sbgECom Library

Change-log v2.1.142.stable

1. Summary

This software release adds support to new ELLIPSE Series 3. This release also removes deprecated code and improves overall code quality.

The C API has thus changed slightly so you will probably have to upgrade your code.

2. Import highlights from this release

- Support for new ELLIPSE Series 3
- Added new output logs
- Removed deprecated commands and code
- Improve code readability

3. Upgrade Procedure

The latest sbgECom Library version comes with an SDK release. You can download the latest SDK using the SBG Systems support center web area.

4. Changes for release 2.1.142-stable

4.1. New Feature

- [SBGECOM-229] - Now ELLIPSE-N and D can accept RTCM corrections over Port A

4.2. Improvement

- [SBGECOM-220] - Updated license to MIT

5. Changes for release 2.0.4536-stable

5.1. New Feature

- [SBGECOM-180] - Added NMEA GGK message output

SBG SYSTEMS

- [SBGECOM-191] - Added in SBG_ECOM_LOG_GPS#_POS status report for all GNSS constellations
- [SBGECOM-194] - Add specific SBG_ECOM_THIRD_PARTY_ADA_01 output log
- [SBGECOM-208] - Added a README.md file with migration guidelines
- [SBGECOM-216] - Add Cobham SBG_ECOM_THIRD_PARTY_AT_ITINS output log support
- [SBGECOM-219] - Added CAN dbc and BusMaster definitions in sbgECom project

5.2. Improvement

- [SBGECOM-188] - Updated SBG_ECAN_MSG_ODO_VELOCITY from float field to integers
- [SBGECOM-196] - Added status field for SBG_ECAN_MSG_AUTO_TRACK_SLIP_CURV (0x220) message
- [SBGECOM-199] - Simplified SbgEComGnssModelsStdIds enum for ELLIPSE-N and ELLIPSE-D
- [SBGECOM-204] - Renamed SBG_ECOM_GNSS_MODEL_UBLOX_GPS_GLONASS to SBG_ECOM_GNSS_MODEL_INTERNAL
- [SBGECOM-207] - Reworked motion profile / aiding equipments errors models set/get API (removed SbgEComModelInfo)
- [SBGECOM-209] - Reworked and simplified GNSS model ids to comply with sbgECom 2.x
- [SBGECOM-212] - Added in SBG_ECOM_CMD_FEATURES gnss firmware version field

5.3. Removed feature

- [SBGECOM-200] - Removed SBG_ECOM_GNSS_MODEL_UBLOX_HIGH_DYNAMICS, use SBG_ECOM_GNSS_MODEL_INTERNAL instead
- [SBGECOM-201] - Removed SBG_ECOM_GNSS_MODEL_ELLIPSE_D_INTERNAL, use SBG_ECOM_GNSS_MODEL_INTERNAL instead
- [SBGECOM-202] - Removed SBG_ECOM_GNSS_MODEL_UBLOX_HIGH_SPEED, use SBG_ECOM_GNSS_MODEL_INTERNAL instead
- [SBGECOM-203] - Removed SBG_ECOM_GNSS_MODEL_UBLOX_LOW_SPEED, use SBG_ECOM_GNSS_MODEL_INTERNAL instead
- [SBGECOM-206] - Removed deprecated methods sbgEComCmdGnss1GetLeverArmAlignment & sbgEComCmdGnss1SetLeverArmAlignment
- [SBGECOM-211] - Removed legacy IG-500 protocol support

6. Changes for release 1.11.920-stable

6.1. New Feature

- [SBGECOM-123] - Implement DVL aiding configuration SBG_ECOM_CMD_DVL_####
- [SBGECOM-126] - Implement AirData aiding configuration SBG_ECOM_CMD_AIRDATA_####
- [SBGECOM-135] - Add configuration commands for CAN odometer support
- [SBGECOM-136] - Add sbgECom Log Event Output useful for virtual odometer
- [SBGECOM-137] - Add SBG_ECOM_LOG_DEPTH / SBG_ECAN_MSG_DEPTH_INFO/ALTITUDE output logs
- [SBGECOM-140] - Updated SBG_ECOM_CMD_AIDING_ASSIGNMENT command for AirData support
- [SBGECOM-141] - Add airDataInput demo project to show external sbgECom AirData aiding
- [SBGECOM-142] - Updated SBG_ECOM_LOG_PRESSURE to SBG_ECOM_LOG_AIR_DATA with airspeed
- [SBGECOM-143] - Updated SBG_ECAN_MSG_PRESSURE to SBG_ECAN_MSG_AIR_DATA with airspeed
- [SBGECOM-156] - Add baseline length field in SBG_ECOM_LOG_GPS#_HDT log

