STMicroelectronics announces accelerometers for automotive airbags

I-Micronews

STMicroelectronics (NYSE: STM), a leader in automotive ICs and in MEMS (Micro-Electro-Mechanical Systems) sensors, has introduced a new family of high-g acceleration sensors for advanced airbag systems. These micro-machined devices detect the rapid deceleration of the vehicle during a crash and send instant information to the airbag control unit.

Airbag-system manufacturers will benefit from the strong combination of ST's leadership in MEMS with its thorough understanding of the automotive market, close relationships with leading car makers, and an unswerving commitment to quality. Compared with other suppliers, ST offers large-scale production capacity at its dedicated 8-inch MEMS fab, together with cutting-edge motion sensor design and testing capabilities.

ST's AIS1xxxDS peripheral-sensor accelerometers provide single-axis in-plane motion sensing across five full-scale ranges, from ±20 g up to ±400 g(1). An on-chip IC interface converts the deceleration data into a high-resolution digital bit stream that is transmitted with high reliability to a dedicated microcontroller chip through a standard DSI(2) protocol. Sophisticated algorithms evaluate the situation and decide whether or not to deploy the airbag within a few milliseconds.

ST's new high-g accelerometers operate within an extended temperature range from -40 to 125°C. Robust to electromagnetic interference, they are qualified to AEC-Q100, a critical stress-test qualification for automotive integrated circuits established by the Automotive Electronics Council (AEC).

The sensing part of the airbag accelerometer is fabricated on ST's 8-inch MEMS line, which has produced more than 850 million motion sensors to date. The electrical part benefits from the high level of integration and specific control of parasitic currents made possible by the Silicon-On-Insulator technology in the Company's proprietary BCD(3) manufacturing process.

Samples of ST's AIS1xxxDS peripheral acceleration sensors for airbags are available and volume production is scheduled for 2012. Unit pricing is $3 for volumes in the range of 1000 pieces. Further pricing options are available for larger quantities.

For further information on ST's complete MEMS portfolio see www.st.com/mems.

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