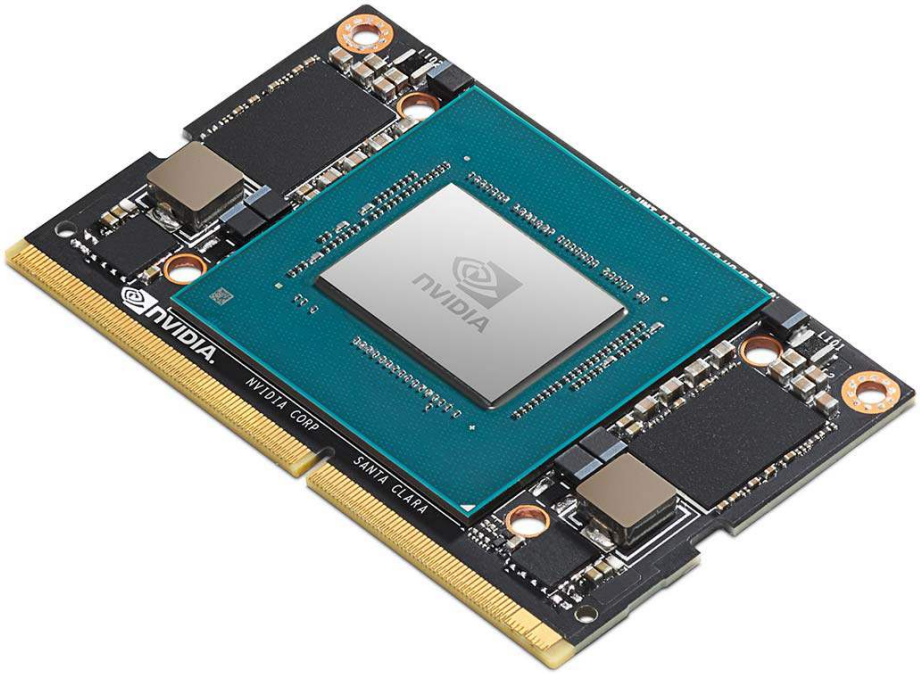


NVIDIA® Jetson Xavier™ NX Module

SKU 102110409

- 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.

PRODUCT DETAILS

Tip

We offer the NVIDIA® Jetson Xavier™ NX Developer Kit which includes an NVIDIA® Jetson Xavier™ NX Module and a reference carrier board. Click here to learn more!

Features

- Compact size SoM powerful enough for advanced AI applications with low power consumption
- Supports entire NVIDIA Software Stack for application development and optimization
- More than 10X the performance of Jetson TX2
- Enables development of AI applications using NVIDIA JetPack™ SDK
- Easy to build, deploy, and manage AI at the edge
- Flexible and scalable platform to get to market with reduced development costs
- Continuous updates over the lifetime of the product

Description

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 the 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.

Bringing Cloud-Native Agility to Edge AI Devices with the NVIDIA Jetson Xavier NX Developer Kit

Tip
To learn more about Jetson Xavier, please visit the Jetson Xavier NX Technical Blog with Benchmarks, also by the NVIDIA team.

Comparison Between The NVIDIA Jetson AI Modules

	Jetson Nano	**Jetson TX2 Series**	**Jetson Xavier NX**	**Jetson AGX Xavier Series**
AI Performance	0.5 TFLOPS (FP16)	1.3 TFLOPS (FP16)	6 TFLOPS (FP16) 21 TOPS (INT8)	5.5-11 TFLOPS (FP16) 20-32 TOPS (INT8)
GPU	128-core NVIDIA Maxwell™ GPU	256-core NVIDIA Pascal™ GPU architecture with 256 NVIDIA CUDA cores	NVIDIA Volta architecture with 384 NVIDIA CUDA® cores and 48 Tensor cores	512-Core Volta GPU with Tensor Cores
CPU	Quad-core ARM A57 @ 1.43 GHz	Dual-Core NVIDIA Denver 2 64-Bit CPU Quad-Core ARM® Cortex®-A57 MPCore	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6 MB L2 + 4 MB L3	8-Core ARM v8.2 64-Bit CPU, 8 MB L2 + 4 MB L3
Memory	4 GB 64-bit LPDDR4 25.6	8GB 128-bit LPDDR4 1866 MHz - 59.7 GB/s	8 GB 128-bit LPDDR4x @ 51.2GB/s	32 GB 256-Bit LPDDR4x | 137

