

What's New in OEM7 FW 7.10.02

This is a general release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7700, OEM7600, OEM7720, OEM7500, PwrPak7, PwrPak7D, CPT7, CPT7700 and GT7800.

New Features

- New dispatch functionality (first available in [7.09.06](#))
- Galileo HAS positioning
- gPTP profile
- QZSS L1C/B tracking

Additional Firmware Updates

- Support NATRF2022 datum
- Updated datum transformation support
- Support for PwrPak7 enclosure variants that do not include Wi-Fi

Changes to Commands/Logs

Includes commands/log changes from [7.09.06](#).

Commands

New commands:

- PRNMAPPING
- DISPATCHSET

Logs

New logs:

- GALINAVRAWDATA
- DISPATCHMESSAGES, DISPATCHRECEIPT, DISPATCHSCHEDULE

Updated logs:

- VERSION
- TERRASTARINFO
- BDSBCNAV2EPHEMERIS

What's New in OEM7 FW 7.10.00

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New Features

- High Availability tracking to improve the acquisition, reacquisition, and tracking of GPS, Galileo, BeiDou and GLONASS signals in challenging conditions
- Decoding Galileo HAS corrections from the navigation data

Additional Firmware Updates

- Improved SPAN performance using better GNSS update acceptance in challenging environments
- Change default correlator spacing
- Automatic recovery (once back in normal velocity range) of receiver after velocity limit exceeded
- Increase max number of commands allowed in Profile command
- Replace all RANGECMP logs with RANGECMP5
- Add a stop option to the LUA command
- Added new LCOM ports for LUA
- Updates to default Wi-Fi and administrator passwords (minimum 12 characters)
- DGNSS is no longer available while PDP is active
- Improvements to idle time

Changes to Commands/Logs

Commands

New commands:

- NMEANUMERICSTATIONID

Updated logs:

- INSSEED

Logs

New logs:

- BDSBCNAV3RAWMESSAGE2
- GALHASRAWMT – Raw Galileo HAS corrections log
- PROFILERESPONSE

- RANGECMP5

Updated logs:

- INSATTX – some Extended Solution Status bits are now reserved

What's New in OEM7 FW 7.09.06

This is a general release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7500, OEM7600, OEM7700, OEM7720, CPT7, CPT7700, PwrPak7, PwrPak7D, SMART2, SMART7.

New Features

- New Dispatch functionality to deliver subscriptions and software model upgrades to the receiver supports new service types and seamless trials, upgrades and renewals. Both subscriptions and software model upgrades are delivered over L-band, NTRIP, Telematics or by command.

Notes:

Starting with FW 7.09.06, NovAtel receivers with 7.09 firmware use a new dispatch message system for correction service subscriptions. As a result, existing TerraStar subscriptions stored in the receiver will be removed when updating from earlier firmware versions. When this occurs, the subscription can be resent using one of the following methods:

- NovAtel eStore – Log in to the eStore, select My Products -> Receivers, enter the receiver serial number, and resend the subscription.
- NovAtel Application Suite (NAS) – Ensure NAS has internet access, connect to the receiver and press Subscription Resend in the Subscription Information tile.
- Machine to Machine (M2M) via TerraStar API – OEMs or integrators using the TerraStar API can resend activations programmatically.

These options ensure TerraStar service continuity after upgrading to FW 7.09.06 or later.

Additional Firmware Updates

- Support to ITRF2020 in the list of datum transformations.
- Improvements to SPAN handling ALIGN with antennas at different heights.
- Improved INS seeding to enhance initialization.
- New capability to enable communication tunneling via ICOM ports.
- New STOP parameter added to the LUA command

- RTKIONORESILIENCE default state set to NORMAL

Changes to Commands/Logs

Commands

New commands:

- DISPATCHSET

Changed commands:

- AUTH
- INSSEED
- MODEL

Logs

New logs:

- DISPATCHMESSAGES
- DISPATCHRECEIPT
- DISPATCHSCHEDULE

Changed logs:

- TERRASTARINFO
- VERSION

What's New in OEM7 FW 7.09.05R2

This is a general maintenance release available on these OEM7 platforms (and associated variants): PwrPak7 and SMART7.

Additional Firmware Updates

- Updates to comply with Radio Equipment Directive cybersecurity requirements in EN 18031
- Updates to default Wi-Fi and administrator passwords (minimum 12 characters)

Logs

New logs:

- CYBERSECEVENTS – record of cybersecurity events

What's New in OEM7 FW 7.09.05

This is an Agriculture market-specific release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7700, OEM7500, PwrPak7, SMART2, and SMART7.

