

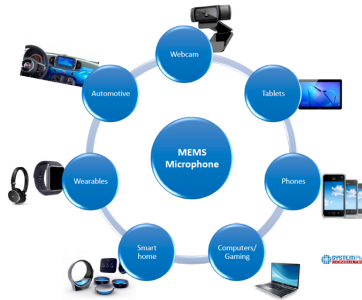
endura

technologies

Case Study: IoT Wearables (Digital Microphone) Breaking the old paradigm around Power, Performance, and Area

Background

There is a growing range of applications being enabled and developed based on MEMS sensor technology from mobile handsets to wearables, automotive, security, and many others. These sensors are coupled with Analog-Front-End ASIC chipsets to detect sounds and translate analog audio into digital signals. The number of digital microphone sensors deployed on the edge is growing exponentially. These sensors are often deployed in compact form-factors with limited power availability, which significantly increases the need for small and low-power consuming microphones. Endura has been engaged with the world's largest manufacturer of digital microphones to create a solution that delivers best-in-class audio quality while also significantly reducing the surface area and power consumption of the microphone.



Endura Solution

Endura's CHA1100 analog-front-end ASIC, built on the 55nm processing node, delivers best-in-class performance in a dramatically smaller form factor with significantly less power consumption than other products on the market. Endura's proprietary high-performance, low noise analogue-to-digital conversion technology enhances signal-to-noise ratios to an industry leading 72dB+. Endura's proprietary active compression technology enables extremely high acoustic overload points of 140dB+. The CHA1100 is powered by Endura's disruptive PMIC architecture, enabling radically lower power consumption and surface area.

Benefits

Endura's CHA1100 has best-in-class performance across all key metrics of performance; SNR, AOP, dynamic range, and signal distortion all in a form factor that is 50% smaller than existing solutions in the market with power consumption that is more than 50% lower than existing solutions.

