

Launch of ams' tiny, cost-effective AS3412 opens up mass market opportunity for active noise cancellation

New AS3412 noise cancellation speaker driver is ideal for use in the bundled headsets supplied with smartphones

Premstaetten, Austria (16 March, 2016) -- ams AG (SIX: AMS), a leading provider of high performance sensors and analog ICs, today launched the AS3412, a compact, cost-effective speaker driver which promises to bring the benefits of Active Noise Cancellation (ANC) for the first time to mass-market headsets.

The new device extends the ams family of ANC speaker drivers, drawing on the proprietary analog noise cancellation technology developed by ams and in use by many of the world's leading audio equipment manufacturers.

The AS3412 offers outstanding noise cancellation performance, typically providing up to 30dB of external noise attenuation over an audible frequency range of 20Hz – 2kHz. A highly integrated solution, the AS3412 combines its ANC circuitry with a speaker driver, capable of driving 2x34mW into a 32Ω load, in a 2.2mm x 2.2mm x 0.4mm chip-scale package. Operating from a 1.6V-1.8V power supply, the IC is suitable for use with battery-powered equipment such as smartphones. The AS3412's power and audio system is also compatible with USB Type-C and with Lightning® interfaces.

Supported by an easy-to-use development kit including a software GUI, firmware and simulation environment, the compact AS3412 can readily be integrated into end product designs. Unlike more complex digital implementations, the AS3412 only requires a small number of supporting components, including a filter network composed of low-cost capacitors and resistors.

This means that a high-performance ANC sensor solution can be implemented with the AS3412 at a lower bill-of-materials cost than was previously possible. This enables consumer product OEMs to offer sophisticated noise-cancellation capability for the first time to users of low-cost headset and headphone products, including the bundled headsets supplied with new smartphones and media players.

An additional advantage of the AS3412 is provided by its integrated depletion-mode MOSFET, which provides a built-in bypass function. This simplifies the mechanical design of the end product by eliminating the need for a bulky bypass switch, enabling the speaker driver to continue to provide an audio output even when there is insufficient battery power remaining to support the ANC function.

The AS3412 itself draws a very low current from the battery even in noisecancellation mode. Typical power consumption in normal feed-forward operation, with a 260μA load for twin microphones, is just 11.5mW.



Press Release
ams launches AS3412 active noise cancellation
speaker driver

The audio performance provided by the speaker driver function of the AS3412 is well suited to headsets used with smartphones or media players, offering a signal-to-noise ratio of 112.5dB and a total harmonic distortion and noise figure of less than 0.01% at a music output power of 30mW.

'The experience of listening in silence to crystal-clear sound, even in a noisy environment, has in the past been enjoyed only by users of high-end headphones. With the introduction of the highly integrated AS3412, ams is now making it possible to fit ANC functionality inside a traditional hands-free headset dongle, even in low-cost headsets, to provide noise-free listening to the mass audio market', said Anna Wutke, Marketing Manager for the business line Audio Sensors at ams AG.

The AS3412 ANC solution is available now in production volumes. Unit pricing is \$1.50 in an order quantity of 100,000 units.

An evaluation board for the AS3412 active noise cancellation speaker driver is available from the ams ICdirect online store.

ams will also be demonstrating the ANC IC AS3412 at Electronica Shanghai, stand E2.2112.

For sample requests and technical information, go to www.ams.com/ANC/AS3412.

About ams

ams is a global leader in the design and manufacture of advanced sensor solutions and analog ICs. Our mission is to shape the world with sensor solutions by providing a seamless interface between humans and technology. ams' high-performance analog products drive applications requiring extreme precision, dynamic range, sensitivity, and ultra-low power consumption. Products include sensors, sensor interfaces, power management and wireless ICs for consumer, communications, industrial, medical, and automotive markets.

With headquarters in Austria, ams employs over 2,100 people globally and serves more than 8,000 customers worldwide. ams is listed on the SIX Swiss stock exchange (ticker symbol: AMS). More information about ams can be found at www.ams.com.

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for further information

Media Relations

ams AG

Ulrike Anderwald
Head of Marketing Communications
T +43 (0) 3136 500 31200
press@ams.com
www.ams.com

Technical Contact

ams AG

Anna Wutke
Marketing Manager Audio Sensors
T +43 3136 500 32528
anna.wutke@ams.com
www.ams.com