



Bosch Sensortec at 23rd Electronica, Munich **Intelligent MEMS Sensors by Bosch Sensortec conquer Consumer Electronics markets** Focus is on Acceleration and Pressure Sensors

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- ▶ Bosch Sensortec shows analog and digital acceleration sensors
- ▶ Further presenting the world's smallest digital pressure sensor for Consumer Electronics: BMP085
- ▶ Halogen-free housings with no pollution emissions by the end of 2008

Bosch Sensortec is showing its latest micro mechanical pressure and acceleration sensors (MEMS) for mobile consumer electronics at Electronica 2008. Bosch Sensortec will be present in Hall 6 / Booth A340 together with Bosch Automotive Electronics.

Analog and digital acceleration sensors

The new triaxial analog sensors, BMA140 and BMA145, are only 0.9 mm high, yet detect inclination, motion, shock and vibration within a measuring range of ± 4 g. The digital triaxial acceleration sensor BMA020 is just as ultra-flat; it outputs acceleration values with a 10 bit resolution via the integrated SPI und I2C serial interfaces. The BMA150 is pin-compatible with the related BMA020 sensor, yet the BMA150's lower zero-g offset and integrated temperature sensor are designed to address more challenging technical applications.

Smallest digital barometric pressure sensor for Consumer Electronics

The world record holder among the exhibits is the world's smallest digital barometric pressure sensor for consumer electronics use: the BMP085 has a housing that measures a mere 5 x 5 x 1.2 mm. The MEMS sensor, offering 25 cm resolution in altitude measurement and requiring a minimal 3 μ Ampere of operating current, can be installed as an altimeter, for example in a mobile telephone with navigational functions. There, it ensures highly accurate navigation through superimposed levels independent of GPS, e.g. in large train stations or shopping centers. The market researcher, Frost & Sullivan, re-

cently acknowledged the development of this innovative sensor with their “2008 Global Award for Product Innovation”.

All products of Bosch Sensortec are RoHs (Restriction of certain Hazardous Substances) compliant. By the end of this year, the complete product portfolio of Bosch Sensortec will be halogen-free, because they will be voluntarily produced using environmentally-friendly flame retardants.

MEMS for Consumer Electronics – ultra-small, highly efficient

MEMS sensors have only just begun to inspire product developers in mass-market, mobile consumer electronics. As key components, they can noticeably boost the usage of both established and new products. The innovative potential of these MEMS sensors is extraordinarily large, as the following, limited selection of applications clearly demonstrates:

- displays that switch between portrait and landscape alignments with a simple hand movement; users can scroll up and down in the vertical display, or page forward and backward through texts displayed horizontally.
- Cell phones that can be silenced with a tap when they ring at undesired times, or phones that automatically forward calls to the mailbox when the phone is placed display-down.
- Notebook computers that automatically move the hard drive into the secure park position – during a free-fall.
- Even a simple application for battery hogging devices, which then drop into energy saving stand-by mode when they are motionless, yet are immediately “wide awake” as soon as they are moved.

The innovative Surface Micromachining Technology from Bosch, which brought up MEMS sensors to high production volumes, is being nominated for the German Federal’s President Prize for Innovation and Advanced Technology. The prize (Deutscher Zukunftspreis) will be presented in December. The nomination results from the groundbreaking new production technology and for opening up non-automotive applications especially in Consumer Electronics, driven by Bosch Sensortec.

About Bosch Sensortec

Bosch Sensortec GmbH, a 100 percent subsidiary of Robert Bosch GmbH, 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.

Bosch has been active in the field of MEMS since 1988, being 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 is more than 160 million sensors.

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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.