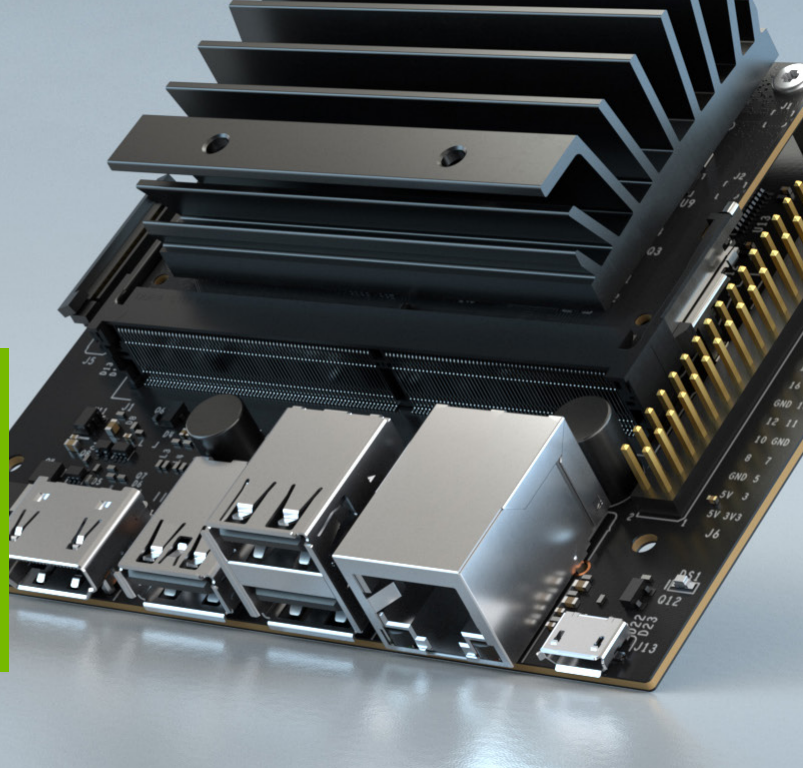
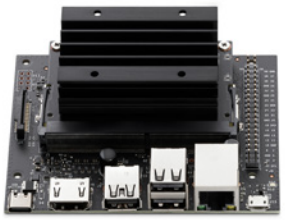
NVIDIA JETSON NANO 2GB DEVELOPER KIT

GET HANDS ON WITH AI AND ROBOTICS.



Small Size. Small Price. Big AI Discoveries.



Discover the power of AI and robotics with NVIDIA® Jetson Nano™ 2GB Developer Kit. It's small, powerful, and priced for everyone at $59*. This means educators, students, and other enthusiasts can now easily create projects with fast and efficient AI using the entire GPU-accelerated NVIDIA software stack.

Learning by doing is key for anyone new to AI and robotics, and the Jetson Nano 2GB Developer Kit is ideal for hands-on teaching and learning. Unlike online-only learning, you'll see your work on the developer kit perceive and interact with the world around you in real time.

Thousands of Jetson Nano developers actively contribute videos, how-tos, and open-source projects in addition to the free and comprehensive tutorials offered by NVIDIA. These start with an introductory "Hello AI World," continue to robotics projects such as the open-source NVIDIA JetBot AI robot platform, and lead to the next level of robotics development with NVIDIA Isaac™.

All these resources are enabled by NVIDIA JetPack™, which brings to each Jetson developer the same CUDA-X™ software and tools used by professionals around the world. JetPack includes a familiar Linux environment and simplifies the development process with support for cloud-native technologies such as containerization and orchestration.

The Jetson Nano 2GB Developer Kit delivers incredible AI performance at a low price. It makes the world of AI and robotics accessible to everyone with the exact same software and tools used to create breakthrough AI products across all industries. There's no better way to start.

