TRIMBLE RTX TECHNOLOGY FOR INFRASTRUCTURE APPLICATIONS

AN INNOVATIVE NEW APPROACH FOR WORLDWIDE PRECISE POINT POSITIONING

⊗ Trimble.

TRIMBLE RTX TECHNOLOGY

KEY FEATURES

- **Global correction delivery**
- **Centimeter level positioning**
- **Real-Time Kinematic (RTK)**
- **Postprocessing (PP)**
- **Fast convergence times**
- **Correction delivery via L-Band or IP/Cellular**
- **Online data submission with automated processing and results**
- **GNSS support**
- **Absolute positioning for real-time and postprocessing, or as an integrated monitoring solution**

WORLDWIDE COVERAGE

- RTX – Satellite Delivery
- RTX – IP Delivery

THE NEXT GENERATION IN POSITIONING: CENTIMETER LEVEL ACCURACY, WORLDWIDE

Trimble® RTX™ correction service is a high-accuracy Global Navigation Satellite System (GNSS) correction technology. By combining real-time data with innovative positioning and compression algorithms, RTX technology is able to deliver repeatable high accuracy positions around the globe. RTX technology utilizes real-time GNSS corrections from a global reference station network to compute centimeter level positions based on satellite orbit and clock information.

The patent-pending Trimble RTX technology provides high-accuracy GNSS positioning without the use of traditional reference station-based differential RTK infrastructure. While standard autonomous GNSS position solutions provide accuracies in the 1 meter range, Trimble RTX technology can achieve accuracies at the centimeter level—anywhere on or near the earth's surface.

RTX high accuracy corrections can be delivered via satellite (L-Band) or via Internet Protocol (IP) / Cellular, ensuring geographic coverage around the world. Combining global coverage, correction data enabling high accuracy absolute solutions, and fast initialization times, RTX technology provides GNSS users unprecedented operating freedom. In addition to providing worldwide corrections for real-time users, Trimble also provides the benefits of RTX technology for postprocessing applications. Simply log the data and submit! Trimble RTX postprocessing technology will process the data against RTX corrections for the geographic region and send the automated results to the user.

This advanced technology is implemented in new Infrastructure solutions—hardware and software—supporting high accuracy GNSS absolute positioning worldwide. Trimble RTX technology is now supported in the following Trimble Infrastructure solutions:

NETR9 RTX SUPPORT FOR:
- Establishing or monitoring CORS station coordinates
- Static occupation survey campaigns

PIVOT RTX REAL-TIME APP AND PIVOT RTX POSTPROCESSED APP FOR:
- Establishing or monitoring station coordinates in Real-Time Networks
- Measuring absolute station movement for earthquake, volcano, landslide, dam or other monitoring applications, providing kinematic and/or static/filtered positions.

Trimble innovation continues to lead the industry in providing high accuracy solutions while simplifying equipment setup, lowering overall costs, and increasing efficiency.

TRIMBLE RTX GLOBAL REFERENCE STATION FRAMEWORK
The Trimble RTX correction service tracking network distribution currently consists of around 100 stations, distributed across the globe. This advanced technology can be applied in various applications requiring high precision positioning including agriculture, DGNSS navigation infrastructure, earth systems, mapping and GIS, machine control, monitoring, real-time networks, survey and construction.
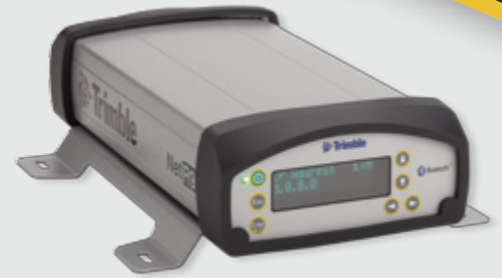
RTX TECHNOLOGY IN INFRASTRUCTURE SOLUTIONS

RTX TECHNOLOGY IN INFRASTRUCTURE HARDWARE

The world's most advanced reference station, the Trimble NetR9™, now offers the world's most advanced global correction data – Trimble RTX. Receiving the corrections via either L-Band satellite or IP / cellular, high accuracy positioning and monitoring applications can now be achieved worldwide. The extensive coverage and delivery options provide opportunities in environments where corrections historically have not been available.

The NetR9 reference receiver includes built-in Position Monitoring technology to alert the operator if the antenna moves…even if only by a centimeter. Used standalone or as part of a larger network of receivers, onboard RTX technology enables faster setup/deployment, increased efficiency in daily routines, and peace of mind in knowing you have corrections where ever the receiver may need to be deployed.

RTX TECHNOLOGY IN INFRASTRUCTURE SOFTWARE

Trimble Pivot™ is an advanced software platform for Infrastructure Apps that support a wide and growing range of capabilities to serve various markets and their specific needs. Within the Infrastructure apps portfolio, two key apps offer the advantages of absolute positioning techniques using Trimble RTX technology to provide users with centimeter-level position accuracy.

TRIMBLE PIVOT RTX REAL-TIME APP

Trimble Pivot RTX App is designed to perform absolute position monitoring in real-time on a network of receivers. This is particularly helpful when operating a network of CORS receivers which may be used in an RTN or for monitoring applications such as landslides, earthquakes, dams, etc.

The Pivot RTX App uses a software based RTX engine, so that the receivers which are to be monitored do not require RTX capability onboard. Using GNSS data streaming from a receiver, the Pivot RTX App applies RTX corrections in real-time, monitoring the reference station position. Increased positioning accuracy, for example, for developing station coordinates, may be obtained by enabling long-term filtering of real-time positions

TRIMBLE PIVOT RTX POSTPROCESSED APP

Trimble Pivot RTX PostProcessing App (RTX-PP) is designed to perform absolute position monitoring in postprocessing mode. The Pivot RTX-PP App provides highly accurate position computations based on the RTX postprocessing technique. This enables precise determination of initial coordinates for CORS or measurement of displacements after station movement.

The Pivot RTX-PP App supports different processing modes: static or kinematic. The static mode enables users to receive highly accurate absolute positions, while the kinematic mode allows users to process data to obtain position measurements during periods of station movement.

RTX TECHNOLOGY & INFRASTRUCTURE APPS FOR CUSTOMERS

Customers running Trimble Dynamic Control App and VRS³Net™ App on the Trimble Pivot Platform may also use Infrastructure RTX solutions for absolute precise point positioning as an independent approach or in areas without established geodetic control.

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