Release Notes

GNSS OEM Receivers

VERSION 6.50 FIRMWARE

This document contains late-breaking product information, updates, and troubleshooting tips not covered in the Trimble® GNSS OEM receivers' documentation.

Introduction

These release notes describe improvements made since version 6.43.

With this release, Trimble is making firmware 6.50 available for GNSS OEM receivers that support the ProPoint® RTK/Trimble RTX® engine. Only receivers that have the ProPoint option installed can load 6.xx firmware. Receivers that do not have the ProPoint firmware option installed are not currently being updated. Listed below are the Trimble GNSS OEM receivers, which these release notes apply to.

GNSS receiver model	Firmware version
BD940[1]	6.50
BD940-INS[1]	6.50
BX940[1]	6.50
AX940 / AX940i [2]	6.50
BD990[1]	6.50
BD992[1]	6.50
BD992-INS[1]	6.50
BX992[1]	6.50
BD9250 / BD9250s[2]	6.50

[1] Upgrade steps if the receiver was not purchased with the ProPoint option and does not have the ProPoint option installed: (a) Ensure that firmware version 5.46 or later is loaded in the receiver. (b) Install the purchased ProPoint option key password provided by the support team. (c) Install the ProPoint 6.XX firmware.

[2] All AX940 / AX940i and BD9250 / BD9250s receivers use the 6.XX firmware and do not require an upgrade to install version 6.43.

 This is the April 2026 release (Revision A) of the Release Notes. It applies to version 6.50 of the OEM receiver firmware.

To use the new firmware, you must have a valid firmware warranty. You can check the Firmware Warranty Date using the web interface. Ensure the date shown is 1 May 2025 or later to load firmware version 6.50. Alternatively, obtain the warranty date from the WinFlash software. Select **Verify receiver options** and ensure the **Firmware Option** is 1 May 2025 or later to load firmware 6.50.

Note – Additional support information is available at https://oemgnss.trimble.com/support/.

Upgrade procedure

There are two ways to load the new firmware:

- Use the WinFlash utility (BD9xx WinFlash V650.exe) downloaded from the Trimble website.
- Use the web interface of the receiver to load the firmware image file downloaded from the Trimble website.

Note – Additional help on upgrading can be found at https://tinyurl.com/mrxr5sz6.

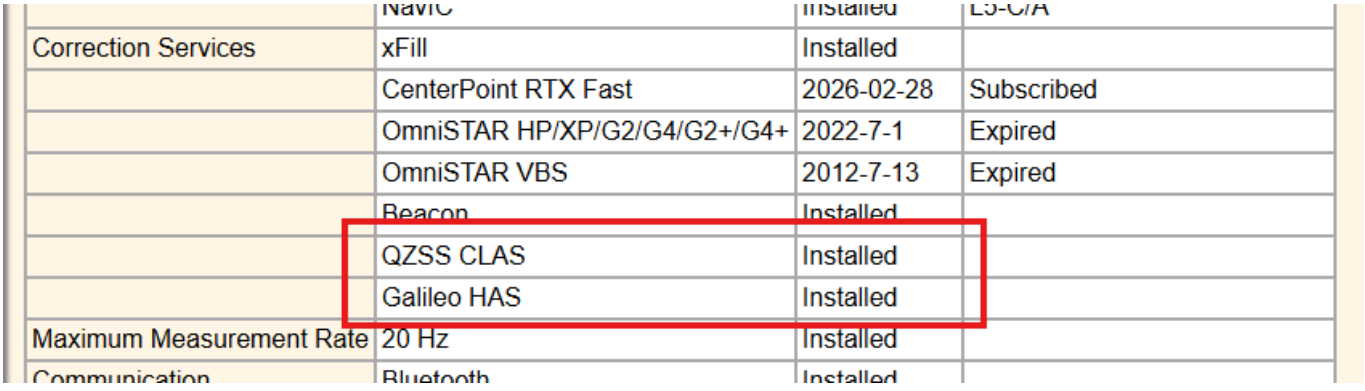
New features and changes for ProPoint receivers between firmware versions 6.43 and 6.50

GNSS signal tracking and processing enhancements

Galileo HAS and QZSS CLAS

The receiver web interface now shows if QZSS CLAS and Galileo HAS are installed on the receiver. Contact Trimble if you have an older receiver that does not have the options installed.

