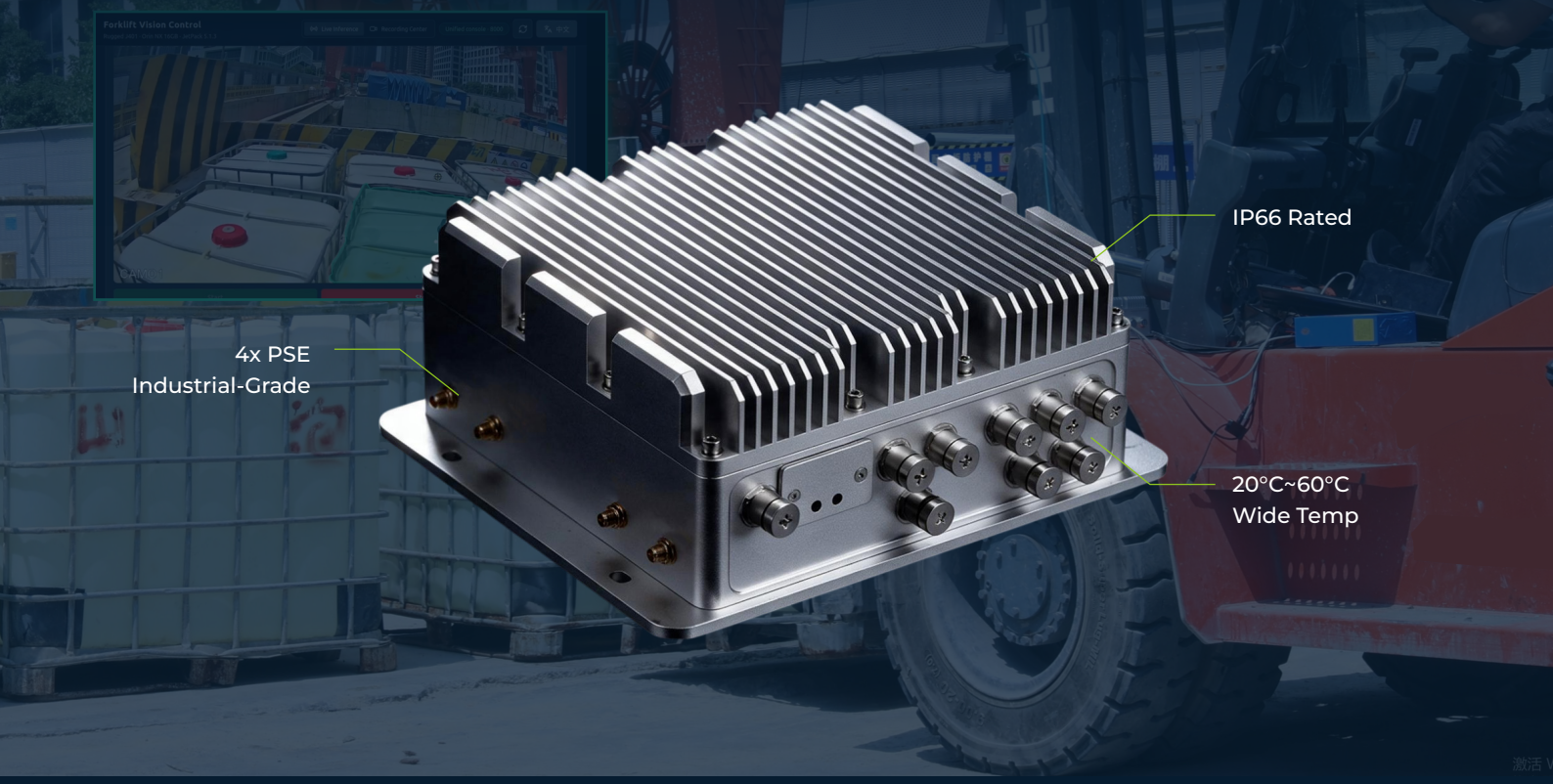
seeed studio

NVIDIA Elite Partner

reComputer Rugged Series

Industrial Edge AI Computer Built for Autonomous Machines and Robotics

An IP66-rated edge AI computer powered by NVIDIA® Jetson Orin™ Nano 8GB or Orin NX 16GB, designed for reliable AI deployment in demanding outdoor and industrial environments.
Equipped with M12 and sealed connectors, it offers a range of I/O interfaces, including USB, Ethernet with PSE, CAN, RS-232/422/485, and DI/DO. An M.2 Key B slot supports 5G modules, while 48V power compatibility and interfaces for common industrial sensors simplify integration into rugged applications across robotics, agriculture, transportation, and maritime operations.



Key Features

IP66-Rated, Fanless Design

Built for demanding environments where exposure to rain, dust, and vibration is inevitable, operating from −20 °C to 60 °C.

Up to 100 TOPS in a Compact Enclosure

Powered by NVIDIA Jetson Orin NX 16GB, delivering up to 100 TOPS of AI computing in a 210 × 190 × 95 mm housing.

