3-Axis Gyroscope Boasts Smallest Package Size

STMicroelectronics, a leading supplier of MEMS (Micro-Electro-Mechanical Systems) for consumer and portable applications, has expanded its motion-sensor portfolio with the addition of what is presented as the world's smallest high performance 3-axis analog gyroscope.

The L3G3250A combines the same robust and field-proven micromachining technology that ST has already used to produce nearly 1.54 billion motion sensors with the Company's aggressive package-shrinking roadmap, making it the first 3-axis gyroscope to meet the demand for smaller footprints in next-generation applications such as gaming and virtual reality input devices, motion control for MMI (man-machine interfaces), GPS navigation systems, and appliances and robotics. The sensor is a high-performance three-axis analog-output gyroscope housed in a package measuring just 3.5x3x1 mm, reducing the footprint from 17.6 mm3 - the current generation in production today - to just 10.5 mm3, a reduction of nearly 40%.

With a resonant frequency beyond the audio bandwidth, the L3G3250A is completely immune to audio noise, such as from speakers mounted close to the sensor, and mechanical vibrations coupled through the printed circuit board, therefore operating with greater accuracy and reliability. In addition, its advanced design, with a single sensing structure for motion measurement along all three orthogonal axes, further increases sensing accuracy and reliability and delivers the industry's highest level of output stability over time and temperature. The combination of high sensing resolution with outstanding immunity to audio noise and vibrations makes motion-sensing user interfaces more realistic in mobile phones, tablets, game consoles, and other smart consumer devices.

The L3G3250A offers two user-selectable full scales – 625 or 2500 dps (degrees per second) – with sensitivities of 2mV/dps and 0.5mV/dps, respectively. The high range allows the device to detect and measure very fast gestures and movements. Other features include an embedded self-test function, a wide supply voltage range (2.4 V to 3.6 V), embedded power-down and sleep modes to optimize power management

in battery-operated devices, an embedded low pass filter and a high pass filter reset function, and high shock survivability.

The device operates over an extended temperature range (-40°C to 85°C) and is available in a 3.5x3x1 mm3 LGA-16 ECOPACK® RoHS and “Green” compliant package. Engineering samples are available now and volume production is scheduled for Q4 2011, with unit pricing at $3.95 for volumes in the range of 1,000 pieces. If your company has a high-volume need, please contact your ST sales office.

Further information on ST can be found at www.st.com [1].

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[1] http://www.st.com