SBG SYSTEMS

- [SBGECOM-162] - Add SBG_ECOM_LOG_DIAG message to send text
- [SBGECOM-163] - Add CAN output message with vehicle body velocity
- [SBGECOM-164] - Add CAN output message with track, slip and curvature indications
- [SBGECOM-168] - Add INDYN NMEA like message output for marine applications
- [SBGECOM-170] - Add SBG_ECOM_CMD_GNSS_1_INSTALLATION command to set/get GNSS lever arm
- [SBGECOM-173] - Add compatibility support Crossbow AHRS500 series
- [SBGECOM-174] - Basic Logger: Add support for error log messages
- [SBGECOM-175] - Basic Logger: Add support for UDP interfaces

6.2. Improvement

- [SBGECOM-132] - Updated SBG_ECOM_CMD_AIDING_ASSIGNMENT command for DVL support
- [SBGECOM-133] - Renamed DVL standard deviation as quality indicator in DVL log structure
- [SBGECOM-144] - Converted SBG_ECOM_AIDING_EM_LOG_RECV to SBG_ECOM_AIDING_DEPTH_RECV
- [SBGECOM-145] - Renamed SBG_ECOM_AIDING_PRESSURE_RECV to SBG_ECOM_AIDING_AIR_DATA_RECV
- [SBGECOM-146] - Renamed SBG_ECOM_SOL_PRESSURE_USED to SBG_ECOM_SOL_AIR_DATA_USED
- [SBGECOM-147] - Added SBG_ECOM_SOL_DEPTH_USED in EKF solution status
- [SBGECOM-165] - Updated CAN log default IDs for Ship Motion HP from 0x210 to 0x14A
- [SBGECOM-169] - Updated SBG_ECOM_THIRD_PARTY_IXBLUE_XXX logs to comply with naming conventions
- [SBGECOM-176] - Minor code cleanup and removed useless defines
- [SBGECOM-177] - Updated all C types to use standard ones uint32 -> uint32_t
- [SBGECOM-178] - Updated common lib code with improved organization

6.3. Removed feature

- [SBGECOM-100] - Removed deprecated sbgEComSetReceiveCallback method
- [SBGECOM-101] - Removed deprecated sbgEComCmdGnss1SetModel method
- [SBGECOM-102] - Removed deprecated sbgEComCmdSensorSetMotionProfile method
- [SBGECOM-103] - Removed deprecated sbgEComCmdMagSetModel method
- [SBGECOM-171] - SBG_ECOM_CMD_GNSS_1_LEVER_ARM_ALIGNMENT deprecated and replaced by SBG_ECOM_CMD_GNSS_1_INSTALLATION

7. Changes for release 1.10.3692-stable

7.1. New Feature

- [SBGECOM-115] - Add Septentrio Internal GNSS model for new Ellipse D
- [SBGECOM-117] - Added getters for delta a angle / velocity / temperature for IMU Short log
- [SBGECOM-119] - Added new Swell Mode Ship Motion status flags

7.2. Improvement

- [SBGECOM-118] - Improved sbgEComStartFrameGeneration & sbgEComFinalizeFrameGeneration methods

SBG SYSTEMS

- [SBGECOM-122] - Increased time out for sbgEComCmdLicenseApply to support new ELLIPSE-D internal GNSS

8. Changes for release 1.9.706-stable

8.1. New Feature

- [SBGECOM-110] - Added DOLOG HRP proprietary message
- [SBGECOM-111] - Added a new short IMU log message also used for post processing
- [SBGECOM-112] - Add a heavy machinery motion profile definition for Ellipse series

