Trimble Advanced Positioning

ALLOY AND NETR9 REFERENCE RECEIVERS

Version 6.08 and 5.48 Firmware Release

These release notes describe the latest improvements made to the Trimble® Alloy™ and NetR9® reference receivers.

Introduction

These release notes describe improvements to the Alloy 6.08 firmware and NetR9 5.48 firmware. All Alloy receivers are entitled to firmware version 6.08. The NetR9 receiver must have a minimum firmware date of 1 November 2018 or later to use firmware version 5.48. If necessary, contact your Trimble distribution partner to purchase a NetR9 Trimble Protection Plan. Before you perform a firmware upgrade, ensure that you download and back up any files or configuration settings.
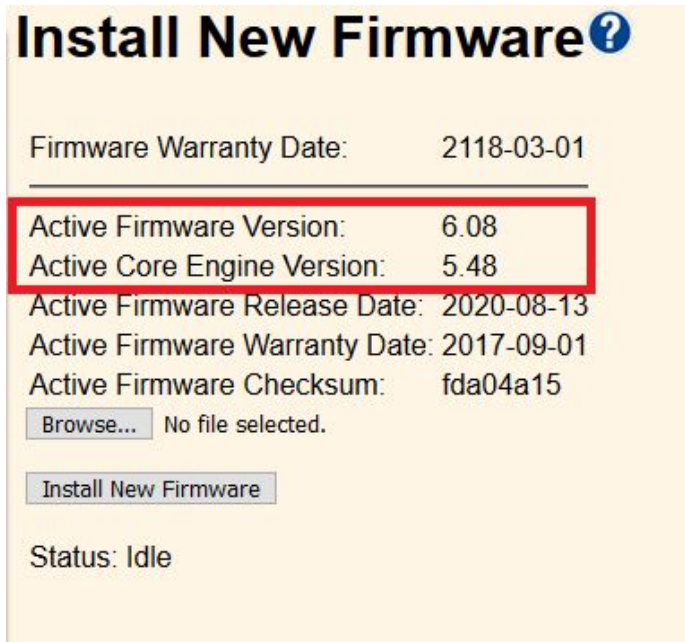
Version: 6.08 and 5.48
Date: August 2020

Alloy version 6.08 features and changes

Trimble ProPoint GNSS Engine

Alloy receivers with the new Trimble ProPoint™ GNSS engine (released in version 5.45) will have a new firmware numbering format. The numbering will change from 5.4X to 6.0X. The firmware changes will be used to differentiate between the new ProPoint GNSS engine and the previous GNSS engine. The Alloy active core version will still be 5.48, but the active version will be 6.08.

Install New Firmware❓

Firmware Warranty Date:	2118-03-01
Active Firmware Version:	**6.08**
Active Core Engine Version:	**5.48**
Active Firmware Release Date:	2020-08-13
Active Firmware Warranty Date:	2017-09-01
Active Firmware Checksum:	fda04a15

Browse... No file selected.

Install New Firmware

Status: Idle

Tracking

IRNSS

- Adjusted the receiver's capacity to better detect IRNSS ephemeris information.

GLONASS

- Upgraded the Alloy receiver's tracking proficiency with GLONASS satellites in higher latitude regions.

BeiDou

- Updated the Alloy receiver's ability to handle BDS-III signals using TGD (Trimble GPS Raw Data) files.
- Improved the Alloy receiver's tracking capability with BeiDou GEO-stationary satellites.

Common features and changes

These features and changes apply to both the Alloy and the NetR9 receiver.

Tracking

QZSS

- The receiver can support the QZSS satellite changes from MSAS(MTSAT-2) for SBAS.

SBAS

- Updated the L1 only position solution for SBAS and Autonomous solutions.
- Improved the SLAS (Sub-meter Level Augmentation Service) and MSAS performance (The Multi-functional Satellite Augmentation) to address transition issues with the satellite data.

