



GNSS Firmware v5.4

Release Notes

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Supported Products

Systems

- Topcon NET-G5, HiPer HR, HiPer VR, MR-2, GR-5¹
- Sokkia GNR5, GRX3, GCX3

OEM

- Topcon B111, B111A, B125, B210

Accompanying Topcon Software and Firmware

- To access all new features and improved functionality available in GNSS Firmware 5.4 the following Topcon software versions (or later) are recommended:
 - TRU v3.6
 - MAGNET v7.0
- BLE Firmware v1.8 (HiPer VR, GRX3)

Features and Changes

- Introduction of StarPoint Services
 - StarPoint and StarPoint Pro Lband and NTRIP PPP service
 - SkyBridge service with base estimation
- New GNSS signal support; includes tracking, positioning², and support in correction and data messages
 - GPS L1C
 - NavIC³ L5
 - BDS-3 B2a and B1C
 - QZSS L6(D+E), MADOCA (PPP), CLAS (PPP)
 - GLONASS L3
- Advanced Tracking Features
 - Accelerated acquisition of Galileo, BeiDou and SBAS satellites
 - Improve satellite tracking in difficult conditions and in presence of moderate interference/jamming (manual calibration required)
 - Ability to limit maximum of tracked satellites for secondary antenna (B210 only)
 - Ability to manage Galileo tracking for secondary antenna (B210 only)
- Improvements to RTK, DION and SBAS DGNSS positioning including:
 - Better RTK accuracy for medium and long baselines
 - Noticeable increase in RTK availability in challenging conditions
 - 100 Hz positioning operations improved
 - New manual and automatic modes to reset base data
 - Support for Galileo, BeiDou, and IMU data in DION positioning
 - New mode to improve pass to pass performance for DION positioning

¹ GR-5 with Vanguard Technology.

² Positioning availability and modes supported is dependent on signal type

³ NavIC previously known as IRNSS

- DION smoothing now enabled by default for additional solution types
 - New code-with-carrier smoothing methods
 - Better performance in SBAS DGNSS mode
- New Advanced Positioning Features
 - RTK Advanced Multi-engine Platform (AMP)
 - Short-Term-Base functionality for construction and AG applications; based on existing auto-seed functions.
- Ability to adjust PPS pulse width and limit output of PPS until after positioning solution obtained
- Support of RTCM3 1029 message output for base receivers
- Addition of NMEA-0183 v4.11 support
- New mode to support automatic detection of incoming correction format
- Updated default state for *notvis* command and behavior with SBAS satellites.
- QLL improvements for receiver operation at higher vibration levels
- Improvements for file logging to SD cards with ability to use up to 32 GB capacity cards (OEM boards, GR-5, MR-2)
- Default state for automatic power on of receiver when power supply connected now disabled (HiPer VR, GRX3)
- File system improvements (HiPer VR, GRX3, HiPer HR, Net-G5, GNR5)
 - Updated web interface
 - File logging folders and quotas support with
 - FTP multi-push functionality
 - Added media file system checks
 - Enhanced multiple media support
 - Write access to SD and Internal storage media via USB Mass Storage (via command)
 - New checks during GNSS FW TFI file installation to confirm if microprogram updates required
- Defect fixes and stability improvements