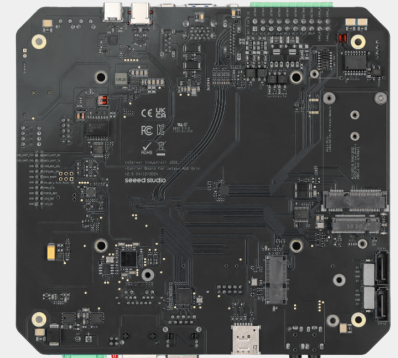
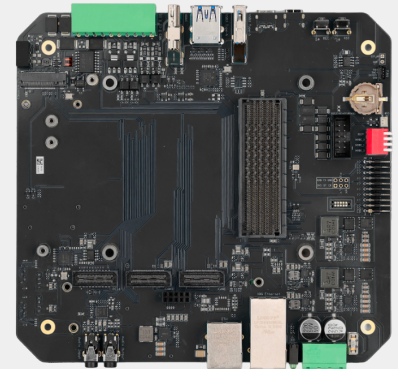


reServer Industrial J501 Carrier Board for NVIDIA® Jetson AGX Orin™

The reServer Industrial J501 is a powerful carrier board that compatible with NVIDIA Jetson AGX Orin 32GB/64GB modules. It features rich data ports and extension interfaces, completely unleashes the full performance of the AGX Orin module up to 275 TOPS AI performance. The carrier board supports adding GMSL extension to connect up to 8 GMSL cameras, that can be your perfect choice to develop vision AI and autonomous machine with diverse applications.

Features

- Multi-sensors supported: 10GbE, PCIe, DP, GMSL, MIPI CSI-2, USB 3.2
- Expand local storage with 2x SATA HDD/SSD
- Hybrid connectivity: support 4G/5G, LoRaWAN, Series Wireless
- Support JetPack 6.0
- Power consumption within 15-60 watts



Compatible Module		Carrier Board		
AI Performance	Jetson AGX Orin 64GB; Jetson AGX Orin 32GB	I/O	Ethernet	1x LAN0 RJ45 GbE (10/100/1000Mbps) 1 x LAN1 RJ45 10GbE(10000Mbps)
GPU	NVIDIA Ampere architecture with 2048 NVIDIA® CUDA®cores and 64 Tensor cores; 1792-core NVIDIA Ampere architecture GPU with 56 Tensor Cores		USB	3x USB3.1; 1x USB3.1 Type C(Host mode), 1x USB2.0 Type C(Device mode),
			DI/DO	4x DI,4x DO,3x GND,DI_2x GND_DO,1x GND_ISO,1x CAN
			Display	1x HDMI 2.1 Type A 7680x4320
CPU	12-core Arm Cortex-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3; 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3		SATA	2x SATA III 6.0Gbps at 30 Hz
		SIM	1x Nano SIM card slot	
DL Accelerator	2x NVDLA v2.0	Button	Reset Button, Recovery Button	
Vision Accelerator	PVA v2.0	Expansion	Mini PCIE	1x Mini PCIE for LoRaWAN®/4G/Series Wireless (Module not included)
Memory	64GB 256-bit LPDDR5 204.8GB/s; 32GB 256-bit LPDDR5 204.8GB/s		M.2 Key B	1x M.2 Key B (3042/3052) support 4G/5G (Module not included)
Storage	64GB eMMC 5.1		M.2 Key E	1x M.2 Key E
			M.2 Key M	1x M.2 Key M (PCIE 4.0)
Video Encode	2x 4K60 4x 4K30 8x 1080p60 16x 1080p30 (H.265); 1x 4K60 (H.265) 3x 4K30 (H.265) 6x 1080p60 (H.265) 12x 1080p30 (H.265)		Camera	2x Expansion connector (8lanes for each connector)
			Fan	1x Fan connectors (5V PWM)
			RTC	1x RTC socket (CRI220 included) 1x RTC 2-pin
Video Decode	1x 8K30 3x 4K60 6x 4K30 12x 1080p60 24x 1080p30 (H.265); 1x 8K30 (H.265) 2x 4K60 (H.265) 4x 4K30 (H.265) 9x 1080p60 (H.265) 18x 1080p30 (H.265)		TPM	1x TPM 2.0 connector (Module not included)
			PCIE	1x PCIE
			Power	DC 12V-36V Terminal block 2 pin
		Mechanical	176mm(W) x 163mm(D), 225g (Module not included)	

