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INDUSTRIAL PRODUCT DATASHEET

reComputer Mini J501 Carrier Board for Jetson AGX Orin™

reComputer Mini J501 carrier board is a ultra-compact carrier board for NVIDIA Jetson AGX Orin™ modules, both 32GB and 64GB.ItfeaturesrichIOs,includingCAN,USB,Ethernet,RS-...

SKU	UPDATED	PRICE
100094378	2026-11-11 09:30:47	$279.00(Excl. VAT)



Overview



reComputer Mini J501 carrier board is a ultra-compact carrier board for NVIDIA Jetson AGX Orin™ modules, both 32GB and 64GB.ItfeaturesrichIOs,includingCAN,USB,Ethernet,RS-485andI2S,makingitperfectcandidateforhumanoidcontrollerandrapidprototyping.WithJetson AGX Orin™modules,reComputerMini501carrierboardisaperfectalternativeoptionforNVIDIA® Jetson AGX Orin™Developer Kit.

Key Features

01 **PowerfulembodiedAIPlatformCompatible with the Jetson AGX Orin module, offering up to 275 TOPS.PerfectplatformforembodiedAIdevelopment.**

02 **UltraCompact Size110mmx110mmfootprint,suitable for robotprototypinganddevelopment,especiallyrobotsthathastightfootprintsuchashumanoids**

03 **WideVoltageInputRange Can be used in 48V battery power system (max 54V input)**

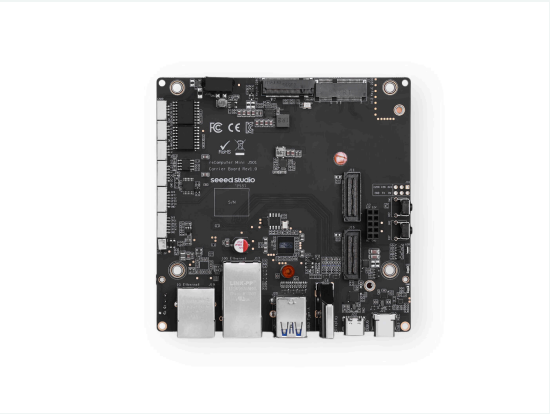
04 **Rich IO capabilities**

Includes mostcommonIOsusedinroboticsprototyping,suchasUSB, 10GEthernet,CAN,RS-485andI2S

