

INDUSTRIAL PRODUCT DATASHEET

reComputer Mini J5012 with GMSL - Ultra-Compact Edge AI Computer with NVIDIA Jetson AGX Orin 64GB

Ultra-compact Jetson AGX Orin 64GB edge AI computer with 8x GMSL2 cameras for advanced robotics and vision AI.

SKU	UPDATED	PRICE
100085113	2026-07-27 09:29:44	\$4699.00(Excl. VAT)



Overview



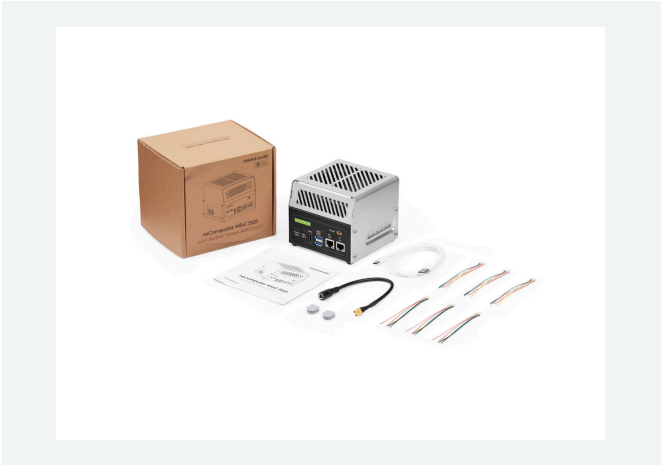
The reComputer Mini J5012 with GMSL is an ultra-compact edge AI computer powered by the NVIDIA Jetson AGX Orin 64GB, delivering up to 275 TOPS for embodied AI and robotics prototyping. Its 119x119mm footprint, wide 48V input, rich I/O including 10G Ethernet and CAN, and 8x GMSL2 cameras enable multi-sensor fusion, generative AI at the edge, and vision AI applications like BEV and SLAM.

Key Features

- **Powerful Embodied AI Platform** Paired with the Jetson AGX Orin 64GB, offering up to 275 TOPS. Perfect platform for embodied AI and ultra-compact edge application development.
- **Ultra-Compact Size** 119mm x 119mm footprint, suitable for robot prototyping and development, especially robots that has tight footprint such as humanoids.
- **Wide Voltage Input Range** Can be used in 4-8V power system (max 54V input).
- **Rich IO Capabilities** Includes most common IOs used in robotics prototyping, such as USB, 10G Ethernet, 1G Ethernet, CAN, RS-485, GPI, GPO and I2S.
- **Vision AI Support** Features 8x GMSL2 cameras, making it ideal for vision AI applications such as BEV, Occupancy Grid, SLAM etc.

