

reComputer J4011/J4012 with NVIDIA® Jetson Orin™ NX Module

Classic design with long availability, up to 100 TOPS AI performance

reComputer J40 series are the hand-size edge AI boxes built with NVIDIA® Jetson Orin NX module which brings up to 100 TOPS AI performance to the edge, offering up to 5X the performance of Jetson Xavier NX and up to 3X the performance of Jetson AGX Xavier. It simplifies AI product development, and fits for deployment for edge AI solution providers working in video analytics, computer vision, natural language processing, and robotics across industries of smart cities, security, industrial automation, smart factories.

Hardware Feature

Combining the NVIDIA Ampere™ GPU architecture with 64-bit operating capability, the Jetson Orin NX integrates advanced multi-function video and image processing, and NVIDIA Deep Learning Accelerators. The full system includes NVIDIA Jetson Orin™ NX 8GB/16GB production module, a cooling fan with a heatsink, enclosure, and a power adapter, supporting desktop and wall mount carrying, fit in anywhere. It's ready to help you accelerate and scale the next-gen AI product. It has a rich set of IOs including 4x USB 3.2, HDMI 2.1, 2xCSI, 1xRJ45 for GbE, M.2 Key E, M.2 Key M, CAN, and GPIO.


Software Compatibility

The reComputer J40 series all have pre-installed Jetpack 5.1 SDK on the included 128GB NVMe SSD which provides a full development environment and includes CUDA-X accelerated libraries and other NVIDIA technologies to kickstart your development, including the Jetson Linux Driver package which provides the Linux kernel, bootloader, NVIDIA drivers, flashing utilities, sample filesystem, and toolchains for the Jetson platform. It also includes security features, over-the-air update capabilities, and much more. Within the NVIDIA AI software stack, there are many essential frameworks can be referred to use, such as NVIDIA DeepStream SDK for AI-based multi-sensor processing and video and image understanding, NVIDIA TAO Toolkit model training acceleration, and NVIDIA Riva Speech AI applications.

Support AI Platforms (continuing updating)

Intelligent Video Analytics    

Computer Vision    

Machine Listening 

Fleet management   

Cloud native deployment 



reComputer J4011 Orin NX 8GB

70 TOPS

reComputer J4012 Orin NX 16GB

100 TOPS

reComputer Content

- NVIDIA Jetson Orin NX 8GB/16GB production module x1
- reComputer J401 carrier board x1
- 128GB NVMe SSD x1
- Aluminum heatsink with fan x1
- Aluminum case x1
- Power adapter x1

Interfaces

- 4x USB3.2 Type A
- 1x USB2.0 Type-C
- 1x HDMI 2.1
- 2x CSI
- 1x RJ45 for GbE
- 1x M.2 Key E
- 1x M.2 Key M
- 1x CAN
- 1x 40-Pin Expansion header
- 1x 12-Pin Control and UART header

reComputer J40 series with NVIDIA Jetson Orin NX

| Specifications | reComputer J4011 | reComputer J4012 |
|----------------------|---|---|
| Module | Jetson Orin NX 8GB | Jetson Orin NX 16GB |
| AI Performance | 70 TOPS | 100 TOPS |
| GPU | 1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores | |
| GPU Max Frequency | 765 MHz | 918 MHz |
| CPU | 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3 | 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3 |
| CPU Max Frequency | 2 GHz | |
| Memory | 8GB 128-bit LPDDR5 102.4GB/s | 16GB 128-bit LPDDR5 102.4GB/s |
| DL Accelerator | 1x NVDLA v2 | 2x NVDLA v2 |
| DLA Max Frequency | 614 MHz | |
| Vision Accelerator | 1x PVA v2 | |
| Storage | 128GB NVMe SSD | |
| Video Encoder | 1x 4K60 (H.265) 3x 4K30 (H.265) 6x 1080p60 (H.265) 12x 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) | |
| Display | 1* HDMI 2.1 | |
| CSI Camera | 2* CSI (2-lane 15pin) | |
| Networking | 1* Gigabit Ethernet (10/100/1000M) | |
| USB | 4* USB 3.2 Type-A (10Gbps); 1* USB2.0 Type-C (Device Mode) | |
| M.2 KEY M | 1* M.2 Key M | |
| M.2 KEY E | 1* M.2 Key E | |
| Fan | 1* 4 pin Fan (5V PWM) | |
| CAN | 1* CAN | |
| Multifunctional Port | 1* 40-Pin Expansion header, 1* 12-Pin Control and UART header | |
| RTC | RTC 2-pin, RTC socket (supports CR1220 but not included) | |
| Power | 9-19V | |
| Power Supply | DC 12V/5A(Barrel Jack 5.5/2.5mm) | |
| Temperature | -10°C~60°C | |
| Mechanical | 130mm x120mm x 58.5mm | |

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!