

# Trimble Zephyr 3 Rugged Antenna

## Precise and durable with millimeter accuracy

The newly improved Trimble® Zephyr™ 3 Rugged antenna is smaller and lighter than its Zephyr 2 Rugged predecessor. The Zephyr 3 Rugged antenna is designed for applications in high shock and vibration environments. Integrated with advanced filtering capabilities and robust signal tracking, the Zephyr 3 Rugged can provide the millimeter level accuracy required to enhance your position solution.

### Comprehensive GNSS support

The Zephyr 3 Rugged antenna offers full support for current and near-future GNSS signals including GPS, GLONASS, Galileo, BeiDou, QZSS, IRNSS, OmniSTAR®, Trimble RTX® and SBAS.

### Features of the Zephyr 3 Rugged

- Additional Iridium filtering above 1616 MHz allows antenna to be used as close as 20 m of Iridium transmitter
- Additional filtering below 1510 MHz allows for antenna placement closer to Japanese LTE cell tower
- Advanced LNA (low noise amplifier) to reduce interference by high power out-of-band transmitters
- 50 dB signal gain for reliable tracking in challenging environments and long cable runs
- Two product versions available for 5/8" - 11" thread and 3" mast mounting

### Key features

- Comprehensive GNSS support, including GPS Modernization signals, GLONASS, BeiDou and Galileo
- Robust low-elevation satellite tracking
- Millimeter phase center repeatability
- Improved signal filtering and multipath rejection
- Additional Iridium and Japanese LTE filtering
- High signal gain (50 dB) for reliable tracking
- 75g Shock



Zephyr 3 with 5/8" mounting  
PN 125000-30-INT



Zephyr 3 without bracket  
PN 125000-20-INT



Zephyr 3 with 3" mast mounting  
PN 125000-10-INT

# Trimble Zephyr 3 Rugged Antenna

## Technical specifications

- Comprehensive GNSS Tracking:
  - GPS: L1, L2, L5
  - GLONASS: L1, L2, L3
  - BeiDou: B1, B2, B3
  - Galileo: E1, E5a, E5b, E6
  - QZSS: L1, L2, L5, LEX
  - IRNSS: L5
  - SBAS: WAAS, EGNOS, GAGAN, and MSAS
  - MSS: OmniSTAR, Trimble RTX
- Quality signal tracking, even at low elevations
- Four point antenna feed for phase center stability and enhanced polarization

## Environmental qualifications

Operating Temperature ..... -40 °C to +85 °C  
 (-40 °F to +185 °F)

Humidity ..... IP69K, +/- 5psi Sealing Spray per IEC 60945 Environmental

Shock ..... 75G, 6ms

Vibration ..... 20.4 gRMS Bouyant

Compliance ..... CE compliant including ISO 13766:2006, 2014/45/EU (RED), EN 60950, E-Mark and RoHS, FCC, IC and RCM compliant

## Physical & electrical specifications

**Dimensions**

125000-10-INT ..... 21.9 cm diameter x 12.5 cm height  
 (8.62 in diameter x 4.92 in height)

125000-20-INT ..... 21.9 cm diameter x 6.1 cm height  
 (8.62 in diameter x 2.4 in height)

125000-30-INT ..... 18.7 cm diameter x 8.6 cm height  
 (7.36 in diameter x 3.39 in height)

**Weight**

125000-10-INT ..... 2.19 kg (4.83 lb)

125000-20-INT ..... 1.08 kg (2.38 lb)

125000-30-INT ..... 1.79 kg (3.95 lb)

**Input Voltage** ..... 3.5 VDC to 20 VDC

**MSS Narrow Band Mode (1555 to 1559 MHz):**  
 ..... >6.4 VDC to 9 VDC

**MSS Wide Band Mode (1525 to 1559 MHz):**  
 ..... 3.5 VDC to 6.0 VDC and 9.4 VDC to 20 VDC

**Input Current** ..... 125 mA

**Signal Gain** ..... 50 dB

**Signal Connector** ..... TNC Sealed

**Mounting** ..... 5/8" - 11 Thread or  
 4 x M8-1.25 Thread or 3" mast mount

## L1 Nominal Phase Center Values

The offset value for the Zephyr 3 Rugged L1 nominal phase center has changed compared to the Zephyr 2 antenna. Make sure your system is updated to reflect the correct offset as shown.

DESCRIPTION	L1 APC OFFSET
Bottom of 4-hole bracket (Top of mast when using mast mounting bracket)	7.16 cm
Bottom of 5/8 bracket	8.43 cm
Bottom of antenna mount	5.89 cm

Specifications subject to change without notice.

## Part number

- 125000-10-INT ..... Zephyr 3 Rugged Antenna with 3" Mast Mount Bracket
- 125000-20-INT ..... Zephyr 3 Rugged Antenna without Bracket
- 125000-30-INT ..... Zephyr 3 Rugged Antenna with 5/8" Mounting Bracket

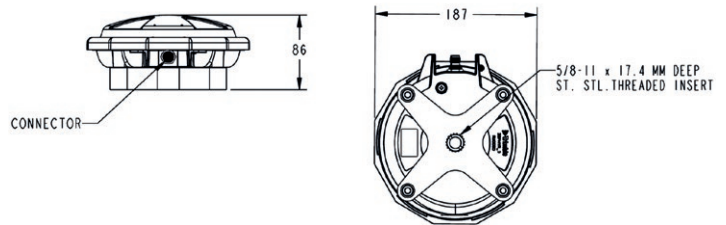


Figure 1: Technical Drawing of Zephyr 3 with 5/8" mounting  
 PN 125000-30-INT

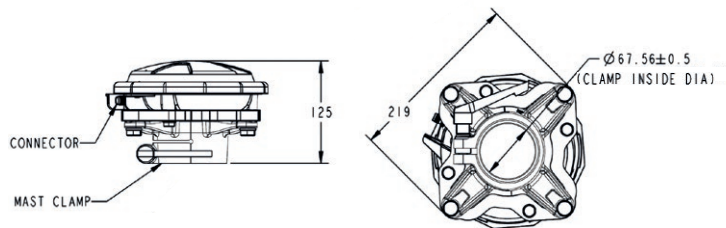


Figure 2: Technical Drawing of Zephyr 3 with 3" mast mounting  
 PN 125000-10-INT

Contact your local Trimble Authorized Distribution Partner for more information

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