Embedded MotionApps Platform v2.0.0 – Release Note (6-axis only)

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High-level features:

- 6-axis sensor fusion (gyro and accelerometer)
- Bias trackers
  - No-motion
  - Gravity
  - SW temp comp (for gyro on uC)
- Interrupt from InvenSense MPU device

Test Hardware platform:

- Atmel UC3 Xplained development platform
- Inertial 2 sensor board

Test SW platform:

- AVR Studio 5, which will includes an IDE, the AVR32 toolchain, and the AVR Software Framework

Device(s) tested:

- 6-axis
  - MPU-3050 + Kionix KXTF9 accel
  - MPU-6050 with internal accel

Sample applications tested:

- UC3 Debug Console
- Teapot application

Documentation with this release:

- Embedded MotionApps Platform User Guide (updated for this release)
- Embedded MotionApps Platform Functional Specification (updated for this release)

New features / enhancements (since v1.1.1):

- MPU-6050 revs B and C are auto-detected.
- API support is provided for individual active / sleep control for accel / gyro
- Software temperature compensation is supported.
- Load and store calibration functionality is supported.
- MPU-6050 Low power accel mode is supported when internal accel is used at the following data rates:
  - 5Hz
  - 20Hz
  - 40Hz

Bug fixes (since v1.1.1):

- Behavior change in load / store calibration data with data being stored in non-volatile memory on the ATMEL UC3 platform (instead of on the Windows PC).

Known Limitations and Design Constraints:

- No support for accel-only mode with IMU-3000 / MPU-3050