New Features

- Added RTKIONORESILIENCE command, which adds tuning modes to optimize RTK performance.
- Added PGN 127251 CAN message (Vessel Rate of Turn) to the list of supported NMEA2000 messages. This message complements PGN 127250 message (Vessel Heading).
 - Note: PGN 127250 and PGN 127251 require active ALIGN functionality to provide heading and heading rate information.
- Upgrades to GENERATERTKCORRECTIONS command
 - Addition of RTCM 1230 message to the list of RTK corrections messages generated for the option RTCMv3.

Additional Firmware Updates

- Improved SPAN + ALIGN resilience in degraded GNSS environments
- CAN TP now works with the receiver CAN port configured in both J1939 and ISO11783 protocols.

What's New in OEM7 FW 7.09.03

This is an Agriculture market-specific release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7700, OEM7600, OEM7720, OEM7500, PwrPak7, PwrPak7D, SMART2, and SMART7.

New Features

- Increased CCOM Ports
 - CCOM Ports increased from 6 to 9
- ITRF2020 Support
 - Datum in use for TerraStar Services has changed from ITRF2014 to ITRF2020
 - Support transformation from ITRF2014 to ITRF2020

Additional Firmware Updates

- Improved BDS tracking

What's New in OEM7 FW 7.09.02R2

This is a general maintenance release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7700, OEM7600, OEM7720, OEM7500, PwrPak7, PwrPak7D, CPT7 and CPT7700.

Additional Firmware Updates

- Fix issue with unexpected resets

What's New in OEM7 FW 7.09.02R1

This is a general maintenance release available on these OEM7 platforms (and associated variants): PwrPak7, PwrPak7D, CPT7 and CPT7700.

Additional Firmware Updates

- Updates to comply with Radio Equipment Directive cybersecurity requirements in EN 18031
- Updates to default Wi-Fi and administrator passwords (minimum 12 characters)

Logs

New logs:

- CYBERSECEVENTS – record of cybersecurity events

What's New in OEM7 FW 7.09.02

This is a general release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7700, OEM7600, OEM7720, OEM7500, PwrPak7, PwrPak7D, CPT7, CPT7700 and GT7800.

Additional Firmware Updates

- INS azimuth standard deviation reporting adjustments for non-Agriculture profiles

Notes:

This firmware otherwise has the same features and functionality as 7.09.01 but is released for all other markets and with support for additional platforms.

What's New in OEM7 FW 7.09.01

This is an Agriculture market-specific release available on these OEM7 platforms (and associated variants): OEM719, OEM729, OEM7700, OEM7600, OEM7720, OEM7500, PwrPak7, PwrPak7D, SMART2, and SMART7. This release also includes [changes first introduced in 7.09.00](#).

New Features

- PPP positioning improvements in environments affected by ionospheric scintillation to improve availability and accuracy of positioning:
 - Improved ionospheric modeling
 - Improved integrity algorithms

Additional Firmware Updates

- PPP seeding improvements

Changes to Commands/Logs

Logs

New logs:

- PGN127250 Vessel Heading – support for ALIGN Heading solution
- SYNCRELINSPVACMP

Updated logs:

- PGN129029 GNSS Position - height reference updated to ellipsoidal
- LOG – ONALL trigger added

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New Features

- Precision Time Protocol (PTP)

Additional Firmware Updates

- Improved time to first fix
- Improved PPP under scintillation conditions

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- Improvements to SPAN initialization and performance
 - Secondary SPAN solution for improved reliability in challenging conditions
 - Support for the μ IMU-IC with UART interface
 - Export velocity limit increased to 600m/s
 - Use of BeiDou B2b in RTK positioning
 - New and improved Doppler Velocity filter
 - Maximum number of logs increased to 128
 - Updates to the INS position and velocity standard deviation reporting when a USER offset is applied

Changes to Commands/Logs

Commands

New commands:

- SETTIMESOURCE
- SET4BITSBASPREAMBLE
- USERCANCLOSE, USERCANOPEN, USERCANWRITE
- PTPMODE, PTPPROFILE, PTPTIMESCALE

Logs

New logs:

- RXCONFIGUSER
- PTPDELTATIME
- USERCANDATA, USERCANSTATUS