Release Notes

GNSS OEM Receivers

VERSION 6.43 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 6.40.

With this release, Trimble is making firmware 6.43 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]	6.43
BD940-INS[1]	6.43
BX940[1]	6.43
AX940 / AX940i [2]	6.43
BD992[1]	6.43
BD992-INS[1]	6.43
BX992[1]	6.43
BD9250 / BD9250s[2]	6.43

[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 6.40.

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 6.43. 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 6.43.

Note: Additional support information can be found at https://oemgnss.trimble.com/support/.

Upgrade procedure

There are two ways to load the new firmware:

- Use the WinFlash utility (BD9xx WinFlash V643.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 6.40 and 6.43

New cybersecurity enhancements

Trimble GNSS firmware version 6.43 includes several enhancements related to cybersecurity.

Trimble AX940i units, which contain a transmit WiFi/Bluetooth radio, have stricter controls when shipped from Trimble with firmware version 6.43.

The cybersecurity enhancements available in the 6.43 firmware are determined by the receiver type and whether the firmware was loaded at the Trimble factory or by the user. The table and descriptions below indicate the differences. An "n/a" indicates the feature described is not applicable after loading the 6.43 firmware.

Feature	AX940i units shipped from Trimble with 6.43	AX940i units upgraded to 6.43	All other GNSS OEM units shipped or upgraded to 6.43
Disabled FW installation via webUI	✓	n/a	n/a
HTTPS by default	✓	n/a	n/a

Standard TCP/IP ports removed	✓	n/a	n/a
Additional TCP/IP port controls	✓	✓	✓
Temporary failed password lockout	✓	✓	✓
Legacy Bluetooth pairing removed	✓	n/a	n/a
ZeronConf disabled by default	✓	n/a	n/a
WiFi AP password change	✓	✓	✓
SFTP by default	✓	✓	✓
Cybersecurity option	✓	n/a	n/a
Downgrade Limit	6.43	n/a	n/a

Install new firmware

By default, firmware installation via the web interface is disabled. Users can manually enable firmware installation by selecting the **Allow New Firmware To Be Installed** check box (**Firmware / Install**).

Allow New Firmware To Be Installed: ☑

Choose File | No file chosen

HTTP Secure

By default, HTTPS will be enabled and HTTP disabled. To access the receiver web interface when connected to the WiFi access point, enter '**https://"** in your web browser's address bar.

Note – You need to establish port forwarding in your internet router to access the receiver outside the local network. Remember to configure your HTTP/HTTPS ports accordingly. The default HTTPS port is 443.

You can enable HTTP at any time from the **HTTP configuration** menu.

Notes –

- Reverting to defaults automatically disables HTTP and reverts the HTTPS port back to the default 443.
- Trimble recommends enabling [BootMonitor HTTP].
- Trimble recommends leaving [High Security] enabled.

Standard TCP/IP ports removed

TCP/IP ports 5017, 5018, 28001, and 28002 have been removed. You will need to manually create new ports for TCP/IP connections.

Note – Existing TCP/IP port configurations will not be deleted or modified by installing Trimble GNSS firmware version 6.43.
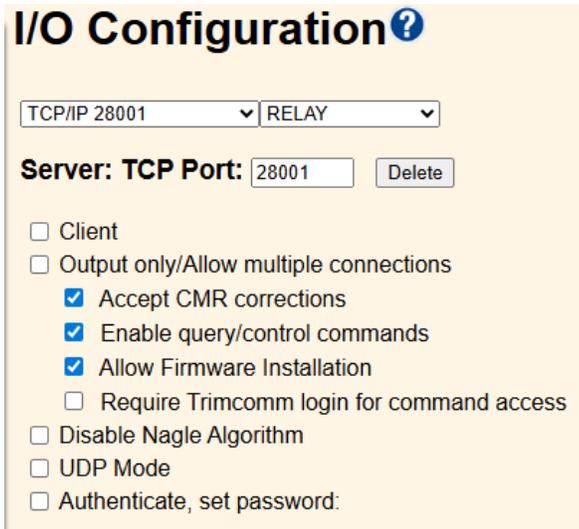
Additional TCP/IP port controls

If **Output only/Allow multiple connections** is turned off, then additional controls on TCP/IP are now available.

