Bullet™ 360 Antenna

Multi-GNSS – GPS, GLONASS, Beidou & Galileo
The Trimble® Bullet™ 360 timing antennas are designed specifically for the congested urban environments.

GNSS timing application will benefit from increased signal availability and multi-constellation redundancy. In challenging urban environments the increased number of visible satellites will significantly improve the performance of GNSS receiver.

Put it anywhere
The antenna is housed in weatherproof packaging designed to withstand exposure to shock, 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.

Strong Performance
The Bullet 360 antenna is an active GPS L1, Galileo E1, Beidou B1 and GLONASS G1 bands antenna with 28dB preamp (5V DC), 26dB preamp (3.3 VDC). The Bullet 360 filtering improves impunity to other RF signals for reliable performance in hostile RF jamming environments.

Proven Reliability
For over 25 years, Trimble has sold GNSS antennas renowned for their survivability in tough environments. The Bullet 360 antenna is the fifth generation of the proven Bullet antenna family and offers all the reliability and performance benefits that are required for mission critical installations.

In unforgiving environments, an antenna failure could be disastrous. Don’t risk it. Select a proven GNSS antenna – the Trimble Bullet 360 antenna.

KEY FEATURES
- Multi-GNSS – GPS, Galileo, Beidou & GLONASS constellations
- Weatherproof housing
- Extended temperature range (-40°C / +90°C)
- High gain 28 ±3dB
- Filtering for RF Jamming environments
- Available in 3.3V (TNC) or 5V (TNC or F)
- RoHS-II Compliant
Bullet™ 360 – GPS, Galileo, Beidou & GLONASS Antenna

ENVIRONMENTAL SPECIFICATIONS

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..................7.0oz (200grams)
Enclosure..................Off-white plastic
Connector..............F-type & TNC (5V) – TNC (3.3V only)
Mounting..............1” – 14” thread or ¾” pipe thread

TECHNICAL / PERFORMANCE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>3.3V</th>
<th>5.0V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Power</td>
<td>3.3V DV (±10%)</td>
<td>5.0V DV (±10%)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>&lt;13mA</td>
<td>&lt;20mA</td>
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<tr>
<td>Gain</td>
<td>26dB ± 3dB (GPS)</td>
<td>28dB ± 3dB (GPS)</td>
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<tr>
<td>Output Impedance</td>
<td>50Ω</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>GPS L1 1575.42 ±3MHz</td>
<td>BDS B1 1561 ±3MHz</td>
</tr>
<tr>
<td></td>
<td>GLO G1 1602 ±3MHz</td>
<td></td>
</tr>
<tr>
<td>VSWR</td>
<td>2.0 maximum</td>
<td></td>
</tr>
<tr>
<td>Axial ratio</td>
<td>&lt;50d (GPS)</td>
<td>&lt;3db</td>
</tr>
<tr>
<td>Noise</td>
<td>2.0dB (typical)</td>
<td></td>
</tr>
<tr>
<td>Bandwidth (10dB RL)</td>
<td>70 MHz (min)</td>
<td></td>
</tr>
<tr>
<td>Out of Band rejection</td>
<td>fo= L1, B1, G1</td>
<td>fo ±50 MHz: 30 dB typ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fo ±100MHz: 40dB typ</td>
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<tr>
<td>Azimuth coverage</td>
<td>360° (omni-directional)</td>
<td>360° (omni-directional)</td>
</tr>
<tr>
<td>Elevation coverage</td>
<td>0°-90° elevation (hemispherical)</td>
<td>0°-90° elevation (hemispherical)</td>
</tr>
<tr>
<td>ESD</td>
<td>IEC 61000-4-2</td>
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MECHANICAL

CONNECTORS

GENERAL INFORMATION & ACCESSORIES

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