8.2. Bug

- [SBGECOM-113] - Fixed invalid SBG_ECOM_CAN_RX/TX_OK comments

9. Changes for release 1.8.2916-stable

9.1. New Feature

- [SBGECOM-95] - Added GPS number of SV used and diff corrections details in sbgECan protocol
- [SBGECOM-105] - Add compatibility with SBG_ECOM_CMD_VALIDITY_THRESHOLDS command
- [SBGECOM-108] - Added support for aiding assignment on Port E for ELLIPSE-E and N

9.2. Improvement

- [SBGECOM-91] - Added sbgEComSetCmdTrialsAndTimeOut to setup the number of trials and default time out for commands

10. Changes for release 1.7.235-stable

10.1. New Feature

- [SBGECOM-89] - Implement Kongsberg Binary 26 message output
- [SBGECOM-87] - Add an uptime indication in SBG_ECOM_LOG_STATUS
- [SBGECOM-86] - Added the command SBG_ECOM_CMD_ETHERNET_INFO to current device IP address
- [SBGECOM-85] - Added command SBG_ECOM_CMD_ETHERNET_CONF to define / retrieve the Ethernet configuration
- [SBGECOM-77] - Add new output log class for NMEA proprietary messages
- [SBGECOM-75] - Added UAV motion profile definition (for low dynamic rotary wing UAV applications)

10.2. Improvement

- [SBGECOM-83] - Better use of size_t type instead of uint32 to comply with C standard and 64 bit platforms

10.3. Task

- [SBGECOM-84] - Updated sbgCommonLib to latest revision

SBG SYSTEMS

10.4. Removed Feature

- [SBGECOM-79] - Removed deprecated "course" from the GNSS configurable aiding sources

11. Changes for release 1.5.209-stable

11.1. New Feature

- [SBGECOM-72] - Added proprietary NMEA message PASHR for roll, pitch, heading, heave
- [SBGECOM-70] - Added SBG Proprietary NMEA message with acceleration and angular rate
- [SBGECOM-68] - Added SBG_ECOM_OUTPUT_MODE_DIV_5 flag for 40 Hz output
- [SBGECOM-66] - Added SBG_ECOM_GENERAL_CPU_OK status flag
- [SBGECOM-65] - Added sbgEComHandleOneLog method to return even if more logs are available
- [SBGECOM-64] - Added sbgEComSendAck method
- [SBGECOM-62] - Added sbgEComStartFrameGeneration and sbgEComFinalizeFrameGeneration methods
- [SBGECOM-59] - Added sbgECom log generation code
- [SBGECOM-57] - Added SBG_ECOM_LOG_FAST_IMU_DATA message definition
- [SBGECOM-40] - Added KVH third party output format id (SBG_ECOM_THIRD_PARTY_KVH)

11.2. Improvement

- [SBGECOM-74] - Switched unix projects to CMake
- [SBGECOM-73] - Added examples into the sbgECom
- [SBGECOM-63] - Updated sbgCommonLib to latest revision
- [SBGECOM-61] - Use stream buffer instead of basic buffer for sbgECom log parsing
- [SBGECOM-51] - Added SBF (Septentrio) protocol support on Ellipse-E
- [SBGECOM-50] - Added direct PPS from internal GNSS Sync Output (SBG_ECOM_CMD_SYNC_OUT_CONF)
- [SBGECOM-47] - Made the sbgECom 64 bit compatible
- [SBGECOM-46] - Switched project files to Visual Studio 2013
- [SBGECOM-45] - Added a new callback method (sbgEComSetReceiveLogCallback) and deprecated the old one (sbgEComSetReceiveCallback)
- [SBGECOM-42] - Improved handling of MSG and CLASS fields in low level protocol functions

11.3. Bug

- [SBGECOM-71] - Fixed sbgEComCmdGetInfo incorrect error code return when an invalid payload is received
- [SBGECOM-44] - Fixed Various incompatibilities in Big Endian platforms
- [SBGECOM-43] - Added output of NACK reasons in sbgECom configuration commands using the return code

