NVIDIA

NVIDIA Jetson AGX Thor Developer Kit

The ultimate platform for humanoid robotics.

NVIDIA Jetson AGX Thor Developer Kit

A Compact Powerhouse for Physical AI and Robotics

The NVIDIA® Jetson AGX Thor™ Developer Kit gives you unmatched performance and scalability. It's powered by the NVIDIA Blackwell GPU and 128 GB of memory, delivering up to 2070 FP4 TFLOPS of AI compute to effortlessly run the latest generative AI models—all within a 130 W power envelope. Compared to NVIDIA Jetson AGX Orin™, it provides up to 7.5x higher AI compute and 3.5x better energy efficiency.

Jetson AGX Thor helps you accelerate low-latency, real-time applications with the new Blackwell Multi-Instance GPU (MIG) technology and a robust 14-core Arm® Neoverse®-V3AE CPU. It also includes a suite of accelerators, including a third-generation Programmable Vision Accelerator (PVA), dual encoders and decoders, an optical flow accelerator, and more. For high-speed sensor fusion, the developer kit offers extensive I/O options, including a QSFP slot with 4x25 GbE, a wired Multi-GbE RJ45 connector, multiple USB ports, and additional connectivity interfaces. Plus, it's designed for seamless integration with existing humanoid robot platforms, allowing for easy tethering to jumpstart prototyping.

Key Features

Developer Kit Content

> NVIDIA Jetson™ T5000 module with heat sink and reference carrier board

> DC power 140W

> 802.11ax wireless network interface controller

> 1 TB NVMe populated in M.2 Key-M slot

> Quick Start Guide

Jetson T5000 Module

> 2560-core NVIDIA Blackwell architecture GPU with 96 fifth-gen Tensor Cores

> 14-core Arm® Neoverse®-V3AE 64-bit CPU

> 128 GB 256-bit LPDDR5X, 273 GB/s

Reference Carrier Board

> QSFP connector

> HDMI port

> DisplayPort

> 2x USB-A 3.2 | 2x USB-C 3.1

> Gigabit Ethernet

> 2x 13-pin CAN header

> Microfit power jack

Jetson AGX Thor belongs to a new class of robotic computers, architected from the ground up to power next-generation humanoid robots. It supports a wide range of generative AI models, from Vision Language Action (VLA) models like NVIDIA Isaac™ GR00T N to all popular LLMs and VLMs. To deliver a seamless cloud-to-edge experience, Jetson AGX Thor runs the NVIDIA AI software stack for physical AI applications, including NVIDIA Isaac for robotics, NVIDIA Metropolis for visual agentic AI, and NVIDIA Holoscan for sensor processing. You can also build AI agents at the edge using NVIDIA agentic AI workflows like Video Search and Summarization (VSS).

Our ecosystem of partners offers all the carrier boards, design services, cameras, and other sensors you need, as well as additional AI and system software to accelerate solution development in industries such as robotics, smart spaces, retail, industrial, medical, and more.

Massive AI performance and sensor capabilities in a compact form factor make the Jetson AGX Thor Developer Kit the ideal platform for developers looking to unlock new possibilities for humanoid robotics and other physical AI applications.

NVIDIA Jetson AGX Thor Developer Kit Specifications

Technical Specifications

	Jetson T5000 Module
AI Performance	2070 TFLOPS (FP4—sparse)
GPU	2560-core NVIDIA Blackwell architecture GPU with 96 fifth-gen Tensor Cores
CPU	14-core Arm® Neoverse®-V3AE 64-bit CPU
	64 KB I-Cache, 64 KB D-Cache
	1 MB L2 cache per core
	16 MB shared system L3 cache
Memory	128 GB 256-bit LPDDR5X
	273 GB/s
Storage	1 TB NVMe M.2 Key M slot
Video Encode	6x 4Kp60 (H.265)
	12x 4Kp30 (H.265)
	24x 1080p60 (H.265)
	50x 1080p30 (H.265)
	48x 1080p30 (H.264)
	6x 4Kp60 (H.264)
Video Decode	4x 8Kp30 (H.265)
	10x 4Kp60 (H.265)
	22x 4Kp30 (H.265)
	46x 1080p60 (H.265)
	92x 1080p30 (H.265)
	82x 1080p30 (H.264)
	4x 4Kp60 (H.264)
Power	40 W–130 W

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

Technical Specifications

	Reference Carrier Board
Camera	HSB camera via QSFP slot
	USB camera
PCIe	M.2 Key M slot with x4 PCIe Gen5 (populated with 1 TB NVMe)
	M.2 Key E slot with x1 PCIe Gen5 (populated with WiFi and Bluetooth module)
USB	2x USB-A 3.2
	2x USB-C 3.1
Networking	1x 5 GBe RJ45 connector
	1x QSFP28 (4x 25 GbE)
Display	1x HDMI 2.0b
	1x DisplayPort 1.4a
Other I/O	2x 13-pin CAN header
	2x 6-pin automation header
	2x 5-pin JTAG connector
	1x 4-pin fan connector—12 V, PWM, and Tach
	2x 5-pin audio panel header
	2-pin RTC backup battery connector
	Microfit power jack
	Power, force recovery, and reset buttons
Mechanical	243.19 mm x 112.40 mm x 56.88 mm (Height includes feet, carrier board, module, and thermal solution)

Ready to Get Started?

To learn more about the NVIDIA Jetson AGX Thor Developer Kit, visit nvidia.com/jetson-thor

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