Updates to L-Band Tracking Functionality on OEM6 and OEM7 Receivers

Background:

NovAtel receivers rely on L-Band tracking to receive precise point positioning (PPP) correction data for TerraStar Correction Services. The precise GNSS satellite clock and orbit PPP corrections are delivered by TerraStar to the end user's NovAtel receiver via L-band from geostationary satellites or "beams". NovAtel receivers access the TerraStar correction data by tracking and subsequently decoding the L-Band signal from a specific beam.

Issue Summary:

NovAtel receivers with firmware versions older than the versions listed in the table below will not track the TerraStar L-Band signal, if the L-Band signal frequency is changed to be outside the range of 1530-1545 MHz. In the event of an L-Band frequency change, NovAtel receivers with older firmware versions will not be able to continuously track the L-Band signal at the new frequency. Even if the user has manually configured the receiver to track the new frequency, or requested the receiver to automatically find the new frequency, the new frequency will not be tracked resulting in loss of TerraStar positioning.

Product Affected:

- All OEM6-based products, including SMART6L and ProPak6, capable of L-Band tracking with firmware versions older than those shown in the table below.
- All OEM7 receivers capable of L-Band tracking with firmware versions older than 7.200.

Mitigation:

The issue stated above has been fixed in the OEM6 and OEM7 firmware versions summarized below:

Receivers	NovAtel Product	Compatible Firmware
OEM6	Receiver Board: OEM628 Enclosures: FlexPak6, FlexPak6D Smart Antennas: SMART6-L	6.710 or later
	Receiver Board: OEM638 Enclosures: ProPak6	6.606[1]
	SPAN Enclosures	6.631 or later
OEM7	All Products	7.200 (7.02.00) or later

[1]Expected release Aug-2017

Any customer currently utilizing or considering TerraStar services are strongly recommended to ensure that their NovAtel receivers are loaded with the latest firmware versions to ensure seamless operation during any future L-Band frequency changes.

It is also recommended that TerraStar customers ensure their interface to the NovAtel receiver allows for manual L-Band beam assignment besides automatic assignment (see ASSIGNLBANDBEAM). Manual assignment should include Beam Frequency, and Baud rate in addition to the Beam ID.

For assistance and further information, please contact support@novatel.com