



Bosch launches smart ultra-low power IMU BMI270 optimized for wearables

Includes intuitive activity, context and gesture recognition

January 07, 2019

PI 10809 SM/Ho

- ▶ Newest member of Bosch's next-generation BMI260 family of IMUs
- ▶ Optimized for wearable and hearable applications
- ▶ Strongly increased system battery life
- ▶ Available with context and activity recognition or gesture recognition
- ▶ Bosch at CES®: booth 14020

At CES® in Las Vegas, Nevada, Bosch Sensortec announced the BMI270, an ultra-low power smart Inertial Measurement Unit (IMU) specifically targeted at wearable applications. It offers a strongly improved accelerometer offset and sensitivity performance, enabled by the newest Bosch MEMS process technology.

The BMI270 is the latest member of Bosch Sensortec's BMI260 family of IMUs. It includes intuitive gesture, context and activity recognition with an integrated plug-and-play step counter, which is specially optimized for accurate step counting in wrist-worn devices. The IMU is also well suited for other types of wearable devices, such as hearables, smart clothes, smart shoes, smart glasses and ankle bands.

As an ultra-low power IMU, the BMI270 significantly extends system battery life by handling multiple activity tracking, step counting and gesture recognition functions independently of the main system processor, without having to wake it up. These processor-independent functions include tasks such as sending an interrupt when a certain number of steps is reached, or geofencing to activate GPS when the user stands up and starts walking.

Powerful, accurate gesture and activity recognition features therefore run in the ultra-low power domain, with current consumption of just 30 µA. This noticeably reduces power consumption and users can benefit from extended battery charging intervals.

"The BMI270 combines robustness, accuracy and ultra-low power consumption, making it ideal for wearables," says Dr. Stefan Finkbeiner, CEO of Bosch Sensortec. "It also features a dedicated set of functions developed for wrist-worn and other wearable

devices, giving wearable manufacturers and vendors the capability to develop differentiated products with a competitive edge."

Two versions: gesture and context/activity

Bosch Sensortec's smart IMU is available in two application-specific versions. The 'gesture' version, which detects gestures including flick in/out, arm up/down, and wrist tilt. This version is designed for Wear OS by Google™, ensuring a user-friendly and feature-rich experience for end users. The 'context and activity' version has advanced features for recognizing context activity and activity change, for example standing, walking or being in a vehicle.

The BMI270 is designed to provide maximum flexibility to customers. Manufacturers not only benefit from the excellent sensor performance of the IMU but can also customize it based on the specific use case with gesture and context/activity features.

Broad range of features

Building on the latest Bosch MEMS process technology, the BMI270 combines the automotive-proven gyroscope technology with a significantly improved accelerometer. The sensor includes a 2 kB FIFO.

Bosch's unique and motionless Component Retrimming (CRT) feature provides built-in gyroscope self-calibration without a rotation stimulus, which saves OEMs valuable time and costs during testing and manufacturing. The embedded plug and play features of the BMI270 help to substantially cut time to market.

The BMI270 measures only 2.5 x 3.0 x 0.8 mm³, and is pin-to-pin compatible with the BMI160, BMI260, BMI261 and BMI263.

Availability

The BMI270 will be available for distribution in the second quarter 2019.

Wear OS by Google is a trademark of Google LLC.

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Bosch at CES 2019:

- **PRESS CONFERENCE:** In Ballrooms B, C, and D, Mandalay Bay Hotel, Las Vegas **South Convention Center, Level 2**, from **9:00 to 9:45 a.m. local time on Monday, January 7, 2019.**
- **BOOTH: Tuesday to Friday, January 8–11, 2019**, in the Central Hall, booth #14020
- **FOLLOW** the Bosch CES 2019 highlights on Twitter: **#BoschCES**
- **PANELS WITH BOSCH EXPERTS:**
 - **Wednesday, January 9, 2019, 9:00 to 10:00 a.m.** (local time)
“[Connected Home Innovations](#)” session with Anne Rucker, Global Head of Digital Strategy, Venetian, Level 4 Marcello 4405
 - **Wednesday, January 9, 2019, 9:00 to 10:00 a.m.** (local time)
“[Technology, Jobs, and the Future of Work](#)” session with Charlie Ackerman, Senior Vice President of Human Resources North America, Las Vegas Convention Center, North Hall N258
 - **Wednesday, January 9, 2019, 2:15 to 3:15 p.m.** (local time)
“[IoT to the Max, Thanks to 5G](#)” session with Davie Sweis, Vice President of Web Business, Las Vegas Convention Center, North Hall N256

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Bosch Sensortec GmbH, a fully owned subsidiary of Robert Bosch GmbH, develops and markets a wide portfolio of microelectromechanical systems (MEMS) sensors and solutions tailored for smartphones, tablets, wearable devices and IoT (Internet of Things) applications. The product portfolio includes 3-axis acceleration, gyroscope and geomagnetic sensors, integrated 6- and 9-axis sensors, environmental sensors, optical microsystems and a comprehensive software portfolio. Since its foundation in 2005, Bosch Sensortec has emerged as the MEMS technology leader in the markets it addresses. Bosch has been both a pioneer and a global market leader in the MEMS sensor segment since 1995 and has, to date, sold more than 10 billion MEMS sensors. More than every second smartphone worldwide uses a Bosch Sensortec sensor.

For more information, please visit www.bosch-sensortec.com, twitter.com/boschMEMS

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,000 associates worldwide (as of December 31, 2017). The company generated sales of 78.1 billion euros in 2017. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers

innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 125 locations across the globe, Bosch employs some 64,500 associates in research and development.

Additional information is available online at www.bosch.com, www.iot.bosch.com, www.bosch-press.com