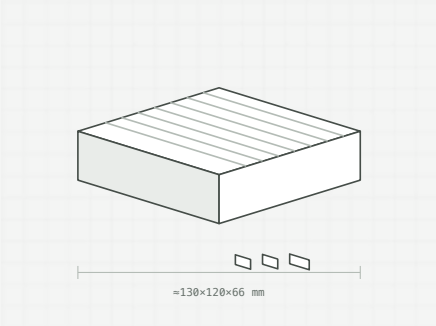
PH-J31 — Jetson box

PH-J31 — ПХ-J31 in Russian documents

Box built on the NVIDIA Jetson Orin Nano 8GB (Super) module: industrial carrier board with 2×GbE / 4×USB 3.2 / M.2 M + E / CAN, aluminum enclosure, 256 GB NVMe, JetPack 6.2. Orin NX 8GB / 16GB options.

AVAILABILITY	LEAD TIME	MINIMUM ORDER (MOQ)	PRICE
build to order, 2–5 weeks	**2–5 weeks (module — made to order)**	**1 unit; batch — from 10 units**	**on request, RUB excl. VAT**



PH-J31
diagram; photo — after the first samples

Outline drawing; product photos are on the product page. Dimensions: ≈130×120×66 mm (aluminum enclosure).

- NVIDIA Jetson Orin Nano 8GB, Super mode: 67 TOPS sparse (≈33 dense), 1024 CUDA / 32 Tensor Cores; options Orin Nano 4GB, Orin NX 8GB / 16GB
- 2×GbE, 4×USB 3.2, HDMI 2.1, CSI ×2–4, CAN, 40-pin; M.2 M (256 GB NVMe) + M.2 E (Wi-Fi — option), mini-PCIe (LTE — option)
- 12–19 V, ≈130×120×66 mm, aluminum enclosure, PWM fan; −10…+60 °C
- JetPack 6.2: CUDA / TensorRT / DeepStream with no conversion; OTA updates and camera profile are ours

Typical uses: terminal and workstation · control cabinet · robot and mobile machinery · language and multimodal models · test bench and development.

1. Purpose

Ready-to-run edge computer on the NVIDIA Jetson Orin Nano 8GB module in Super mode (67 TOPS sparse / ≈33 dense): industrial carrier board, aluminum enclosure with fan, 256 GB NVMe with our system image on JetPack 6.2. For teams whose models already live in CUDA / TensorRT / DeepStream: nothing to convert, while OTA updates and the camera profile are ours. Module options: Orin Nano 4GB, Orin NX 8GB / 16GB. Base unit without radio. If you don't need CUDA — PH-K40 costs half as much.

> **Straight talk:** Jetson is the strongest edge ecosystem (CUDA / TensorRT / DeepStream), and we acknowledge that. The price is tied to the NVIDIA module price list (revised 22 Jul 2026) and the exchange rate, so it is fixed in the quotation, valid 30 days, with a revision formula in the contract.

2. Platform

SoC / accelerator	NVIDIA Jetson Orin Nano 8GB — 6×Cortex-A78AE, Ampere GPU 1024 CUDA / 32 Tensor Cores; options: Orin Nano 4GB, Orin NX 8GB / 16GB
TOPS INT8 dense	≈33 TOPS INT8 dense (NVIDIA publishes 67 sparse, Super mode); Orin NX 16GB — ≈78 dense / 157 sparse method: NVIDIA datasheet: sparse INT8 in MAXN SUPER mode (JetPack 6.2); dense = sparse / 2; Jetson Orin Nano is the baseline on our bench

Memory	8 GB LPDDR5 128-bit, 102 GB/s in Super mode (68 GB/s in the original mode); Orin NX 16GB — 16 GB, 102 GB/s
Storage	256 GB NVMe (M.2 2280) with system image; the module has no eMMC — boots from NVMe

3. Interfaces

USB	4×USB 3.2 Type-A (10 Gbps), 1×USB-C (recovery / service)
Ethernet / PoE	2×GbE RJ-45; 1×GbE + PoE-PSE 15 W variant — industrial carrier board, made to order
RS-485 / CAN / RS-232	CAN ×1 (on-board connector), UART / I2C / SPI on the 40-pin header; RS-232 / RS-485 — 40-pin adapter or industrial carrier board (DB9 RS-232/422/485)
GPIO / relay	40-pin (NVIDIA pinout), power / reset / recovery buttons, 2 LEDs, RTC
M.2	M.2 2280 M-key — NVMe (system); M.2 2230 E-key — Wi-Fi/BT (option); mini-PCIe — LTE (option)
Video output	HDMI 2.1 (DP 1.4 — depends on the carrier board)
Wi-Fi / BT / LTE	none base unit without radio — no FSB notification and no security questions on site; for mobile use we fit a module imported with notification

