# Aetina announces support for Super Mode on NVIDIA Jetson Orin modules



Aetina, a prominent player in the edge AI solutions sector, has announced its extensive support for the recently introduced Super Mode feature on NVIDIA® Jetson Orin™ NX and Jetson Orin™ Nano modules. This significant enhancement is set to be activated with the forthcoming release of the NVIDIA JetPack™ software development kit’s version 6.2, anticipated later this month. This upgrade is expected to double the generative AI inference performance, thereby solidifying applications in fields such as computer vision, robotics, and local AI deployment.

Super Mode is claimed to radically enhance the operational capabilities of the Jetson Orin platforms. By significantly improving processing performance and efficiency, these modules are tailored for demanding AI applications at the edge. The introduction of Super Mode will offer up to a 70% increase in AI TOPS, enabling a diverse array of AI models to operate, including large language models (LLMs), vision-language models (VLMs), and Vision Transformers (ViTs). Aetina's DeviceEdge series, which includes models such as AIE-CN/CO-1-S1, AIE-PN/PO-1-S1, and AIE-KN/KO-1-S1, has been fully optimised to exploit these advancements, positioning them as robust solutions for enterprise and industrial AI needs.

Key advancements associated with Super Mode include enhanced AI capabilities, as this feature facilitates the execution of complex generative AI models at quicker and more efficient rates. This is particularly advantageous for various applications, including LLM-powered chatbots, visual AI agents, AI-driven robotics, and proactive edge computing tasks. Moreover, the rich NVIDIA software ecosystem also plays a critical role, offering essential development tools such as NVIDIA Isaac, NVIDIA Metropolis, and the NVIDIA TAO Toolkit. These resources empower developers to build and deploy sophisticated AI solutions effectively.

Troy Lin, Senior Manager of Product Development at Aetina, expressed his enthusiasm for this development, stating, "As an Elite member of the NVIDIA Partner Network, Aetina is committed to bringing cutting-edge AI capabilities to the edge computing market. The integration of Super Mode for Jetson Orin NX and Orin Nano modules into our DeviceEdge series represents a significant leap forward in edge AI computing. It is more than just a performance upgrade - it's a strategic investment in future AI capabilities. Super Mode helps ensure our clients’ AI infrastructure stays ahead of emerging technologies and future workload demands."

The rollout of the NVIDIA JetPack 6.2 is poised to usher in a new era of AI capabilities for Aetina's clients, with expectations to transform both industrial and enterprise applications. Complementing these software updates, Aetina plans to release new system models featuring Super Mode for Jetson Orin Nano modules in the first quarter of 2025, followed by Super Mode for Jetson Orin NX modules in the second quarter of the same year. This move aims to cater to the increased performance requirements, ensuring that system durability and reliability are upheld across various operational environments.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

* <https://docs.nvidia.com/jetson/jetpack/release-notes/index.html> - This link provides details on the new features of NVIDIA JetPack 6.2, including the introduction of Super Mode for NVIDIA Jetson Orin Nano and Jetson Orin NX modules, which enhances AI performance and memory bandwidth.
* <https://forums.developer.nvidia.com/t/make-your-existing-nvidia-jetson-orin-devices-faster-with-super-mode/318356> - This forum post explains how the Super Mode in JetPack 6.1 rev 1 boosts the internal clocks of the NVIDIA Jetson Orin Nano and NX to increase AI performance and memory throughput, and provides benchmark results for the YOLOv8n model.
* <https://www.jetson-ai-lab.com/initial_setup_jon.html> - This guide outlines the steps to update and enable Super Mode on the Jetson Orin Nano Developer Kit, including firmware updates and switching to the MAXN power mode for maximum performance.
* <https://docs.nvidia.com/jetson/jetpack/release-notes/index.html> - This document details the support for new reference power modes on Jetson Orin Nano and Jetson Orin NX production modules, delivering up to 2x generative AI performance with the new flashing configuration.
* <https://forums.developer.nvidia.com/t/make-your-existing-nvidia-jetson-orin-devices-faster-with-super-mode/318356> - This link corroborates the performance improvements with Super Mode, mentioning up to a 1.7 times improvement in AI workloads depending on the AI model and system conditions.
* <https://www.jetson-ai-lab.com/initial_setup_jon.html> - This guide explains the process of updating the firmware to enable the Super performance mode, which is crucial for unlocking the increased AI capabilities on the Jetson Orin modules.
* <https://docs.nvidia.com/jetson/jetpack/release-notes/index.html> - This release note highlights the flexibility and expanded choices of Linux distro options on Jetson with the new JetPack version, supporting any upstream Linux Kernel greater than 5.14.
* <https://forums.developer.nvidia.com/t/make-your-existing-nvidia-jetson-orin-devices-faster-with-super-mode/318356> - This post discusses the practical implementation of Super Mode, including the configuration details and observed performance improvements in real-world scenarios like object detection using the YOLOv8n model.
* <https://www.jetson-ai-lab.com/initial_setup_jon.html> - This guide mentions the necessity of deleting old power profiles to enable the new MAXN performance mode, ensuring the system is ready for the enhanced AI capabilities.
* <https://docs.nvidia.com/jetson/jetpack/release-notes/index.html> - This document lists the specific power modes supported by different Jetson Orin modules, such as 10W, 15W, 25W, and MAXN SUPER, which are relevant to the performance enhancements discussed.
* <https://electronics-journal.com/news/89935-aetina-embarks-on-revolutionary-edge-ai-enhancements-with-super-mode-support-for-nvidia-jetson-orin-nx-and-nano-series> - Please view link - unable to able to access data