Datasheet

NVIDIA Jetson Thor Module

The ultimate platform for physical AI and robotics.

Jetson Thor module, viewed at a three quarter angle

Unmatched AI Compute and Efficiency for Robotics

The NVIDIA® Jetson T5000™ module gives you the highest level of performance for physical AI and robotics. It delivers up to 2070 FP4 TFLOPS of AI compute and 128 GB of memory with power configurable between 40 W and 130 W. Compared to AGX Orin™, it delivers over 7.5x higher AI compute than NVIDIA AGX Orin™, with 3.5x better energy efficiency.

This system-on-module (SoM) features an NVIDIA Blackwell architecture GPU with a transformer engine and Multi-Instance GPU (MIG) support to effortlessly run the latest generative AI models. NVIDIA Jetson Thor™ accelerates low-latency, real-time multi-sensor applications with a 14-core Arm® Neoverse®-V3AE CPU, 4x 25 GbE networking, and extensive I/O options for sensor fusion. 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.

Jetson Thor belongs to a new class of robotic computers, architected from the ground up to power next-generation physical AI applications. It supports a wide range of generative AI models, from Vision Language Action (VLA) models like NVIDIA Isaac™ GR00T for humanoids to all popular LLMs and VLMs. To deliver a seamless cloud-to-edge experience, Jetson 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. This lets you accelerate solution development in industries ranging from robotics and smart spaces to retail, industrial, medical, and more.

The Jetson Thor module gives you production-ready performance, massive AI compute, and sensor capabilities for physical AI applications in a compact form factor. This makes it the ideal platform for developers looking to unlock new possibilities for humanoid robotics and other physical AI applications.

Key Features

- NVIDIA Jetson T5000 Module
- 2070 FP4 TFLOPS AI Compute powered by Blackwell GPU
- 14-core ARM® Neoverse® CPU
- 128 GB LPDDR5X Memory

Technical Specifications

	NVIDIA Jetson T5000
AI Performance	2070 TFLOPS (FP4—sparse)
GPU	2560-core NVIDIA Blackwell architecture GPU with 96 fifth-gen Tensor Cores
	Multi-Instance GPU with 10 TPCs
GPU Max Frequency	1.57 GHz
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
CPU Max Frequency	2.6 GHz
Vision Accelerator	1x PVA v3
Memory	128 GB 256-bit LPDDR5X
	273 GB/s
Storage	Supports NVMe through PCIe
	Supports SSD through USB3.2
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)
Camera	Up to 20 cameras via HSB
	Up to 6 cameras through 16x lanes MIPI CSI-2
	Up to 32 cameras using virtual channels
	C-PHY 2.1 (10.25 Gbps)
	D-PHY 2.1 (40 Gbps)
PCIe*	Up to 8 lanes—Gen5
	Root port only—C1 (x1) and C3 (x2)
	Root Point or Endpoint—C2 (x1), C4 (x8), and C5 (x4)

Technical Specifications	
USB*	xHCI host controller with integrated PHY 3x USB 3.2 4x USB 2.0
Networking	4x 25 GbE
Display	4x shared HDMI2.1 VESA DisplayPort 1.4a—HBR2, MST
Other I/O	5x I2S/2x Audio Hub (AHUB), 2x DMIS, 4x UART, 4x CAN, 3x SPI, 13x I2C, 6x PWM outputs
Power	40 W–130 W
Mechanical	100 mm x 87 mm 699-pin B2B connector Integrated Thermal TransferPlate (TTP) with heatpipe

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

Ready to Get Started?

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

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