SBG SYSTEMS

11.4. Removed Feature

- [SBGECOM-60] - Removed Ship Motion 1,2,3 and Ship Motion HP 1,2,3 due to new deported heave concepts

12. Changes for release 1.4.3239-stable

12.1. New Feature

- [SBGECOM-28] - Added differential correction age, diff base id and num sv to the SBG_ECOM_LOG_GPS#_POS
- [SBGECOM-29] - Added GNSS raw data log for the second GNSS receiver
- [SBGECOM-30] - Added official support for Ellipse additional output interfaces PORT C and PORT E
- [SBGECOM-33] - Added big/little endian support for stream buffer
- [SBGECOM-34] - Added sbgPlatform.h file to setup platform specific configuration such as endianness

12.2. Improvement

- [SBGECOM-7] - Added support for both little and big endian platforms
- [SBGECOM-32] - Improved stream buffer error handling
- [SBGECOM-36] - Improved File naming and overall library organization
- [SBGECOM-37] - Modified firmware and software version numbering scheme
- [SBGECOM-38] - Increased raw GPS data buffer size from 2048 to 4096 bytes

12.3. Bug fixes

- [SBGECOM-21] - Fixed SBG_ECOM_ETH#_RX_OK and SBG_ECOM_ETH#_TX_OK status definitions
- [SBGECOM-27] - Changed sbgEComHandle behavior so the error returned by receive call back is taken into account
- [SBGECOM-35] - Fixed improper comments in some configuration structures

SBG SYSTEMS

13. All changes for release 1.3

13.1. New Feature

- [SBGECOM-10] - Added sbgInterfaceChangeBaudrate for both windows and unix platforms
- [SBGECOM-19] - Added SBG_ECOM_LOG_PRESSURE log for depth sensors and altimeters
- [SBGECOM-25] - Added support for Ellipse series
- [SBGECOM-26] - Added SBG_ECOM_LOG_USBL log for USBL aiding equipments (beta)

13.2. Improvement

- [SBGECOM-18] - Fixed Typos in GPS pos, Vel and Hdt Fix Status
- [SBGECOM-20] - Better error checking for sbgStreamBuffer with new method sbgStreamBufferGetLastError
- [SBGECOM-22] - Added UTC & Clock status to the binary log SbgLogUtcData
- [SBGECOM-23] - Added Solution status to the binary log SbgLogEkfEuler, SbgLogEkfQuat, SbgLogEkfNav
- [SBGECOM-24] - Added time stamp to the log SBG_ECOM_LOG_MAG_CALIB

SBG SYSTEMS

14. All changes for release 1.2

14.1. New Feature

- [SBGECOM-14] - Added SBG_ECOM_LOG_SHIP_MOTION_HP logs for delayed heave output
- [SBGECOM-15] - Added sbgInterfaceSerialChangeBaudrate method to change the serial interface baud rate
- [SBGECOM-17] - Added SBG_ECOM_POS_FIXED / SBG_ECAN_POS_FIXED position type for GPS

14.2. Improvement

- [SBGECOM-13] - Updated SBG_ECOM_LOG_SHIP_MOTION_XXX logs to add velocity and status data
- [SBGECOM-16] - Changed GPS OmniStar solution type to PPP ones for better compatibility with third party GPS

14.3. Removed Feature

- [SBGECOM-11] - Removed heave status field from SBG_ECOM_LOG_STATUS log

SBG SYSTEMS

15. All changes for release 1.1

15.1. New Feature

- [SBGECOM-1] - Added output log for DVL support
- [SBGECOM-3] - Added output for GPS 1 raw data in order to support post processing
- [SBGECOM-4] - Added event markers logs support
- [SBGECOM-6] - Added Unix support and build script
- [SBGECOM-8] - Added sbgEComReceiveAnyCmd method that return any received command that is not an output log
- [SBGECOM-9] - Added settings import and export command

15.2. Improvement

- [SBGECOM-2] - Added pitch information in the SbgLogGpsHdt GPS true heading log
- [SBGECOM-5] - Now sbgEComProtocolReceive method returns the received command even if the CRC is not valid

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