



Support Bulletin

Advanced Positioning

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TRIMBLE RESELLER CONFIDENTIAL

ENCRYPTION AND BEAM CHANGE FOR TRIMBLE RTX CORRECTION SERVICES - FIRMWARE UPDATE REQUIRED ON ALL TRIMBLE XFILL AND TRIMBLE RTX DEVICES IN NORTH AMERICA, EUROPE, MIDDLE EAST AND AFRICA (GEOSPATIAL)

Data integrity and authenticity are critical to ensure that our correction services are reliable and trustworthy. We take data security extremely seriously and leverage the most advanced technology available to protect our correction data streams. To this end, Trimble Advanced Positioning® will be updating Trimble RTX™ real-time correction streams to AES Encryption, providing further peace of mind for our users. Additionally, Trimble will be changing satellite beams that will accommodate RTX technology enhancements and network coverage expansion for years to come. The net result is even better service reliability and greater access to Trimble's ever-expanding CenterPoint® RTX Fast network. These changes will provide the end-user with increased reliability and access to faster convergence times in more areas.

All Trimble xFill® and Trimble RTX compatible devices must be updated to versions of firmware supporting the encrypted streams, as well as configured for the new satellite beams, in order to continue to use Trimble xFill and Trimble RTX correction services.

The newly encrypted correction streams will be deployed on new satellite beams, and the old satellite beams will be left on for several months to allow a smooth transition before they are disabled (see table below). This bulletin is being distributed prior to the turn on dates of the new satellite beams to give resellers and customers plenty of time to upgrade firmware. Firmware should be upgraded as soon as possible (ASAP) so that just a quick configuration change for the new beam frequencies is necessary when they become available; we will send out a Support Bulletin with the frequencies for the new beams when they are turned on. It is very important that all users update their equipment firmware ASAP, and then configure the devices to use the new beam during the period of overlap.

www.trimble.com/Positioning-Services

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When and where is this happening?

Refer to the following table for the schedule of beam changes. Note that the existing 3 beams in North America will be replaced by a single beam covering the same areas.

	New Beam (AES Encrypted) <i>*compatible firmware required*</i>				Old Beam		
Region	Beam Name	Frequency (MHz)	Baud Rate	Turn on Date ¹	Beam Name	Frequency (MHz)	Turn off Date ²
Europe, Middle East, and Africa	RTXEA	1545.49	2400	December 1, 2018	RTXAE	1539.8125	June 1, 2019
North America (Canada & USA)	RTXNA	TBD	2400	February 14, 2019	RTXWN RTXCN RTXEN	1557.8615 1557.8150 1557.8590	July 1, 2019

¹ Target Turn On Date - Dates will be confirmed and communicated 1 month prior to this date

² Beams will be turned off at 0:00 UTC

What devices are affected by this change?

All xFill and Trimble RTX compatible devices are affected by this change, devices are listed below.

- Trimble R10-2
- Trimble R10
- Trimble R9s
- Trimble NetR9 Geospatial
- Trimble R2
- Trimble R4s
- Spectra Precision SP60
- Spectra Precision SP80
- Trimble Geo 7X
- Trimble R1
- Spectra Precision SP90m

How can I work through this change?

To minimize any disruption from this change, it will be necessary to:

1. Update the customer's device firmware to the minimum version listed in the table below
2. Configure the customer's device to use the new beam

Firmware can be updated at any time before switching to the new beam. All firmware will continue to work with the old beams, allowing resellers to upgrade customer firmware at the first available opportunity, even before the new beams are available.

The beam configuration should be completed during the overlap period:

- For users in Europe, Middle East, and Africa, configure the use of the RTXEA beam ASAP after December 1, 2018 and before June 1, 2019.
- For users in North America, configure the use of the RTXNA beam ASAP after February 14, 2019 and before July 1, 2019.

