Specifications

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Basic Specifications	SOC	NVIDIA Jetson AGX Orin (64GB, original module)
	CPU	12-core 64-bit ARM Cortex-A78AE v8.2 processor with a frequency of up to 2.2GHz
	AI performance	275 TOPS
	GPU	64 Tensor Cores 2048-core NVIDIA Ampere architecture GPU
	Video encoding	H.265: 2×4K60, 4×4K30, 8×1080p60, 16×1080p30
	Video decoding	H.265: 1×8K30, 3×4K60, 7×4K30, 11×1080p60, 22×1080p30
	Memory	64GB LPDDR5
	Storage	64GB eMMC
	Storage expansion	1 × M.2 M-KEY (Expandable PCIe NVMe 2280 SSD, inside the computer), 1 × TF Card
	Power	DC 24V (5.5 × 2.1mm, support 9V~36V wide voltage input)
	Size	277.95mm × 136.09mm × 88.0mm
	Environment	Operating Temperature: -20℃ ~ 60℃, Storage Temperature: -20℃ ~ 70℃, Storage Humidity: 10% ~ 90%RH (non-condensing)
Software Support	OS	Jetson systems based on Ubuntu 22.04 provide a complete desktop Linux environment with graphics acceleration and support for libraries such as NVIDIA CUDA, TensorRT, CuDNN, and more.
	Large model	Robot model: - ROS robot model is supported. Large language models: - Support the privatization deployment of ultra-large-scale parametric models under the Transformer architecture, such as Deepseek-R1 series, Gemma series, Llama series, ChatGLM series, Qwen series, Phi series and other large language models Large visual models: - Support the privatization deployment of large visual models such as EfficientVIT, NanoOWL, NanoSAM, SAM and TAM. AI Painting: - Supports the private deployment of Flux, Stable Diffusion, and Stable Diffusion XL image generation models.
	Deep learning	Support Ollama local large model deployment framework, which can be used for natural language processing, code generation, and assistance scenarios. Support ComfyUI graphical deployment framework, which can be used for scenarios such as image restoration, image style conversion, and image synthesis. Supports multiple deep learning frameworks accelerated by cuDNN, including PaddlePaddle, PyTorch, TensorFlow, MATLAB, MXNet and Keras. Supports custom operator development. Supports Docker containerization technology, which can be easily used for image deployment.
	AI software stack	The NVIDIA Jetson Orin series delivers powerful AI compute power, massive unified memory, and a comprehensive software stack to power the latest generative AI applications. It enables fast inference on any generative AI model powered by the Transformer architecture, enabling superior edge performance on MLPerf.
Interface Specifications	Internet	Ethernet: 1 × 10G Ethernet (RJ45), 5 × Gigabit Ethernet (RJ45; Among them, GE2, GE3, GE4, and GE5 support PSE) WiFi: Expand WiFi/Bluetooth module via M.2 E-KEY (2230), supports 2.4GHz/5GHz dual-band WiFi6 (802.11a/b/g/n/ac/ax) and Bluetooth 5.2 4G: Expanding 4G LTE through Mini PCIe 5G: Expanding 5G through M.2 B-KEY
	GPS	Support GPS positioning, real-time positioning, tracking, tracking, and time calibration of field devices (synchronized with UTC)
	Video input	8 × GMSL2 (Input via two 4Pin Mini FAKRA interfaces)
	Video output	1 × HDMI2.0 (4K@60Hz)
	Audio	1 × 3.5mm Audio jack (Support MIC recording, American standard CTIA)
	USB	4 × USB3.0 (Max: 1A), 1 × Type-C (USB3.2 OTG), 1 × Type-C (Debug)
	Antenna	3 × 5G antenna, 1 × 4G/5G antenna, 1 × GPS antenna, 2 × WiFi antenna
	Button	1 × Reset, 1 × Recovery, 1 × Power
	Other interfaces	1 × SIM Card 1 × Phoenix connector (2×12Pin, 3.5mm pitch): 1 × RS485, 1 × RS232, 2 × CAN 2.0, 1 × UART, 1 × IO input, 1 × IO output