Embedded Motion Driver for ICM-20602 1.7.0 Release Notes

January 23, 2017

OVERVIEW

This release note document explains all the relevant information regarding the Embedded Motion Driver for ICM-20602 **1.7.0** software release.

Software Modules included:
  MCU Sample code based on ST Nucleo
  Embedded Driver (libIDD)
  Applications:
  - Simple sample code (lite example)

Supported Features:

- HW:
  - o Accel/Gyro/Temp RAW data
  - o Wake-up On Motion
  - o Self-Test
  - o Mag RAW data (with AK09911)
- SW:
  - o Calibration: Accel Cal, Mag Cal, Gyro Cal
  - o Gravity
  - o Linear Acceleration
  - o Game Rotation Vector
  - o Rotation Vector
  - o GeoMagnetic Rotation Vector

MIPS and code size information are available on the quick start guide included in the package. Feel free to refer to it for further information.

CONTENTS

TEST SW PLATFORM

This section describes the software test platform used during the test:
- sensor-cli including LibIDD (3.8.4)
- Standalone NUCLEO samples code included in release package

TEST HW PLATFORM

- ST Nucleo STM32F411 + ICM 20602 daughterboard + Nucleo Carrier Board verB

TEST HW SENSORS

The following InvenSense devices were tested in the combinations shown below:

INVENSENSE DEVICE	3rd PARTY DEVICES ON PRIMARY I2C BUS	3rd PARTY DEVICES ON SECONDARY I2C BUS	STATUS
ICM 20602 (Accel + Gyro)	AK09911		Completed

CHANGELOG

This section describes the changelog compared to the *1.6.0* version that went into this package.

- bias (selftests + algos) storage on Nucleo
- Add mounting matrix command support on LITE and FULL
- GeoRV heading accuracy reports wrong value
- Accelerometer max ODR too high when accel, gyr, and mag are all enabled at 200 ODR
- Higher yaw error for GRV in lite package
- mistake doc eMD_Software_Guide_ICM20602.pdf about AKM9915
- using an akm9915 can report data if FULL example is compiled for akm9912
- Enabling FSYNC with ACCEL results in corrupted accel output data
- Coupling of StepCounter with StepDetector
- Enabling Temperature changes the Gyro offset
- Gyro FSR selection is limited to between 250 and 2000 dps
- acc and gyr self test passed when device is in vigorous mode
- Acc@1000Hz has samples at 499-1996 Hz range
- Algo DLL shouldn't be in the package
- Setting sensor-cli 'setconfig FSR' command for base sensor results in incorrect FSR for calibrated sensor
- missing information of wom and predictive quaternion in doc
- Mag consumption is too high once Gyr has been enabled
- Magnetometer cannot be reached in LITE example

REVISION HISTORY

REVISION DATE	REVISION NUMBER	DESCRIPTION
1/23/2017	1.0	1.7.0 Release

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