# NVIDIA Announces Jetson Nano: $99 Tiny, Yet Mighty NVIDIA CUDA-X AI Computer That Runs All AI Models

GPU Technology Conference--NVIDIA today announced the Jetson Nano™, an AI computer that makes it possible to create millions of intelligent systems.

The small but powerful CUDA-X™ AI computer delivers 472 GFLOPS of compute performance for running modern AI workloads and is highly power-efficient, consuming as little as 5 watts.

Unveiled at the GPU Technology Conference by NVIDIA founder and CEO Jensen Huang, Jetson Nano comes in two versions -- the $99 devkit for developers, makers and enthusiasts and the $129 production-ready module for companies looking to create mass-market edge systems.

Jetson Nano supports high-resolution sensors, can process many sensors in parallel and can run multiple modern neural networks on each sensor stream. It also supports many popular AI frameworks, making it easy for developers to integrate their preferred models and frameworks into the product.

Jetson Nano joins the Jetson™ family lineup, which also includes the powerful Jetson AGX Xavier™ for fully autonomous machines and Jetson TX2 for AI at the edge. Ideal for enterprises, startups and researchers, the Jetson platform now extends its reach with Jetson Nano to 30 million makers, developers, inventors and students globally.

“Jetson Nano makes AI more accessible to everyone -- and is supported by the same underlying architecture and software that powers our nation's supercomputers," said Deepu Talla, vice president and general manager of Autonomous Machines at NVIDIA. “Bringing AI to the maker movement opens up a whole new world of innovation, inspiring people to create the next big thing."

Jetson Nano Developer Kit

The power of AI is largely out of reach for the maker community and in education because typical technologies do not pack enough computing power and lack an AI software platform.

At $99, the Jetson Nano Developer Kit brings the power of modern AI to a low-cost platform, enabling a new wave of innovation from makers, inventors, developers and students. They can build AI projects that weren't previously possible and take existing projects to the next level -- mobile robots and drones, digital assistants, automated appliances and more.

The kit comes with out-of-the-box support for full desktop Linux, compatibility with many popular peripherals and accessories, and ready-to-use projects and tutorials that help makers get started with AI fast. NVIDIA also manages the Jetson developer forum, where people can get answers to technical questions.

“The Jetson Nano Developer Kit is exciting because it brings advanced AI to the DIY movement in a really easy-to-use way," said Chris Anderson of DIY Robocars, DIY Drones and the Linux Foundation's Dronecode project. “We're planning to introduce this technology to our maker communities because it's a powerful, fun and affordable platform that's a great way to teach deep learning and robotics to a broader audience."

Jetson Nano Module

In the past, companies have been constrained by the challenges of size, power, cost and AI compute density. The Jetson Nano module brings to life a new world of embedded applications, including network video recorders, home robots and intelligent gateways with full analytics capabilities. It is designed to reduce overall development time and bring products to market faster by reducing the time spent in hardware design, test and verification of a complex, robust, power-efficient AI system.

The design comes complete with power management, clocking, memory and fully accessible input/outputs. Because the AI workloads are entirely software defined, companies can update performance and capabilities even after the system has been deployed.

“Cisco Collaboration is on a mission to connect everyone, everywhere for rich and immersive meetings," said Sandeep Mehra, vice president and general manager for Webex Devices at Cisco. “Our work with NVIDIA and use of the Jetson family lineup is key to our success. We're able to drive new experiences that enable people to work better, thanks to the Jetson platform's advanced AI at the edge capabilities."

To help customers easily move AI and machine learning workloads to the edge, NVIDIA worked with Amazon Web Services to qualify AWS Internet of Things Greengrass to run optimally with Jetson-powered devices such as Jetson Nano.

“Our customers span very diverse industries, including energy management, industrial, logistics, and smart buildings and homes," said Dirk Didascalou, vice president of IoT, Amazon Web Services, Inc. “Players in all of these industries are building intelligence and computer vision into their applications to take action at the edge in near real time. AWS IoT Greengrass allows our customers to perform local inference on Jetson-powered devices and send pertinent data back to the cloud to improve model training."

One Software Stack Across the Entire Jetson Family

NVIDIA CUDA-X is a collection of over 40 acceleration libraries that enable modern computing applications to benefit from NVIDIA's GPU-accelerated computing platform. JetPack SDK™ is built on CUDA-X and is a complete AI software stack with accelerated libraries for deep learning, computer vision, computer graphics and multimedia processing that supports the entire Jetson family.

The JetPack includes the latest versions of CUDA, cuDNN, TensorRT™ and a full desktop Linux OS. Jetson is compatible with the NVIDIA AI platform, a decade-long, multibillion-dollar investment that NVIDIA has made to advance the science of AI computing.

Reference Platforms to Prototype Quickly

NVIDIA has also created a reference platform to jumpstart the building of AI applications by minimizing the time spent on initial hardware assembly. NVIDIA JetBot™ is a small mobile robot that can be built with off-the-shelf components and open sourced on GitHub.

Jetson Nano System Specs and Software
Key features of Jetson Nano include:

- GPU: 128-core NVIDIA Maxwell™ architecture-based GPU
- CPU: Quad-core ARM® A57
- Video: 4K @ 30 fps (H.264/H.265) / 4K @ 60 fps (H.264/H.265) encode and decode
- Camera: MIPI CSI-2 DPHY lanes, 12x (Module) and 1x (Developer Kit)
- Memory: 4 GB 64-bit LPDDR4; 25.6 gigabytes/second
- Connectivity: Gigabit Ethernet
- OS Support: Linux for Tegra®
- Module Size: 70mm x 45mm
- Developer Kit Size: 100mm x 80mm

Availability
The NVIDIA Jetson Nano Developer Kit is available now for $99. The Jetson Nano module is $129 (in quantities of 1,000 or more) and will begin shipping in June. Both will be sold through NVIDIA's main global distributors. Developer kits can also be purchased from maker channels, Seeed Studio and SparkFun.

**About NVIDIA**
NVIDIA's (NASDAQ: NVDA) invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined modern computer graphics and revolutionized parallel computing. More recently, GPU deep learning ignited modern AI — the next era of computing — with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world. More information at http://nvidianews.nvidia.com/.

Certain statements in this press release including, but not limited to, statements as to: the benefits, impact, performance and abilities of Jetson Nano, Jetson Nano Developer Kit, Jetson Nano module and JetPack SDK; Jetson Nano running all AI models and ability to create millions of intelligent systems; Jetson Nano supporting many frameworks making it easy for developers to integrate their models and frameworks into the product; Jetson products extending its reach to users globally; Jetson Nano making AI more accessible to everyone and bringing AI to the maker movement opening up a new world of innovation and inspiring the next big thing; Jetson Nano Developer Kit bringing the power of modern AI, enabling a new wave of innovation; enabling AI projects that were not possible before and taking existing projects to the next level; excitement over the Jetson Nano Developer Kit bringing AI to the DIY movement and the reasons for the planned introduction of the technology to maker communities; the Jetson Nano module opening up a new world of embedded applications, its ability to bring products to market faster and companies' ability to update performance and capabilities after the system has been deployed; Cisco's mission, work with NVIDIA and Jetson being the key to its success and its ability to drive new experiences that enable people to work better due to Jetson; the benefits of Jetson and AWS Internet of Things Greengrass working together and it enabling customers to perform inference on Jetson devices and help improve model training; players in industries building intelligence and computer visions into their applications; and the availability of the Jetson Nano Developer Kit and Jetson Nano module are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners' products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.



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