



KEY FEATURES

Proven GNSS Trimble R-Track™ technology from Trimble

Powerful yet cost-effective

Simple to operate

Scalable to meet your specific needs

Rugged and compact

Low power consumption

Fully compatible with Trimble Infrastructure software

The Trimble® NetR3 GNSS reference sensor is an innovative GNSS reference sensor designed to integrate seamlessly into any Trimble VRS™ (Virtual Reference Station) network or Trimble Infrastructure application. The Trimble NetR3 offers a new option for tracking and streaming data.

Powerful yet cost effective, the Trimble NetR3 GNSS reference sensor achieves high-quality results and is ideal for a wide range of infrastructure applications such as high-accuracy positioning through a VRS network, support for differential global positioning system (DGPS) MSK beacons, and integrity monitoring of networks and physical infrastructure such as bridges, dams and mines. In addition, its competitive price point makes the Trimble NetR3 GNSS reference sensor the best value option for expanding, densifying or modernizing an existing network or for implementing Sparse GLONASS capabilities.

Using Trimble's exclusive R-Track technology, the Trimble NetR3 GNSS reference sensor streams data easily and conveniently. However, instead of storing collected data internally like a continuously operating reference station (CORS), the Trimble NetR3 takes advantage of Trimble software storage capabilities, eliminating the need for onboard memory. The result is a highly affordable, reliable alternative for use in applications that do not require all of the functionality of a CORS.

Combining innovative software with the most technologically advanced hardware, Trimble offers the most established and widely used GNSS infrastructure solutions on the market today. The Trimble NetR3 GNSS reference sensor works exclusively with the latest GNSS geodetic antennas from Trimble—the Zephyr Geodetic™ 2 and the GNSS Choke Ring. In addition, the Trimble NetR3 GNSS reference sensor is designed to seamlessly interface with Trimble's Infrastructure software for a complete solution.

Each Trimble Infrastructure software package supports a different infrastructure application and the Trimble NetR3 GNSS reference sensor is customizable through optional upgrades that offer enhanced functionality. No matter which network application components you use, the solution is scalable and will grow with you as your business needs change.

These software solutions include:

Trimble Network Software

- Trimble GPSBase software
- Trimble GPSNet™ software
- Trimble RTKNet™ software (VRS)

Trimble Coastal Solutions

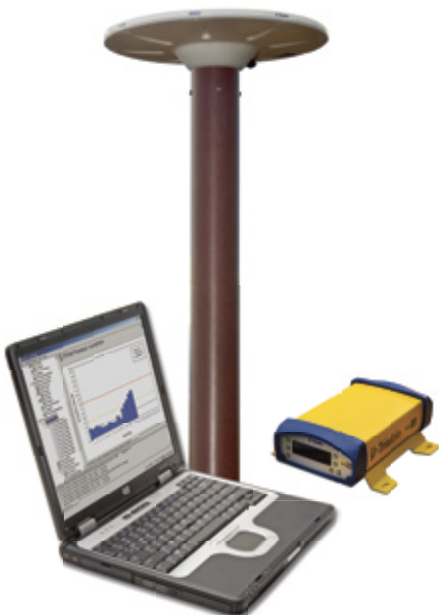
- Trimble Charisma software
- Trimble Coastal Center software

Trimble Network Monitoring

- Trimble Integrity Manager™ software

In the field, set up and configuration of the Trimble NetR3 GNSS reference sensor is simple and fast. The interactive front display panel provides easy parameter setup and sensor status, while the specially designed mounting plate ensures secure attachment to its designated location. Rugged and compact, the Trimble NetR3 consumes very little power, and has an onboard battery for increased reliability. It's built to provide consistency even in the most demanding installation environments. The Trimble NetR3 supports the modernized GPS L2C and GLONASS L1/L2 signals with an option to add L5 support as it becomes available.

In a world where GNSS infrastructure applications are constantly evolving, businesses, governments and scientific organizations worldwide will find that the Trimble NetR3 reference sensor is a smart, cost-effective way to achieve their goals. Whether building a small network, implementing Sparse GLONASS or expanding, densifying or modernizing an existing network on a limited budget, the Trimble NetR3 reference sensor is the simplest way to get reliable, high-quality results.