BeiDou

- Addressed BINEX issues with incomplete BeiDou satellite C33 data by updating the ephemeris in the BINEX data format.

Convert to RINEX

- Corrected formatting issues with GLUT (GLONASS to UTC) in the receiver's RINEX ephemeris files.

Improvements

- Fixed issues with BeiDou sending incorrect RTCM data.
- The Alloy receiver's BINEX format will allow you to decide what Galileo ephemeris to use when sending BINEX data. You will have the choice to send legacy, upgraded, or both Galileo ephemeris. If you do not select an option, the receiver will only send the upgraded format.

- Updated RTCM3 output to include MSM 3 for better performance of triple-frequency satellites.
- Enhanced the receiver's atmospheric modeling in autonomous and SBAS solutions.
- Adjusted the antenna configuration list to include new third-party antennas.
- Improved and brought back RTX positioning monitoring options in the web interface; the RTX option was not in firmware version 5.45.

Position Monitoring ❓

Enable ☐

Reference Position to Monitor against:

Reference Latitude:	0 °	0 '	0.00000 "	⦿ N ◯ S
Reference Longitude:	0 °	0 '	0.00000 "	⦿ E ◯ W
Reference Height:	0.000 [m]			

[Here] Load Current Position

[Use Reference Station Position]

☐ Force reference station position

☐ Suspend CMR/RTCM output if the monitored position is out of tolerance

Position Type	Lat Offset [m]	Lon Offset [m]	Height Offset [m]	Lat/Lon Ranges [m]	Height Ranges [m]
Autonomous	10.000	10.000	20.000	1 - 100	3 - 100
SBAS	5.000	5.000	10.000	0.3 - 100	1 - 100
VBS	1.000	1.000	3.000	0.15 - 100	0.5 - 100
RTK	0.020	0.020	0.050	0.01 - 100	0.01 - 100
DGNSS	1.000	1.000	3.000	0.15 - 100	0.5 - 100
HP	0.200	0.200	0.500	0.075 - 100	0.2 - 100
XP	0.300	0.300	0.500	0.1 - 100	0.2 - 100
G2	0.300	0.300	0.500	0.15 - 100	0.2 - 100
RTX	0.150	0.150	0.200	0.04 - 100	0.08 - 100

[OK] [Cancel]

Security

- Improved the receiver's ability to upload multiple SSL CA certificates.

Feature comparison table

Tracking	Alloy	NetR9
IRNSS updates	Y	N
GLONASS updates	Y	N
BeiDou Gen III GeoStationary	Y	N
QZSS MSAS QZSS-3	Y	Y
SBAS L1	Y	Y
Convert to RINEX Improvements		
GLONASS format fixes	Y	Y
Improvements		
BINEX Galileo Ephemeris options	Y	Y
RTCM3 MSM 3	Y	Y
BeiDou RTCM	Y	Y
Atmospheric modeling	Y	Y
3rd Party antenna support	Y	Y
RTX Positioning	Y	Y
Security Improvements		
Multiple SSL CA uploading abilities	Y	Y

Upgrade procedure

Before upgrading the firmware, please back up and save the receiver's configuration.

For the NetR9 receiver, ensure that the receiver firmware warranty date is 1 November 2018 or later. The Alloy receiver has lifetime firmware upgrades.

To upgrade, use one of the following methods:

- If using the WinFlash utility: Use the latest version that is available with the version 5.48 Web package.

- Receiver Web Interface: Download and install the version 6.08 or 5.48 *.TIMG file. The firmware files are located on the Trimble Alloy and Trimble NetR9 web pages under the download section. Please see the links below.

  Trimble Alloy - www.trimble.com/Real-Time-Networks/Trimble-Alloy.aspx

  Trimble NetR9 - www.trimble.com/support_trl.aspx?Nav=Collection-69991&pt=NetR9%20Support

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Release notice

This is the August 2020 release (Revision A) of the Release Notes. It applies to version 5.48/6.08 of the Alloy and NetR9 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