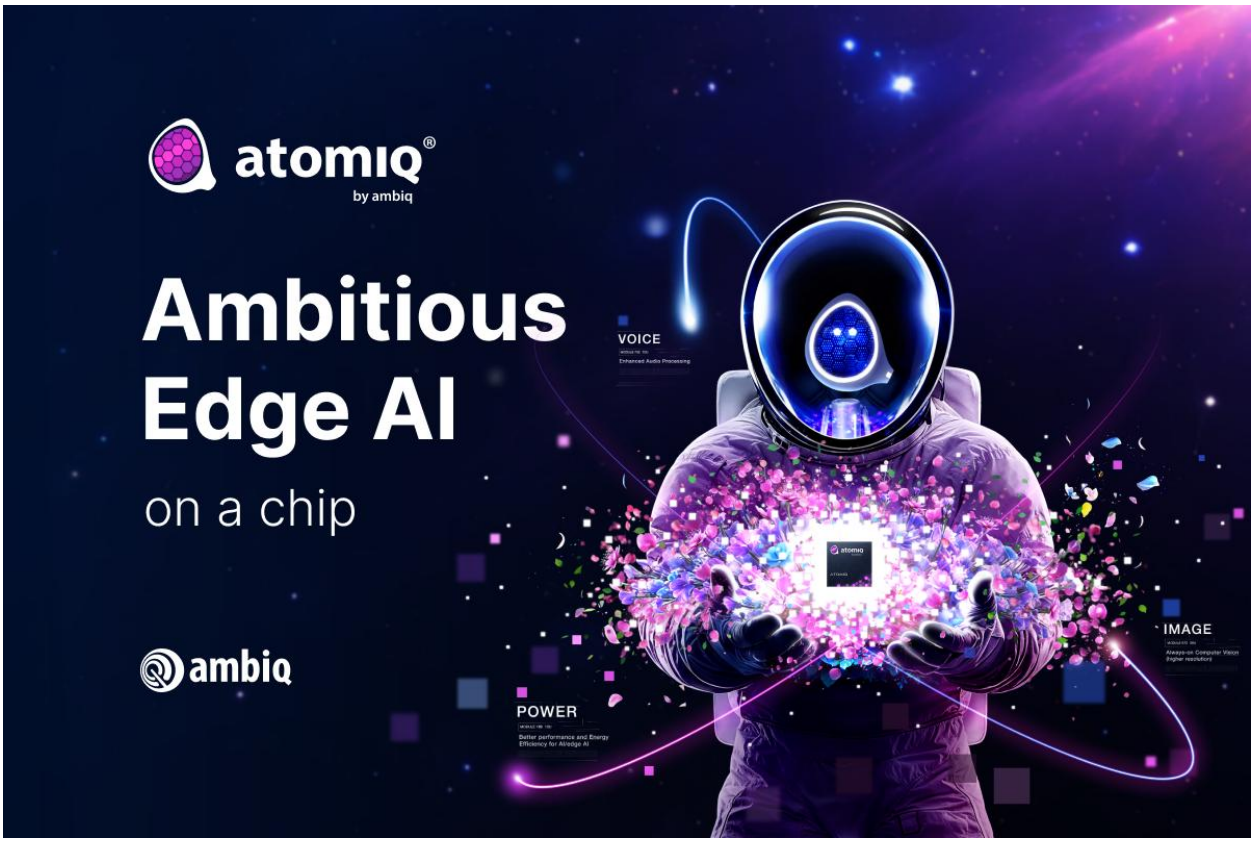
Ambiq Unveils Atomiq®, the World's First Ultra-Low Power NPU SoC Built on SPOT®

Enabling always-on audio, vision, and reasoning for next-generation edge AI devices



AUSTIN, Texas, January 6, 2026 — Ambiq Micro, Inc. ("Ambiq") (NYSE: AMBQ), a recognized leader in ultra-low-power semiconductor solutions for edge AI, today announced Atomiq, the highly anticipated system-on-chip (SoC) integrating a Neural Processing Unit (NPU) designed to enable real-time, always-on artificial intelligence at the edge. Built on Ambiq's Subthreshold Power Optimized Technology (SPOT) platform, Atomiq aims to establish a new benchmark for energy efficiency in demanding edge AI applications.

High Performance Meets Power Efficiency

As AI models continue to grow in complexity, manufacturers face a critical challenge: scaling device intelligence without compromising battery life or increasing thermal and

system costs. Atomiq is architected to address this challenge at a system level, optimizing compute performance and power consumption to enable sustained AI processing at the edge.

