PIKSI MULTI FIRMWARE 2.2 RELEASE

February 7, 2019

Updates to Swift Navigation's Multi-Band, Multi-Constellation Centimeter-Accurate RTK GNSS Receivers

Overview

Swift Navigation is proud to release the latest firmware upgrade to the Piksi® Multi GNSS Receiver, its ruggedized version, Duro®, as well as Swift's Inertial solution, Duro Inertial. Firmware Version 2.2 introduces RTK corrections output in Radio Technical Commission for Maritime Services (RTCM) v3.1 and v3.2 formats and provides improved functionality. In the Getting Started Guide, refer to Section 7 entitled Piksi Multi - Upgrading Firmware for detailed instructions on how to upgrade your device. Firmware release binaries and product support documents are available at support.swiftnav.com.

Changes from Firmware Version 2.1

RTCMv3 Output—Firmware Version 2.2 now includes the capability for Swift receivers to provide corrections to third-party rovers. For each communication interface, users will be able select "RTCMv3 Out" as the communication mode with the following three options: "Legacy", "MSM5" (default) and "MSM4". The following messages are now supported in at least one of the RTCMv3 modes - 1004, 1012, MSM4, MSM5, 1006, 1008, 1033 and 1230. Please refer to Swift's RTCM Output support article for more information.

Improvements to the Starling™ Positioning Engine—GPS availability and accuracy have both improved in Firmware 2.2. RTK float has increased accuracy across all supported constellations, including GPS, GLONASS, BeiDou and Galileo.

GSV Message Available from Simulation Mode—NMEA message GPGSV is now output when the device is in simulation mode.

Minor Fixes and Improvements—Users should notice faster firmware update times, proper rounding of SBP UTC nanosecond and general improvements to device messaging.

Known Issues

- Upgrading to Firmware Version 2.2 requires that the Swift device be running Firmware Version 2.0 or 2.1. Users will be unable to upgrade to the 2.2 release from devices running Firmware Version 1.5 and prior. Users will first need to upgrade to the Firmware Version 2.0 firmware release before being able to upgrade past 2.0. Downgrading from firmware 2.2 to 1.5 or prior can be done directly without downgrading to firmware 2.0 first.
- Continued from Firmware Version 2.0—RTK performance has improved at all solution frequencies from prior releases. Solution frequencies at 10 Hz may use fewer satellites than solutions provided at slower rates. To maximize the number of satellites used in an RTK solution, it is recommended to operate at 5 Hz or below.
- Duro Inertial customers using Windows must upgrade the Swift Console to version 2.2 before attempting to upgrade firmware. Swift Console v2.1 may be unable to upgrade a Duro Inertial and will result in a pop-up window that indicates "Updating firmware is not supported when INS is active. Please change the 'output_mode' INS setting to 'Disabled' before updating firmware" no matter the state of the INS 'output_mode' setting. It is recommended to disable INS output during firmware update to avoid any misleading INS navigation solutions.