4. Power and thermal

Power input	12–19 V DC, 5.5×2.5 mm jack; 12 V 5 A adapter included (Orin NX — 19 V 4.74 A); 9–36 V onboard power — via DC/DC (option)
Power consumption (typical)	≈12 W (module 15 W mode) at 2×1080p streams
Power consumption (peak)	≤30 W (MAXN SUPER 25 W + carrier board); Orin NX 16GB — up to 40 W
Cooling	active: heatsink with PWM fan on the module, aluminum enclosure; passive heatsink enclosure in 15 W mode — option
Enclosure temperature in a closed cabinet at +40 °C ambient	measured after the first sample is tested; we publish the measurement, not a datasheet value

5. Mechanical

Dimensions	≈130×120×66 mm (aluminum enclosure)
Weight	≈650 g
Mounting	desk / wall (mounting ears included); VESA 75 and DIN rail — options
Connectors	standard RJ-45 / USB / HDMI; locking DC connector — depends on the carrier board; cable clamp included

6. Environment and protection

Operating temperature	–10…+60 °C per carrier-board rating; closed cabinet at +40 °C — measured on the test bench
Ingress protection	IP30 (ventilated enclosure)
Vibration / shock	not rated in the base unit; for vehicles and machinery — industrial carrier board, made to order

7. Bench measurements

Measurements are expected with the first samples. What we measure: FPS INT8 YOLOv8n; FPS INT8 YOLOv8s; FPS INT8 YOLO11n; FPS INT8 YOLO11s; FPS INT8 ResNet50; FPS INT8 OCR (PP-OCRv4 rec); 1080p streams; accuracy after quantization.

test-bench baseline: the reference row for all devices; measured with the first samples on the test bench; method — /en/testing/

8. Configuration options

Option	Price
Orin Nano 4GB	on request
Orin Nano 8GB (Super) — base	base
Orin NX 8GB	on request
Orin NX 16GB	on request
Industrial carrier board: fanless, PoE-PSE, RS-232/422/485, CAN, DI/DO, DIN rail made to order	made to order, price in the quotation

Prices for 1 / 10 / 100 units and for options — in the quotation within 2 business days, valid 30 days. The contract includes a price revision formula tied to the Bank of Russia exchange rate and the DRAM index.

9. What's included

- Jetson Orin Nano 8GB (Super) module on an industrial carrier board, aluminum enclosure, 256 GB NVMe with system image on JetPack 6.2, 12 V 5 A power adapter, mounting ears
- Ready-to-run image on JetPack 6.2: CUDA / TensorRT / DeepStream as shipped by NVIDIA, Docker, autostart, watchdog — models run without conversion
- OTA updates of the image and the model with rollback — from your network, no cloud of ours
- Connects only to the addresses you set: we keep no cloud and no keys of ours in the image; no video is stored on the device
- 1-year warranty, replacement unit or spares; product passport (Russian regulatory data sheet); EAC declaration — in progress

10. Compatibility

Cameras	PH-Cam-K (USB, global shutter); PH-Cam-S / PH-Cam-O (PoE) — via an injector or switch; PH-Cam-M (MIPI CSI) ×2–4 depending on the carrier board; GMSL2 — carrier board with GMSL2 inputs, made to order

Power / PSU	12 V adapter (included); 12/24 V onboard power via 9–36 V DC/DC (option)
Runtimes	JetPack 6.2 (L4T 36.4): CUDA 12.6, TensorRT 10, cuDNN, DeepStream 7; ONNX Runtime (CUDA / TensorRT EP); Docker / containerd (nvidia-container-runtime); ROS 2 (Humble) in a container

11. Updates and support

Image updates and system-component fixes — free during the warranty (1 year), delivered from your network; afterwards — under a support contract.

12. Documents and origin

EAC declaration	in progress — declaration issued to Pikhta Tech LLC, in progress
FSB notification	not required — no radio modules
Datasheet	this document: PDF v0.9 and the web version on this website
Product passport	in progress — single template, PDF with each delivery
Vendor security questionnaire	on request — under NDA
Origin and our part	NVIDIA Jetson Orin module (country of manufacture per the batch marking: Taiwan / China); carrier board and enclosure — contract manufacturer (ODM, China); system image, incoming inspection and kitting — in Russia; EAC declaration is issued to Pikhta Tech LLC.

13. Chip and sensor vendor documentation

- NVIDIA Jetson — Orin Nano / Orin NX modules: https://developer.nvidia.com/embedded/jetson-modules
- Jetson Orin Nano Super Developer Kit: https://www.nvidia.com/en-us/autonomous-machines/embedded-systems/jetson-orin/nano-super-developer-kit/
- JetPack SDK: https://developer.nvidia.com/embedded/jetpack
- Jetson documentation: https://docs.nvidia.com/jetson/
- Jetson Download Center (module data sheets and design guides — with an NVIDIA Developer account): https://developer.nvidia.com/embedded/downloads

We do not host third-party documents — links to official pages only; full chip datasheets are available from the vendor or its distributor.