

### SW release note for HAIN

#### Release 3.6.4

Requires APOS 4.19.0 or newer.

#### Improvements

- GP was restarted, even when non-GP parameters were changed.

#### Release 3.6.3

Requires APOS 4.19.0 or newer.

#### Improvements

- Added possibility to use MDL 2 orientation output from HAIN.

#### Release 3.6.2

Requires APOS 4.19.0 or newer.

#### Improvements

- Improved startup of DNet2.

#### Release 3.6.1

Requires APOS 4.19.0 or newer.

#### Improvements

- Fixed a problem with HG9900 UDP.

#### Release 3.6.0

Requires APOS 4.19.0 or newer.

#### New functions

- NMEA THS output from HAIN.

#### Release 3.5.4

Requires APOS 4.19.0 or newer.

#### New functions

- Runs on Windows 7.

- Added support for the Seatex MGC IMU (Serial and UDP).
- Added support for HG9900 UDP in Hain Reference.

#### Improvements

- When creating an HAIN object in APOS for an HAIN that previously was configured, it is no longer necessary to make a change in the HAIN Properties dialog before clicking OK.
- HAIN Properties sometimes indicated corrupt files when HAIN and APOS were installed on the same computer.

#### Release 3.5.3

Requires APOS 4.19.0.

#### New functions

- Added possibility of specifying individual accelerometer biases in GP.ini. To be used when z-accelerometer bias repeatedly reaches bias limit.
- Added HainController stores not used Transponder lever arms.

#### Improvements

- HainController crashed when opening file with illegal IP-address.
- HainController revert to default values for sensor types if illegal values are read.

#### Release 3.5.2

Requires APOS 4.19.0.

#### Improvements

- UDPNavDataOut output velocities in wrong frame.
- If conversion type was UNESCO it showed up as Simple when loading HainController.

- In HainPP APOS age is now allowed to be older than Log File age. If APOS age is older it will stop HainPP communication from HAIN to APOS.

### **Release 3.5.1**

Requires APOS 4.19.0.

#### **Improvements**

- There was an issue related to HAIN/APOS tx/rx ports when setting up HAIN initially. This is now fixed.
- Added HainController About box.

### **Release 3.5.0**

Requires APOS 4.19.0.

#### **Improvements**

- HainController sends vital APOS parameters as a multicast message.
- HainController is now independent of WinCom2U2010.dll.
- APOS specific output settings removed from HainController.
- Fixed ImuRec.exe crash when using HG9900.

### **Release 3.4.0**

Requires APOS 4.19.0.

#### **New functions**

- Added HAIN dynamic simulator, that allows simulation of moving vehicle.

### **Release 3.3.0**

Requires APOS 4.19.0.

#### **Improvements**

- Added HAIN Controller application. HAIN can now be configured directly from the HAIN computer.

### **Release 3.2.1**

Requires APOS 4.19.0.

#### **Improvements**

- Stability improvements HainPP.
- Improvements in processing efficiency of HainPP.
- Extra user added to HainsFTP. It is used for log file access.
- Added possibility of setting lower max KF update rate.

### **Release 3.2.0**

Requires APOS 4.19.0.

#### **New functions**

- Added normalized innovation outlier filter. It will remove outliers on all aiding sensors, if enabled in ini-files.
- Added option controlled functionality. HAIN programs require a valid Options.opt file present in directory they exist.
- Added UNESCO pressure to depth conversion.
- Added export of HainPP attitude.

#### **Improvements**

- HainPP export files are of 5 minutes intervals instead of one big file.
- HAIN Instruction manuals have been updated.