

INDUSTRIAL PRODUCT DATASHEET

reComputer Robotics J4012 - Intelligent Edge AI Computer with NVIDIA Jetson Orin NX Super 16GB

Intelligent edge AI computer with NVIDIA Jetson Orin NX Super 16GB, up to 157 TOPS, for autonomous robots and demanding edge AI applications.

SKU	UPDATED	PRICE
114110310	2026-10-17 01:03:56	\$1599.00(Excl. VAT)



Overview



The reComputer Robotics J4012 is an intelligent edge AI computer powered by the NVIDIA Jetson Orin NX Super 16GB module, delivering up to 157 TOPS AI performance. It features multiple robotics interfaces, pre-installed JetPack 6.2, and robust power and thermal design for operation from $-20\text{ }^{\circ}\text{C}$ to $60\text{ }^{\circ}\text{C}$ at 25 W.

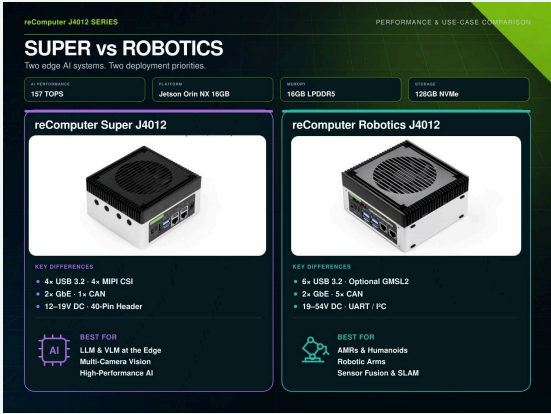
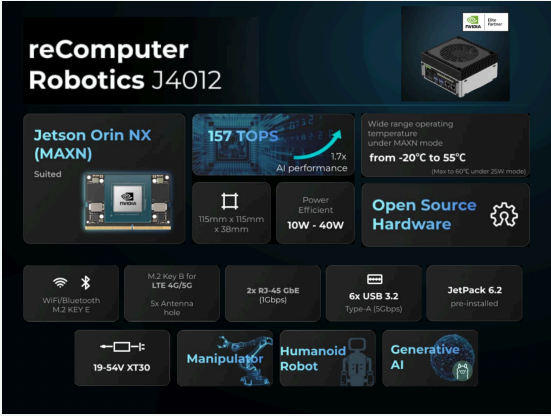
Key Features

- **Robust Hardware Design:** Boost power in a compact size: deliver up to 157 TOPS AI performance by NVIDIA Jetson Orin NX Module.
- **Multiple Interfaces for robotics:** Including dual RJ45, M.2 slots for 5G/Wi-Fi/BT modules, 6x USB 3.2, 2x CAN, GMSL2(additional purchase), I2C, and UART, functioning as a powerful robotic brain.
- **Software-ready Ecosystem:** Pre-installed with JetPack 6.2 and Linux BSP for seamless deployment.
- **Application and Benefit:** Ideal for rapid development of autonomous robots, accelerating time-to-market with ready-to-use interfaces and optimized AI frameworks.
- **Robust Power & Thermal Design for Durability:** Operates reliably from -20 °C to 60 °C at 25 W and up to 55 °C in MAXN mode, fueled through a wide 19-54 V DC input, ensuring stable operation in mobile and industrial robot environments

Jetson Modules Performance with Super Mode

- Enhanced power management
- Improved higher frame rate processing
- Reduced inference time

