



NEWS RELEASE

# Ambiq Accelerates the Development of Optimized AI Features with neuralSPOT

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## Highlights

- Ambiq's neuralSPOT is an open-source developer-focused AI development kit (ADK) and toolkit designed for Ambiq hardware platforms
- Ideal for AI developers, neuralSPOT includes Ambiq-optimized libraries, tools, and examples to help jumpstart AI-focused applications
- Available now as a Technical Preview, visit **our code repository** to download and start developing AI today

Austin, TX – Ambiq®, a technology pioneer in ultra-low power semiconductor products and solutions, introduces neuralSPOT®, an open-source AI developer-focused ADK designed for Ambiq's latest Apollo4 Plus system-on-chip (SoC) family.

While leveraging Ambiq's proprietary SPOT® platform, neuralSPOT unlocks a game-changing, multi-fold improvement in energy efficiency for our end customers' electronic products. The ADK encompasses essential software and tools for developers to advance AI features for their applications. Designed with libraries for communicating with sensors, managing SoC peripherals, controlling power and memory configurations, tools for easily debugging AI models from a laptop or PC, and examples, neuralSPOT ties it all together.

Today, AI is used extensively in the multibillion-dollar intelligent Internet of Things (IoT) space for everything from industrial anomaly detection to speech-based consumer interfaces. The IoT edge installed base is expected to grow from 14.6 billion devices in 2021 to 30.0 billion devices by 2027, according to Ericsson®, reinforced by growth in applications such as smart wearables, hearables, industrial IoT (IIoT), intelligent manufacturing, healthcare, smart home, smart buildings, and automotive.



With a turnkey approach, neuralSPOT helps unlock the Apollo4 Plus's highly efficient AI capabilities by including Ambiq-specific optimized libraries for audio, I<sup>2</sup>C, power and memory management, accelerated inter-process communication, and other peripherals. Moreover, it offers customized tools to ease common cross-platform AI development challenges, such as testing a deployed model against public datasets by allowing PC-based AI models to communicate seamlessly with Ambiq's embedded platforms. It also includes ready-to-use AI examples to help bootstrap AI feature development on Ambiq products.

The open-source and modular approach in neuralSPOT is designed specifically for embedded AI application developers, flexibly accommodating multiple workflows to drive development and collaboration.

"Ambiq's feature-rich Apollo4 family is a highly capable and extremely power-efficient AI platform," Carlos Morales, Vice President of AI at Ambiq. "neuralSPOT will help propel our customer's initiatives to a faster time-to-market for their unique feature implementation."

Designed by AI developers for AI developers, neuralSPOT provides an on-ramp to the rapid development of AI features for our customers' AI applications and products.

An open-source technical preview of neuralSPOT is available now at [ambiq.ai/neuralSPOT](https://ambiq.ai/neuralSPOT)

#### About Ambiq

Our mission is to enable intelligent devices everywhere by developing the lowest-power semiconductor solutions to drive a more energy-efficient, sustainable, and data-driven world. We are a pioneer of ultra-low power semiconductor solutions based on our proprietary and patented Sub-threshold Power Optimized Technology (SPOT) platform. SPOT provides a game-changing multi-fold improvement in energy efficiency for our end customers' electronic products. Ambiq has helped leading manufacturers worldwide develop products that run for weeks (rather than days) on a single charge, while delivering a maximum feature set in compact industrial designs. Ambiq's goal is to take Artificial Intelligence (AI) where it has never gone before in mobile and portable devices, using Ambiq's advanced ultra-low power system on chip (SoC) solutions. Ambiq has shipped more than 150 million units as of April 2022. For more information, visit [ambiq.com](https://ambiq.com).

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