KONGSBERG

APOS 6
Software Release Note

User description on new functions and improvements for APOS 6 software.
Last software version is APOS 6.15.0 – 2nd Nov 2026

Release Description

APOS Release 6.15.0 – 02 Nov 2026

New functions

- Added AHRS Alignment functionality for improved operation with tilted transducers. Requires HiPAP version 4.8.8 or newer.
- HAIN Subsea 7000: Added measured DVL altitude to the PSIMHSD telegram
- HAIN Reference: Added GGA/GLL, GST and VTG NEMA output for HAIN.
- HAIN Reference: Added BCD output for HAIN when aided by both GNSS and DVL.
- HAIN Reference: Added option to suspend sending GPS position to HAIN Reference.
- Modem Control: Added telemetry heartbeat functionality for external clients.
- HUGIN: Added support for Underwater Recovery Docking

Improvements

- Fixed memory leaks when using HAIN Reference
- HAIN Subsea 7000: Improved integration, including GNSS handling, DVL standby control, positioning aid accuracy and status presentation.
- HAIN Subsea 7000: Position is now displayed with heading indication in the map.
- Reduced APOS startup time by approximately 20 seconds.
- Fixed occasional application crashes when calculating TD Alignment, Box-in and IMU Alignment.

Known Issues

- APOS Survey: When using APOS Survey with Vessel APOS versions 6.10.0 through 6.14.0.x, Vessel APOS must be upgraded to version 6.15.0 or later to ensure correct operation of external interfaces.
- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect.
- APOS FSK Not Supported for HiPAP 602
- APOS Training mode not supported in LF mode.

History

APOS Release 6.12.0 – 09 Oct 2025

New functions

- Improved startup time

Improvements

-

Known Issues

- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect.

APOS Release 6.11.3 – 03 Jan 2025

New functions

-

Improvements

- Fixed bug with TpChannel M907 and M909 not existing
- Fix bug with ServiceTimeout happening every 5 seconds due to default time to check against was in the past (01.01.2025)

Known Issues

- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect.

APOS Release 6.11.2 – 25 Sept 2024

New functions

- HAIN: Synchronize time upon activating positioning
- Applies to HAIN 3.x and 9.x, not HAIN Subsea 7000

Improvements

- Fix Gyro/Attitude ip address input so we can have addresses with 0
- HAIN: BCD output rejected by DP because the "BCD Conversion error" bit to be set. Heading was in the range [-180,180], changed to [0,360]

Known Issues

- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect.

APOS Release 6.11.1 – 8 July 2024

New functions

- Implemented mapping of cNode Ultra channels to B channels in Output.

Known Issues

- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect.

APOS Release 6.11.0 – 8 May 2024

New functions

- Added retry functionality for cNODE Ultra Telemetry
- Added functionality to check previously read battery capacity for Ultra transponders.
- Added new Alkaline-Ultra battery type.
- HAIN Subsea 7000: DVL standby, will case DVL to be paused.

Improvements

- TTC: Fix using LF channels in Modem Config.
- TTC: Disable all configuration of Equipment and Equipment Type without a valid config dongle.
- TTC: Fixed bug where serial number check in download new configuration to cNODE failed when cNODE was in sleep. This could cause an unwanted update of serial number.
- TTC: Implement functionality to always have the download dialog stay on top.
- Fixed HAIN Reference Multi SSBL-mode.
- HAIN Subsea 7000: dynamically adjusting aiding accuracy depending on HAIN navigation status.
- HAIN Subsea 7000: GUI adjustments.
- HAIN Subsea 7000: fixed sound velocity used in range measurements. Now using CTD sensor connected to HAIN without having to specify this in APOS.
- Dual HiPAP: fixed bug where data was handled by the wrong positioning object.

Known Issues

- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect.
- The APOS report shows wrong cNODE serial number if an old transducer alignment file is opened.

APOS Release 6.10.1 - 14 Sept 2023

New functions

- NA

Improvements

- Fix bug in OSKTimeSynch where the history text file was initially created as a directory.
- Fix bug related to transponder fixed depth calculations.
- Fix bug in the calculation of transducer position (introduced in 6.10.0).
- Corrected GUI labels ("Depth" to "Down")
- Fixed the interpretation of PSIMDR and PSIMDRM (draft) status fields

Known Issues

- Setting up Local Gyro/VRS in APOS Survey sometimes requires ASI to be restarted and another click on the OK button in the Attitude configuration dialog before changes are in effect

