Jetson Xavier AGX H01 Kit with Jetson Xavier AGX processor, 32 TOPs, Wi-Fi, Aluminum case with cooling fan, pre-installed JetPack System

SKU 110991666

The Jetson Xavier AGX H01 Development Kit is powered by NVIDIA Jetson AGX Xavier processor which applies AI performance and delivers up to 32 Tera Operations Per Second(TOPs) yet costs less than 30W. It is an ideal solution to agriculture, optical inspection, manufacturing, robotics, logistics, retail, service, smart cities, and healthcare.

PRODUCT DETAILS

Note

The smallest and most powerful AI edge computer, NVIDIA® Jetson AGX Orin™ Developer Kit is online! Book it now!
Get to know anything about the Jetson AGX Orin via this blog in advance.
Bolg_NVIDIA Jetson AGX Orin Module and Dev Kit: the best AI performance of Jetson Family.

In addition, how does AGX Orin's AI performance, GPU, CPU, Memory & Storage compared to Jeston AGX Xavier? You will find all the answers in this blog_Compare NVIDIA Jetson AGX Orin with AGX Xavier.

Attention

In the current market, the price of components are fluctuating greatly, and the lead time of some products may take 8 - 12 weeks. To help you plan ahead, we recommended that customers with large quantity requirements get in touch with us in advance at order@seeed.cc .Inform us of your schedule and required quantity, and we will do our best to accommodate your request.

Note

- **We will not include a power cord, please choose a suitable form according to your country.**
- **We will not include a 3V RTC battery (CR1220)**
- **We have already installed JetPack 4.6 system, the login password is 'nvidia'.**
- **The USB-C connector in the kit is supported USB-C 3.0 function with a FPC convert port.**
- **The connectors in the kit are not quite similar to the official board. We highly recommend to CONFIRM the datasheet or purchase sample product first before deploying it in your projects.**

Features

- AI Performance: 32 (Tera Operations Per Second)TOPs
- Powerful GPU: 512-core Volta GPU with 64 Tensor Cores 11 TFLOPS (FP16) 22 TOPS (INT8)
- GPU Max Freq: 2200 MHz
- Powerful CPU: 8-core Carmel ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
- CPU Max Freq: 4-core @ 2200MHz 6/8-core @ 1400MHz
- PCIe: 1 x8 + 1 x4 + 1 x2 + 2 x1 (PCIe Gen4, Root Port & Endpoint)
- Power Operation: 10W |15W |30W
- Video Encode: 2x1000MP/sec 4x 4K @ 60 (HEVC) 8x 4K @ 30 (HEVC) 16x 1080p @ 60 (HEVC) 32x 1080p @ 30 (HEVC)
- Video Decode: 2x1500MP/sec 2x 8K @ 30 (HEVC) 6x 4K @ 60 (HEVC) 12x 4K @ 30 (HEVC) 26x 1080p @ 60 (HEVC) 52x 1080p @ 30 (HEVC) 30x 1080p @ 30 (H.264)
- Vast Storage and Memory: 32GB eMMC 5.1 and 32GB 256-Bit LPDDR4x |136.5GB/s
- CSI Camera: Up to 6 cameras (36 via virtual channels) 16 lanes MIPI CSI-2 |8 lanes SLVS-EC D-PHY 1.2 (up to 40 Gbps) C-PHY 1.1 (up to 62 Gbps)
- Display: 3 multi-mode DP 1.4/eDP 1.4/HDMI 2.0 No DSI support
- DeepLearning Accelerator: (2x) NVDLA Engines* |5 TFLOPS (FP16), 10 TOPS (INT8)
- Vision Accelerator: 7-way VLIW Vision Processor*
- Networking: 10/100/1000 BASE-T Ethernet
- Mechanical: 100 mm x87 mm 699-pin connector Integrated Thermal TransferPlate

