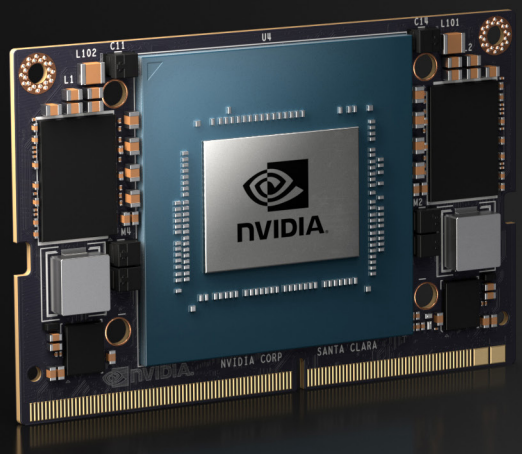

NVIDIA JETSON XAVIER NX

XAVIER PERFORMANCE. NANO SIZE.

The World's Smallest AI Supercomputer for Embedded and Edge Systems

NVIDIA® Jetson Xavier™ NX takes supercomputer performance to the edge in a compact system-on-module (SOM) that's smaller than a credit card. It features new cloud-native support and accelerates the NVIDIA software stack with more than 10X the performance of its widely adopted predecessor, Jetson TX2. This power-efficiency enables accurate, multi-modal AI inference in a small form factor and opens the door for innovative edge devices in manufacturing, logistics, retail, service, agriculture, smart city, healthcare and life sciences, and more.

The Jetson Xavier NX module benefits from new cloud-native support across the entire Jetson platform lineup, making it easier to build, deploy, and manage AI at the edge. Pre-trained AI models from NVIDIA NGC, together with the NVIDIA Transfer Learning Toolkit, provide a faster path to inference with optimized AI networks, while containerized deployment to Jetson devices allows flexible and seamless updates.

NVIDIA JetPack™ SDK enables development of AI applications for Jetson Xavier NX with accelerated libraries supporting all major AI frameworks, as well as computer vision, graphics, multimedia, and more. Together with the latest NVIDIA tools for application development and optimization, JetPack ensures fast time to market and reduced development costs.

Ease of development and speed of deployment together with a unique combination of form-factor, performance, and power advantage make Jetson Xavier NX the most flexible and scalable platform to get to market and continuously update over the lifetime of a product.

Key Features

- 384-Core NVIDIA Volta™ GPU with 48 Tensor Cores
- 6-Core NVIDIA Carmel ARM®v8.2 64-bit CPU
- 2x NVDLA Engines
- 7-Way VLIW Vision Processor
- 8 GB 128-bit LPDDR4x
- 16 GB eMMC 5.1
- 10/100/1000 Base-T Ethernet

Power

- Voltage Input: 5 V
- Module Power: 10 W - 15 W

NVIDIA JETSON XAVIER NX MODULE
TECHNICAL SPECIFICATIONS

AI Performance	**21 TOPS (INT8)**
GPU	**NVIDIA Volta architecture with 384 NVIDIA CUDA® cores and 48 Tensor cores**
Max GPU Freq	**1100 MHz**
CPU	**6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6 MB L2 + 4 MB L3**
CPU Max Freq	**1900 MHz**
Memory	**8 GB 128-bit LPDDR4x 51.2GB/s**
Storage	**16 GB eMMC 5.1**
Power	**10 W | 15 W**
PCIe	**1 x1 (PCIe Gen3) + 1 x4 (PCIe Gen4), total 144 GT/s ***
CSI Camera	**Up to 6 cameras (24 via virtual channels) 14 lanes (3x4 or 6x2) MIPI CSI-2 D-PHY 1.2 (up to 30 Gbps)**
Video Encode	**2x 4K @ 30 | 6x 1080p @ 60 | 14x 1080p @ 30 (H.265/H.264)**
Video Decode	**2x 4K @ 60 | 4x 4K @ 30 | 12x 1080p @ 60 | 32x 1080p @ 30 (H.265) 2x 4K @ 30 | 6x 1080p @ 60 | 16x 1080p @ 30 (H.264)**
Display	**2 multi-mode DP 1.4/eDP 1.4/HDMI 2.0**
DL Accelerator	**2x NVDLA Engines**
DLA Max Freq	**1100 MHz**
Vision Accelerator	**7-Way VLIW Vision Processor**
Networking	**10/100/1000 Base-T Ethernet**
USB	**1xUSB 3.1 (10 Gbps) | 3xUSB 2.0**
Other IOs	**1x SDIO / 2x SPI / 3x UART / 2x I2S / 4x I2C / 1x CAN / GPIOs**
Mechanical	**45 mm x 69.6 mm 260 pin SO-DIMM connector**

* Refer to the Software Features section of the latest NVIDIA Jetson Linux Developer Guide for a list of supported features

Learn more at **www.nvidia.com/JetsonXavierNX**

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