Note – CLAS and HAS are only available and shipping on BD/BX99x receivers.



	NavIC	Installed	L5-C/A
Correction Services	xFill	Installed	
	CenterPoint RTX Fast	2026-02-28	Subscribed
	OmniSTAR HP/XP/G2/G4/G2+/G4+	2022-7-1	Expired
	OmniSTAR VBS	2012-7-13	Expired
	Beacon	Installed	
	QZSS CLAS	Installed	
	Galileo HAS	Installed	
Maximum Measurement Rate	20 Hz	Installed	
Communication	Bluetooth	Installed	

Galileo

Improved Galileo E6 acquisition

In anticipation of the upcoming Galileo system pilot encryption, E6 tracking now defaults to "Data-only" as Pilot will not be available.

GLONASS

Fixed a defect where GLONASS L1 C/A pseudorange showed code drift during high ionospheric activity.

Corrected an error in CMR+ where GLONASS SVs were dropped when GPS SV count exceeded 12.

QZSS

Added full support for the new L1C/B signal (QZS-6), including corrected phase alignment and appropriate RINEX/T04 logging.

SBAS

Updated the web interface labeling and coverage area for PRN 139 to reflect its allocation to MSAS (QZS-7).

Anti-jamming

Continuous improvement with respect to Jamming detection and mitigation.
Improved Galileo tracking where the primary signal is jammed.

Anti-spoofing

Enhanced spoofing detection with a faster cold start:

- The receiver's cold start is accelerated by leveraging ephemeris data within the Trimble RTX® stream.
- Additionally, the system supports robust spoofing detection powered by the ProPoint engine.

IonoGuard

Improved Trimble RTX performance with Trimble IonoGuard™ during periods of elevated ionospheric activity.

Addressed issues with some CMRx messages not being decoded with IonoGuard enabled.

Refined IonoGuard status indicators in the web interface to ensure they correctly clear when base corrections stop.

RTK

Improved RTK performance in harsh environments when using a Trimble base station.

Moving Base RTK

Improved dual-antenna vector performance in harsh environments such as canopy or obstructions.

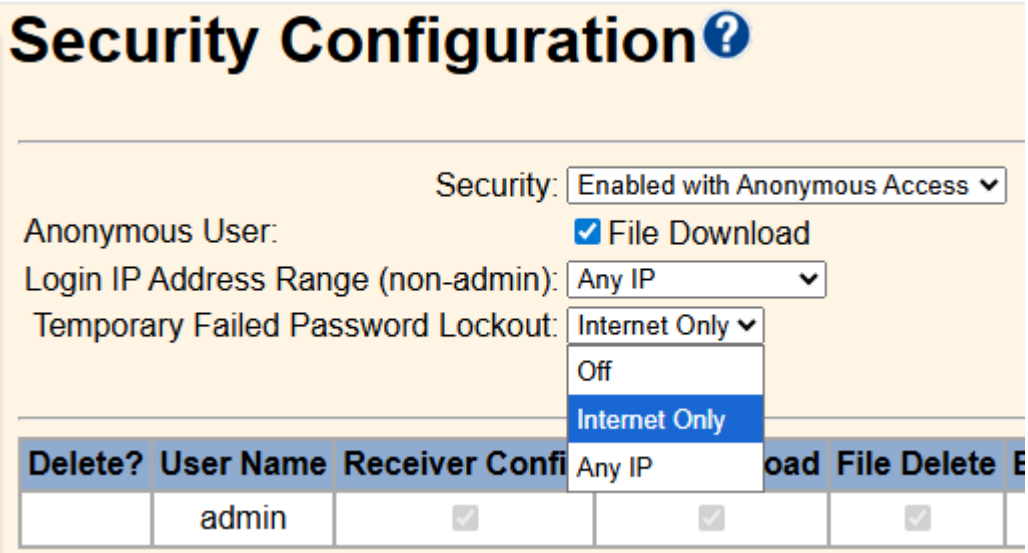
Security and connectivity

Enhanced network security

To mitigate potential security risks, broadcast ping echoes and IP redirects have been disabled by default.

