



## New digital BMA020 acceleration sensor **Emerging products from Bosch Sensortec promote MEMS in consumer electronics**

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- ▶ Product diversification to exploit new markets
- ▶ New digital BMA020 acceleration sensor – down-scaled SMB380
- ▶ For cell phones, notebooks, PDAs, sport articles and game controllers

Bosch Sensortec has launched the BMA020, expanding its selection of ultraflat, digital triaxial acceleration sensors. In this way, the Bosch subsidiary enables a broader penetration of MEMS sensors into consumer electronics market.

Many manufacturers in these markets are discovering what are in part spectacular new functions paired with user advantages made possible by MEMS sensors. But mass markets for consumer electronics have their own laws, presenting component manufacturers with quite different challenges to traditional MEMS markets. Bosch Sensortec has consequently initiated product diversification in order to offer big industry customers sensors of high quality and with performance matched to the particular purpose. The dominance, witnessed to date, of universal sensors capable of taking on so many different applications is receding, to make way for components like the BMA020 that are designed to meet specific market requirements.

The digital BMA020 triaxial acceleration sensor addresses applications that do not exhaust the full potential of the two performance models SMB380 (QFN package) and BMA150 (LGA package). Bosch's rigorous quality standards remain in place throughout. Typical applications are cell phones, notebooks, PDAs, sport articles and game controllers. With a 3 x 3 x 0.9 mm footprint, the sensor allows efficient and low-cost integration. The device can be used for easy scrolling of display content by manual movement, work as a step counter in sport articles, or operate with automatic wakeup, switching a mobile unit like a remote control, when touched, from battery-saving standby to normal mode in a thousandth of a second. Matching market demand, the new acceleration sensor is

immediately available in large quantities; like all sensors from Bosch Sensortec it is fabricated RoHS compliant.

On standby the BMA020 manages with just 1  $\mu$ A, well below the self-discharge of a rechargeable battery pack. Operating current of only 0.2 mA also promises long battery service life. Other key features are a user-programmable measurement range of  $\pm 2$  to  $\pm 8$  g, high resolution of 10 bits, output in SPI and I2C format, and conditioning of measured values by a programmable lowpass filter.

### **About Bosch Sensortec**

Bosch Sensortec GmbH, a 100 percent subsidiary of Robert Bosch GmbH, which is the global market leader for automotive sensors, offers micromechanical sensors, application and foundry services for consumer electronics, security systems and logistics. Its product portfolio to date includes triaxial acceleration sensors as well as pressure sensors. The company was founded in early 2005 and is headquartered near Reutlingen to the south of Stuttgart (Germany). For more information about Bosch Sensortec, visit [www.bosch-sensortec.com](http://www.bosch-sensortec.com).

Bosch has been active in the field of MEMS since 1988 and is one of the pioneers in this technology. Today, hundreds of engineers of the Bosch Group work in the field of MEMS. A wide selection of products – from pressure and acceleration sensors to yaw-rate sensors – is manufactured for the automotive industry. Annual production at Bosch amounted to more than 160 million MEMS sensors in 2007.

### **Press photo: 1-UBI-14717**

*The Bosch Group is a leading global supplier of technology and services. In the areas of automotive and industrial technology, consumer goods, and building technology, some 260,000 associates generated sales of 43.7 billion euros in fiscal 2006. The Bosch Group comprises Robert Bosch GmbH and its roughly 300 subsidiary and regional companies in over 50 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. Bosch spends more than three billion euros each year for research and development, and in 2006 applied for over 3,000 patents worldwide. The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as "Workshop for Precision Mechanics and Electrical Engineering."*

*The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.*

*Additional information can be accessed at [www.bosch.com](http://www.bosch.com).*