Key Features:

- **World's First SPOT-Optimized NPU:** Atomiq is the first SoC to leverage sub- and near-threshold voltage operation for AI acceleration, delivering industry-leading energy efficiency for complex edge AI workloads.
- **>200 GOPS of On-Device AI Performance:** Integration of the Arm® Ethos™-U85 NPU supports sparsity and on-the-fly decompression, enabling compute-intensive workloads, including computer vision, multilingual speech recognition, and sensory models, directly on-device.
- **Dynamic Power Scaling for Always-on Intelligence:** SPOT-based ultra-wide range dynamic voltage and frequency scaling (DVFS) enables operation at lower voltage and lower power than previously possible, making room in the power budget for unprecedented levels of intelligence.
- **Robust Software Platform for Faster Time-to-Market:** Ambiq's Helia™ AI platform, together with its AI development kits (ADK), and the modular neuralSPOT® SDK, delivers a tightly integrated hardware-software stack that is designed to enable higher performance in a smaller memory footprint at much lower power, significantly shorten development cycles, and provide energy-optimized AI deployment out of the box.

The Manufacturer Advantage

The Atomiq SoC expands Ambiq's edge AI portfolio by enabling a new class of high-performance, battery-powered devices that were previously impractical due to power and thermal constraints. Representative use cases include:

- Smart Cameras & Security: Always-on, high-resolution object recognition and tracking without frequent recharging or active cooling.
- AR Glasses & Wearables: Conversational voice-based interfaces with on-board text-to-speech synthesis for all-day use.
- Industrial Edge & Robotics: High-fidelity semantic audio processing and advanced data analysis on the factory floor, operating independently of cloud connectivity or fixed power sources.

Executive Remarks

"The Atomiq product family represents a step-change in energy-efficient edge AI," says CTO and Founder, Dr. Scott Hanson. "By combining the Atomiq system architecture with Arm's Ethos-U85, we enable significantly larger AI models at the edge with industry-leading energy efficiency, powered by our SPOT platform. Together, these capabilities form the foundation for true ambient intelligence."

"From smart cameras to wearables, edge devices now require increasing levels of AI performance within extreme power and thermal constraints," said Lionel Belnet, senior director of hardware product management, Edge AI Business Unit at Arm. "Built on the Arm compute platform, Ambiq's Atomiq SoC shows what's possible when AI acceleration is designed specifically for the edge, enabling richer audio, vision, and reasoning directly on-device for a new class of intelligent, battery-powered edge systems."

CES 2026 Platform Highlights

The Atomiq announcement builds on Ambiq's established leadership in ultra-low power edge AI. At CES 2026, Ambiq will showcase its edge AI ecosystem and real-world progress across consumer and industrial markets. New deployments with Bravechip and Ronds demonstrate how Apollo platforms enable scalable AI solutions today, while Atomiq outlines the architectural path to support more demanding future applications—from conversational AR glasses to autonomous industrial robots.

Smart Rings: Next-Generation Wearable Platforms

Ambiq's continued partnership with Bravechip enables a new chiplet platform designed to reduce smart ring costs by up to 85%, boost production yield by 20%, and accelerate development of next-generation wearables. Powered by Ambiq Apollo330B Plus SoC, the Bravechip BCL603S3H platform is purpose-built to deliver greater processing performance, improved energy efficiency, and expanded memory to support ultra-low-power, always-on sensing and on-device advanced AI features, including voice recognition, gesture detection, and continuous health monitoring.

Read the Bravechip announcement.

Industrial Edge: Intelligent Equipment Monitoring

Ambiq's strategic partnership with Ronds has enabled the deployment of more than 400,000 intelligent sensors across heavy industries, including petrochemical, coal processing, and chemical plants. Built on the Apollo platform, these sensors provide continuous condition monitoring and predictive maintenance of industrial equipment operating in harsh, power-constrained environments—without relying on continuous cloud connectivity. Ronds is now expanding into international markets across North America, Europe, and the Middle East.

Read the Ronds announcement.

Together, these CES 2026 ecosystem examples illustrate how Ambiq provides a scalable foundation for edge AI across diverse markets, from consumer wearables to industrial infrastructure.

The Roadmap: 12nm & Beyond

Ambiq remains committed to enabling intelligence everywhere. Atomiq serves as a foundational platform for increasingly sophisticated AI applications across smart buildings, healthcare, and consumer electronics. The company plans to share additional details on its next-generation 12nm SPOT platform, beginning in March 2026 at the Embedded World Conference in Germany.

Media, investors, and manufacturers are invited to **meet with Ambiq's technical leadership team** at the Venetian Hotel during CES 2026 to learn how Ambiq is shaping the future of edge AI.

About Ambiq Micro

Headquartered in Austin, Texas, Ambiq's mission is to enable intelligence (artificial intelligence (AI) and beyond) everywhere by delivering the lowest power semiconductor solutions. Ambiq enables its customers to deliver AI compute at the edge where power consumption challenges are the most severe. Ambiq's technology innovations, built on the patented and proprietary subthreshold power-optimized technology (SPOT®), fundamentally deliver a multi-fold improvement in power consumption over traditional semiconductor designs. Ambiq has powered over 280 million devices to date. For more information, visit www.ambiq.com.

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