Service Bulletin No. 0005 Rev.B

Subject

New Veronte Autopilot 1x firmware, release 6.12.112-GA.

Compliance Consideration

Embention considers this Service Bulletin as mandatory.

Models affected

All Veronte Autopilots running any firmware release in 6.12 and prior to revision 6.12.112.

Effectivity date

05/06/2024

Compliance time

This Service Bulletin is recommended at the next scheduled maintenance event.

Purpose

Veronte Autopilot 1x firmware update to release 6.12.112-GA.

Release Notes: 6.12.92 → 6.12.112

Added:

- PDI errors for maximum number of logs fields reached: pdi_event_log (ID 770), pdi_onboard_log (ID 771) and pdi_fast_log (ID 772).
- SIL provided example with a new block to simulate VectorNAV navigation messages.

Changed:

- Signal splitter behavior. If one of the consumers is not available, the available one will still consume the input signal.
- CPU temperature bit is now true when temperature is below maximum allowed temperature.
- Now the guidance is not restarted by default when changing the autopilot mode from "Manual" to "Auto", or when changing the selected autopilot in a 4x configuration. **WARNING**: To keep the correct behavior, the block configuration should be set so that the guidance block is not executed when the autopilot is in "Manual" mode. This way, when the autopilot swtiches to "Auto" mode and the guidance block is executed again, the guidance will be restored as usual.
- RM3100 magnetometer is now being calibrated using the board temperature to interpolate the calibration parameters.

Fixed:

- ADS-B variables are not anymore user-writable.
- Position set and yaw set commands (IDs 201 and 202) are now only accepted if the UAV is in the initial phase.
- High priority thread CPU ratio performance to avoid a different behavior depending on the hardware version.
- DFS2 driver is now committing reliable values onto its BIT.
- Moving grid maps (used for geoid and magnetic field) are no longer reset due to negative increments of the grid position in the longitude direction.
- AGL calibration is now applied when there is no SRTM data available.
- Small increments in position close to the south pole are now computed properly.
- HIL sensor is now sending only IMU messages at high frequency to reduce CIO workload.
- RPM are now computed properly.
- 1xVeronte address is now stored also in the case of memory formatting error.
- Position and yaw commands are now rejected in PDI mode to avoid generating a System error.
- Serial over CAN can now work simultaneously on both CAN channels with Input/Output filters.
- CAN termination resistors are now set to HIGH by default on hardware versions higher than:
  - Veronte Autopilots: 1x - w/o DAA 4.8 --> P006982 - B001037

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- ○ Veronte Autopilots: 1x - Remote ID --> P006142 - B001039
- ○ Veronte Autopilots: 1x - ADS-B --> P006143 - B001040
- ○ Veronte Autopilot BCS 4.8 --> P006417 B001053
- ○ Veronte Autopilots: 4x - w/o DAA 1.8 --> P006984 - B000905
- ○ Veronte Autopilots: 4x - Remote ID 1.8 --> P006146 B001055
- ○ Veronte Autopilots: 4x - ADS-B 1.8 --> P006147 - B000335

Instructions

Firmware update instructions can be found at https://manuals.embention.com/veronte-updater/en/latest/index.html

Material required

- Veronte Autopilot 1x firmware release 6.12.112-GA, available at the Joint Collaboration Framework.
- Veronte Tools last package, available at the Joint Collaboration Framework.

   Note

   Go to https://manuals.embention.com/joint-collaboration-framework/en/0.1/index.html for help finding the latest software versions at the Joint Collaboration Framework.