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**