

Analog speaker driver from ams provides low-power noise cancellation in latest Huawei smartphone

Ascend Mate 7's headset offers outstanding voice call and audio playback experience with near-silent background even in noisy environments

Unterpremstaetten, Austria (2 March, 2015), ams AG (SIX: AMS), a leading provider of high performance analog ICs and sensors, today revealed that the headset in the latest Huawei smartphone implements advanced noise cancellation with the AS3415, a speaker driver from ams with active noise cancellation (ANC) capability.

The ams ANC chip is in the headset of the Ascend Mate 7, a new high-end Android™ smartphone from Huawei. The headset's ANC feature, combined with the passive noise reduction provided by the in-ear housings surrounding the speakers, attenuates a large proportion of ambient noise from low frequencies up to around 3kHz.

This provides the user with an immersive listening experience, undistracted by extraneous sounds. The Ascend Mate 7 makes the music or voice that the user wants to listen to come effortlessly to the fore of the soundscape.

The method of combating ambient noise commonly adopted by users of conventional earphones is to turn up the volume very high. This achieves a higher signal-to-ambient-noise ratio, but at the risk of damaging the sensitive inner ear. With the Ascend Mate 7's headset - due to the provision of noise-cancelling earphones - every audio signal can be heard easily when played at a comfortable volume.

The high-performance ANC implementation enabled by the AS3415 also makes the Ascend Mate 7 more enjoyable to use in voice calls: users accustomed to straining to understand the other party's voice on phone calls in noisy environments will notice how much easier it is to talk in the near-silent background provided by the ams ANC technology.

The AS3415, a feed-forward ANC speaker driver IC, is a perfect fit for the Ascend Mate 7's headset because of its low power consumption, outstanding audio performance and small size.

Unlike competing ANC systems, which contain a digital signal processor that runs software to shape the speaker's output signal, ams speaker drivers use pure analog circuitry. This uses less than half the power of digital ANC systems. It also saves space in the headset, because all the features necessary for noise cancellation are integrated into the AS3415's circuitry, with very few, small external components required.

The high-fidelity sound reproduction of the AS3415 also helps the Ascend Mate 7's headset to achieve



superior audio quality. The AS3415 produces typical total harmonic distortion of just 0.004%, and offers a signal-to-noise ratio of >110dB (34mW output into a 32Ω load). Typical active noise attenuation achieved by the AS3415 is 95%.

'Huawei has made a breakthrough in the consumer appeal of high-end smartphones by providing ANC in the headset of the new Ascend Mate 7. Users will love the crystal-clear audio and almost totally silent background enabled by the AS3415 ANC speaker driver in the headset,' said Oliver Jones, Director and General Manager Audio Sensors at ams.

"The Ascend Mate7 is our most premium smartphone to date powered with the latest innovation to enable users to have a faster, longer, more powerful and extraordinary experience. We have chosen to partner with ams to deliver exceptional audio quality to our consumers and continue to delight them," said Mr. Bruce Li, Vice President of Handset Product Line, Huawei Consumer Business Group.

The AS3415 is available immediately in production volumes.

An evaluation kit for the AS3415 ANC speaker driver is available online from ams. For further information on the AS3415 and to request samples, please visit www.ams.com/ANC/AS3415.

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 1,700 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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