Description

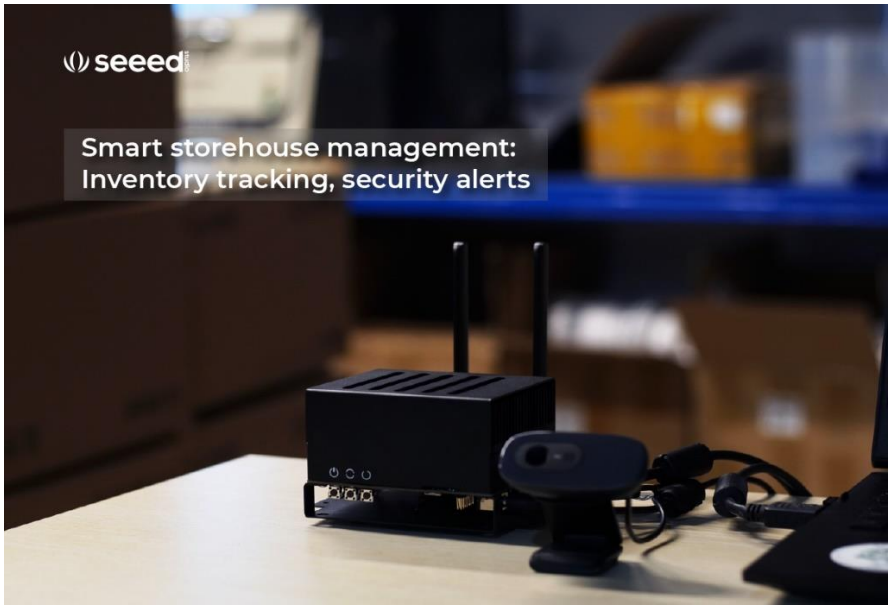
NVIDIA® Jetson™ AGX Xavier

The Jetson Xavier AGX H01 Kit is powered by the NVIDIA Jetson AGX Xavier processor which applies AI performance and delivers up to 32 Tera Operations Per Second(TOPs) yet costs less than 30W. Supported by NVIDIA JetPack and DeepStream SDKs, as well as Linux OS, NVIDIA CUDA®, cuDNN, and TensorRT software libraries, the kit makes AI-powered autonomous machines possible. With the Jetson Xavier AGX H01 Kit, it is easy to create and deploy end-to-end AI robotics applications for solving problems in agriculture, optical inspection, manufacturing, robotics, logistics, retail, service, smart cities, and healthcare.

The Jetson Xavier AGX H01 Kit provides a full-featured development platform designed to get you up and running quickly. The included carrier board exposes many standard hardware interfaces, enabling a highly flexible and extensible platform for rapid prototyping. With the 32GB eMMC 5.1 and 256-Bit LPDDR4x 136.5GB/s in memory, it can be leveraged by the developers to store multiple AI models, run complex applications, and enhance real-time pipelines. As part of the world's leading AI computing platform, it benefits from the rich set of NVIDIA AI tools and workflows, enabling developers to train and deploy neural networks quickly.

Supported by the kit, NVIDIA AI tools contain Deep Learning, Computer Vision, GPU Computing, multimedia processing and much more software libraries, applying built-in Jetson modules to achieve high-speed computational capability operations.

Matched and corresponded to included carrier high-performance of Video Encode and Decode, the tools include the NVIDIA DeepStream SDK to deliver a complete toolkit for real-time situational awareness through intelligent video analytics (IVA). Furthermore, with other built-in Jetson modules in the kit and supported NVIDIA JetPack SDK, the kit can help developers to boost AI models performance and accelerate software development while reducing development cost and effort.