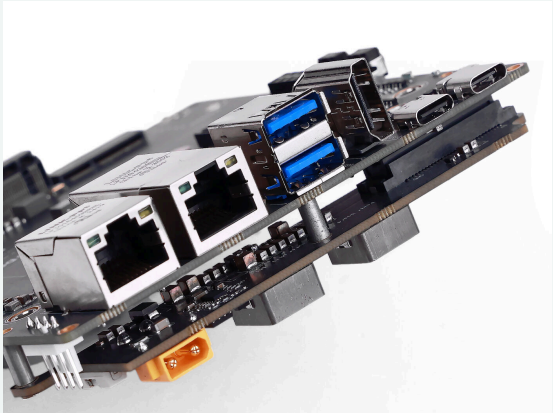
Product Gallery



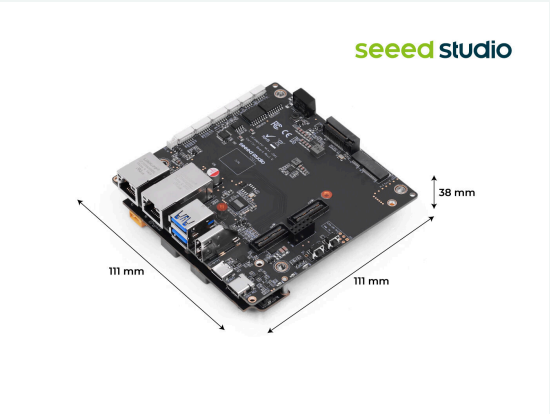






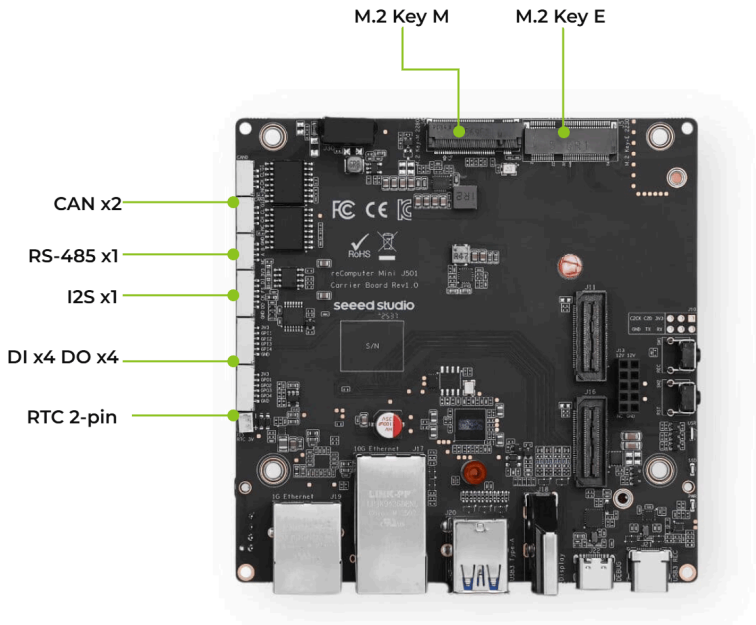




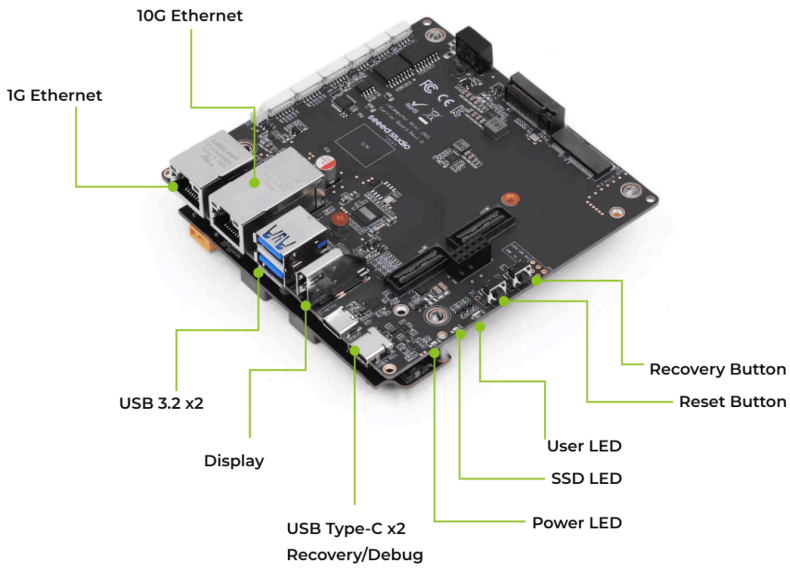

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38 mm
111 mm
111 mm

Hardware Overview

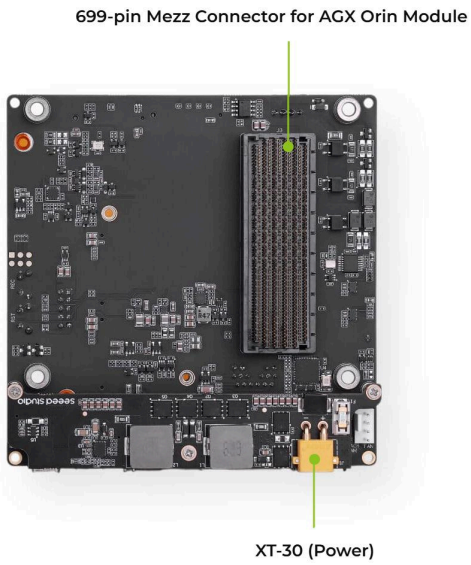
Carrier Board - Bottom View



Carrier Board - Side View



Carrier Board - Top View



Applications

- **Humanoid Robotics**
- **AIRobotDevelopment:** 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.
- **LearnaboutIssacplatform**
- **Isaac - AI Robot Development Platform | NVIDIA Developer**
- **Multi-Sensor Fusion for Autonomous Mapping & Navigation:** reComputer Mini 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, or Nav2, it performs sensor fusion, real-time localization, path planning, and obstacle avoidance. The low-latency processing on the AGX Orin 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.
- **Learn more about sensor options compatible with reComputer Mini J501 to get started.**
- **Capable of Bringing Generative AI to the Edge:** Now you can build AI agents capable of processing large amounts of live or archived videos and images with Vision-Language Models (VLM) such as LLaVA, this new AI agents help nearly every industry summarize, search, and extract actionable insights from video using natural language.
- **Deploy Depth Anything v3:** reComputer Mini J501 enables real-time execution of the Depth Anything V3. By processing frames captured from a monocular camera, the system instantaneously generates high-precision depth maps and reconstructs 3D point cloud spaces. This empowers small-scale mobile robots with exceptional spatial perception, obstacle recognition, and real-time 3D modeling capabilities, making it ideal for low-power, high-performance robotic applications such as outdoor inspection, autonomous delivery, and environmental mapping.
- **Fruit Sorting with Mini J501 and StarAI Follower Arm Viola:** Mini J501 (Jetson AGX Orin) and StarAI Follower Arm Viola utilizes the LeRobot framework to execute fruit sorting tasks. The project showcases an end-to-end workflow from data collection to deployment, enabling the robot to intelligently grasp and organize fruits.
- **Fastest Way to Deploy Generative AI and Computer Vision Models:** We have jetson-exampleprepared for you! It 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.

Resource Links

- https://www.seeedstudio.com/reComputer-Mini-J501-Carrier-Board-without-GMSL-p-6688.html
- Datasheet
- CarrierBoardSchematic
- PowerBoardSchematic
- 3D File
- Seeed Nvidia Jetson Product Catalog
- Nvidia Jetson Comparison
- Nvidia Jetson Product Comparison
- Seeed Nvidia Jetson Success Cases
- Seeed Jetson One Pager

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