Product Gallery





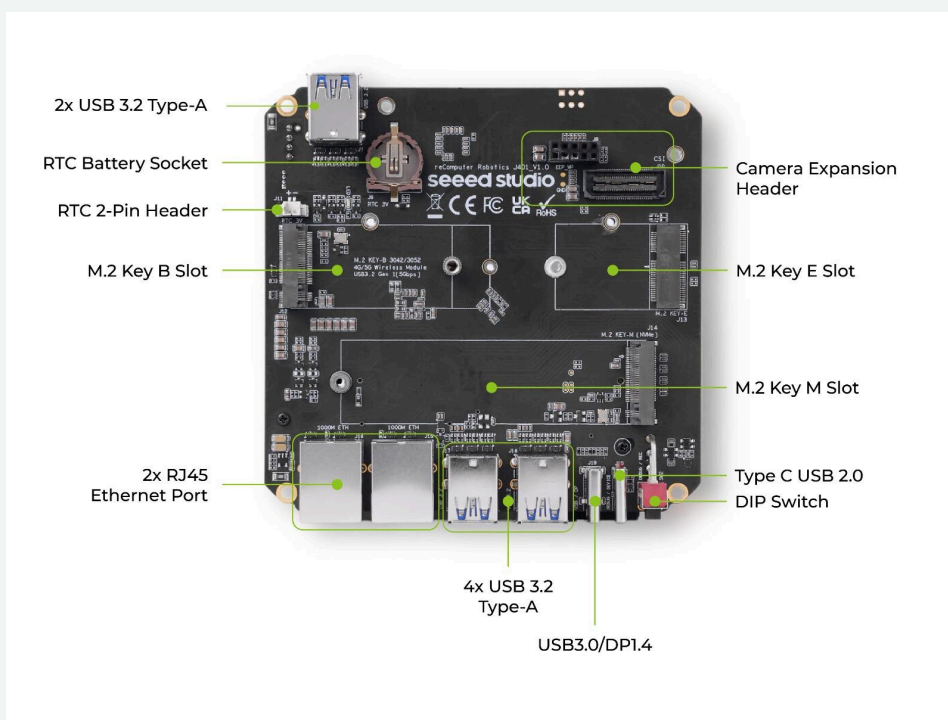
Specification

Module	
	reComputer Robotics J4012
Applications Processor(AP)	NVIDIA Jetson Orin™ NX 16GB
AI Performance	Orin NX 16GB – 157 TOPS (MAXN)
GPU	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores
GPU Max Frequency	1173 MHz
CPU	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
CPU Max Frequency	2.0 GHz
DL Accelerator	2 x NVDLA v2.0
DL Max Frequency	1.23 GHz
Vision Accelerator	1 x PVA v2.0
Memory	16GB 128-bit wide LPDDR5 DRAM 102.4GB/s
Power	10W - 15W - 25W - 40W
Video Encode	1x 4K60 (H.265) 3x 4K30 (H.265) 6x 1080p60 (H.265) 12x 1080p30 (H.265)
Video Decode	1x 8K30 (H.265) 2x 4K60 (H.265) 4x 4K30 (H.265) 9x 1080p60 (H.265) 18x 1080p30 (H.265)

CSI camera	Up to 4 cameras (8 via virtual channels) 8 lanes MIPI CSI-2 D-PHY 2.1 (up to 20Gbps)
Mechanical	69.6mm x 45mm 260-pin SO-DIMM connector

Carrier Board		
Storage	1x M.2 KEY M PCIe	
Networking	M.2 KEY E	1x M.2 Key E for WiFi/Bluetooth module
	M.2 KEY B	1x M.2 Key B for 5G module
	Ethernet	2x RJ-45 Gigabit Ethernet
I/O	USB	6x USB 3.2 Type-A (5Gbps) 1x USB 3.0 Type-C (Host/DP 1.4) 1x USB 2.0 Type-C (Device Mode Only for Reflash/Debug)
	CAN	2x CAN0 (XT30(2+2)) 3x CAN1 (4-Pin GH-1.25 Header)
	Display	1x DPI.4 (Type C Host)
	UART	1 x UART 4-Pin GH-1.25 Header
	I2C	2x I2C 4-Pin GH-1.25 Header
	Fan	1x 4-Pin Fan Connector (5V PWM) 1x 4-Pin Fan Connector (12V PWM)
	Extension Port	1x Camera Expansion Header (for GMSL2 board, not included)
	RTC	1x RTC 2-pin 1x RTC Socket
	LED	3x LED (PWR, ACT and User LED)
	Pinhole Button	1x PWR 1x RESET
	DIP Switch	1x REC
	Antenna Hole	5x Antenna Hole
Power	19-54V XT30(2+2) (XT30 to 5525 DC Jack Cable included)	
Jetpack Version	Jetpack 6.2	
Mechanical	Dimensions (W x D x H)	130mm x 120mm x 66mm
	Weight	1100g
	Installation	Desk, Wall-mounting
Operating Temperature	-20°C~60°C (25W Mode) -20°C~55°C (MAXN Mode) (with reComputer Robotics heat sink with fan)	
Warranty	2 Years	
Certification (Pending)	RoHS, REACH, CE, FCC, KC	

Hardware Overview



Applications

- **AI Application and Deployment:** The NVIDIA AI software stack (<https://developer.nvidia.com/embedded/develop/software#:~:text=The%20software%20stack%20provides%20an%20end-to-end%20development%20workflow%2C,and%20CUDA-X%20accelerated%20libraries%20and%20other%20NVIDIA%20technologies.>) is designed for accelerate AI application and deployment.
- **Edge AI Computer Vision Applications:** Jetson Platform Services (<https://docs.nvidia.com/jetson/jps/moj-overview.html>) provide a platform to simplify development, deployment and management of Edge AI applications on NVIDIA Jetson like BEV sensing demo with 4 USB cameras.
- **Demanding AI Applications:** Such as AMR, smart retail, industrial automation, and video surveillance, smart video analysis scenario
- **Jetson-example:** Offers one-line deploy projects edge AI applications of generative AI including Ollama, Llama3; computer vision including YOLOv8, and others. We have configured all environment for you to provides single command deployment of projects. (<https://github.com/Seeed-Projects/jetson-examples>)

Part List

Items	Quantity
Jetson Orin™ NX 16GB module	x 1
Seeed Carrier Board (reComputer Robotics J401)	x 1
128GB NVMe SSD	x 1
Aluminum Case and Heatsink with Fan	x 1
USB Cable; Type A to Type C	x 1
XT30 to DC cable	x1
User Manual	x 1

Compliance & Logistics



HSCODE	8471504090
USHSCODE	8517180050
UPC	
EUHSCODE	8471707000
COO	CHINA

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy.

If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Resource Links

- <https://www.seeedstudio.com/reComputer-Robotics-J4012-p-6505.html>
- [User Manual&Datasheet](#)
- [Carrier Board Schematic](#)
- [Power Board Schematic](#)
- [3D File](#)
- [Mechanical Document-reComputer Robotics PCBA](#)
- [Seeed NVIDIA Jetson Product Catalog](#)
- [Nvidia Jetson Comparison](#)
- [Seeed Nvidia Jetson Success Cases](#)
- [Seeed Jetson One Pager](#)
- [Flash BSP for Jetson](#)

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