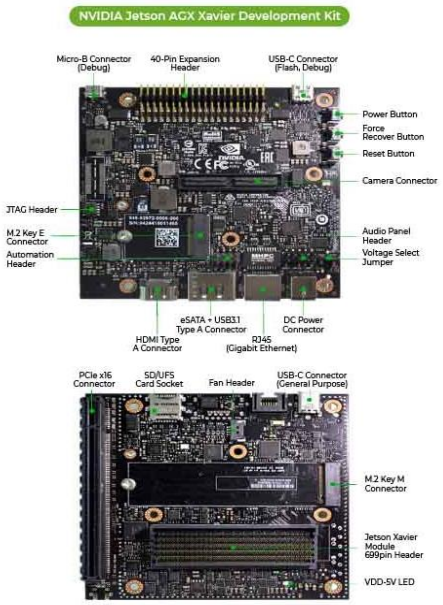


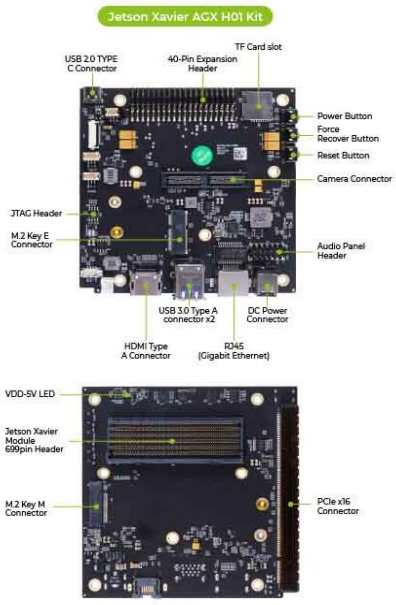
Comparison with NVIDIA Jetson Xavier NX

Module	NVIDIA JETSON XAVIER AGX	NVIDIA JETSON XAVIER NX
AI Performance	32 TOPs	21 TOPS
GPU	512-core Volta GPU with 64 Tensor Cores 11 TFLOPS (FP16) 22 TOPS (INT8)	384-core NVIDIA Volta™ GPU with 48 Tensor Cores
CPU	8-core Carmel ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU · 6MB L2 + 4MB L3

Module	NVIDIA JETSON XAVIER AGX	NVIDIA JETSON XAVIER NX
Memory	32GB 256-Bit LPDDR4x |136.5GB/s	8 GB 128-bit LPDDR4x · 59.7GB/s
Storage	32GB eMMC 5.1	16 GB eMMC 5.1
Power	10 W | 15 W | 30 W	10 W | 15 W | 20W
PCIe	1 x8 + 1 x4 + 1 x2 + 2 x1 (PCIe Gen4, Root Port & Endpoint)	1 x1 (PCIe Gen3) + 1 x4 (PCIe Gen4), total 144 GT/s*
CSI Camera	Up to 6 cameras (36 via virtual channels)	Up to 6 cameras (24 via virtual channels)
	16 lanes MIPI CSI-2 |8 lanes SLVS-EC	12 lanes (3x4 or 6x2) MIPI CSI-2
	D-PHY 1.2 (up to 40 Gbps) C-PHY 1.1 (up to 62 Gbps)	D-PHY 1.2 (up to 30 Gbps)
Video Encode	2x 1000MP/sec | 4x 4K60| 8x 4K30| 16x 1080p60| 32x 1080p30 (HEVC)	2x 4K60 | 4x 4K30 | 10x 1080p60 | 22x 1080p30 (H.265)
	2x 1000MP/sec | 4x 4K60| 8x 4K30| 16x 1080p60| 32x 1080p30 (H.265)	2x 4K60 | 4x 4K30 | 10x 1080p60 | 20x 1080p30 (H.264)