KEY FEATURES

NVIDIA Jetson Nano 2GB Developer Kit

- 128-core NVIDIA Maxwell™ GPU
- Quad-core ARM® A57 CPU
- 2 GB 64-bit LPDDR4

Power options

- USB-C 5V ⎓ 3A

I/O

- USB 3.0 Type A
- USB 2.0 Type A
- USB 2.0 Micro-B (device mode)
- MIPI CSI-2 camera connector
- Gigabit Ethernet
- 40-pin header (GPIOs, I2C, I2S, SPI, UART)
- HDMI
- Fan header†

Kit Contents

- NVIDIA Jetson module and reference carrier board
- Quick Start / Support Guide
- 802.11ac wireless adapter and extension cable†

* Local pricing will vary due to currency and taxes | † Not initially available in all regions

NVIDIA JETSON NANO 2GB DEVELOPER KIT
TECHNICAL SPECIFICATIONS

GPU	**128-core NVIDIA Maxwell**
CPU	**Quad-core ARM A57 @ 1.43 GHz**
Memory	**2 GB 64-bit LPDDR4 25.6 GB/s**
Storage	**microSD (Card not included)**
Video Encode	**4Kp30 | 4x 1080p30 | 9x 720p30 (H.264/H.265)**
Video Decode	**4Kp60 | 2x 4Kp30 | 8x 1080p30 | 18x 720p30 (H.264/H.265)**
Connectivity	**Gigabit Ethernet** **802.11ac wireless†**
Camera	**1x MIPI CSI-2 connector**
Display	**HDMI**
USB	**1x USB 3.0 Type A, 2x USB 2.0 Type A, 1x USB 2.0 Micro-B**
Others	**40-pin header (GPIO, I²C, I²S, SPI, UART)** **12-pin header (Power and related signals, UART)** **4-pin Fan header†**
Mechanical	**100 mm x 80 mm x 29 mm**

† Not initially available in all regions

Learn more at **www.nvidia.com/JetsonNano2GB**

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NVIDIA JETSON NANO MODULE

SMALL. POWERFUL. POWERED BY AI.

Bringing AI to millions of new systems at the edge

The NVIDIA® Jetson Nano™ module is opening amazing new possibilities for edge computing. It delivers up to 472 GFLOPS of accelerated computing, can run many modern neural networks in parallel, and delivers the performance to process data from multiple high-resolution sensors—a requirement for full AI systems. It's also production-ready and supports all popular AI frameworks. This makes Jetson Nano the ideal platform for developing mass market AI products such as AIoT gateways, smart network video recorders and cameras, consumer robots, and optical inspection systems.

The system-on-module is powered by the NVIDIA Maxwell™ GPU with 4 GB of memory, which allows real-time processing of high-resolution inputs. It offers a unique combination of performance, power advantage, and a rich set of IOs, from high-speed CSI and PCIe to low-speed I2Cs and GPIOs. Plus, it supports multiple diverse sets of sensors to enable a variety of applications with incredible power efficiency, consuming as little as 5 W.

Jetson Nano is supported by NVIDIA JetPack™, which includes a board support package (BSP), Linux OS, NVIDIA CUDA®, cuDNN, and TensorRT™ software libraries for deep learning, computer vision, GPU computing, multimedia processing, and much more. The comprehensive software stack makes AI deployment on autonomous machines fast, reduces complexity, and speeds time to market.

The same JetPack SDK is used across the entire NVIDIA Jetson™ family of products and is fully compatible with NVIDIA's world-leading AI platform for training and deploying AI software.

KEY FEATURES

Jetson Nano module

- 128-core NVIDIA Maxwell GPU
- Quad-core ARM® A57 CPU
- 4 GB 64-bit LPDDR4
- 16 GB eMMC 5.1
- 10/100/1000BASE-T Ethernet

Power

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

Environment

- Operating Temperature: -25 C to 80 C*
- Storage Temperature: -25 C to 80 C
- Humidity: 85% RH, 85°C [non-operational]
- Vibration: Sinusoidal 5 G RMS 10 to 500 Hz, random 2.88 G RMS, 5 to 500 Hz [non-operational]
- Shock: 140 G, half sine 2 ms duration [non-operational]