	Jetson Nano	Jetson TX2 Series	Jetson Xavier NX	Jetson AGX Xavier Series
	GB/s			GB/s
Power Consumption	5-10W	7.5-15W	10-15W	10-30W
Dimensions	45 x 70mm	50 x 87mm	45 x 70mm	100 x 87mm
Price	$149	Starting at $299	$499	Starting at $679

Note
We provide a wide selection of AI-related products including Machine Learning, Computer Vision, Edge Computing, Speech Recognition & NLP, and Neural Networks Acceleration. Check here for more products you may need.
We are also calling for feedback and inputs from the developers. Any suggestions on the product features are welcome at Seeed Forum!

Specifications

AI Performance	**21 TOPS (INT8)**
GPU	NVIDIA Volta architecture with 384 NVIDIA CUDA® cores and 48 Tensor cores
Max GPU Frequency	1100 MHz
CPU	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6 MB L2 + 4 MB L3

AI Performance	**21 TOPS (INT8)**
Max CPU Frequency	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 *
	Up to 6 cameras (24 via virtual channels)
CSI Camera	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

AI Performance	**21 TOPS (INT8)**
DLA Max Frequency	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
Dimensions	45 mm x 69.6 mm
Connector	60 pin SO-DIMM connector

Tip

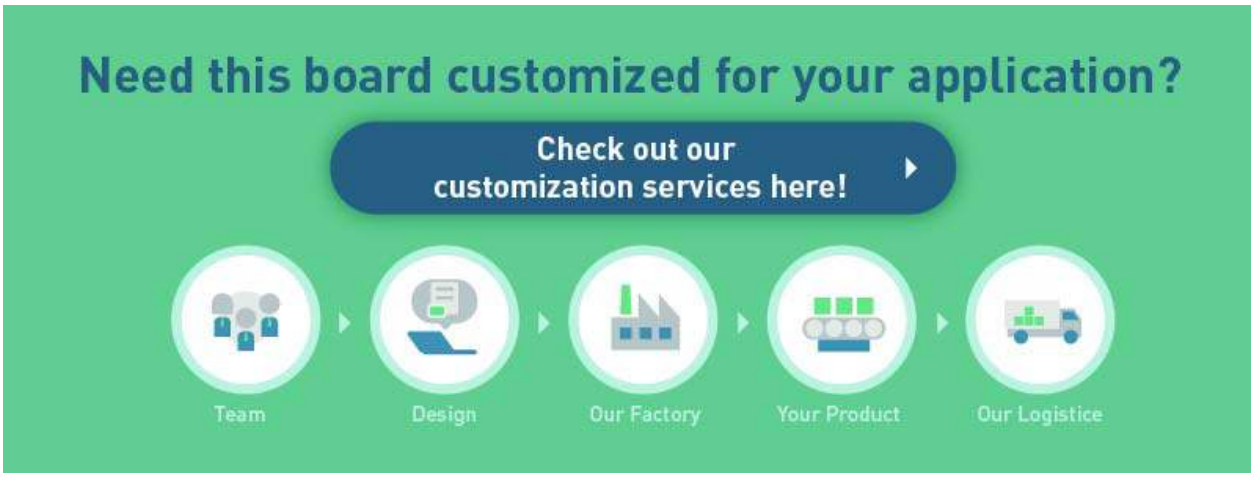
To explore more NVIDIA products, please click here and learn more!

Tip

Head over to NVIDIA Jetson Download Center to explore the necessary drivers and software for this product.

Parts List

1 x NVIDIA® Jetson Xavier™ NX Module



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