Module	NVIDIA JETSON XAVIER AGX	NVIDIA JETSON XAVIER NX
Video Decode	2x 1500MP/sec | 2x 8K30| 6x 4K60|12x 4K30 | 26x 1080p60 (H.265) | 52x 1080p30 (H.265)	2x 8K30 | 6x 4K60 | 12x 4K30 | 22x 1080p60 | 44x 1080p30 (H.265)
	2x 1500MP/sec | 2x 8K30| 6x 4K60|12x 4K30 | 26x 1080p60 (H.265) | 30x 1080p30 (H.264)	2x 4K60 | 6x 4K30 | 10x 1080p60 | 22x 1080p30 (H.264)
Display	3 multi-mode DP 1.4/eDP 1.4/HDMI 2.0	2 multi-mode DP 1.4/eDP 1.4/HDMI 2.0
DL Accelerator	2x NVDLA Engines* |5 TFLOPS (FP16), 10 TOPS (INT8)	2x NVDLA Engines
Vision Accelerator	7-way VLIW Vision Processor	7-Way VLIW Vision Processor
Networking	10/100/1000 BASE-T Ethernet	10/100/1000 BASE-T Ethernet
Mechanical	100 mm x 87 mm	69.6 mm x 45 mm
	699-pin connector Integrated Thermal Transfer Plate	260-pin SO-DIMM connector





Pinout Comparison

DEVELOPER KIT I /OS	Jetson AGX Xavier Developer Kit	Jetson Xavier AGX H01 Kit
Developer Kit I/Os	Jetson AGX Xavier Module Interface	Jetson AGX Xavier Module Interfa ce
PCIe X16	x8 PCIe Gen4/x8 SLVS-EC	x8 PCIe Gen4/x8 SLVS-EC
RJ45	Gigabit Ethernet	Gigabit Ethernet
USB-C	2x USB 3.1, DP (Optional), PD (Optio nal) Close- System Debug and Flashing Suppor t on 1 Port	20PIN 0.5mm ZIF FPC(achieve USB-C 3.0 with corresponding convert ports)
Camera Connecto r	(16x) CSI-2 Lanes	(16x) CSI-2 Lanes

DEVELOPER KIT I /OS	Jetson AGX Xavier Developer Kit	Jetson Xavier AGX H01 Kit
M.2 Key M	NVMe	NVMe
M.2 Key E	PCIe x1 + USB 2.0 + UART (for Wi-Fi/LTE) / I2S / PCM	PCIe+UART+I2S/PCM
40-Pin Header	UART + SPI + CAN + I2C + I2S + DMIC + GPIOs	UART + SPI + CAN + I2C + I2S + DMIC + GPIOs
HD Audio Header	High-Definition Audio	High-Definition Audio
eSATAp + USB3.0 Type A	SATA Through PCIe x1 Bridge (PD + Data for 2.5-inch SATA) + USB 3.0	USB3.0 Type A*2
HDMI Type A	HDMI 2.0	HDMI 2.0
uSD/UFS Card Socket	SD/UFS	TF Card Socket

Application

- Agriculture: Smart farm in crop-dusting, moitoring,
- Optical Inspection: Automatic inspection robot
- Manufacturing: Safety precautions in factory
- Robotics: Various robot scenarios
- Logistics: Economical efficiency in transmitting
- Retail: Superior vending in shoping
- Service: Convenience for people
- Smart cities: Supervisory control in building
- Healthcare: Medical support for medical Institutions Jetson Xavier AGX H01 Kit x1

Note

- The jetpack system comes pre-loaded with the drivers needed to run the product. If you need to install your own image, please reinstall the driver to make the USB port and SD card slot work.

Part List

Jetson Xavier AGX H01 Kit	x1
19V/4.74A Power Adapter	x1
ZYJB (antenna)	x2

ECCN/HTS

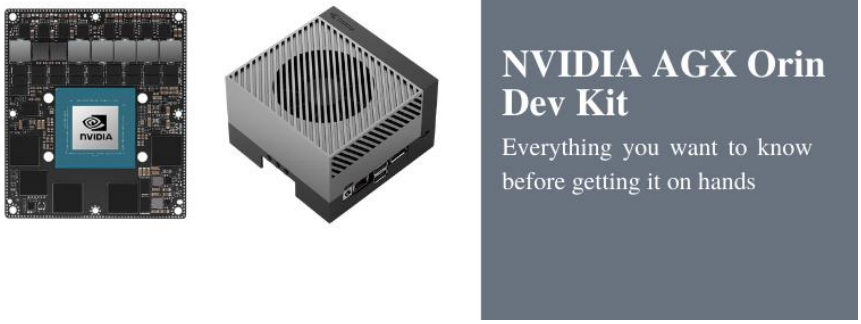
HSCODE	8543709990
USHSCODE	8543709860
UPC	
CE	1

