



NEWS RELEASE

Ambiq Launches heliaCORE for Real-World Edge AI Deployment

2026-06-23

Production-grade AI kernel foundation validated across 40+ AI models and ~12x more operator instances than MLPerf Tiny on Apollo SoCs.

AUSTIN, Texas--(BUSINESS WIRE)-- Ambiq Micro, Inc. ("Ambiq®"), a technology leader in ultra-low-power semiconductor solutions for edge AI, today announced heliaCORE™, the foundational software layer powering its HELIA™ Edge AI ecosystem. Built specifically for Apollo SoCs, heliaCORE provides optimized AI kernels, broad operator acceleration, and production-scale validation to help developers bring AI-enabled products to market faster on resource-constrained edge devices.

Designed for production edge AI workloads, heliaCORE accelerates not only core neural network kernels but also critical inference operations—including activations, padding, reductions, reshapes, and data movement—to improve real-world performance and efficiency while reducing the complexity of bringing AI-enabled products to market. Built on the Arm® CMSIS-NN ecosystem, heliaCORE preserves compatibility with industry-standard embedded AI development workflows.

"The future of AI will be defined by intelligent devices operating at the edge, but moving AI from experimentation to real-world deployment remains one of the industry's biggest challenges," said Dr. Adam Page, Head of AI at Ambiq. "helioCORE is a foundational building block of the HELIA ecosystem, providing the software infrastructure developers need to deploy edge AI faster and with greater confidence."

Key highlights include:

- More than 200 accelerated operators optimized for Apollo devices
- MVE and DSP acceleration across current- and previous-generation Apollo SoCs
- Validation across:
 - 40+ AI models
 - 53 operator types
 - 247 unique operators
 - 963 operator instances

This validation footprint spans approximately 12x more operator instances than MLPerf Tiny, providing broader coverage of real-world AI workloads and greater confidence in production deployment.

heliaCORE expands Ambiq's HELIA ecosystem, joining previously announced technologies, including heliaRT™ and heliaAOT™, as part of Ambiq's growing Edge AI software platform, designed to simplify the development and deployment of intelligent products on Apollo SoCs.

Available through CMake, CMSIS-Pack, Zephyr, and neuralSPOT-X integration flows, heliaCORE integrates into existing development workflows, helping teams reduce software integration effort and accelerate time to market.

Availability

heliaCORE is available now to Ambiq customers and partners. Developers can access documentation, software resources, and get-started materials through Ambiq's developer portal and **heliaCORE GitHub page**.

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 300 million devices to date. For more information, visit **www.ambiq.com**.

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