Resellers have several options to assist their customers:

1. Instruct the customer to perform the firmware update, and then have the customer configure the beam *after* the beam turn on date.
2. Over a single visit to the customer, perform the firmware update and configure the beam *after* the beam turn on date.
3. Over a single visit to the customer, perform the firmware update *prior* to the beam turn on date, and then have the customer configure the beam *after* the beam turn on date.
4. Over two visits to the customer, perform the firmware update *prior* to the beam turn on date, and then configure the beam *after* the beam turn on date.

When will the frequencies for the new beams be available?

The frequencies will be available on the beam turn on date:

- For users in Europe, Middle East, and Africa, the frequency for RTXEA is now available
- For users in North America, the frequency for RTXNA will be available by February 14, 2018

The most up-to-date information can be found at <https://www.trimble.com/sat>.

What firmware version do I need?

Required firmware versions for all devices are listed below:

Device	Minimum Firmware Version
R10	5.20
R9s	5.20
NetR9 Geospatial	5.20
R2	5.20
R4s	3.33
SP60	3.30
SP80	3.30
Geo 7X	OS FW v6.7.18 (GNSS FW v4.50.3)
R1	5.37*

R10-2	5.34
SP90m	3.80**

**Firmware version 5.37 will be available by December 31, 2018*

***Firmware version 3.80 will be available by December 31, 2018*

How do I download and install the firmware?

Trimble R10-2, R10, R9s, and R2

Firmware for the R10-2, R10, R9s, and R2 can be downloaded and installed through Trimble Installation Manager.

1. Download and install Trimble Installation Manager: <http://www.trimble.com/installationmanager>
2. After the installation process is complete, launch Trimble Installation Manager, connect the receiver with the appropriate data cable to your computer and click on **Connect**.
3. Trimble Installation Manager will display receiver-specific information. Select the firmware version 5.20 or higher from the selection menu in the top right corner. Click on **Install** to start the installation process.

Contact TAP Correction Services Customer Care for any issues regarding the warranty period of these units

Trimble NetR9 Geospatial

For users whose firmware maintenance subscription has expired and cannot install version 5.20, a non-serialized option code will be made available which will upgrade the receiver firmware warranty date to meet the minimum requirement. Users will be able to install the option code through Trimble WinFlash or the receiver WebUI. The option code and installation instructions have been released via product bulletin on [Partners](#).

Trimble Geo 7X

Firmware for the Geo 7X can be downloaded from Trimble.com, copied to the Geo 7X, and then installed directly from the Geo 7X.

1. Go to <https://www.trimble.com/globalTRLTAB.asp?Nav=Collection-102357>, and select Operating System v6.7.18 or higher. Click on the FULL OS file to download, e.g. **Trimble Geo 7X Operating System 6.7.18 - FULL OS**.
2. Save the file to your desktop.
3. Copy the file to your Geo 7X handheld (or copy the file to an SD card, then insert the SD card into the handheld).
4. Navigate to the file on the Geo 7X handheld, then tap the file to run it. If prompted, select the option to install the operating system to the system storage (rather than to the SD card). The installation runs automatically. Once the operating system is installed, the handheld automatically resets.
5. If you chose to install a multi-language provisioned operating system image, when prompted, select your language of preference using the navigation and **Enter** keys.

Trimble R1

Firmware for the R1 can be downloaded from Trimble.com, and then installed through a PC.

1. Go to <https://www.trimble.com/globalTRL.asp?nav=Collection-113050>, and click on R1 Firmware version 5.37 or higher to download, e.g. **R1 Firmware version 5.37 (12 2018)**

2. Save the file to your desktop
3. Ensure the R1 is turned off
4. Connect the R1 to the PC using the USB cable
5. Open R1 Firmware version 5.37.exe from your desktop
6. Click **Yes**
7. Select the unit from the drop down list (it should be auto-detected)
8. Click **Next**
9. The application will replace the firmware on the device with the new image. This will take approximately 5 minutes, during which time the progress bar will move and at times the lights on the unit will flash
10. Once the process has finished click **Finish** to close the Firmware Update Wizard

Spectra Precision SP60

Firmware for the SP60 can be downloaded from SpectraPrecision.com, and then installed through Spectra Precision Loader.