LEARN AND DOCUMENTS

Documentations

- **AGX H01 Kit Datasheet**
- **AGX Xavier H01 Specification**

Learn

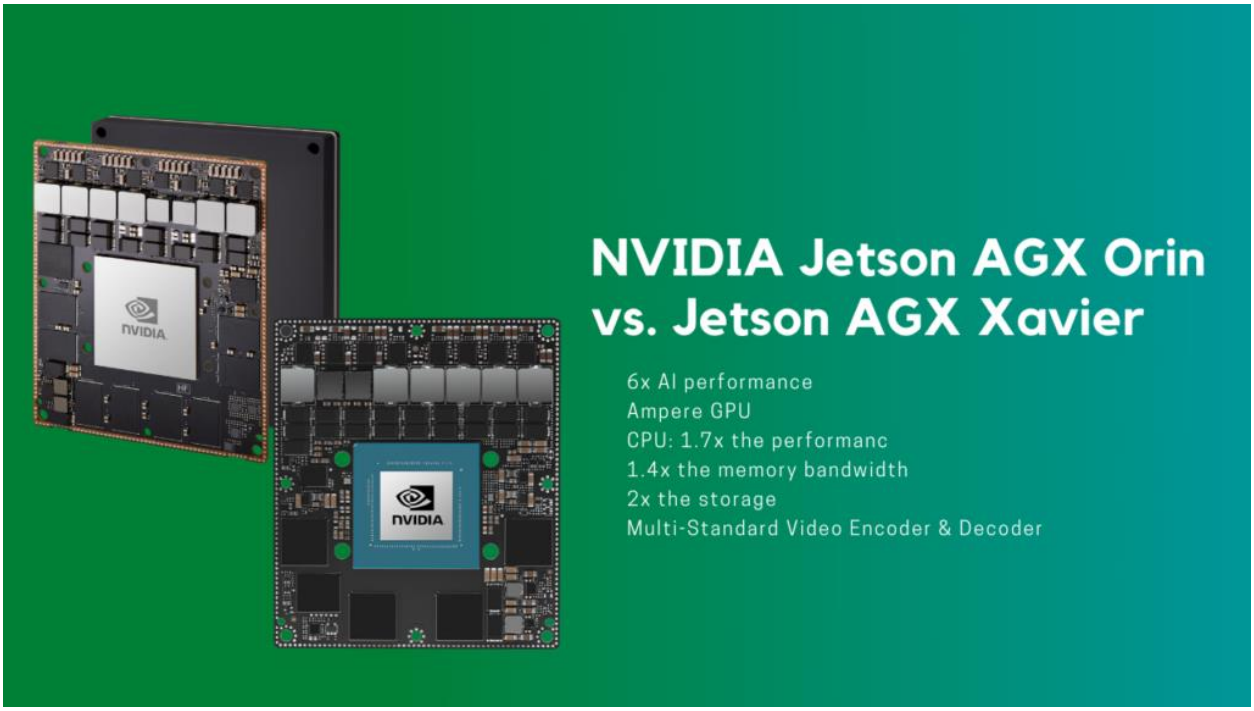


[Wiki] NVIDIA Jetson AGX Orin Module and Dev Kit: the best AI performance of Jetson Family

Here have all the info that you may want to know about NVIDIA Jetson AGX Orin Module and Dev Kit

