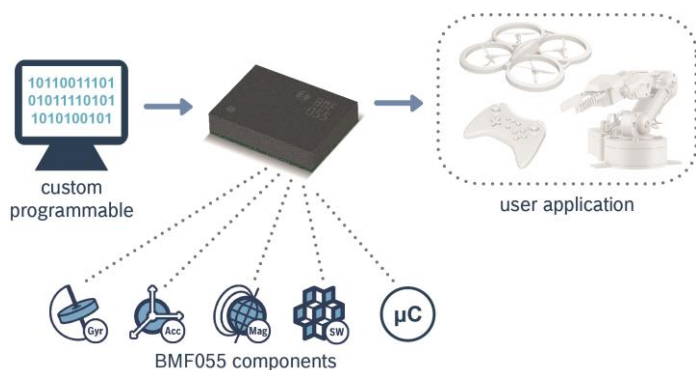# BMF055
Custom programmable 9-axis motion sensor

GENERAL DESCRIPTION

The BMF055 is an extension of the Application Specific Sensor Nodes (ASSN) family implementing a custom programmable 9 axis motion sensor which includes sensors and a microcontroller in a single package.

The BMF055 is a System in Package (SiP), integrating a triaxial 14 bit accelerometer, a triaxial 16 bit gyroscope with a range of ±2000 degrees per second, a triaxial geomagnetic sensor and a 32 bit Cortex M0+ micro-controller from Atmel. At just just 5.2 x 3.8 x 1.1 mm^3, it is significantly smaller than comparable discrete or system on board solution.

By integrating sensors and the microcontroller in a single device, the BMF055 eases the integration process for customers. Moreover Bosch Sensortec also provides an additional Software Development Package which includes a precompiled BSX Lite fusion library with integration guidelines, API source files for individual sensors and example projects as a plugin for Atmel Studio ©. This enables the development of custom specific firmware for applications such as gaming, robotics, augmented reality or other industrial applications.

custom programmable

user application

BMF055 components

COMPONENTS

▶ Acceleration Sensor (BMA)
▶ Gyroscope (BMG)
▶ Geomagnetic Sensor (BMM)
▶ 32 bit Microcontroller

APPLICATIONS

▶ Augmented reality
▶ Navigation
▶ Gaming
▶ Robotics
▶ Industrial applications

WHAT MAKES THE DIFFERENCE

▶ All components in one package leads to simplified system integration and faster time to market
▶ Footprint is significantly reduced compared to discrete and system on board solutions
▶ Example projects implemented using Atmel Studio © provides a basic setup to quickly get started with the software development
▶ Integration guideline along with the BSX lite fusion library enables easy integration of application specific software
▶ Hardware together with the Software Development Package provides the full flexibility to either integrate additional software or develop application specific sensor fusion algorithm