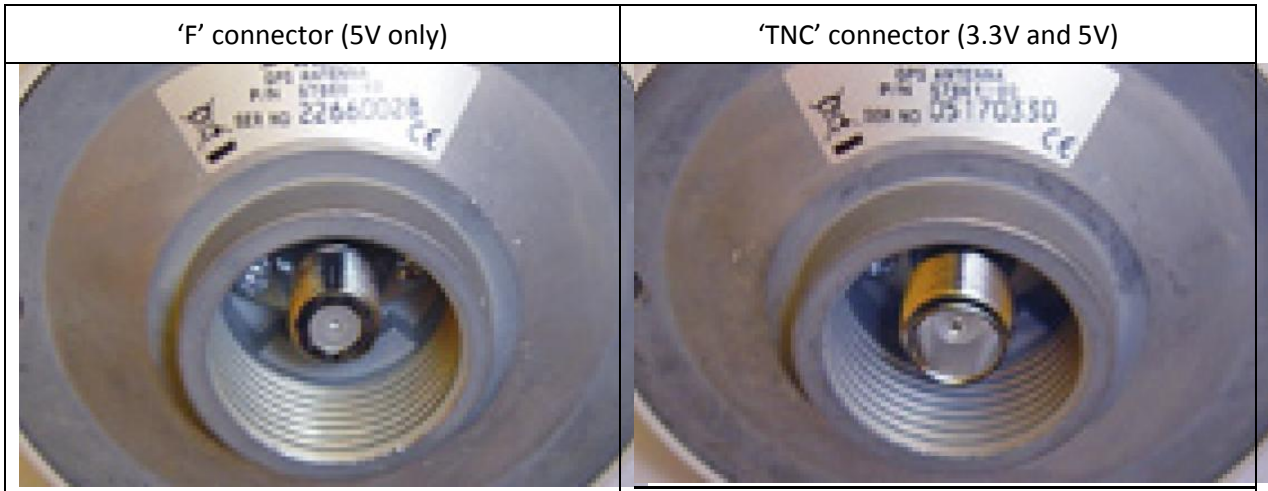
Environmental:

Vibration	10-200Hz Log sweep 3g (sweep time 30mn) 3 axes
Shock	50g vertical, 30g all axes
Operating Temperature	-40°C/+85°C
Storage Temperature	-40°C/+100°C
Humidity	MIL-STD-810E
Corrosion	5% Salt spray
Waterproof	IP67 – Immersion to 1 meter
Mounting	1"-14" thread or 3/4" pipe thread
Weight	170 grams
Enclosure	Off-white plastic
Connector	F-type & TNC (5V DC) – TNC (3.3V DC)

Technical/Performance characteristics:

	3.3 V	5 V
Prime power	+3.3V DC ($\pm 10\%$)	+5V DC ($\pm 10\%$)
Power consumption	<20 mA	30 mA
Gain	30 dB @ 25°C	35 dB (± 3 dB)
Output impedance	50 Ω	50 Ω
Frequency	1575.42 MHz ± 1.023 MHz	1575.42 MHz ± 1.023 MHz
Polarization	Right-hand circular polarization (RHCP)	Right-hand circular polarization (RHCP)
VSWR	2.0 maximum	2.0 maximum
Axial ratio	90°: 4.0db max 10°: 6.0db max	90°: 4.0db max 10°: 6.0db max
Noise	3.3db max (25°C $\pm 5^\circ$ C)	3.3db max (25°C $\pm 5^\circ$ C)
Pass-band width	50MHz	50MHz
Out of Band rejection	fo = 1575.42 MHz fo \pm 20MHz: 7db min fo \pm 30MHz: 12db min fo \pm 50MHz: 20db min fo \pm 100MHz: 30db min	fo = 1575.42 MHz fo \pm 20MHz: 7db min fo \pm 30MHz: 12db min fo \pm 50MHz: 20db min fo \pm 100MHz: 30db min
Azimuth coverage	360° (omni-directional)	360° (omni-directional)
Elevation coverage	0° to 90° elevation (hemispherical)	0° to 90° elevation (hemispherical)

Mechanical:



Bullet Antenna with optional mechanical mounting kit

