NVIDIA JETSON AGX XAVIER 64GB
Server-Class Performance In the Palm of Your Hand

A new AI Milestone for Autonomous Machines

NVIDIA® Jetson AGX Xavier™ 64GB delivers up to 32 TOPS of accelerated computing capability in a compact form factor consuming under 30 watts.

This advanced system-on-module is powered by the NVIDIA Xavier SoC and designed for cost-effective and performance-driven autonomous machine applications. A heterogeneous accelerated computing architecture delivers advanced compute performance for AI at the edge, complete with integrated memory, storage, power management, and an innovative thermal design to enable faster time to market. The Jetson AGX Xavier 64GB module gives you the performance to run modern AI workloads and solve problems in optical inspection, manufacturing, robotics, logistics, retail, service, agriculture, smart cities, and healthcare.

Jetson AGX Xavier 64GB is supported by the NVIDIA JetPack™ SDK, which includes board support package (BSP), Linux OS, NVIDIA CUDA®, cuDNN, and TensorRT™ software libraries for deep learning, computer vision, GPU computing, multimedia processing, and more. It's also supported by the NVIDIA DeepStream SDK, which delivers a complete toolkit for real-time situational awareness through intelligent video analytics (IVA) and the NVIDIA Isaac™ software platform for robot development. These help boost performance and accelerate software development, while reducing development cost and effort.

Key Features

Module

> 512-core NVIDIA Volta™ GPU with 64 Tensor cores

> 2x NVDLA

> 8-core NVIDIA Carmel Arm®v8.2 64-bit CPU

> 64GB 256-bit LPDDR4x

> 32GB eMMC 5.1

> 2x PVA

Power

> Voltage input 5V, 9V~20V

> Module Power: 10W - 30W

Environment

> Operating temperature: -25°C to 80°C measured on the TTP surface

> Non-operational humidity: 95% RH, -10°C to 65°C

> Non-operational vibration: 5G RMS 10 to 500Hz, 8 hours/axis

> Non-operational shock:140G, half sine, 2ms

NVIDIA Jetson AGX Xavier 64GB

TECHNICAL SPECIFICATIONS

AI Performance	**32 TOPS (INT8)**
GPU	**NVIDIA Volta™ architecture with 512 NVIDIA CUDA® cores and 64 Tensor cores**
Max GPU Freq	**1.37GHz**
CPU	**8-core NVIDIA Carmel Arm®v8.2 64-bit CPU** **8MB L2 + 4MB L3**
CPU Max Freq	**2.26GHz**
DL Accelerator	**2x NVDLA**
Vision Accelerator	**2x PVA**
Memory	**64GB 256-bit LPDDR4x** **136.5 GB/s**
Storage	**32GB eMMC 5.1**
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 40Gbps) | C-PHY 1.1 (up to 62 Gbps)**
Video Encode	**4x4K60 | 8x4K30 | 16x1080p60 | 32x1080p30 (H.265)** **4x 4K60 | 8x 4K30 | 14x 1080p60 | 30x 1080p30 (H.264)**
Video Decode	**2x 8K30| 6x 4K60 | 12x 4K30 | 26x 1080p60 | 52x 1080p30 (H.265)** **4x 4K60 | 8x 4K30 | 16x 1080p60|32x 1080p30 (H.264)**
UPHY	**8x PCIe Gen4** **3x USB 3.1** **Single Lane UFS**
Networking	**10/100/1000 Base-T Ethernet**
Display	**3 multi-mode DP 1.4/eDP 1.4/HDMI 2.0 a/b**
Other I/O	**4x USB 2.0** **5x UART, 3x SPI, 4x I2S, 8x I2C, 2x CAN, DMIC & DSPK, GPIOs**
Power	**10W | 15W | 30W**
Mechanical	**100mm x 87mm** **699-pin Molex Mirror Mezz Connector** **Integrated Thermal Transfer Plate**

Learn more

Learn more about Jetson AGX Xavier 64GB at **nvidia.com/Jetson**