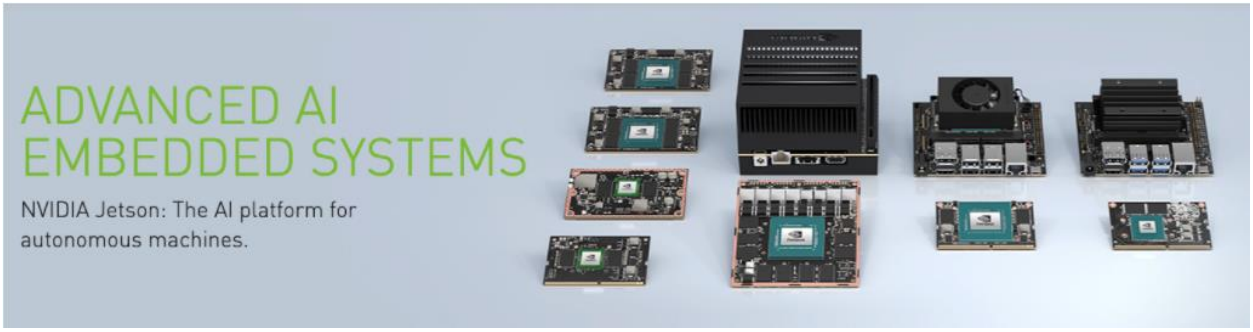
[Wiki] Getting Started with Allxon on NVIDIA® Jetson Devices

You can securely manage NVIDIA® JetPack 4.6 onward versions with Cyber Security at the Edge protecting all networks and hardware. Here are some operations about installing, getting code, adding devices etc.



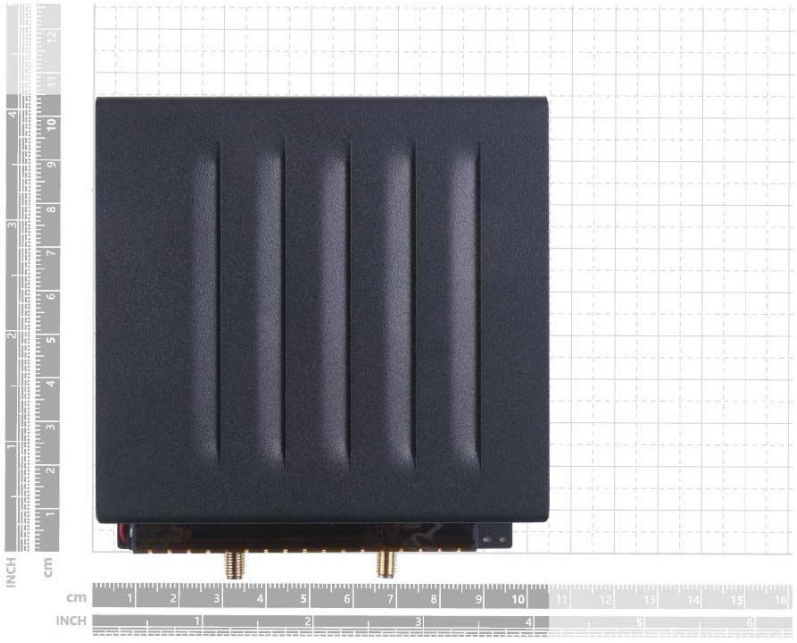
[Blog] Compare NVIDIA Jetson AGX Orin with AGX Xavier

In this blog gonna talk about what are the differences between Jeston AGX Orin and Jeston AGX Xavier



[Blog] Seeed Partners with Allxon to Enable Efficient Remote Hardware Management Services for NVIDIA Jetson Platform

Seeed is glad to partner with Allxon to deliver a secure remote management solution for Jetson Platform. At Seeed, you will find everything you want to work with NVIDIA Jetson Platform – official NVIDIA Jetson Dev Kits, Seeed-designed carrier boards, and kits, as well as third-party boards and accessories.



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