APOS Release 6.10.0 - 26. June 2023

New functions

- Added functionality to OSKTimeSynch for Priority and Master status. System clock is set when APOS is Master.
- Added PSIMRAM sentence description to NMEA help.
- Implemented PSIMTDC output sentence.
- Implemented support for PSIMDRM draft input sentence.
- Implemented draft offset coordinates (used for draft roll/pitch compensation) in Vessel Properties dialog.
- Implemented support for TSS1 attitude input in ASI for use in APOS Survey.
- Changed label for "Below" to "Down" in the Transducer offset dialog.
- Added help description for Position Fix.
- Added numerical data display in the boxin function.
- Adding possibility to manually exclude individual data points from the boxin calculations.
- Adding HAIN Subsea 7000 sensor data to APOS trend view.
- Generally improving HAIN Subsea 7000 status view / sensor display

Improvements

- Fixed timestamp issue in Auto Range measurements. When operation took less than 3s the time for all but the first range set was in the future.
- Fixed bug in TideManager that caused APOS to hang if the GPS input was gone for more than approximately 10 minutes and then came back online.
- Fixed bug where the HST sentence was not sent if the OS was not Master.
- Fixed bug in the Telemetry Test dialog that caused APOS to crash on closing the dialog.
- Fixed bug where APOS was using AHRS values calculated by HAIN to estimate depth aid for HAIN. This might cause an unfortunated feedback loop.
- Fixed bug where the use of HiPAP 600 was not properly supported by APOS Survey / ASI.
- Fixed bug related to sending acoustic ranges to HAIN Subsea 7000

APOS Release 6.9.0 - 12. May 2022

New functions

- Support for Goliat View.
- Sound velocity data sent to HAIN Subsea 7000.
- cPAP ranges sent to HAIN Subsea 7000.
- Sensor data display for HAIN Subsea 7000.
- Added HAIN Subsea 7000 as available source for boxin.
- Depth input from External Vessels/vehicle to be diplayed.
- cNODE Ultra as licensed option.
- Support for Release and Battery Status telemetry commands in cNODE Ultra transponders.
- Show the External Depth value used for calculation in Numeric View instead of the actual sensor value.
- Disable LBL option on NEL system

Improvements

- Use the External Depth name set by the user in Numeric View.
- Show External Depth sensor values in Numeric View for transponder objects.
- Fixed issus involving saving/loading boxin log files containing data from depth/temperature sensors.
- Fixed issues generating id's for alarms where all alarms with the same text length got the same id.
- Fixed Draugen FSL view for APOS 6
- TTC version 2.1.4: Fix bug where SlantRange from MiniS nav reply to show correct value.
- Fixed bug where SurveyMode was set to False in SysConf after using the F4 menu to add transponders on non-NEL systems

APOS Release 6.8.3 - 21. June. 2021

New functions

- Support for Linda Beacon – 45kHz
- Output of HAIN positions in PSIMSSB
- Added sensor status (GNSS and Sound velocity) in HAIN Status view for HAIN Subsea 7000

Improvements

- Updated property page for transponder channels A12-A57.
- Corrected tide correction in box-in function

APOS Release 6.8.2 - 24. March. 2021

New functions

- Added support for TTS1 attitude format.
- Changed max sound velocity to 1650.
- Switched to 32bit version of license server

Improvements

- ACS500: Adjusting environmental sensor alarm settings.
- ACS500: Fixing failure to write replace SCU pdf report

APOS Release 6.8.1 - 27. Nov. 2021

New functions

- Added support for APOS NEL licensing versions.
- Added support for transducers TD180_MICRO, TD180F, TD40VF, TD30VF and TD30HF to both WinHPR and TTC.
- Changed debug printouts in ModemCtrl from raw data to more descriptive text.
- Added "Delete mission data" command for HAIN Subsea 7K

Improvements

- Fixed geodesy checker bug where target and source datum were swapped

APOS Release 6.7.0 - 24. March. 2020

New functions

- Added option to correct for hull unit bending due to water speed.
- Added option to calculate acoustic center offset for transceivers.
- Added support for HiPAP and APOS system report for pdf for format.
- LBL Array number is available in the PSIMLBA string
- Added support HAIN Subsea 7000 type.
- Define transceivers dialog now requires service logon instead of unique password

Improvements

- Cleanup display of calculated angle scale in TD alignment.
- Added support for cNODE Micro battery type in WinHPR and TTC.
- APOS will correctly use full screen when in full screen mode.
- Ensure the correct sounds velocity is sent to HiPAP.
- Emergency shutdown of ASI to now deactivates transponders (Win10).
- Fixed issue diff inclo offset for inclo tp is used and faulty value could be presented

