

INDUSTRIAL PRODUCT DATASHEET

# reComputer Robotics J3011 with GMSL Extension - Intelligent Edge AI Computer with NVIDIA Jetson Orin Nano Super 8GB

Intelligent edge AI computer with NVIDIA Jetson Orin NX delivering 157 TOPS, rugged industrial design, and integrated GMSL extension for advanced robotics.

SKU

100001302

UPDATED

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PRICE

\$659.00(Excl. VAT)



# Overview



The reComputer Robotics J3011 with GMSL Extension delivers up to 157 TOPS AI performance via NVIDIA Jetson Orin NX 16GB module in Super/MAXN mode, featuring dual RJ45, 6x USB 3.2, 2x CAN, GMSL2, I2C, UART, and industrial-grade thermal design for  $-20$  to  $60^{\circ}\text{C}$  operation. It serves as a robotic brain for humanoid robots, AMRs, and advanced vision tasks like object detection and 3D reconstruction, with ready-to-use GMSL camera support and JetPack 6.2 preinstalled.

# Key Features

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## Price Increase Announcement

**Date: February 28, 2026**

Due to surging demand for modules and SSDs, prices for reComputer and reServer Jetson devices will increase by approximately \$50 to \$400 in the coming weeks. Please confirm your requirements and place your orders promptly to secure your stock.

- **Boosted AI Performance in a compact size:** Delivers up to 157 TOPS AI performance by NVIDIA® Jetson™ Orin™ NX 16GB module in Super/MAXN mode.
- **Rich Interfaces for Robotics:** Including dual RJ45, M.2 slots for 5G/Wi-Fi/BT modules, 6x USB 3.2, 2x CAN, GMSL2, I2C, and UART, functioning as a powerful robotic brain.
- **Industrial-Grade Power and Thermal Design:** Operates reliably from -20 °C to 60 °C in 25 W mode 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
- **Software-ready Ecosystem:** Pre-installed with JetPack 6.2 and Linux BSP for seamless deployment. Combined with Isaac Sim, it can be used to create autonomous mobile robots (AMRs), arms and manipulators, humanoids, and more.
- **Ready-to-use GMSL Extension:** Provides ready-to-use GMSL extension that supports multiple GMSL cameras in Jetpack

