<https://www.nvidia.com/en-us/autonomous-machines/embedded-systems/>

**1.NVIDIA JETSON SERIES**

NVIDIA Jetson systems provide the performance and power efficiency to run autonomous machines software, faster and with less power. Each is a complete System-on-Module (SOM), with CPU, GPU, PMIC, DRAM, and flash storage—saving development time and money. Jetson is also extensible. Just select the SOM that’s right for the application, and build the custom system around it to meet its specific needs.

**1.1.Nvidia Jetson Nano**

The Jetson Nano module is a small AI computer that has the performance and power efficiency needed to run modern AI workloads, multiple neural networks in parallel and process data from several high-resolution sensors simultaneously. This makes it the perfect entry-level option to add advanced AI to embedded products.

*Bringing the Power of Modern AI to Millions of Devices*

NVIDIA Jetson Nano enables the development of millions of new small, low-power AI systems. It opens new worlds of embedded IoT applications, including entry-level Network Video Recorders (NVRs), home robots, and intelligent gateways with full analytics capabilities.

At just 70 x 45 mm, the Jetson Nano module is the smallest Jetson device. This production-ready System on Module (SOM) delivers big when it comes to deploying AI to devices at the edge across multiple industries—from smart cities to robotics.

It delivers 472 GFLOPs for running modern AI algorithms fast. It runs multiple neural networks in parallel and processes several high-resolution sensors simultaneously, making it ideal for applications like entry-level Network Video Recorders (NVRs), home robots, and intelligent gateways with full analytics capabilities.

Jetson Nano frees you to innovate at the edge. Experience powerful and efficient AI, computer vision, and high-performance computing at just 5 to 10 watts.

**1.2.Jetson TX1**

The world's first supercomputer on a module, Jetson TX1 is capable of delivering the performance and power efficiency needed for the latest visual computing applications. It's built around the revolutionary NVIDIA Maxwell architecture with 256 CUDA cores delivering over 1 TeraFLOPs of performance. 64-bit CPUs, 4K video encode and decode capabilities, and a camera interface capable of 1400 MPix/s make this the best system for embedded deep learning, computer vision, graphics, and GPU computing.

The Jetson TX1 Developer Kit is a full-featured development platform for visual computing designed to get you up and running fast. It comes pre-flashed with a Linux environment, includes support for many common APIs, and is supported by NVIDIA’s complete development tool chain. The board also exposes a variety of standard hardware interfaces, enabling a highly flexible and extensible platform. This makes it ideal for all your applications requiring high computational performance in a low-power envelope.

**1.3.Jetson TX2 Series**

NVIDIAJetson TX2 gives you exceptional speed and power-efficiency in an embedded AI computing device. Jetson TX2 is the fastest, most power-efficient embedded AI computing device. This supercomputer-on-a-module brings true AI computing at the edge with an NVIDIA Pascal GPU, up to 8 GB of memory, 59.7 GB/s of memory bandwidth, and a wide range of standard hardware interfaces that offer the perfect fit for a variety of products and form factors.

Now you can get exceptionally high compute, accuracy, and power efficiency in a module the size of a credit card. Its small 50 mm x 87 mm size enables real deep learning applications in small form-factor products  like drones and more. Experience more than double the performance or twice the energy efficiency of Jetson TX1. It’s all made possible by Jetson TX2’s 256-core NVIDIA Pascal architecture and 8 GB memory for the fastest compute and inference.

With Jetson TX2, you can now run large, deep neural networks for higher accuracy on edge devices. At just 7.5 watts, it delivers 25X more energy efficiency than a state-of-the-art desktop-class CPU. This makes it ideal for real-time processing in applications where bandwidth and latency can be an issue. These include factory robots, commercial drones, enterprise collaboration devices, intelligent cameras for smart cities.

*The Jetson TX2 series embedded module for edge AI applications now comes in three versions*

**i.Jetson TX2**

Jetson TX2’s NVIDIA Pascal architecture and small, power-efficient form factor are ideal for intelligent edge devices like robots, drones, smart cameras, and portable medical devices. It supports all the features of the Jetson TX1 module while enabling bigger, more complex deep neural networks.

**ii.Jetson TX2i**

NVIDIA Jetson TX2i module’s rugged design, small form factor, and reduced power envelope make it ideal for high-performance edge computing devices such as industrial robots, machine vision cameras, and portable medical equipment.

**iii.Jetson TX2 4GB**

Explore new AI capabilities at the edge with the NVIDIA Jetson TX2 4GB. This embedded computer lets you run neural networks with double the compute performance or double the power efficiency of Jetson TX1. It works with NVIDIA’s rich set of AI tools and workflows, enabling developers to train and deploy neural networks quickly.

**1.4.Jetson AGX Xavier**

Jetson AGX Xavier is the first computer designed specifically for autonomous machines. It has six Engines onboard for accelerated sensors data processing and running autonomous machines software, and offers the performance and power efficiency for fully autonomous machines.

It makes AI-powered autonomous machines possible, running in as little as 10W and delivering up to 32 TOPs.  As part of the world’s leading AI computing platform, Jetson AGX Xavier benefits from NVIDIA’s rich set of AI tools and workflows, enabling developers to train and deploy neural networks quickly.

*NVIDIA has extended the Jetson family of embedded modules to include the new lower-power lower-price Jetson AGX Xavier 8GB*

**Jetson AGX Xavier 8GB**

Jetson AGX Xavier 8GB is a lower-power lower-price Jetson AGX Xavier offering full hardware and software compatibility with the existing Jetson AGX Xavier. It consumes a maximum of 20W for the full module while delivering up to 20 TOPS of AI performance.