APOS Release 6.6 - 05. April. 2019

New functions

- Add button for About dialog on the Acoustic page of TTC control.
- Added support for cNODE Micro battery type in WinHPR and TTC.
- Added cNODE type selection for Micro and MiniS in the new transponder dialog.
- Add button for About dialog on the Acoustic page of TTC control.
- Updated TTC to version 2.0.3. Software Loader now uses the same version as the TTC control.
- Only update Tide values in sysconf when something actually changed.
- Changed MultiLBL failover functionality. Don't switch trc over to the master, but change which is master.
- OSK TimeSynch priority is now only set from IoServer and only if the time sentence input is present.
- Changed default password in SysConfEdit and WinHPR options dialog.
- Added new licensed option control

Improvements

- Tested for Win10
- Fixed issue with local transceivers not being removed correctly when synchronizing ASI on the survey side.
- Fixed ASI status lights on local transceivers to show status for local sensor when in use. Previously the status for the vessel sensor was always displayed even when local sensors were in use.
- Fixed TTC bug that caused software download to cPAP to fail.
- Remove sensor value from Numeric View when disabling a sensor on an active LBL transponder.
- Remove LBL information from Numeric View when deactivating an ROV position object.
- Fixed issue with ROV Depth not being displayed in Numeric View.
- Added position updates for Riser Monitor objects to Numeric View.
- Fixed issue with Sensor values not being shown in Polar mode in Numeric view when activated and Polar was selected.

- Fixed issue with TPRange pos objects not being properly deleted on Slave OS.
- Maintain Gyro/VRS selection for specific transceivers after a "File New" operation.
- Fixed conversion from incl x/y to and from tilt/azimuth.
- Added Internal Tilt options to the change transponder dialog in FSK mode.
- Fixed crash when tpconf window was open as transponders where deleted on a remote computer.
- Fixed bug where setting Position Source from the SparseLBL dialog did not properly subscribe to position updates from the source.
- Removed generation of VTG sentence from vessel heading to Seatex MGC.
- Fix so TdAlignment, PosFix and BoxIn save images in correct folder according to Project settings.
- Set correct error ellipse scale in LBL calibration report.
- Fixed bug in APOS report where Datasonics was reported as Wadatsumi.
- Improved issue with opening Hain Properties with no connection to the Hain computer. APOS would freeze for several seconds.
- Added missing HainControllerDefault.exe and CADImage.dll files. Opening CAD dialog would crash APOS when CADImage.dll was missing.
- Fixed crash when opening boxin utility.
- Fixed Riser Monitor NMEA output to include inclination instead of time values when inclo sensor is active.
- SoundVelocity will now use project folder to save/open xml file.
- Fixed issue where LBL positioning would stop when changing transducer even though the positioning object was active.
- Fixed an issue where td offset changes was not updated in the active graphic views on a Slave OS.
- Enabled external VRS interface for cPap transceiver.
- Fixed so that cNODE Micro and MiniS transponders show in the list of available transponders for FastTrack

Release History

APOS Release 6.5 - 01. Nov. 2018

New functions

- Added functionality to create transponders with L and M channels in Remote Control Positioning.
- Cleaned up layout of sensor options in transponder properties dialog.

Improvements

- Fixed SparseLBL lever arm properties sync between OS's.
- Prevent crash when using Interval plots in Trend View.
- Could not start the application if it was closed with more than one Trend View.
- Inclination and Temperature trends added three equal plots when the view was closed and openend again.
- When removing MultiUser LBL and LBL TP pos objects, the LBL status was not removed from Numeric View.
- Fix LBL wizard bug where LIC was not correct with extended channels.
- Add functionality to open saved TD alignment files from transponders with extended channels.

- Fix swapped Strain and Multi-SvPI sensors in new transponders dialog. When selecting Strain you got Multi-SvPI and vice versa.
- Transceiver status indicated standby instead of offline when HiPAP software was stopped.
- Fixed crash when opening UTM context menu after setting a Cirle marker and Measure View was open.
- Fixed IoServer status colors with timesynch. The status was grey instead of yellow when the timesynch sentence was missing.
- Fixed switched column heading for MultiUser Master and TAD in LBL position setup dialog page.
- Fixed wrong calculation of MGC Pitch values when TP Sensor filter option was enabled in sysconf.
- Fixed software deadlock when deleting transponder and not making a selection in the following dialog for at least 30 seconds.
- Remove Altimeter option from tp properties dialog when it is not enabled in sysconf.
- Remove Attitude, Inclo and Diff.Inclo sensor options from tp config dialog when they are not enabled in sysconf.
- Pos objects added from the LBL Positioning dialog without being activated was not added to the toolbar on the Master OS.
- Subsea Transceiver status was red and said offline when everything was working.