seeed studio

INDUSTRIAL PRODUCT DATASHEET

reComputer Robotics J5011 with GMSL - Ultra-Advanced Edge AI Computer with NVIDIA Jetson AGX Orin 32GB

The reComputer Robotics J5011 with GMSL is an ultra-advanced edge AI computer with NVIDIA Jetson AGX Orin 32GB, 200 TOPS, and 8x GMSL2 camera support for autonomous mobile robots and vision AI applications.

SKU	UPDATED	PRICE
100076722	2026-10-28 03:02:46	$3049.00(Excl. VAT)



Overview



reComputer Robotics J5011 with GMSL is an ultra-advanced edge AI computer powered by the NVIDIA Jetson AGX Orin 32GB module, delivering 200 TOPS for embodied AI and AMR applications. It supports multi-sensor fusion for autonomous mapping and navigation via LiDAR, 3D cameras, GPS, and IMU, and is designed for autonomous mobile robots, smart retail, industrial automation, and video surveillance.

Key Features

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.

- **Powerful embodied AI Platform** Compatible with the Jetson AGX Orin 32GB module, offering computing capability of 200 TOPS. Perfect platform for embodied AI and AMR
- **Multi-Connectivity** Featuring 2x M.2 Key M slots for SSD, M.2 Key E slot for Wi-Fi and M.2 Key B slot for 4G/5G
- **Wide Voltage Input Range** Can be used in 48V battery power system
- **Rich IO capabilities** Includes most common IOs used in robotics and AMR prototyping, such as USB, 10G Ethernet, CAN, RS-232/422/485, I2C, SPI and I2S
- **Vision AI Support** Features 4x 4-lane CSI output, and can be connected up to 8x GMSL2 cameras, making it ideal for vision AI applications such as BEV, Occupancy Grid, SLAM etc

Product Gallery



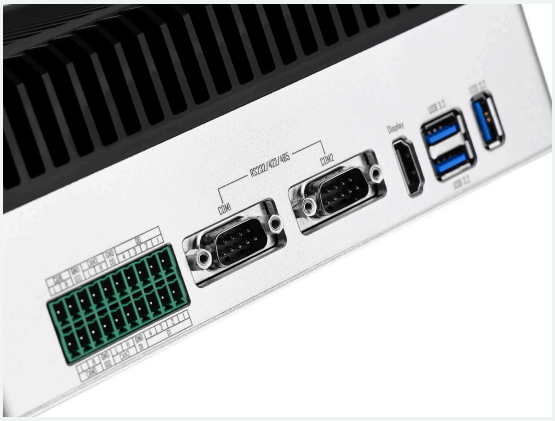














Specification

Product	reComputer Robotics J5011 with GMSL Extension	
Storage	2x M.2 Key M slot (1x 128G SSD included)	
Networking	1x M.2 Key E slot for WiFi/Bluetooth module 1x M.2 Key B slot for 4G/5G module	
I/O	USB	3x USB 3.0 Type-A (5Gbps); 1x USB 3.0 Type-C (Recovery); 1x USB 2.0 Type-C (Debug);
	RJ45	4x 1G Ethernet 1x 10G Ethernet
	GMSL	8x GMSL2 (MAX96712 as deserializer)
	CAN	4x CAN (CAN-FD supported)
	Serial	2x RS-232/422/485
	DI/DO	4x DI 4x DO
	IO	1x SPI 1x I2C 1x I2S
	Display	1x HDMI 2.1
	Fan	1x 4-pin Fan Connector (12V PWM)
	Button	1x Reset Button; 1x Recovery Button
	RTC	1x RTC 2-pin 1x RTC socket
Power	DC 19V ~ 48V Terminal Block 2-pin	
Mechanical	Dimensions (W x D x H)	210mm*180mm*87mm (with stands)
	Weight	2.95 kg
	Installation	Desk, wall-mounting
Operating Temperature	-10℃~60℃	
Warranty	2 Year	

Manufactuer	Model	Resolution
Sensing	SG3S-ISC031C-GMSL2F	1920H*1536V
	SG2-AR0233C-5200-G2A	1920H*1080V
	SG2-IMX390C-5200-G2A	1920H*1080V
	SG8S-AR0820C-5300-G2A	3840H*2160V
Orbbec	Orbbec Gemini 335Lg	3D

