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STMicroelectronics Introduces World's Smallest Integrated 6-Axis Inertial Measurement Unit

Automotive-telematics and navigation-sensor leader keeps motor vehicles on track

Geneva, October 30, 2014 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, the world's top MEMS (Micro-Electro-Mechanical Systems) manufacturer and the leading supplier of MEMS for consumer and mobile¹ as well as automotive applications², today announced the industry's smallest 6-axis Inertial Measurement Unit (IMU) qualified for Automotive applications with low-noise and improved output resolution.

The tiny ASM330LXH IMU is ideal for in-dash car-navigation solutions that require accurate and reliable inertial sensors to optimize positioning and direction, even in the absence of a strong GNSS (Global Navigation Satellite System) signal. Weak or intermittent satellite signals are common in urban areas, tunnels, and parking garages, where direct visibility of the satellites may be blocked. Multi-axis gyroscopes and accelerometers, like the 6-axis ASM330LXH, empower sophisticated Dead Reckoning software algorithms that calculate current position from a previously determined location updated by time, acceleration, and change of direction. The new device also targets on-board units for electronic road tolling and other vehicle telematics systems.

"Having built its 8" MEMS manufacturing line in 2006 and introduced the world's first automotive-qualified 3-axis MEMS gyroscope for non-safety applications in 2012, ST is fortifying its market leadership with the introduction of this 6-axis IMU that is accurate and reliable despite its small size," said Anton Hofmeister, STMicroelectronics Group Vice President and General Manager Custom MEMS Division.

According to IHS, the market for automotive MEMS devices increased 13% last year, indicating sensor penetration rates that continue to grow faster than the growth of passenger vehicles.

¹ Source: IHS Consumer and Mobile MEMS Market Tracker H1 2014

² Source: IHS Market Tracker Automotive MEMS H1 2014

Technical Notes:

Built on the Company's fab on its robust 8" manufacturing line using the well-proven proprietary THELMA³ micromachining process technology that enables the integration on the same silicon of both a 3-axis acceleration and 3-axis angular-rate sensor (gyroscope), the ASM330LXH IMU is mounted in a 3x3x1.1mm Land Grid Array package. The device offers selectable full-scale ranges of 2/4/8/16g and 125/245/500/1000/2000dps with 16-bit synchronized data outputs, at 6 user-selectable Output Data Rates, for both the gyroscope and accelerometer. An SPI digital output allows the trouble-free transport of sensor data to the microcontroller, and I²C is also supported. Energy efficiency is assured via power-down, low-power, and normal power modes.

AEC-Q100 qualified for automotive non-safety applications, the ASM330LXH is a robust sensor [up to 10000g shock survivability] that operates over an extended industrial temperature range (-40°C to +85°C). Electromagnetic reliability is assured through ST's extensive solid design and packaging expertise.

Engineering samples of the [ASM330LXH](#) are available now, with volume production planned for Q1 2015 and unit pricing at \$6 for orders of 1,000 pieces.

About STMicroelectronics

ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2013, the Company's net revenues were \$8.08 billion. Further information on ST can be found at www.st.com.

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³ Thick-Epi-PolyLayer for Microgyroscopes and Accelerometers