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## **World's First High-Dynamic-Range Audio Processor from STMicroelectronics Delivers Whispers and Screams with Amazing Clarity**

**Geneva, June 25, 2014** – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, and a pioneer in ICs for audio processing, has introduced the world's first audio processor to incorporate the innovative HDR (High Dynamic Range) audio-signal acquisition technology. This highly integrated device combines all the leading-edge audio-processing technologies into a powerful, flexible, and easy-to-use solution.

Audio processors are key components of home systems such as active speakers, docking stations, and digital media players. The high level of integration offered by the new STA311B processor makes it ideal for a wide range of home systems, from entry-level to high-end equipment.

“ST has been a leader in semiconductor audio since practically the beginning of audio electronics,” said Andrea Onetti, General Manager Analog and Audio Systems Division, STMicroelectronics. “Ever since SGS Microelettronica, one of our parent companies<sup>1</sup>, developed the first single-chip audio power amplifiers in 1958, we have set new standards year after year, and with the STA311B we have raised the bar again. The unprecedented combination of performance and flexibility built into the STA311B allows our customers to simultaneously reduce their costs and improve their customers' listening experience.”

HDR signal acquisition allows digital signals with a dynamic range exceeding 130dB to be generated without the need for expensive, high-performance ADCs (Analog-to-Digital Converters). This technique, for which ST has a patent application pending, allows the STA311B to process sounds as low as a whisper or as high as jet engine noise with the same degree of clarity, delivering an unprecedented audio quality.

Housed in a compact 8.0x8.0x0.9mm VFQFPN package, the STA311B embeds eight audio-processing channels with up to 10 independent user-selectable biquadratic filters per channel, input and output mixing capabilities, multi-band dynamic range compression, advanced pop-free operation, auto-detection of input sampling

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<sup>1</sup> ST was formed in 1987 by the merger of the French company Thomson Semiconducteurs and the Italian company SGS Microelettronica. In 1958, SGS launched the TAA 611 (for transistor radios) and the TAA 621 (for TVs). Both devices remained in production for over 25 years.

frequency, input and output (pre- and post-processing) RMS (Root Mean Square) metering, ST's proprietary FFX™ Pulse Width Modulation technology, and HDR acquisition inputs in a single device. This allows audio equipment and subsystem manufacturers to reduce costs by developing multiple products based on the same design still tailored for a variety of price/performance scenarios.

The STA311B's input/output RMS metering function delivers an increased level of safety to the final product without any additional hardware cost. Whereas previous solutions relied on using over-specified and more expensive speakers capable of sustaining high power peaks, the STA311B allows the application to suppress unwanted energy surges that could potentially damage the speakers. The STA311B's pop-free circuitry also enables a seamless start-up, eliminating unwanted noise due to the bridge charge sequence in both Single-End and Bridge-Tied Load configurations.

The latest member of the well-established Sound Terminal® product family, the STA311B is fully supported by ST's free APWorkbench software development tool that allows all ST audio products to be configured via an intuitive, user-friendly graphical interface (<http://www.st.com/apworkbench>). The APWorkbench dedicated e2e community forum is also available at <https://my.st.com/public/STe2ecomunities/analog/Lists/APWorkbench/AllItems.aspx> where interested users can exchange opinions, ask questions, propose new solutions, and much more.

The [STA311B](#) is available in volume and samples are available at \$3.00 in 1Ku quantities.

### **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](http://www.st.com).

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