[Product Description](#) [Downloads](#) [Order](#)

BNO055

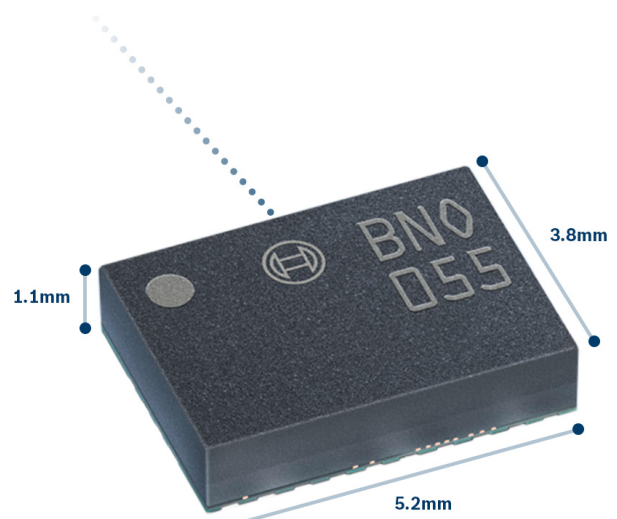
The BNO055 is the first in a new family of Application Specific Sensor Nodes (ASSN) implementing an intelligent 9-axis Absolute Orientation Sensor, which includes sensors and sensor fusion in a single package.

The BNO055 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 microcontroller running the company's BSX3.0 FusionLib software. At just $5.2 \times 3.8 \times 1.1$ mm³, it is significantly smaller than comparable discrete or system-on-board solutions.

By integrating sensors and sensor fusion in a single device, the BNO055 eases the integration process for customers, freeing them from the complexities of multivendor solutions so they can spend more time on product innovation, including novel applications such as wearable hardware. It is also the perfect choice for augmented reality, more immersive gaming, personal health and fitness, indoor navigation and any other application requiring context awareness.

Applications

- Augmented reality
- Navigation
- Gaming
- Fitness and well-being
- Context awareness



Main features



Absolute Orientation
Integrates accelerometer, gyroscope and magnetometer



Accelerometer
Detects linear motion and gravitational forces



Gyroscope
Measures the rate of rotation in space (roll, pitch, yaw)



Magnetometer
Measures the terrestrial earth's magnetic fields



Software
Intelligently fuses raw data from multiple sensors

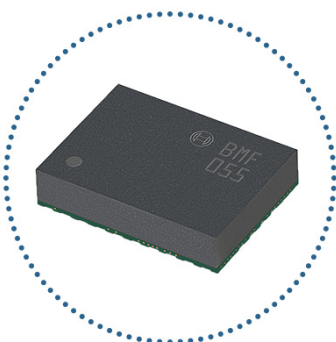
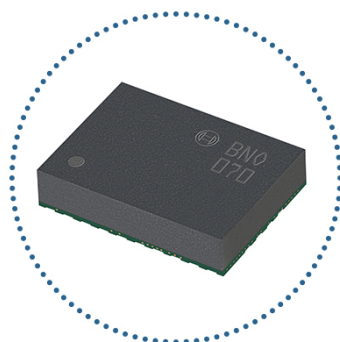


Gaming Applications

Gaming consoles are a normal part of many people's everyday lives. Soccer, dancing, tennis and a multitude of games utilise motion detection. Of course, many game applications use MEMS sensors, e.g. acceleration sensors detect motion to enhance the user's gaming experience. Sensing the particular movement of the user is converted into a motion-based interface for a game. This opens up a world of opportunities for simpler, more interactive user interfaces.

[discover the application](#)
[watch the video](#)

Other sensors in the same category



BNO070

The BNO070 has low power consumption and a compact size of 5.2 x 3.8 x 1.1 mm³ which make the solution ideal for wearable devices, where both power and space are limited e.g. head mounted displays (HMD).

[More information](#)

BNO080

The BNO080 is a 9-axis System in Package (SiP) which enables rapid development of sensor-enabled Augmented Reality (AR), Virtual Reality (VR), Robotics and IoT devices. It features a high-performance accelerometer, magnetometer, and gyroscope with a low-power 32-bit ARM Cortex M0+ MCU in a small package. Hillcrest's Freespace® sensor hub software is pre-integrated.

[More information](#)

BMF055

The BMF055 is an extension of the ASSNs family implementing a custom programmable 9-axis motion sensor which includes sensors and a microcontroller in a single package."

[More information](#)

BMX055

The absolute orientation sensor BMX055 is a very small, 9-axis sensor with a small footprint of only 3 x 4.5 mm². It integrates a multitude of features that facilitate its use especially in the area of motion detection, such as device orientation measurement, gaming, HMI and menu browser control.

[More information](#)

[Back to the top](#)

[Change cookie settings](#)



[Font size](#)

[Print](#)

[Facebook](#)

[Twitter](#)

[YouTube](#)

[Corporate information](#) | [Privacy Statement](#) | [Legal Note](#) | [Technology](#) | [General Terms and Conditions of Delivery](#) | [Engineering Samples Disclaimer](#) | [Sitemap](#)

© Bosch Sensortec GmbH 2019, all rights reserved

© Bosch Sensortec GmbH 2019, all rights reserved