

Press Release

Micro Mechanics conquers new markets:

New micro mechanic sensor from Bosch endows consumer goods with incredible features

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- The sensor SMB 360 transforms body movements into control commands for electronic devices. Mere tilting of a PDA or smart phone will scroll through pages.

Bosch, the world's largest manufacturer of micromechanic sensors (MEMS) is now, for the first time, marketing a micromechanic acceleration sensor specifically designed for consumer electronic devices. The triaxial acceleration sensor, product label SMB 360, will be available at the end of the year 2005 and is now available as samples.

Extended functionality and easier operation with the new sensor

With the capability of sensing all three axes, the acceleration sensor opens a multitude of application potentials in electronic consumer goods such as cell phones, PDAs, game consoles as well as in the areas of health, fitness, logistics and security engineering.

- Cell phones ringing in an inappropriate situation can be switched off with a slight shaking movement.
- The sensor can sound a (radio) alarm if a person becomes completely motionless or an unauthorized person grabs the notebook.
- New possibilities for game console controllers allow for a greater interaction of the user through integration of movements in the gaming process.
- Smart phones and PDAs can be operated more efficiently with the SMB 360 while the page on the screen is scrolled by a mere tilting of the device in the right direction.
- Other ideas can be realized on the basis of free-fall recognition (to protect sensitive components such as hard drives and for the

purpose of warranty issues) or to translate body movements into control commands.

The SMB 360 – developed on the basis of extensive MEMS experience

The Bosch sensor SMB 360 incorporates 17 years of the company's experience in design and production of MEMS for the automotive industry. It provides outstanding performance in all major electrical features such as non-linearity and low signal coupling between the different axes. Due to its optimized Application Specific Integrated Circuit (ASIC), the SMB 360 works at a very low power input of 600 μ A when activated and 5 μ A in stand-by mode. A complete self-testing function is simultaneously integrated, and communication is managed through a digital interface. The SMB 360 is also remarkable for its extreme durability and thus total reliability. It manages up to 10,000 times the acceleration of gravity without any damage.

The reliability of the sensor is in no way impaired by its extremely small package. With its length of just 6 mm and its small height of only 1.45 mm, it easily meets one of the most important requirements in consumer electronics. The QFN packaging allows for handling on standard machines in downstream processing.

Outlook: Future micromechanic sensors from Bosch

Bosch has been developing and manufacturing micromechanic sensors for applications such as reading of pressure, yaw rate, acceleration and air flow since 1988. Bosch has manufactured more than 400 million sensors most of which were produced for the sophisticated market of automotive electronics. The SMB 360 is the first sensor from Bosch intended for the market of consumer electronics. Bosch plans to introduce similar products such as a pressure sensor and a yaw sensor for the same purposes.