Temporary failed password lockout

After five failed login attempts within a ten-minute window, an account will be locked out of the receiver web interface for 10 minutes. The default is 'Any IP'. You can choose to turn this feature off or disable it for IP addresses within a private LAN/WAN by selecting the appropriate option from the dropdown list (**Security** / **Configuration**).

Bluetooth pairing

Bluetooth legacy pairing has been removed and the use of PIN codes is no longer supported. Simple Secure pairing (SSP) is now the default.

Zeroconf

Zeroconf service discovery (mDNS/DNS-SD) is now disabled by default (**Network Configuration** / **Zeroconf/UPnP**).

WiFi access point encryption

WPA2-AES is now the only available encryption type for the WiFi access point. Additionally, the default password (encryption key) has been changed from "acbcdeabcde" to the device's serial number. When configuring the receiver for the first time, you should change the WiFi access point password from the default to a more secure password.

Secure File Transfer Protocol

SFTP will be the default transfer mode for the FTP Push feature (**Data Logging** / **FTP Push**).
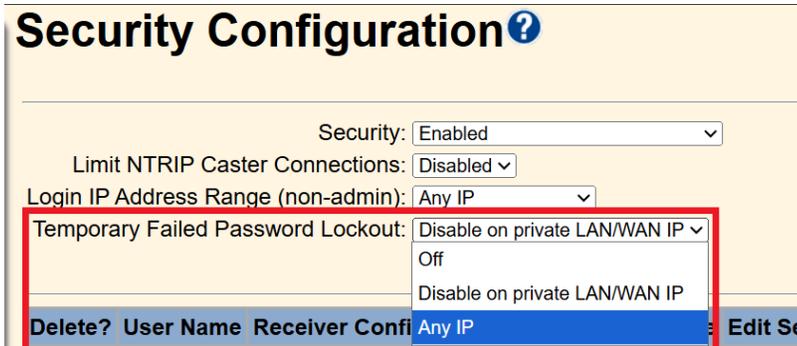
Cybersecurity option

Trimble AX940i receivers shipped with 6.43 from Trimble contain an option that activates an increased level of security in the firmware. This option is not visible in the list of options in the web interface.

Firmware downgrade limit

For Trimble AX940i receivers shipped with version 6.43, the firmware downgrade limit will be set to version 6.43 and you will not be able to downgrade to earlier versions. If you require the ability to downgrade from version 6.43, please contact Trimble GNSS OEM Support.

General improvements

- Added binary and ASCII output messages for IonoGuard diagnostics
- Added binaryand ASCII output messages for RTX Nav Message Authentication (RTX-NMA)
- Added ASCII output message (PTNL,GGT) for local geodetic coordinates
- Updated binary GSOF 62 message with the addition of position sigma information
- RTX-NMA functionality now available on BD9250/BD9250s receivers
- Fixed an issue with firmware 6.40 where the receiver configured as GPS L1 only would not track satellites
- Fixed an issue with the onboard Convert to Rinex utility for QZSS L6 observations
- Fixed an issue with the implementation of PDOP mask
- Fixed an issue where a delay in outputs was experienced when changing the positioning mode type
- Improvements to HAS positioning performance

New Trimble RTX Fast Coverage for the Republic of Korea (South Korea)

Trimble has announced a new regional area network providing CenterPoint® RTX Fast services for the Republic of Korea. In this area, regional atmospheric models to mitigate ionospheric and tropospheric biases are available from a dense network of Trimble RTX® reference stations via the internet on the RTXKR mount point. L-band users will continue to utilize the RTX Pacific-Asia (RTXPA) beam with global ionospheric models.

Documentation updates

The latest documentation can be found online at https://oemgnss.trimble.com/support/.