Authentication logic

Improved the clarity of password lockout settings by renaming the category to "Internet Only" to better differentiate between private LAN and public network access.



NTRIP updates

Corrected a miscalculation in the NTRIP Caster "Content-Length" header that was uniformly reporting two bytes longer than the actual body.

Web interface and data management

Data logging enhancements

Added a live real-time UTC display to the Data Logging page to help manage manual data logging sessions.

Fixed an issue with FTP Push so the **Pair** button only displays when SFTP is selected. Fixed default port assignments (21 for FTP, 22 for SFTP).

Fixed a defect preventing the naming of RINEX 4.01/2.11 files according to IGS standards.

Corrected L1C signal ID mapping in BINEX Observation Code records.

HTTPS and HTTP

Improved the process of enabling/disabling HTTPS and HTTP in the **Network Configuration** menu.

To prevent accidental lockouts, a password check has been implemented when changing the system security from Disabled to Enabled.

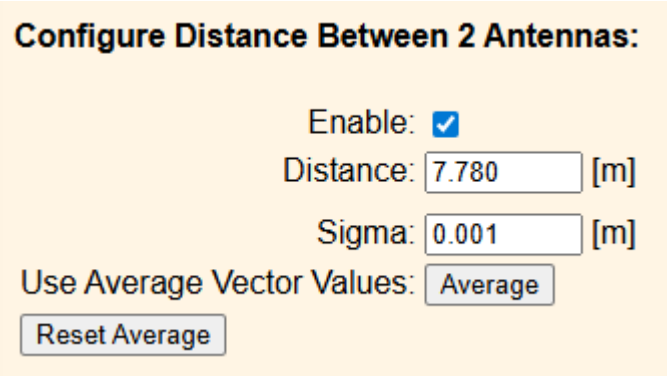
Spectrum analyzer precision

Improved frequency vector calculations for inverted spectra.

Platform and hardware support

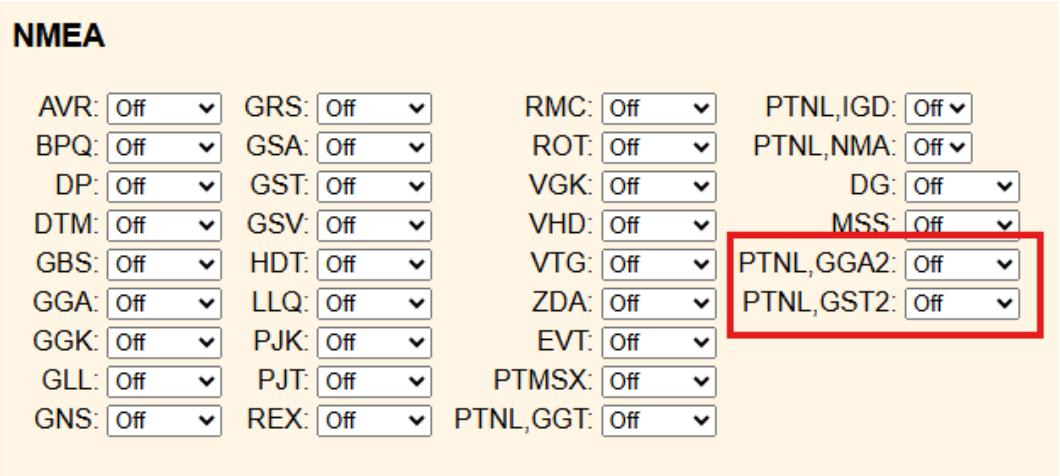
Constrained antenna separation for dual-antenna models

Added user-configurable constraint in the Vector configuration of the web interface to improve the internal vector (Heading) solution on a dual-antenna system when under canopy or other obstructions.



