

# Infineon Introduces Three New Automotive Electronics Sensors

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Munich, Germany and Detroit, Michigan, USA – June 8, 2004 – At the Sensors Conference and Expo, Infineon Technologies (FSE/NYSE: IFX) announced three new sensor products for automotive safety applications. The new sensor products expand Infineon’s portfolio of solutions for these automotive safety segments: Tire Pressure Monitoring Systems (TPMS), Rollover sensing, and Anti-Lock Brake Systems (ABS).

Market researchers at Strategy Analytics forecast that automotive safety applications for semiconductors will achieve a compound growth rate greater than ten percent through 2008, and grow to a market size of nearly US dollar 6.8 billion in that year. Infineon holds a strong market share position in many safety application segments, for example, by its own estimates, it is the number one supplier of Hall Effect wheel speed sensors for ABS, pressure-based side airbag sensors, and sensor devices for the emerging TPMS segment. On average, every new car contains two Infineon sensors.

“In line with our strategy to further extend our leading position in the automotive segment, Infineon sees safety electronics as an important driver of growth and an area where the company’s technical innovation and integration capabilities provide strong competitive advantage,” said Christopher Cook, Vice President, Automotive & Industrial Business Group, Infineon Technologies North America Corp. “With several decades of experience as a supplier to the automotive industry, Infineon has proven its ability to deliver the quality and reliability needed for critical safety systems.”

Two of the new products are Micro-Electro-Mechanical Systems (MEMS) based on the technology of SensoNor, a leading provider of tire pressure and inertia sensors that Infineon acquired in 2003. They are the SP30, a second-generation tire pressure sensing device with three sensing functions; and the SAR10 Rollover Sensor with an angular rate sensor. Both products integrate the MEMS based sensing elements and the signal conditioning chip in a compact package. The third new sensor is the TLE4941-1C, part of Infineon's third-generation Hall Effect sensor family optimized for ABS applications.

The SP30 family for TPMS applications combines a silicon micromachined pressure and acceleration sensor, temperature sensor, and a battery voltage monitor in a small-foot-print package that occupies 104.5 mm<sup>2</sup>. In production since 2003, the SP30 has now been enhanced to include mask programmability for configuration with customer specific software, providing system designers with flexibility to use the family across multiple systems and achieve system cost savings. Infineon believes the SP30 is the only TPMS product in production that integrates an accelerometer sensor in the single package, which contributes to a reduced part count in OEM-designed TPMS modules.

Infineon is also moving to gain a strong position in the emerging market for angular rate sensor-based rollover detection. The SAR10 Rollover sensor contains a silicon micromachined angular rate sensor that detects when a vehicle is beginning to roll over and enables the firing of side airbags and pre-tensioning seat-belts. The side, or curtain air bag, is an increasingly popular passenger vehicle feature, driven by customer interest in enhanced safety for passengers and drivers in the event of an accident. The SAR-10 package, measuring just 120 mm<sup>2</sup>, includes a signal conditioning chip that handles all analog signal processing and analog-to-digital conversion, allowing easy integration into modules as part of the overall vehicle safety system.

The third generation TLE4941-1C is a member of Infineon's successful ABS sensor product line. Based on shipment of previous generation products, Infineon estimates that its ABS sensors are used in one or more production vehicles now available from the major auto manufacturers of Europe and North America and Japan. Combining a Differential Hall Sensor and all signal conditioning on a single-chip, the TLE4941-C has enhanced Electrostatic Discharge (ESD) robustness that is rated at up to 12 kV. Its self-calibration capability acts at start-up and periodically during vehicle operation to adjust signal quality and ensure the highest accuracy readings at all times.

## **Extending Portfolio**

The new sensors expand one of the industry's most extensive portfolios of ICs qualified for the rigorous and demanding environment and truly mission-critical operating requirements of vehicle electronics. Ranked worldwide as the number two supplier of ICs in this market, Infineon provides electronics OEMs with an extensive range of advanced microcontrollers, power devices, sensors, specialized communications bus, and wireless technologies.

The original press release is available [here](#).

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