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INDUSTRIAL PRODUCT DATASHEET

reComputer Robotics J5012 with GMSL - Ultra-Advanced Edge AI Computer with NVIDIA Jetson AGX Orin 64GB

reComputer Robotics J5012 is a poweredgeboxwith NVIDIA Jetson AGX Orin™ 64GB module.

SKU	UPDATED	PRICE
100032662	2026-11-20 10:28:10	$4549.00(Excl. VAT)



Overview



reComputer Robotics J5012 is a poweredgeboxwith NVIDIA Jetson AGX Orin™ 64GB module. It features rich IOs, such as USB, Ethernet, CAN, RS-232/422/485, DI/DO and GMSL.ItalsofeaturesconnectivityM.2KeyEslotforWi-Fi/BTandM.2KeyBslotfor4G/5Gmodules,making it perfect candidate to be the brain of sophisticated mobile robots or autonomous vehicles. Feel free to contact us for Non-GMSL version

Key Features

01 **Powerful embodied AI Platform**

Compatible with the Jetson AGX Orin64GB module, offering computingcapabilityof 275 Perfect platform for embodied AIandAMR development.

02 **Multi-ConnectivityFeaturing2xM.2KeyMslotsforSSD,M.2KeyEslotforWi-FiandM.2KeyBslotfor4G/5G**

03 **Wide Voltage Input Range Can be used in 48V battery power system**

04 **Rich IO capabilities**

Includes most common IOs used in robotics prototyping, such as USB, 10G Ethernet, CAN, RS-232/422/485,I2C,SPIandI2S

05 **Vision AI SupportFeatures 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













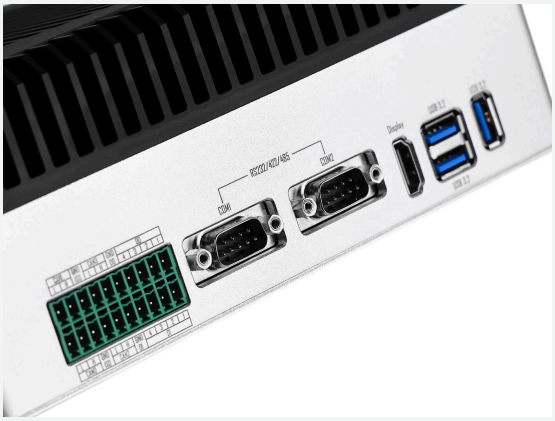


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87 mm
210 mm
180 mm

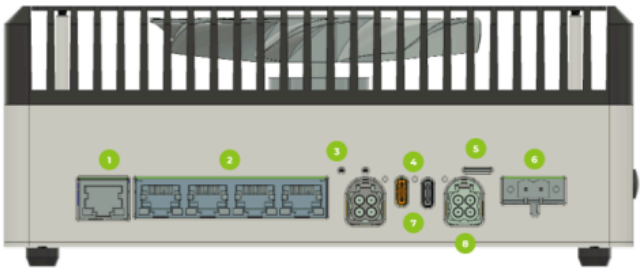
Hardware Overview

Side View 1



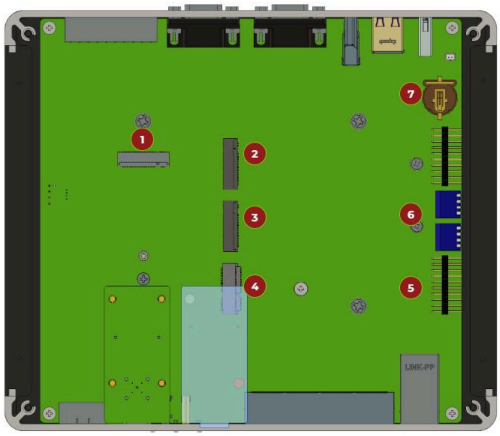
1. DI x 4 DO x 4 CAN x 4
2. RS-232/422/485 x 2
3. Display
4. USB 3.0 x 3

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.**

Resource Links

- https://www.seeedstudio.com/reComputer-Robotics-J5012-with-GMSL-extension-board-p-6682.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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