

## PRESS RELEASE

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**BOSCH**  
Invented for life

New sensor hubs

### **Bosch Sensortec launches vital sensor hubs for wearables at Mobile World Congress 2016**

Enabling heart rate and motion evaluation for fitness and wellbeing applications with enhanced user experience

- „ Programmable platform for vital sensing, sensor fusion and always-on sensor processing
- „ Ultra-low power consumption for maximum system battery life
- „ Vital analytics software from Firstbeat for enhanced user experience



Today, at the 2016 Mobile World Congress, Bosch Sensortec introduces its first generation of sensor hub products with optimized vital sensing features. These devices fuse photoplethysmography (PPG) signals with the onboard inertial MEMS sensors signals for robust, motion compensated heart rate measurement and provide users with valuable insights about their wellbeing and fitness level using Firstbeat's field-proven vital analytics algorithms.

#### **Vital analytics for an enhanced user experience**

These new BHV250 and BHV160 sensors are designed for always-on sensor enabled wearable applications such as fitness wristbands, earphones and smart textiles. As a complete sensor solution they feature ultra-low power consumption in a compact package, with integrated software and a wide-range support for different PPG chipsets. The integrated software from Firstbeat processes raw sensor data to open up a world of motion-compensated vital monitoring, activity recognition applications and gesture based user interfaces.

The unique combination of the Bosch's Vital Sensor Hubs with Firstbeat's extensive vital analytics software enables a rich user experience by providing the tools for sleep analysis, calorie consumption calculation, fitness training evaluation, and "stress and recovery" monitoring. The

myriad of future applications is only limited by the designer's imagination.

“With this all-round sensor subsystem, our customers can now focus on providing added value to their end users, confident in the knowledge that they have a highly integrated, ultra-low power solution”, said Jeanne Forget-Funk, VP Marketing at Bosch Sensortec. “With the fitness tracking and wearables markets expanding so rapidly, we await with great interest the explosion of innovation that will be triggered by this technology”.

“Firstbeat’s revolutionary analytics software creates a digital model of a user’s physiology through advanced modeling of heart function and heart rate variability (HRV)”, said Joni Kettunen, CEO and Co-founder of Firstbeat. “The Bosch sensor subsystem provides the accurate data and flexible programmability that enables our software to deliver new insights to users at ultra-low power consumption”.

### **Product details**

The BHV250 and BHV160 integrate innovative 3- respectively 6-axis inertial MEMS sensors designed around the new Bosch Sensortec DSP ‘Fuser Core’ powering Firstbeat’s vital analytics software. Both devices include an accelerometer, and the BHV160 also includes a gyroscope.

The Android™ Wear-compatible sensor hubs are the components with the lowest power consumption available on the market today, helping to significantly extend system battery life time.

The sensor hubs have tiny footprints that are indispensable for applications where space is tight. The BHV160 measures 3 x 3 x 0.95 mm<sup>3</sup>, while the BHV250 only a mere 2.2 x 2.2 x 0.95 mm<sup>3</sup>.

Samples are available today to qualified customers. Mass production is ramping up in Q2 2016. For pricing, please contact Bosch Sensortec.

### **Market forecast**

According to industry analysts, wearables are a market of increasing importance. IDC (International Data Corporation, [www.idc.com](http://www.idc.com)) predicts that by 2019, total shipments in the wearables market will reach some 214 million units (source: [link](#)).

### **Trademarks**

Android is a trademark of Google Inc.

### **Videos:**

[Bosch sensor solutions enable wearable devices](#)

Vital Sensor Hub: <https://www.youtube.com/watch?v=g81v0MuAw8o>

### **About Firstbeat**

*Firstbeat Technologies Ltd. (“Firstbeat”) is the leading provider of physiological analytics for sports, fitness and wellbeing. The Firstbeat technology turns heartbeat data into rich, personalized and actionable insights on exercise, stress, sleep and*

recovery. Firstbeat analytics is used by hundreds of elite sports teams, thousands of corporations, and millions of consumers worldwide to improve their performance and wellbeing. Firstbeat has developed revolutionary analytics technology that creates a digital model of user's physiology through advanced modelling of heart function and heart rate variability (HRV). For more information, go to: [www.firstbeat.com](http://www.firstbeat.com)

#### About Bosch Sensortec

Bosch Sensortec GmbH is a fully owned subsidiary of Robert Bosch GmbH, dedicated to the consumer electronics world offering a complete portfolio of micro-electro mechanical systems (MEMS) sensors and solutions that enable mobile devices to feel and sense the world around them. Bosch Sensortec develops and markets a wide portfolio of MEMS sensors and solutions for smart phones, 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 as well as environmental sensors and a comprehensive software portfolio. Since its foundation in 2005, Bosch Sensortec has emerged as the technology leader in the addressed markets. The Bosch Group has been the global market leader for MEMS sensors since 1998 and has to date sold more than 6 billion MEMS sensors. For more information, go to [www.bosch-sensortec.com](http://www.bosch-sensortec.com)

For further information, please do not hesitate to contact me.

Kind regards,

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