Product Gallery



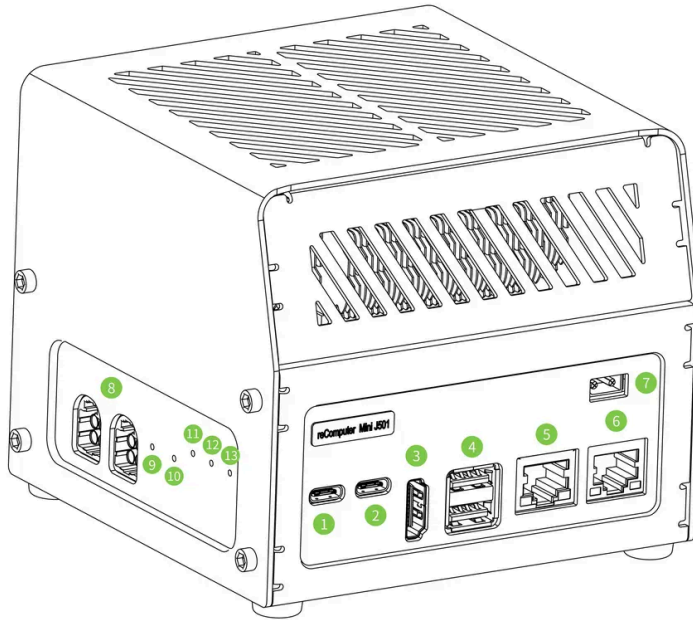


Specification

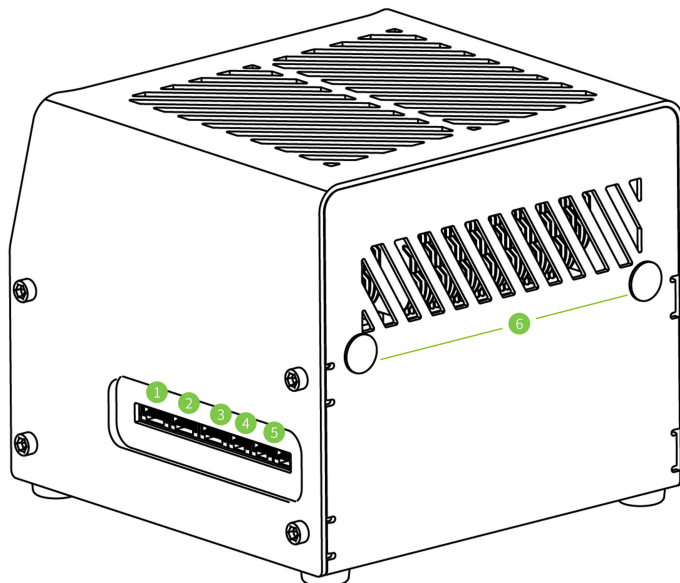
Product	reComputer Mini J5011 with GMSL		reComputer Mini J5012 with GMSL
Module	Jetson AGX Orin 32GB		Jetson AGX Orin 64GB
AI Performance	200 TOPS		275 TOPS
NVIDIA GPU Cores	1792 CUDA Cores with 56 Tensor Cores		2048 CUDA Cores with 64 Tensor Cores
GPU Max Frequency	930 MHz		1.3 GHz
CPU	8x A78 2.2 GHz		12x A78 2.2 GHz
Memory	32GB 256-bit LPDDR5 204.8GB/s		64GB 256-bit LPDDR5 204.8GB/s
Storage	64GB eMMC5.1		
Video Encoder	1x 4K60 (H.265) 3x 4K30 (H.265) 6x 1080p60 (H.265) 12x 1080p30 (H.265)		2x 4K60 (H.265) 4x 4K30 (H.265) 8x 1080p60 (H.265) 16x 1080p30 (H.265)
Video Decoder	1x 8K30 (H.265) 2x 4K60 (H.265) 4x 4K30 (H.265) 9x 1080p60 (H.265) 18x 1080p30 (H.265)		1x 8K30 (H.265) 3x 4K60 (H.265) 7x 4K30 (H.265) 11x 1080p60 (H.265) 22x 1080p30 (H.265)
Module Power	15W 40W		15W 60W
JetPack	JetPack 6.2 (supprots JP7.2)		
Carrier Board			
Storage	1x M.2 KEY M for NVMe SSD (128G SSD included)		
Networking	M.2 KEY E		1x M.2 Key E for WiFi/BT module
	Ethernet		1x RJ45 Gigabit Ethernet 1x RJ45 10 Gigabit Ethernet

I/O	USB	2x USB 3.2 Type-A (5Gbps) 1x USB 2.0 Type-C (Debug) 1x USB 3.0 Type-C (Recovery)
	Camera	8x GMSL2 (Optional)
	CAN	2x CAN (Isolated)
	RS-485	1x RS-485 (Isolated)
	IO	4x GPI (3.3V) 4x GPO (3.3V)
	I2S	1x I2S (3.3V)
	Display	1x HDMI 2.1
	Fan	1x 4-Pin Fan Connector (12V PWM)
	RTC	1x RTC 2-pin
	LED	3x LED (PWR/ACT/USR)
	Button	1x Reset 1x Recovery
Power	1x XT30 Connector (19-48V DC, Max 54V Input)	
Mechanical	Dimensions (W x D x H)	119mm x 119mm x 100mm
	Weight	1325g
	Installation	Desk
Operating Temperature	-10°C~60°C	
Warranty	2 Years	
Certification	RoHS, CE, FCC, KC Vibration Test(GB/T 2423)	