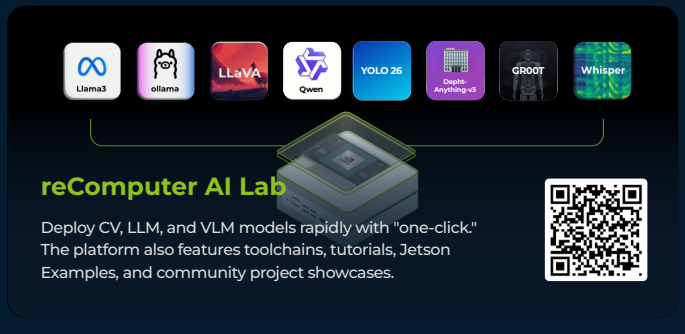
Sealed Connectors & Industrial I/O

Features Sealed M12 connectors and lockable, waterproof USB ports, with industrial I/O including Ethernet (PSE), CAN, RS-232/422/485, and DI/DO.

Design for Robotics & Autonomous System

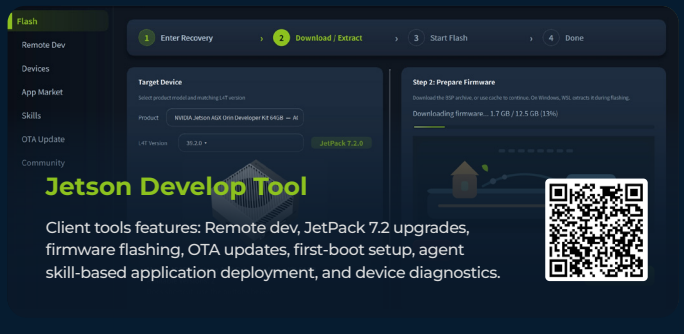
Designed for AI-powered AGVs, AMRs, trucks, and other autonomous machines in harsh environments, with optimized AI frameworks and ready-to-use interfaces for faster integration.

Developer Friendly



reComputer AI Lab

Deploy CV, LLM, and VLM models rapidly with "one-click." The platform also features toolchains, tutorials, Jetson Examples, and community project showcases.



Jetson Develop Tool

Client tools features: Remote dev, JetPack 7.2 upgrades, firmware flashing, OTA updates, first-boot setup, agent skill-based application deployment, and device diagnostics.

Specifications

Product	reComputer Rugged J4012	reComputer Rugged J3011
Module	NVIDIA Jetson Orin™ NX 16GB	NVIDIA Jetson Orin™ Nano 8GB
AI Performance	Orin NX 16GB — 100 TOPS	Orin Nano 8GB — 40 TOPS
GPU	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores
GPU Max Frequency	918 MHz	625 MHz
CPU	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU; 2MB L2 +4MB L3	6-core Arm® Cortex®-A78AE
CPU Max Frequency	2.0 GHz	1.5 GHz
DL Accelerator	2 × NVDLA v2.0	—
DL Max Frequency	1.23 GHz	—
Vision Accelerator	1 × PVA v2.0	—
Memory	16GB 128-bit wide LPDDR5 DRAM; 102.4GB/s	8GB 128-bit wide LPDDR5 DRAM; up to 68GB/s
Power	10W / 15W / 25W	7W / 15W
Video Encode	1× 4K60 (H.265); 3× 4K30 (H.265); 6× 1080p60 (H.265); 12×1080p30 (H.265)	1080p30 supported by 1–2 CPU cores
Video Decode	1× 8K30 (H.265); 2× 4K60 (H.265); 4× 4K30 (H.265); 9× 1080p60 (H.265); 18× 1080p30 (H.265)	1× 4K60 (H.265); 2× 4K30 (H.265); 5× 1080p60 (H.265); 11×1080p30 (H.265)
Mechanical	69.6 × 45 mm 260-pin SO-DIMM connector	

Box Specifications			
Storage	1× M.2 Key M PCIe (128GB SSD included)		
Networking	**M.2 Key E**	1× M.2 Key E for Wi-Fi / Bluetooth module	
	M.2 Key B	1× M.2 Key B for 5G module	
	SIM	1× Nano-SIM slot	
	Ethernet	4× 2.5GbE Gigabit Ethernet (4× PoE, all M12)	5× RJ-45 Gigabit Ethernet (4× PoE, all M12)
I/O	**USB**	4× USB 3.0 Type-A (5Gbps); 1× USB 3.0 Type-C (Recovery); 1× USB 2.0 Type-C (Debug)	
	CAN	2× CAN (M12)	
	Display	1× HDMI	
	DI/DO	2× DI, 2× DO (M12)	
	Serial	1× RS-232/422/485 (M12)	
	RTC	1× RTC 2-pin; 1× RTC Socket	
	LED	2× LED (PWR, SSD)	
	Button	1× Recovery; 1× RESET	
	Antenna Hole	4× Antenna Hole	
Power	19–48V M12 A-code connector		
JetPack Version	JetPack 5.1.3		
Environment	**Ingress Protection**	IP66	
	Operating Temperature	–20°C to +60°C (with 0.7 m/s airflow)	
	Humidity	10–95% RH (non-condensing)	
	Vibration	3 Grms @ 5–500 Hz, random, 1 hr/axis	
	Color	Silver-grey	
Mechanical	**Dimensions (W × D × H)**	210 × 190 × 95 mm (bottom panel: 250 × 210 mm)	
	Weight	3.5 kg	
	Installation	Desk / wall mounting	
Certifications	RoHS, CE, FCC, REACH		

Contact us

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