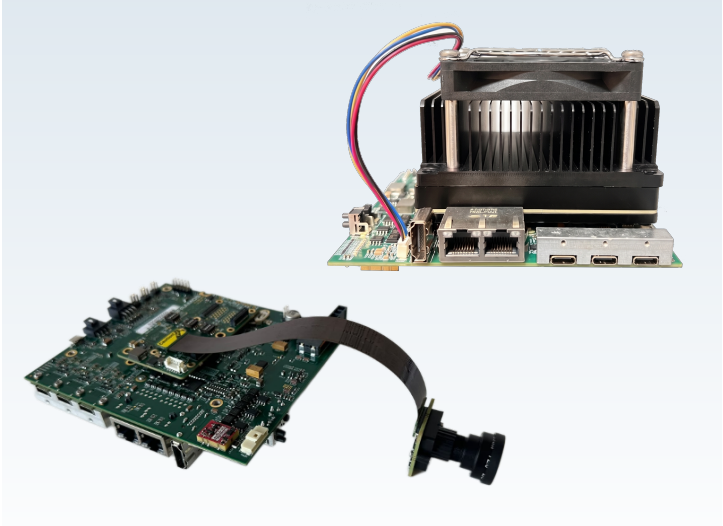
DEV-950AX-000

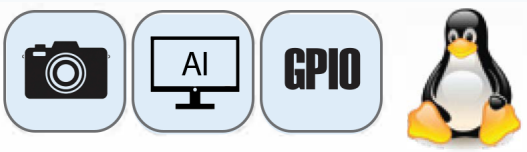
Jetson AGX Orin 32GB Development Kit with FRAMOS Vision



Compute assembly and carrier with camera.
Product views shown at different scales.

Features

- NVIDIA Jetson AGX Orin 32GB; up to 200 TOPS (INT8)
- 8MP/4K Sony STARVIS 2 low-light color image sensor
- 100° HFOV M12 lens (L100A)
- FRAMOS adapter with 4x 4-lane MIPI CSI-2 interfaces
- Dual Gigabit Ethernet; 3x USB 3.2 Type-C
- 256GB NVMe and Intel AX210 wireless module
- RS232/485, CAN-FD and isolated GPIO
- Active cooling and 18V / 90W power supply



Introduction

Built to accelerate Edge AI, robotics, and embedded vision development, this platform combines the EMAC SOM-950AX carrier board with an NVIDIA Jetson AGX Orin 32GB module delivering up to 200 TOPS of AI performance. Out of the box, it includes an 8MP Sony STARVIS 2 low-light camera module, a FRAMOS 4-port MIPI CSI-2 adapter for multi-sensor expansion, a pre-installed 256GB NVMe SSD, and an Intel AX210 wireless module.

Specifications

Processor	8-core Arm Cortex-A78AE v8.2 64-bit CPU, up to 2.2 GHz; 2MB L2 + 4MB L3 cache
GPU / AI	1792-core NVIDIA Ampere GPU with 56 Tensor Cores, up to 930 MHz; up to 200 TOPS (INT8); 2x NVDLA v2.0 and 1x PVA v2.0
Memory	32GB 256-bit LPDDR5; 204.8 GB/s bandwidth
Storage	64GB eMMC 5.1 on SOM; M.2 2280 M-Key PCIe 256GB NVMe SSD included
Networking / wireless	2x 1000BASE-T RJ45 Gigabit Ethernet; Intel AX210 M.2 2230 wireless module with two antennas
USB	2x USB 3.2 Type-C host; 1x USB 3.2 Type-C OTG; 1x USB 2.0 micro port for serial console
Industrial I/O	1x RS232/485 UART; 1x CAN-FD; 3x I2C; 1x SPI with 2 slave selects; 8x isolated GPIO (4x 5V / 20mA outputs, 4x 5V inputs); 2x isolated PWM
Display	1x HDMI Type A, up to 4K 2160p at 60 Hz
Software	Linux with Jetpack v.6.2.2 (Jetpack v.7.2.2 available later this year)

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DEV-950AX-000

Integrated Vision, Kit Contents and Ordering

Vision subsystem

Included camera	FRAMOS FSM:GO IMX678C with L100A lens and 60-pin PixelMate interface
Image sensor	Sony IMX678-AAQR1 (AR), STARVIS 2 CMOS rolling shutter; color RGB; 1/1.8-inch optical format; 2 × 2 µm pixels
Resolution / frame rate	3840 × 2160 (8MP/4K); sensor maximum 72 FPS at 10-bit or 60 FPS at 12-bit. Platform dependent; kit streaming modes require validation.
Lens	L100A: 100° horizontal field of view, F/2.7, IR cut at 660 nm; M12 × 0.5 mount
Processor adapter	FPA-4.A/AGX-Kit: 4x PixelMate interfaces, each with 4-lane MIPI CSI-2 at up to 2.5 Gbps per lane; synchronization cable and sensor signal testpoints
Camera expansion	Adapter provides connections for up to four sensor modules; supported simultaneous modes depend on kit software.

Mechanical, power and environment

Carrier dimensions	4.375 × 5.125 inches (111.125 × 130.175 mm); excludes full kit assembly envelope
Camera footprint	26.5 × 26.5 mm sensor module footprint; lens adds height
Input power	Carrier: 12 to 28 VDC via Molex Mini-Fit connector. Included supply: 18V, 5A, 90W.
Power notes	Orin 32GB module: configurable 15-40W (module only). Camera: 540mW maximum on 3.8V and 1.8V rails. USB Type-C devices limited to 1.0A each.
Operating environment	SOM/Carrier/Camera: -25c to +85c; NVMe SSD 0c to +70c; Wifi/BT Module 0c to +80c; Power Supply: 0c to +40c Humidity 95% non-condensing.

Ordering information

DEV-950AX-000	Jetson AGX Orin 32GB Development Kit with FRAMOS IMX678C vision subsystem.

Development kit contents

- NVIDIA Jetson AGX Orin 32GB SOM
- EMAC SOM-950AX Deluxe Carrier Board
- FRAMOS FPA-4.A/AGX-Kit; FRAMOS FSM:GO IMX678C camera with L100A lens
- M.2 2280 256GB NVMe SSD
- Intel AX210 wireless module and two antennas
- Heatsink and fan
- 18V, 5A, 90W power supply
- Accessory cabling, mounting hardware and EMAC Starter Guide