Supporting Jetson Module

Jetson AGX Orin 32GB

200TOPS

Jetson AGX Orin 64GB

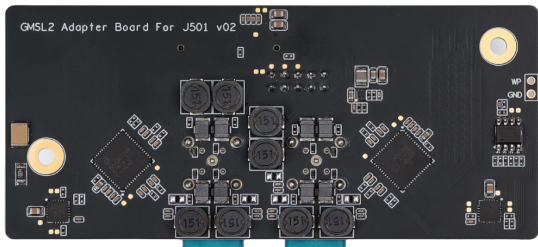
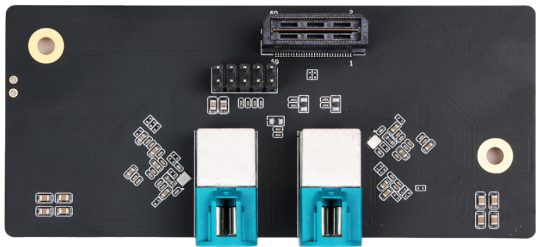
275TOPS

J501 Part List

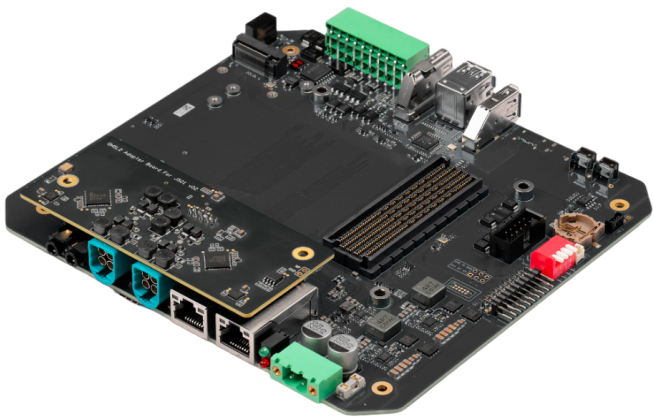
- reServer Industrial J501 Carrier Board for Jetson AGX Orin x1
- Power Adapter AC Power Brick 120W (Power cable not included) x1
- Terminal Connector 20pin x1
- 2-Pin Terminal Block Power Connector x1

reServer Industrial J501 GMSL Extension Board

To utilize the GMSL camera ports functionalities, we recommend you order this GMSL extension board along with reServer Industrial J501 carrier board. This standard option allows you to connect up to 8 lanes GMSL camera inputs and supports either GMSL1 or GMSL2 protocols, offering flexibility for users based on different data transmission bandwidth requirements . Additionally, you can also customize your own board based on our design open file.



Connection with J501 Carrier Board and GMSL Expansion Board



Specifications

Deserializer	MAX96724RGTV
MIPI Output	4-lane MIPI output from each Deserializer (8 lanes total)
Mechanical	103mm x 45mm
Operating Temperature	-20~60℃
Weight	47g

Ready to Get Started?

As an NVIDIA NPN Elite partner, Seeed offers one-stop experience to simplify edge AI deployment including custom image flashing service, fleet management, and hardware customization.

- Check out our [Latest NVIDIA Jetson Catalog](#)
- Explore more about Seeed's NVIDIA Jetson ecosystem at seeedstudio.com/tag/nvidia.html
- Take the first step to send us an email at edgeai@seeed.cc to become a part of the amazing ecosystem!