NEWS RELEASE

Ambiq, DSP Concepts and Sensory Join Forces to Bring Always-On Voice Control to Portable, Battery-Operated Devices

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Ambiq®, the pioneer in ultra-low power solutions, today announced a partnership with DSP Concepts Inc., a global developer of embedded digital signal processing audio solutions and specialist in voice UI technologies, and Sensory Inc., the leading provider of embedded artificial intelligence (AI) and speech recognition technologies. Together, the three companies are demonstrating a new level of energy efficiency in always-on keyword detect and on-device command phrase recognition for portable consumer products including smartwatches, earbuds, smart home end devices, health monitors, and wearables.

Voice control is radically transforming the way consumers interact with their electronic devices, whether at home, at work, or on-the-go. Until the development of Sensory's TrulyHandsfree and DSP Concepts Audio Weaver Voice UI, it has been very difficult to add highly accurate, always-listening voice control to battery-powered devices without sacrificing the user experience or battery life. The Apollo family of system on chips (SoCs) built on Ambiq's patented Sub-threshold Power Optimized Technology (SPOT®) further enhances the power efficiency of TrulyHandsfree and Audio Weaver UI while still providing ideal always-listening wake word and voice control performance for today's ultra-low-power devices.

By combining Sensory's Low Power Sound Detector (LPSD) and TrulyHandsfree wake word and command phrase detection with DSP Concept's quiescent sound detection, beamforming, and noise reduction, Ambiq's Apollo2 microcontroller is able to achieve highly accurate key phrase detection rates while consuming 4x lower power consumption compared to existing solutions. This power and performance efficiency enables high-quality, multi-microphone beam forming and noise reduction algorithms to run for more than a week using a CR2032 battery.

“We’re thrilled to partner with industry leaders DSP Concepts and Sensory to enable energy-efficient, high-quality and seamless interactions for consumers as they increasingly engage with voice-operated appliances,” said Aaron Grassian, Vice President of Marketing and Business Development at Ambiq. “More and more innovative products are embracing voice-enabled user interfaces and, together, we’re delivering the ultra-low power capabilities to bring true always-listening and always-on voice control to battery-powered intelligent devices.”

“Ambiq’s SPOT-enabled devices have given us a platform to showcase the quality of our Audio Weaver Voice UI to focus on the user’s commands at ultra-low power levels,” said Dr. Paul Beckmann, Founder and CTO of DSP Concepts, Inc. “The combination of the power efficiency and audio quality of our technologies is the most important factor in driving a frictionless user experience and a new level of adoption in the market.”

“TrulyHandsfree was specifically developed to enable highly-accurate and noise robust wake word and voice key phrase recognition on ultra-low-power applications,” said Bernie Brafman, VP, business development at Sensory. “As devices continue to get smaller, so will the batteries within them. We are pleased to team up with Ambiq and DSP Concepts to provide a solution that will enable more companies to add TrulyHandsfree always-listening voice capabilities to their power-constrained applications.”

Ambiq will be demonstrating SPOT-enabled ultra-low power voice control solutions at the Consumer Electronics Show 2018 (CES) on Tuesday, January 9, through Friday, January 12, at the Renaissance Hotel Las Vegas, Suite 532. For an appointment, contact **CES-2018@ambiqmicro.com**.