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## **Embedded Motion Driver 5.1.1 Release Note**

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### 1. Revision History

Revision Date	Revision	Description
12/14/2012	1.0	Initial Release

### 2. Overview

This release note explains all the relevant information regarding the InvenSense Embedded MotionDriver 5.1.1 software release for embedded systems.

### 3. Features

#### 3.1 New Features

Following is a list of new features introduced and/or enhancements to existing features in this software release:

- Calibrated gyro data output from hardware
- MPU-6050/MPU-9150 motion interrupt support
- MPU-6500 wake on motion support
- Accel biases can be removed from 6-axis quaternion

#### 3.2 Existing Features

Following is a list of existing features.

- Hardware Gestures
  - Tap
  - Android Screen Orientation
- Hardware Pedometer
- Hardware 3-axis Quaternion
- Hardware 6-axis Quaternion
- I2C interface support
- Function calls for gyro and accel self-test
- Function calls to put individual axes of the gyro to sleep
- Ability to change sensor ODRs of the gyroscope and accelerometer
- Function call to select which data to populate in FIFO

### 4. Target Microprocessor

TI MSP430 16 bit microcontroller using Code Composer Studio 5.0 IDE environment.

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## 5. Test Hardware

TI MSP430 16 bit microcontroller

## 6. Test Software Platform

TI Code Composer Studio 5.0

## 7. InvenSense MotionTracking Device(s) Configurations Supported

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

InvenSense Device	3 <sup>rd</sup> party device on primary I2C interface	3 <sup>rd</sup> party device on secondary I2C interface
MPU-6050 Gyro + Accel		AK8975 Compass
MPU-6500 Gyro + Accel		AK8963 Compass
MPU-9150 Gyro + Accel + Compass		

## 8. Sample Applications Tested

- Motion-driver-client.py (A simple custom 3D UI application)

## 9. Documentation with this Release

Embedded MotionDriver Functional Specification

## 10. Bug Fixes since Last Release (N/A)

N/A

## 11. Known Limitations and Design Constraints

N/A