



Trimble Infrastructure

GNSS SERIES RECEIVERS

These release notes describe the latest improvements made to the Trimble® NetR9™ Infrastructure series receivers.

- ▶ [Introduction](#)
- ▶ [New Features and Changes](#)
- ▶ [Upgrade Procedure](#)
- ▶ [Legal Notices](#)

Introduction

These release notes describe the improvements made to the Trimble Infrastructure NetR9 Series receivers. With this release, the above products can use version 5.20 firmware.

Note – *Not all receivers support all features contained within this firmware release. The supported features will depend on the receiver model and options installed.*

To use firmware version 5.20, you must have a valid firmware warranty. To load this firmware, the receiver must have a firmware dated May 1, 2015 or more recent. If necessary, contact your Trimble dealer to purchase a warranty.

Before you perform a firmware upgrade, ensure you download and backup any files or configuration settings.

New Features and Changes

General

- ▶ Minor translation updates.
- ▶ General system stability improvements.
- ▶ Updated antenna database.

Networking and Security

- ▶ Security updates for OpenSSL.
- ▶ Improved Network Address Translation routines.

Version 5.20
Revision A
December 2016

Tracking

- ▶ Updated OmniSTAR libraries.
- ▶ General GNSS constellation and tracking updates.
- ▶ Improved handling of Glonass time rollovers.
- ▶ Improved SBAS performance.
- ▶ Resolves QZSS tracking issue whereby the receiver may not recognize when an unhealthy satellite becomes healthy.

Data Logging

- ▶ By default, the 'Auto Delete' feature is now enabled.
- ▶ Web UI 'FTP Push Log' page now displays the progress percentage of active files being pushed.
- ▶ RTP SI feature removed from the NetR9 platform.
- ▶ Resolves issue where occasional RINEX files sent via FTP Push may become corrupt.
- ▶ Removes incorrect '#' symbol from the 'GLONASS COD/PHS/BIS' RINEX header records.
- ▶ Resolves issue of zipped Hatanaka RINEX files failing to be transferred via FTP Push.
- ▶ Support of RINEX long filename convention in v3.02 and v3.03 files.
- ▶ Resolves RINEX v3 issue where a '-' symbol may be written into the SNR field.
- ▶ Improved file system stability during power loss and shut down sequence.
- ▶ Addition of SFTP client support. Within the 'FTP Push' web page, SFTP is now available for selection under the 'Transfer Mode' dropdown box. When selected, the default port will automatically be switched to Port 22 (user editable). Upon entering the connection details and performing a 'Test' of the connection, the algorithm and fingerprint provided by the remote server will be displayed, and the 'Verify' checkbox is enabled but remains unchecked. The user must click the Verify checkbox to enable remote host verification during transfers; otherwise the key submitted by the remote host will always be accepted. Users are encouraged to use HTTPS connections in combination with SFTP for secure transmission of all credentials. Also, it is strongly recommend users enable Email Alerts on the receiver to notify them if a transfer fails due to a new fingerprint being used by the remote FTP server.
- ▶ Logged BINEX files updated to for additional Metadata including Antenna Serial Number, Radome Serial Number, Antenna Type, Antenna XYZ, Observer, Agency, and Marker Name.

Data Formats

- ▶ Improved handling of BINEX streams containing observables for more than 40 satellites. Previously this could result in the receiver generating error logs.
- ▶ NTRIP connections now support SSL/TLS connections.
- ▶ Resolves issue of 'Correction Delay' not properly being applied to outgoing corrections, if enabled.
- ▶ Expanded RTCM v3.2 MSM support to include types 1 through 7. When RTCM v3.2 is enabled, the receiver now provides a 'Multiple Signal Message Settings' section which allows the user to specify the MSM type (1-7), which constellations to include, and a 'Streaming Mode' option. Streaming Mode is by default disabled which results in only records necessary for RTK operation resulting in reduced bandwidth. If the RTCM v3.2 MSM stream is intended to be used for full reference station and observable records (raw data), then the Streaming Mode option should be enabled.
- ▶ Resolves Programmatic Interface issue where the returned list of satellites may be truncated.
- ▶ Resolves Programmatic Interface issue where the returned tracking information omitted a space.
- ▶ Real time data output via TCP ports now supports 'Disable Nagle Algorithm' option. By default this option is disabled. When enabled, this option reduces the transmission time of packets, though will result in higher overhead and a greater number of overall packets being sent over the network. This feature is only recommended when users observe a network delay in the transmission of real time data.

Web User Interface and Front Panel

- ▶ Minor Web UI updates for language usage.
- ▶ Updates to improve web page rendering in various browsers.
- ▶ 'TGIP' references on web UI have been renamed to 'RTXIP'.
- ▶ DynDNS client now returns 'ClientName, Username, or password might be wrong' when invalid credentials are supplied. Previously this would return 'Invalid response from DNS Server'.
- ▶ 'OmniSTAR' menu title renamed to 'MSS Corrections'.
- ▶ Resolves issue with position plots which could become corrupt over HTTPS connections.
- ▶ NTRIP clone file configurations are now included within the 'Clone IP Port and I/O Configuration'. Previously these were included with the 'Clone Miscellaneous (Everything Else)' option.

Upgrade Procedure

Ensure that the receiver firmware warranty date is May 1, 2015 or more recent. To upgrade, use one of the following methods:

- ▶ If using the WinFlash utility: Use the latest version that is available with the version 5.20 Web package.
- ▶ Receiver Web User Interface: Download and install the version 5.20 *.TIMG file.

Legal Notices

Trimble Inc.
Engineering and Construction Group
5475 Kellenburger Road
Dayton, Ohio 45424-1099
USA

800-538-7800 (toll free in USA)
+1-937-245-5600 Phone
+1-937-233-9004 Fax
www.trimble.com

Copyright and Trademarks

© 2007–2016, Trimble Inc. Trimble and the Globe & Triangle logo are trademarks of Trimble Inc., registered in the United States and in other countries. NetR9 is a trademark of Trimble Inc. Developed under a License of the European Union and the European Space Agency. Microsoft and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks are the property of their respective owners.

Release Notice

This is the December 2016 release (revision A) of the *Infrastructure GNSS Receivers Release Notes*. It applies to version 5.20 firmware.

Product warranty information

For applicable product warranty information, please refer to the Warranty Card included with this Trimble product, or consult your Trimble reseller.

Notice to our European Union Customers

For product recycling instructions and more information, please go to www.trimble.com/ev.shtml.

Recycling in Europe: To recycle Trimble EEE (Waste Electrical and Electronic Equipment, products that run on Electric power), call +31 497 53 24 30 and ask for the “WEEE Associate”.

Or, mail a request for recycling instructions to:

Trimble Europe BV
c/o Menlo Worldwide Logistics
Meerheide 45
5521 DZ Eersel, NL

