Invensense: First MPU with integrated 3-axis gyro, 3-axis accelero and 9-axis sensor fusion

I-Micronews

InvenSense, Inc., the leading solution provider of MotionProcessors for consumer electronics, today announced the release of its highly anticipated MPU-6000 product family. The MPU-6000 is a breakthrough in MEMS motion sensing technology with the integration of a 3-axis gyroscope and a 3-axis accelerometer on the same silicon die together with an onboard Digital Motion Processor™ (DMP) capable of processing complex 9-axis sensor fusion algorithms. With increasing popularity of motion sensors in everyday consumer electronics, pioneered by Nintendo® with the Wii™ console and later by Apple® with the iPhone™, motion processing is quickly expanding into smart phones, tablets, TV remotes, handheld gaming devices and gaming consoles, digital still and video cameras and many other consumer products.

The MPU-6000 family of MotionProcessors eliminates the challenges associated with selection and integration of many different motion sensors that could require signal conditioning, sensor fusion and factory calibration. It features integrated 9-axis sensor fusion algorithms that utilize an external magnetometer output through its master I2C bus to provide dead reckoning functionality. The MPU-6000 is offered in the same 4x4x0.9 mm QFN package and the same pinout as the current MPU-3000 product family of integrated 3-axis gyroscopes, making it easy to fit on already space constrained boards. It also offers ease of integration and interface to various application processors through an I2C or SPI bus and its standard MotionProcessing Library™ (MPL) and APIs.

With over 100 million units shipped by InvenSense to major consumer electronics makers around the globe, continuity of supply and quality is of the utmost importance. InvenSense leverages its patented and production-hardened Nasiri-Fabrication platform to bring the world's first integrated 6-axis solution to the market. Nasiri-Fabrication is the key enabling technology behind MotionProcessing allowing direct integration of MEMS mechanical structures and CMOS electronics at the wafer level, hence taking all the scaling challenges out of the MEMS fabrication by making it a typical fabless semiconductor supply chain. The MPU product family leverages proven 8" fabrication lines from world class foundries and in-house high volume test and calibration facilities in Taiwan to support the high volume requirements of the consumer marketplace. The MPU-6000 will include the company's proprietary and patent pending DMP engine, enabling 9-axis sensor fusion and MPL APIs to deliver the only complete solution available in the market today.

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