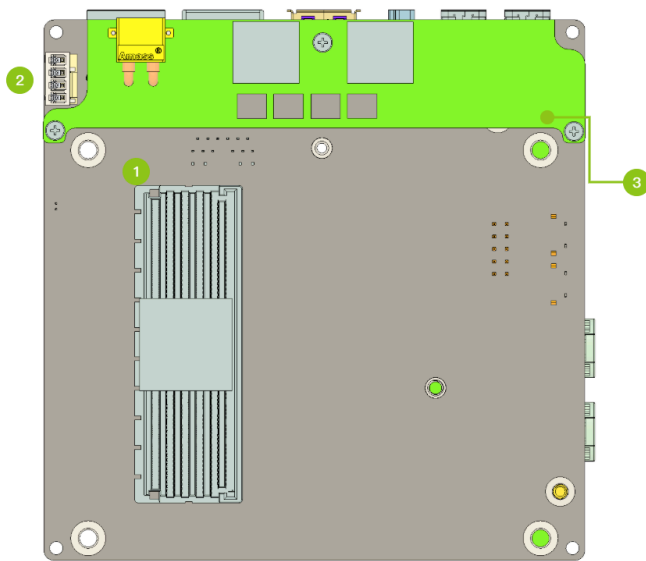
Hardware Overview



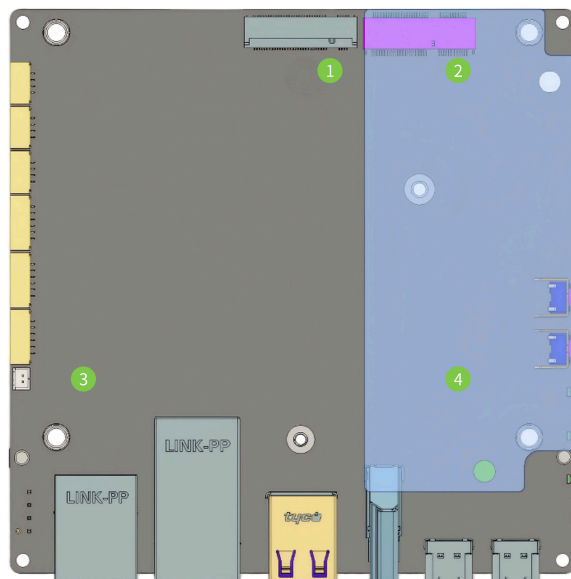
- 1 USB 3.0 Type-C
- 2 USB 2.0 Type-C
- 3 HDMI 2.1
- 4 USB 3.2 Type-A x2
- 5 10 Gb Ethernet
- 6 1 Gb Ethernet
- 7 Power In (XT30 19~48V)
- 8 GMSL2 x8
- 9 Recovery Button (Pinhole)
- 10 Reset Button (Pinhole)
- 11 USR LED
- 12 ACT LED
- 13 PWR LED



- 1 GPI x4
- 2 GPO x4
- 3 I2S
- 4 RS-485
- 5 CAN x2
- 6 ANT x2



- 1 B2B Connector for AGX Orin SOM
- 2 4-Pin Fan Connector (12V PWM)
- 3 Power Board



- 1 M.2 Key M Slot
- 2 M.2 Key E Slot
- 3 RTC 2-pin
- 4 GMSL Extension Board (Optional)

Applications

- **Humanoid Robotics**
- **AI Robot Development:** Powered by the Jetson AGX Orin™ module, this ultra-powerful embedded system accelerates advanced robotics and edge AI development for manufacturing, logistics, and healthcare. Leveraging the NVIDIA Isaac™ platform, it delivers accelerated libraries and generative AI models to elevate robot perception, manipulation, and simulation to the next level.
- **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.
- **Capable of Bringing Generative AI to the Edge**
- **Deploy Depth Anything v3:** reComputer Mini J501 enables real-time execution of the Depth Anything V3. By processing frames captured from a GMSL 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:** reComputer Mini J501 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

Part List

Seeed reComputer Mini J5012	x1
Jetson AGX Orin 64GB Module	x1
GMSL Extension Board (GMSL x8)	x1
128GB NVME SSD	x1
XT30 to DC Power Cable	x1
USB Type-C to Type-A Cable	x1
GH-1.25 4-pin 100mm JST Cable	x3
GH-1.25 6-pin 100mm JST Cable	x3
User Manual	x1

Compliance & Logistics

HSCODE	8471504090
USHSCODE	8517180050
UPC	
EUHSCODE	8471707000
COO	

Resource Links

- <https://www.seeedstudio.com/reComputer-Mini-J5012-with-GMSL-Extension-p-6878.html>
- [User Manual & Datasheet](#)
- [Carrier Board Schematic](#)
- [Power Board 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](#)

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com