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INDUSTRIAL PRODUCT DATASHEET

reServer Industrial J501-Carrier board for Jetson AGX Orin

The J501 carrier board is a powerful extension board that supports NVIDIA Jetson AGX Orin modules.

SKU	UPDATED	PRICE
102991854	2026-11-11 09:42:39	$379.00(Excl. VAT)



Overview



The J501 carrier board is a powerful extension board that supports NVIDIA Jetson AGX Orin modules. It features rich data ports and extension interfaces, completely unleashed the full performance of the AGX Orin module. Also it supports adding GMSL extension to deliver up to 8 GMSL cameras.

Key Features

01 **Build the most powerful embedded AI platform**

Compatible with the Jetson AGX Orin module, offering up to 275 TOPS—8 times more than Jetson AGX Xavier. Power is configurable between 15W and 60W.

02 **Advanced Vision AI Capabilities**

Supports 8K60 and 3x4K60 video decoding. Features 16 lanes of MIPI CSI-2, with an optional GMSL extension board supporting up to 8 GMSL cameras.

03 **Extensive Connectivity**

including Gigabit Ethernet, 10G Ethernet, USB 3.1, M.2 Key E, Key B, and Key M. CAN and RS232/422/485 are supported for connecting to industrial devices and sensors.

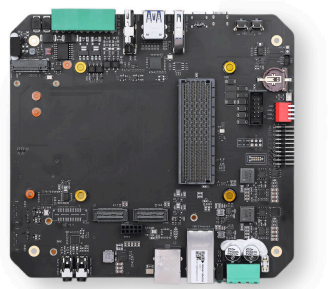
04 **Wide Operating Range**

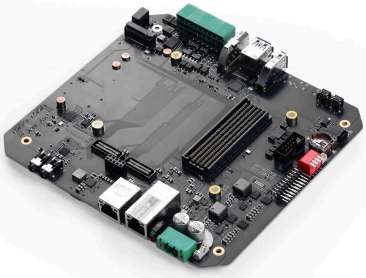
Operates reliably across a temperature range of -25°C to +60°C and an input voltage range of 12-36V DC.

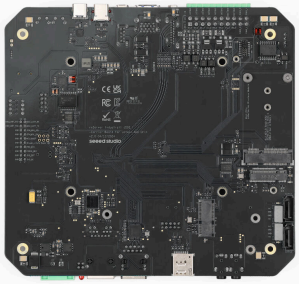
05 **Support Jetpack 6**

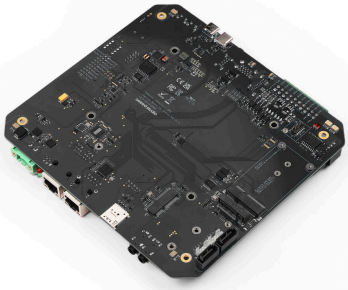
BSP readyfor developing your custom system image,leverageJetson Platform Service for end to end workflow.

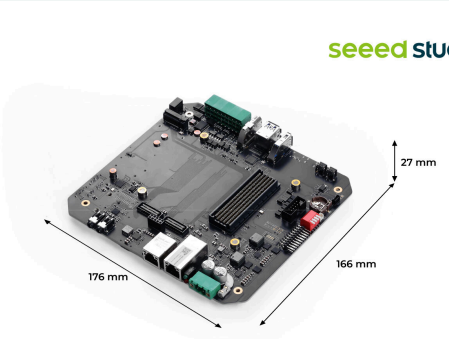
Product Gallery



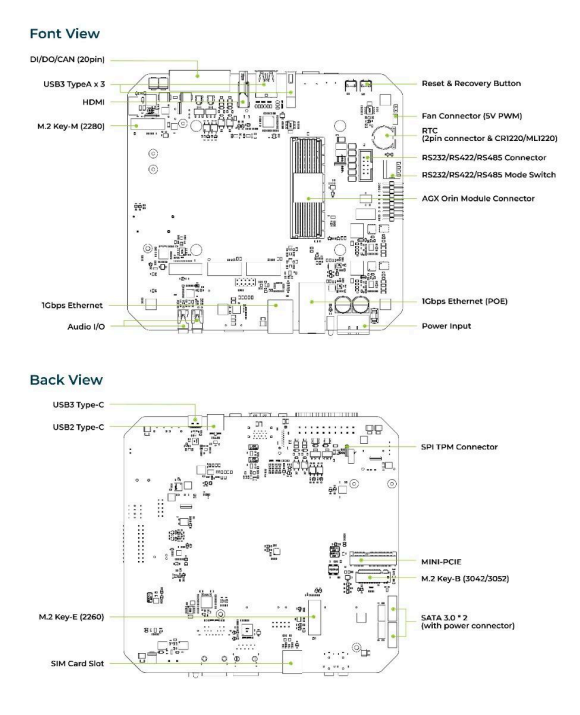








Hardware Overview



Applications

- **Application Field**
- **Autonomous Mobile Robot (AMR)**
- **AI Video Analytics**
- **Generative AI**
- **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 Isaac robotics platform.**
- **Vision AI:** Jetson AGX Orin supports real-time video analytics with up to 23 1080P streams simultaneously. NVIDIA Metropolis, an application framework that combines visual data and AI, equips developers with the tools and ecosystem to enhance operational efficiency and safety across diverse industries.
- **Learn about NVIDIA Metropolis**
- **Generative AI at the Edge:** Jetson AGX Orin offers unmatched AI compute power, large unified memory, and comprehensive software stacks, making it the ideal platform for energy-efficient generative AI applications. It supports fast inference for any generative AI model based on the transformer architecture and leads in edge performance according to MLPerf benchmarks. Quickly deploy generative AI models on text generation, multimodal models, image generation via jetson-examples.
- **Try Jetson Examples.**

Resource Links

- https://www.seeedstudio.com/reServer-Industrial-J501-Carrier-board-for-Jetson-AGX-Orin-p-5950.html
- Datasheet
- Schematic
- 3D File
- 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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