



NEWS RELEASE

Ambiq Brings Intelligent Voice-Command to Battery-Powered Edge Devices

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Complete Industry-Leading Ultra-Low Powered Solution to Enable Billions of Future IoT Devices with Voice Functionality

Austin, TX—Ambiq, a technology leader recognized in ultra-low power system on chips (SoCs) and real-time clocks (RTCs), today introduced the new **Ambiq Voice-on-SPOT® (VoS) Kit**, designed for manufacturers to introduce voice-command into their IoT devices with faster time-to-market. Aimed to deliver the complete ultra-low power solution at both the MCU and the system levels, the VoS Kit integrates Ambiq's hardware and software with peripherals and third-party IP, including signal processing using DSP Concepts' Audio Weaver, Sensory™ VoiceHub, and Retune DSP® VoiceSpot.

The speech and voice recognition market is projected to be worth \$27.16 billion by 2025¹. Spurred by the pandemic, the adoption of voice assistants will continue to rise as both businesses and consumers look for easier, more convenient, and safer ways to interact. The VoS Kit is Ambiq's solution to bring voice and audio capability to battery-powered devices with Always-on-Voice (AoV) functionality. Targeted applications include remote controls, gaming controllers, smart sensors, smartwatches, remote mics, and health trackers.

"Voice is the most convenient but least utilized input modality to interact with a product. The mass adoption of artificial intelligence (AI) in our everyday lives has accelerated the shift toward voice applications," said Marc Miller, the Director of Solutions Marketing at Ambiq. "With the Ambiq VoS Kit, manufacturers finally have a complete solution to implement always-on voice command in their IoT devices while achieving up to one year battery life."

Available now, the first VoS Kit, built on the Apollo3 Blue Plus SoC, will support Always-on-Voice with application and



cloud service driven options for one or two mics, signal processing, wake word/command detection, codec, and Bluetooth® Low Energy communication. The next generation, the Apollo4 Blue VoS Kit, targeted for the third quarter of 2021, will further lower always-on power with 2 analog mic inputs, while increasing capabilities with up to 8 digital mic inputs, 120dB SNR (Signal to Noise Ratio) PDM (Pulse Density Modulation) to PCM (Pulse Code Modulation) converter, 192MHz Arm® Cortex®-M4F MCU, highly precise clocking and advanced interconnectivity with hardware rate matching. The Apollo4 Blue VoS Kit will expand Ambiq's repertoire with excellent voice input for phone calls, translation, and audio conferencing.

For more product information, visit www.ambiq.com.

Supporting Quotes From Selected Partners

DSP Concepts

Paul Beckmann, Founder of DSP Concepts, whose Audio Weaver platform powers more than 50 million devices for leading consumer and automotive brands, notes the ample market opportunity for the Ambiq VoS Kit and the design challenges it solves. "Demand for voice-enabled products is at an all-time high and we've seen a lot of interest from brands looking to add voice to compact devices like smartwatches and remote controls. These applications of voice UI make perfect sense when you think about how often we use these products, but the size and power constraints present real design challenges. Ambiq is widely-recognized as a leader in ultra-low power SoCs, and their VoS Kit is an attractive solution for product makers looking to overcome these obstacles and add reliable voice UI to compact devices."

Retune

"Voice as a User Interface has rapidly become a must-have feature for many battery-operated devices such as smart watches and TV remotes," said Chris Welsh, Director of Business Development at Retune DSP. "Long battery life and accurate wake-word performance are keys to success in this space, and we're very pleased to announce the availability of VoiceSpot, our low memory, ultra-low power wake work engine, on Ambiq's industry leading Apollo3 and Apollo4 family of SoCs. "

Sensory

"Sensory and Ambiq share the same goal of faster time to market for always on voice devices," stated Joe Murphy, VP of Marketing at Sensory. "Using Sensory's VoiceHub, developers can quickly build custom wake word models and voice control command sets. Taking it a step further, developers can select the Ambiq Apollo output which offers seamless integration with Ambiq's VoS kit."

About Ambiq

Ambiq was founded in 2010 with the mission to foster a cleaner, greener, and safer environment where mobile and portable devices could either reduce or eliminate their total power consumption from the batteries. Ambiq has

been laser-focused on inventing and delivering the most revolutionary system on chip (SoC) solutions in the market for the last ten years. Through the advanced Sub-threshold Power Optimized Technology (SPOT®) platform, Ambiq has helped many leading manufacturers worldwide create products that can operate for days, months, and sometimes years on a lithium battery or a single charge.

For more information, visit www.ambiq.com.

¹Sourced by Statista voice recognition market size worldwide published on Jan. 4, 2021

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