BOSCH Sensortec BMF055: Technology and Cost Comparison

**Description:**
Like its competitor InvenSense, BOSCH Sensortec has unveiled a programmable all-in-one motion sensor for robotics, gaming, and household IoT devices, touted as the industry's first custom-programmable 9-axis motion sensor.

The BMF055 is a new version of the BOSCH Sensortec 9-axis device (3-axis Gyroscope + 3-axis Accelerometer + 3-axis Magnetometer), with a MCU included in the package. Compared to the stand-alone sensor hub, this new approach eliminates a package and reduces system-level power. This device integrates six-chip in a complex System-in-Package.

The sensor hub combines a 14-bit accelerometer, a 16-bit gyroscope, and a geomagnetic sensor with a 32-bit ARM Cortex M0+ core. Compared to rivals, BOSCH Sensortec targets a broader range of customer applications with a high precision-sensor and dedicated MCU.

With BOSCH Sensortec's approach, the MEMS sensor and the ASIC are fabricated separately. Final assembly entails wire bonding of all parts. The BMF055 is shipped in a 5.8×3.2×1.15mm LGA package, a footprint that's larger than the competition.

This report features a detailed technology and cost comparison with the leading-edge sensor hub from InvenSense, highlighting the different choices from the two different designers.

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Cost & price comparison with InvenSense ICM-30630 6-Axis Sensor Hub

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