Dual-antenna position output

Added ASCII and binary position and quality outputs for the secondary (vector) antenna on dual-antenna systems.

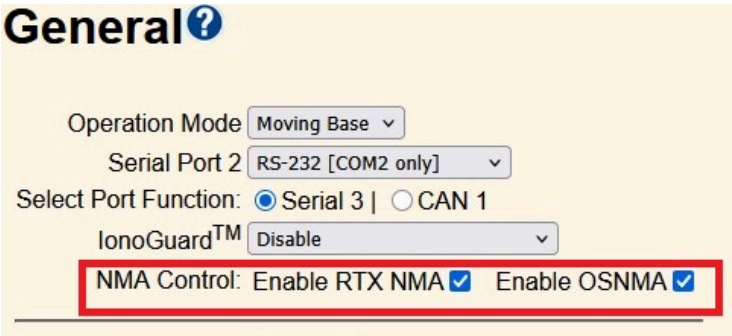


IMU and AINS performance

Improved IMU sampling synchronization and resolved AINS heading stability issues when static in challenging GNSS environments.

Product enhancements

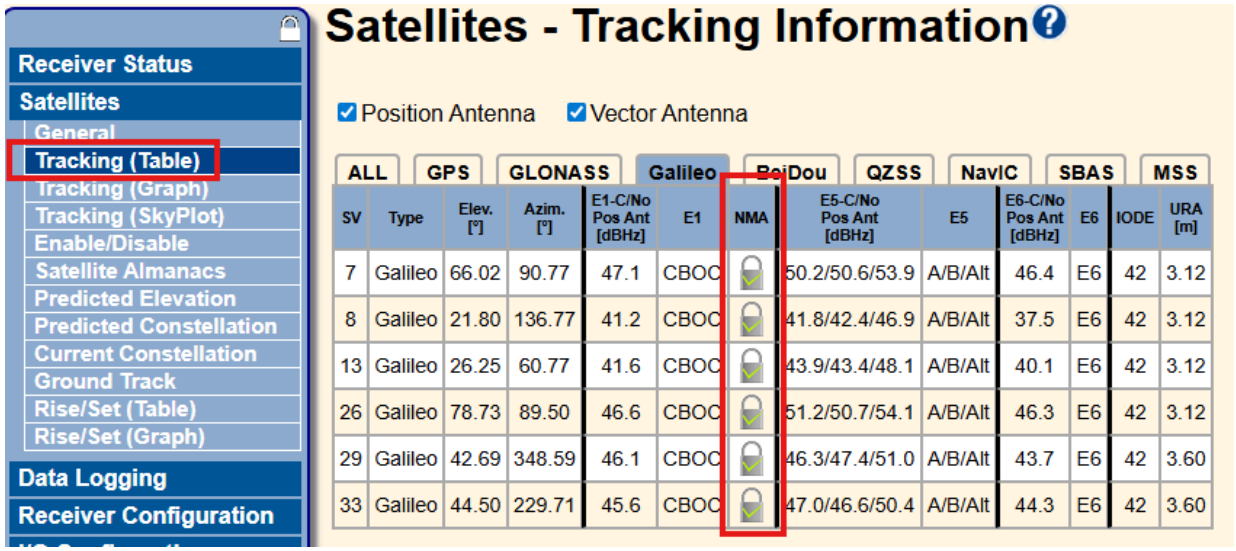
Trimble RTX NMA and Galileo OSNMA



The receiver web interface now lets you enable Trimble RTX NMA (Navigation Message Authentication) and Galileo OSNMA. Used together, these technologies mitigate spoofing attacks across the GPS, BeiDou, and Galileo satellite constellations.

Trimble ProPoint RTX-NMA provides broadcast ephemeris authentication via the Trimble RTX correction stream in real-time with support for GPS and BeiDou-3 satellites. A Trimble RTX® subscription is not required. ProPoint RTX-NMA complements Galileo OSNMA.

The NMA status of individual satellites can be viewed in the Satellite Tracking table.



Documentation updates

The latest documentation is available online at https://oemgnss.trimble.com/support/.