1. Download and Install Spectra Precision Loader: Go to <http://www.spectraprecision.com/eng/sp60.html>, click on Support, then click to download Spectra Precision Loader, e.g. **Spectra Precision Loader v7.1.0**
2. From the same location, download firmware version 3.30 or higher, e.g. **SP60 v3.33 FW** - click on **FW Download**
3. Save the file to your desktop
4. Insert a fully charged battery inside the SP60, and turn the SP60 on
5. Connect the SP60 to the PC with the USB cable
6. Run the Spectra Precision Loader software, select the COM port corresponding to the USB cable and click **Upgrade**
7. Select the firmware file downloaded from step 2
8. Click **Update** and wait for the receiver upgrade process to complete

Contact TAP Correction Services Customer Care for any issues regarding the warranty period of the SP60 unit

Spectra Precision SP80

Firmware for the SP80 can be downloaded from SpectraPrecision.com, and then installed through Spectra Precision Loader.

1. Download and Install Spectra Precision Loader: Go to <http://www.spectraprecision.com/eng/sp80.html>, click on Support, then click to download Spectra Precision Loader, e.g. **Spectra Precision Loader v7.1.0**
2. From the same location, download firmware version 3.30 or higher, e.g. **SP80 v3.33 FW** - click on **FW Download**
3. Save the file to your desktop
4. Copy the file **sp80_upgrade_v3.33.tar** to a SD Card (the size must be at least 256 MB, and it is preferable to use an empty and recently formatted SD Card)
5. Switch off the SP80
6. Plug the SP80 into an external power source, and insert a fully charged battery
7. Insert the SD Card into the SP80
8. Press and hold the **Scroll** button and turn on the SP80; keep the button pressed for about 5 seconds
9. The upgrade process should take about 10 minutes

Contact TAP Correction Services Customer Care for any issues regarding the warranty period of the SP80 unit

Spectra Precision SP90m

Firmware for the SP90m can be downloaded from SpectraPrecision.com, and then installed through Spectra Precision Loader.

1. Download and Install Spectra Precision Loader: Go to <http://www.spectraprecision.com/eng/sp90m.html>, click on Support, then click to download Spectra Precision Loader, e.g. **Spectra Precision Loader v7.1.0**
2. From the same location, download firmware version 3.30 or higher, e.g. **SP90m v3.80 FW** - click on **FW Download**
3. Save the file to your desktop
4. Insert a fully charged battery inside the SP90m, and turn the SP90m on
5. Connect the SP90m to the PC with the USB cable
6. Run the Spectra Precision Loader software, select the COM port corresponding to the USB cable and click **Upgrade**
7. Select the firmware file downloaded from step 2
8. Click **Update** and wait for the receiver upgrade process to complete. Do not turn off the receiver while the upgrade is in progress

Trimble R10-2

All units in production will meet the minimum required firmware version.

How do I configure my device to use the new Trimble RTX satellite beam?

In general, from the Trimble RTX settings (or xFill settings) location, you will need to change the Trimble RTX satellite to Custom, and manually enter the frequency and baud rate for the new satellite beam.

For device/receiver-specific instructions, please review the Receiver Instructions tab at <http://trimble.com/sat>.

What if I use Trimble RTX corrections delivered via Internet (IP)?

Trimble RTX corrections delivered via Internet Protocol (IP) will be unaffected by this change at this time. Customers that are using Trimble RTX corrections via IP are not required to do anything to continue to use Trimble RTX.

As Trimble xFill is not available via IP, users will need to update firmware and configure for the new satellite beams to continue using the feature.

For more information

The latest information regarding Trimble RTX correction services satellite beam changes can be found at <https://www.trimble.com/sat>

For more information contact Correction Services Customer Care. The most up to date contact information is available at www.trimble.com/Positioning-Services/contact-us