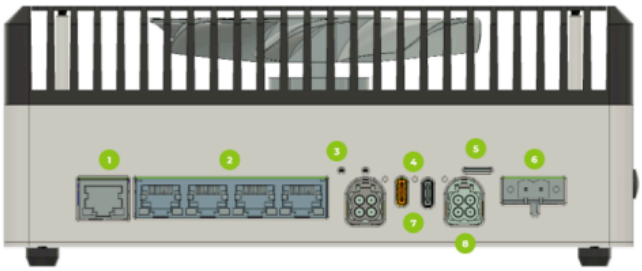
Hardware Overview

Side View 1



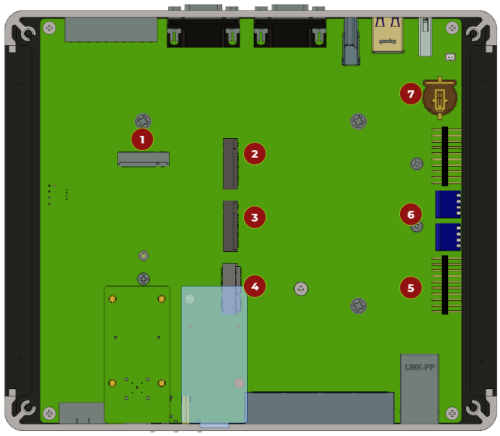
1. DI x 4 DO x 4 CAN x 4
2. RS-232/422/485 x 2
3. Display
4. USB 3.0 x 3

Side View 2



1. 10 GbE x 1
2. 1 GbE x 4
3. Reset + Recovery Button
4. LED Indicator x 3
5. Nano SIM
6. DC 19~ 48 V
7. USB Type-C x 2 (Debug+Recovery)
8. GMSL2 x 8

Bottom View



1. M.2 Key B Slot
2. M.2 Key M Slot 1 (128G SSD Included)
3. M.2 Key M Slot 2
4. M.2 Key E Slot
5. I2C x 1 I2S x 1 SPI x 1
6. RS-232/422/485 Mode Switch
7. RTC Coin Cell Socket

Applications

- **Autonomous mobile robot**
- **AI Robot Development:** With AGX Orin module, this most powerful embedded AI system lets you create advanced robotics and edge AI applications for manufacturing, logistics, and healthcare. It's the most powerful embedded system, pushing the limits of AI robotics. The Isaac robotics platform offers NVIDIA-accelerated systems, libraries, and generative AI models to enhance AI perception, manipulation, and simulation in robotics. Learn about Issac platform Isaac - AI Robot Development Platform | NVIDIA Developer
- **Multi-Sensor Fusion for Autonomous Mapping & Navigation:** reComputer Robotics J501 supports sensor-rich autonomy by integrating data from LiDAR (via Ethernet/CAN), 3D cameras (via USB/CSI), GPS, and IMU (via UART). Using AI models and algorithms like ORB-SLAM,A-LOAM, NVBloxor Nav2, it performs sensor fusion, real-time localization, path planning, and obstacle avoidance. The low-latency processing on the AGXOrin SoC allows autonomous systems to adapt to changing terrain or obstacles on the fly. Its wide voltage input and compact form factor make it suitable for mobile deployment, enabling robust, edge-level autonomy without external compute.
- **Designed for demanding AI applications:** Such as AMR, smart retail, industrial automation, and video surveillance, smart video analysis scenario The NVIDIA Isaac™ platform delivers the NVIDIA® CUDA®-accelerated libraries, application frameworks, and AI models you need to create autonomous mobile robots (AMRs), arms and manipulators, humanoids, and more. Seeed Jetson Develop Tool is a desktop client for all developers who are going to use reComputer Jetson device for the very first time. It brings the common bring-up and development workflow into one GUI: firmware flashing, first-boot initialization, device diagnostics, remote development, app deployment, skill-based automation, OTA updates (Upgrade to JetPack7.2), and community resources. All we provide here is to help you to get started with Seeed reComputer Jetson hardware much more easily and seamlessly.

Part List

reComputer Robotics J501	x1
AGX Orin 32GB	x1
128GB SSD	x1
Terminal block to DC power cable	x1
USB Type-C to Type-A cable	x1
Panel Mount	x2
DIN Rail	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-J5011-with-GMSL-extension-board-p-6681.html
- Datasheet
- Carrier Board Schematic
- 3D File
- Selection of reComputer Jetson AGX Orin Series
- Seeed Nvidia Jetson Product Catalog
- Nvidia Jetson Comparison
- Nvidia Jetson Product Comparison
- Seeed Nvidia Jetson Success Cases
- Seeed Jetson One Pager
- Flash BSP for Jetson

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