## Jetson Modules Performance with Super Mode

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

# Product Gallery



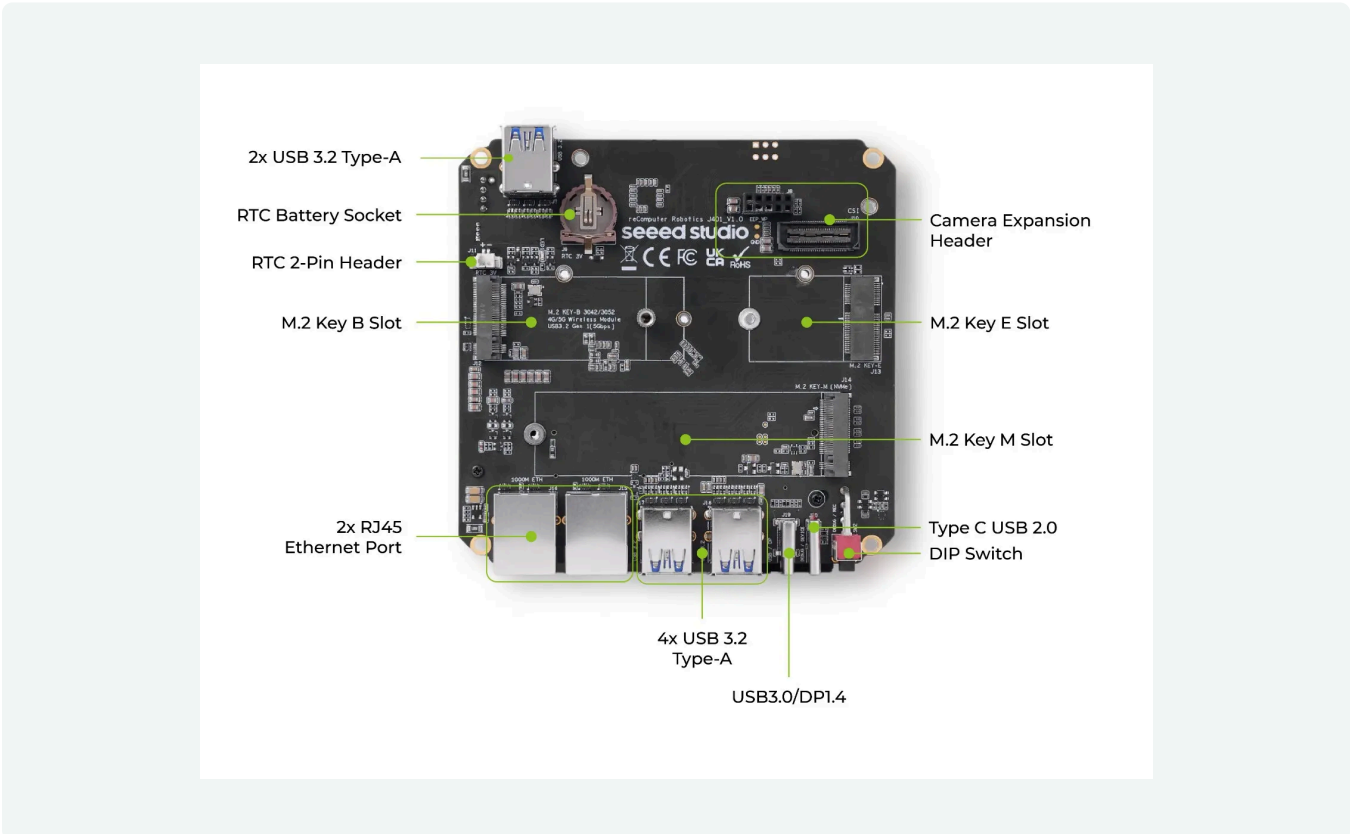
## Specification

Module	reComputer Robotics J3011
Applications Processor(AP)	NVIDIA Jetson Orin™ Nano 8GB

AI Performance	Orin Nano 8GB – 67 TOPS (MAXN)
GPU	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores
GPU Max Frequency	1020 MHz (MAXN_SUPER)
CPU	6-core Arm® Cortex®-A78AE
CPU Max Frequency	1.7 GHz (MAXN_SUPER)
Memory	8GB 128-bit wide LPDDR5 DRAM(up to 68GB/s; 102 GB/s MAXN_SUPER)
Power	7W - 15W - 25W
Video Encode	1080p30 supported by 1-2 CPU cores
Video Decode	1x 4K60 (H.265) 2x 4K30 (H.265) 5x 1080p60 (H.265) 11x 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, 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, CE, FCC, KC	

# Hardware Overview



# Applications

- **Humanoid Robot & Manipulation:** Serving as a powerful brain for humanoid robots, the reComputer Robotics series delivers rich perception with precise motion control. Emulating human-like sensing, dexterity, mobility and whole-body coordination—seamlessly collaborating with people to get tasks done.
- **CAN Bus Motor Control:** - The CAN bus links servos or motors to drive Robotic Arms and Autonomous Robots with millisecond-level joint coordination.
- **LiDAR Mapping and Obstacle Avoidance:** - Logistics Robots map in seconds via UART LiDAR, dodge on the fly and shuttle racks nonstop.
- **Sensor Data Integration & Maintenance Alerts:** - I<sup>2</sup>C weaves temperature, humidity, IMU and fuel-gauge data into a net, giving robots early-maintenance alerts.
- **Barcode Scanning & Real-time Parcel Labeling:** - USB cameras scan barcodes while on the move, and a USB ticket printer labels parcels in real time—zero manual labor from inbound to outbound.
- **Video Link-Aggregation for Edge AI QC:** - Dual-RJ45 link-aggregation delivers video to the Edge AI reComputer in <1 ms for real-time QC and remote monitoring.
- **High-Performance Vision for Robotics:** Combining a GMSL 2 camera with a reComputer Robotics enables advanced vision-based robotics. Sensing 3MP GMSL 2 camera supports real-time object detection, panoramic environment awareness, and multi-camera 3D reconstruction . The high-bandwidth, low-latency GMSL 2 link supports long cable runs and multi-camera setups, while the Jetson Orin NX delivers real-time AI processing for perception, mapping, and control.
- **3D Vision and GMSL 2 Connectivity for Robotics:** The reComputer Robotics GMSL Extension supports the Orbbec Gemini 335LG Stereo Vision 3D Camera, providing accurate real-time 3D perception for advanced robotics. With the MAX96712 deserializer and mini-FAKRA connector, it ensures secure, low-latency, and reliable data transmission, ideal for AMRs, robotic arms, and collaborative robots. Precise depth sensing enables smarter navigation, robust object recognition, and reliable obstacle avoidance across mobile robots, delivery systems, and shelf-stocking applications.

## Part List

Items	Quantity
Jetson Orin™ Nano 8GB module	x1
Seeed Carrier Board (reComputer Robotics J401) with GMSL Extension	x1
128GB NVMe SSD	x1
Aluminum Case and Heatsink with Fan	x1
USB Cable; Type A to Type C	x1
XT30 to DC cable	x1
User Manual	x1

## 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-J3011-with-GMSL-extension-board-p-6538.html>
- [User Manual&Datasheet](#)
- [Power Board Schematic](#)
- [GMSL Board Schematic](#)
- [3D File](#)
- [Mechanical Document-reComputer Robotics PCBA](#)
- [Nvidia Jetson Comparison](#)
- [Seeed Nvidia Jetson Success Cases](#)
- [Seeed Jetson One Pager](#)
- [Flash BSP for Jetson](#)

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