TRIMBLE NetR3 GNSS REFERENCE SENSOR

PERFORMANCE SPECIFICATIONS

- Trimble R-Track Technology
- Advanced Trimble Maxwell™ GNSS Chip
- High precision multiple correlator for GNSS pseudorange measurements
- Unfiltered, unsmoothed pseudorange measurement data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise GNSS carrier phase measurements with <1mm precision in a 1 Hz bandwidth
- Signal-to-noise ratios reported in dB-Hz
- Proven Trimble low elevation tracking technology
- 72 Channels:
 - GPS L1 C/A Code, L2C, L1/L2/L5¹ Full Cycle Carrier
 - GLONASS L1 C/A Code, L1 P Code, L1/L2 Full Cycle Carrier

ROVER INTEGRITY MONITOR PERFORMANCE²

Code Differential GPS Positioning³

Horizontal..... ±0.25 m RMS
Vertical..... ±0.50 m RMS

RTK Positioning³

Horizontal..... ±10 mm RMS
Vertical..... ±20 mm RMS
Initialization time..... typically <10 seconds
Initialization reliability..... typically >99.9%

ELECTRICAL

- 10.5 V DC to 28 V DC input power range with over voltage protection
- Integrated internal battery 7.4 V, 7200 mA-hr, Li-ion
- Integrated internal battery acts as an uninterruptible power supply (UPS) in the event of a power source outage offering 6 hours or more of continuous operation
- Internal battery will charge from external power source when input voltage is >15 V
- Integrated battery charging circuitry
- Power consumption with antenna – 4.4 W average

PHYSICAL SPECIFICATIONS

Dimensions..... 24 cm x 19 cm x 6.7 cm (9.4 in x 7.48 in x 2.64 in)
including connectors and mounting base
Weight..... 1.86 kg (4.11 lb)

Regulatory Compliance

FCC Part 15 (Class B Device), CE mark, C-tick Industry Canada ICES-003, RSS-210, RSS-Gen, RSS-310

ENVIRONMENT

Operating temperature⁴..... –40 °C to +65 °C (–40 °F to +149 °F)
Storage temperature..... –40 °C to +80 °C (–40 °F to +176 °F)
Humidity..... MIL-STD 810F, Method 507.4
Vibration..... Operating: 5 Hz to 350 Hz 0.015 g²/Hz,
350 Hz to 500 Hz -6 dB/octave
Shock..... Survival: 75 g, 6 ms; Non-operating: survives 1 m drop onto
hard surface
Ingress Protection..... IP67: Dust proof;
Protected from temporary immersion in water 1 meter deep

COMMUNICATION

- Ethernet
 - Single RJ45 connector on multiport adapter
 - 10/100BaseT full duplex, auto negotiate network support
 - All functions performed simultaneously through a single IP address including web interface and real-time data streaming
 - Client authentication for data streaming
 - Configurable ports for HTTP operation
 - Web interface supports password access protection
 - E-mail client for alarming and notification of various sensor parameters
- 2 RS-232 ports
 - One port on Lemo connector
 - One port on multiport adapter
 - Serial ports can stream real-time observation data and NMEA messages

Data Streaming

- 1 Hz, 2 sec, 5 sec, 10 sec, 15 sec, 30 sec, 1 min, 5 min, and 10 min data streaming outputs
- Streaming formats: RT17, RT27, and NMEA
- 1 Hz, 2 sec, 5 sec, 10 sec, 15 sec, 30 sec, 1 min, 5 min, and 10 min positioning output with Rover Integrity support option

Control Software

HTML web browser..... Internet Explorer 6.0 or later,
Firefox 1.5.0 or later

Antenna

The Trimble NetR3 Reference Sensor requires the use of one of the following two antenna models:

- Trimble Zephyr Geodetic 2
- Trimble GNSS Choke Ring

¹ L5 support requires an optional upgrade.

² Requires the Rover Integrity Monitor option.

³ Accuracy and reliability may be subject to degradation by multipath interference, obstructions, satellite geometry and atmospheric conditions. Values reflect the use of a Trimble VRS corrector. Always following recommended CORS installation practices.

⁴ The sensor will operate normally to –40 °C; the internal battery is rated to –20 °C.

Specifications subject to change without notice



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