* See thermal design guide for details

NVIDIA JETSON NANO MODULE
TECHNICAL SPECIFICATIONS

GPU	**128-core Maxwell**
CPU	**Quad-core ARM A57 @ 1.43 GHz**
Memory	**4 GB 64-bit LPDDR4 25.6 GB/s**
Storage	**16 GB eMMC 5.1**
Video Encode	**4K @ 30 | 4x 1080p @ 30 | 9x 720p @ 30 (H.264/H.265)**
Video Decode	**4K @ 60 | 2x 4K @ 30 | 8x 1080p @ 30 | 18x 720p @ 30 (H.264/H.265)**
CSI	**12 (3x4 or 4x2) lanes MIPI CSI-2 D-PHY 1.1**
Connectivity	**Gigabit Ethernet**
Display	**HDMI 2.0, eDP 1.4, DP 1.2 (two simultaneously)**
PCIe	**1x1/2/4 PCIe Gen2**
USB	**1x USB 3.0, 3x USB 2.0**
Others	**I^2C, I^2S, SPI, UART, SD/SDIO, GPIO**
Mechanical	**69.6 mm x 45 mm 260-pin SODIMM Connector**

Learn more at **https://developer.nvidia.com/jetson**

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NVIDIA JETSON NANO DEVELOPER KIT

THE LOW-COST AI COMPUTER FOR ALL.

Join the Revolution and Bring the Power of AI to Millions of Devices

The NVIDIA® Jetson Nano™ Developer Kit delivers the compute performance to run modern AI workloads at unprecedented size, power, and cost. Developers, learners, and makers can now run AI frameworks and models for applications like image classification, object detection, segmentation, and speech processing.

The developer kit can be powered by micro-USB and comes with extensive I/Os, ranging from GPIO to CSI. This makes it simple for developers to connect a diverse set of new sensors to enable a variety of AI applications. It's incredibly power-efficient, consuming as little as 5 watts.

Jetson Nano is also supported by NVIDIA JetPack™, which includes a board support package (BSP), Linux OS, NVIDIA CUDA®, cuDNN, and TensorRT™ software libraries for deep learning, computer vision, GPU computing, multimedia processing, and much more. The software is even available using an easy-to-flash SD card image, making it fast and easy to get started.

The same JetPack SDK is used across the entire NVIDIA Jetson™ family of products and is fully compatible with NVIDIA's world-leading AI platform for training and deploying AI software. This proven software stack reduces complexity and overall effort for developers.

KEY FEATURES

Jetson Nano Module

- 128-Core NVIDIA Maxwell™ GPU
- Quad-Core ARM® A57 CPU
- 4 GB 64-Bit LPDDR4
- 10/100/1000BASE-T Ethernet

Power Options

- Micro-USB 5V 2A
- DC Power Adapter 5V 4A

I/O

- USB 3.0 Type A
- USB 2.0 Micro-B
- HDMI/DisplayPort
- M.2 Key E
- Gigabit Ethernet
- GPIOs, I^2C, I^2S, SPI, UART
- MIPI-CSI Camera Connector
- Fan Connector
- PoE Connector

Kit Contents

- NVIDIA Jetson Nano Module with Heatsink and Reference Carrier Board
- Quick Start Guide and Support Guide

NVIDIA JETSON NANO DEVELOPER KIT
TECHNICAL SPECIFICATIONS

DEVELOPER KIT

GPU	**128-Core Maxwell**
CPU	**Quad-Core ARM A57 @ 1.43 GHz**
Memory	**4 GB 64-bit LPDDR4 25.6 GB/s**
Storage	**microSD (Not Included)**
Video Encoder	**4K @ 30 | 4x 1080p @ 30 | 9x 720p @ 30 (H.264/H.265)**
Video Decoder	**4K @ 60 | 2x 4K @ 30 | 8x 1080p @ 30 | 18x 720p @ 30| (H.264/H.265)**
Camera	**2x MIPI CSI-2 DPHY lanes**
Connectivity	**Gigabit Ethernet, M.2 Key E**
Display	**HDMI 2.0 and eDP 1.4**
USB	**4x USB 3.0, USB 2.0 Micro-B**
Others	**GPIO, I²C, I²S, SPI, UART**
Mechanical	**100 mm x 80 mm x 29 mm**

*Please refer to NVIDIA documentation for what is currently supported.

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