

SEEED-102110603

**reServer i31125- Compact Edge Server powered by 11th Gen Intel® Core™ i3
1125G4**



PRODUCT DETAILS

Features

- Compact design for a server with an overall dimension of 132mm*124mm*233mm

- Powered by the latest 11th Gen Intel® Core™ i3 CPU running up to 3.70GHz and Intel UHD Graphics 48EUs running up to 1.25 GHz
- Rich peripherals including dual® 2.5-Gigabit Ethernet ports, USB 3.2 Type-A port, USB 2.0 Type-A port, HDMI port and DP port
- Support hybrid connectivity including 5G, LoRa, BLE and WiFi (5G and LoRa need additional modules)
- Dual SATA III 6.0 Gbps data connectors for 3.5"/2.5" SATA hard disk drives with enough space inside the enclosure to store them both
- M.2 B-Key/ M-Key/ E-Key for expandability such as SSD, LTE/4G/5G, WiFi 6 Modules
- Quiet cooling fan with a large VC heat sink for excellent heat dissipation
- Easy to install, upgrade and maintain with ease of access to the internal components after opening the enclosure
- Pre-installed Windows 10 Enterprise(Unactivated), also support other Windows OS and Linux OS

Description

reServer, as a milestone product of reThings family, is extremely compact and powerful. This smart tiny server is able to work easily and efficiently from the edge to the cloud.



**Compact and
Powerful**

reServer is based on an ODYSSEY X86 v2 board and powered by the latest 11th Gen Intel® Core™ i3 CPU running up to 3.70GHz and Intel UHD Graphics 48EUs running up to 1.25 GHz, which delivers high CPU and AI performance for various applications.



The Power to Do Things Better



reServer comes with two high-speed 2.5-Gigabit Ethernet ports and supports hybrid connectivity including 5G, LoRa, BLE and WiFi. It enables up to 250% faster performance than Gigabit Ethernet with compatible hardware and provides the transition speed up to 5Gbps using link aggregation.



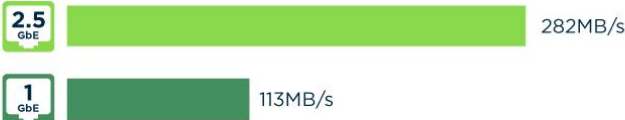
Hybrid Connectivity

- 5G
- LoRaWAN
- BLE



250% Faster with 2.5-Gigabit Ethernet

2.5GbE Compare to 1GbE



With an overall dimension of 132mm*124mm*233mm, reServer is only around 1/10 of the size of an ordinary computer case which makes it possible to place reServer on a table, on a self, on any surface you want it to be. The neat structure of reServer also makes it simple to access the hard drives, memory and PCIe slots which allows for easy installation, upgrade and maintenance.



reServer is equipped with a quiet cooling fan as well as a large VC heatsink to ensure silent and stable operations under heavy load, while providing excellent heat dissipation.



Having dual SATA III 6.0Gbps data connectors, reServer is able to equip up to two 3.5" SATA internal hard disk drives or two 2.5" SATA internal hard disk drives to acquire more storage.

It also has M.2 adapters to connect to various SSDs for faster read and write speeds.

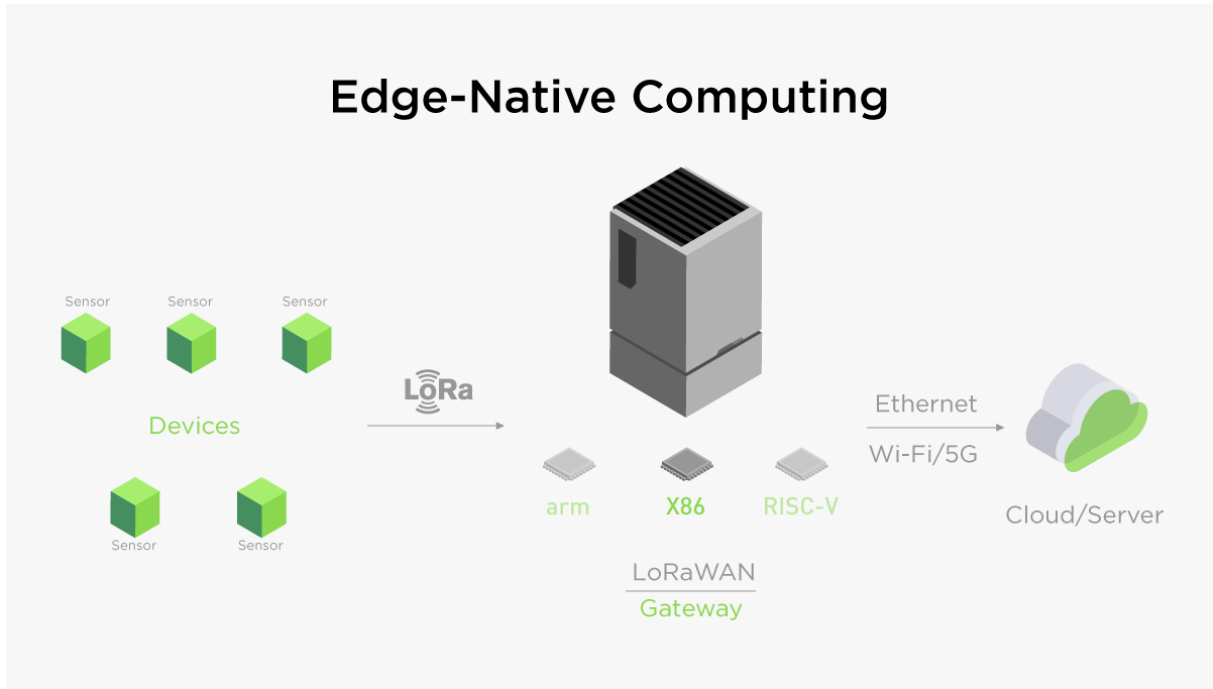
* SATA Internal Hard Disk Drives are not included. SSD is not included in some versions.



reServer supports LoRa technology which makes it possible to connect to a wide range of sensors. It can be applied as an edge computing center for all scenarios that require vast data to collect and process at the edge. The expandability of 5G technology is useful in places where there isn't always reliable internet connectivity, such as on a farm or in a location with spotty service.

*To get LoRa and 5G connectivity, optional modules are needed.

Edge-Native Computing



Specifications

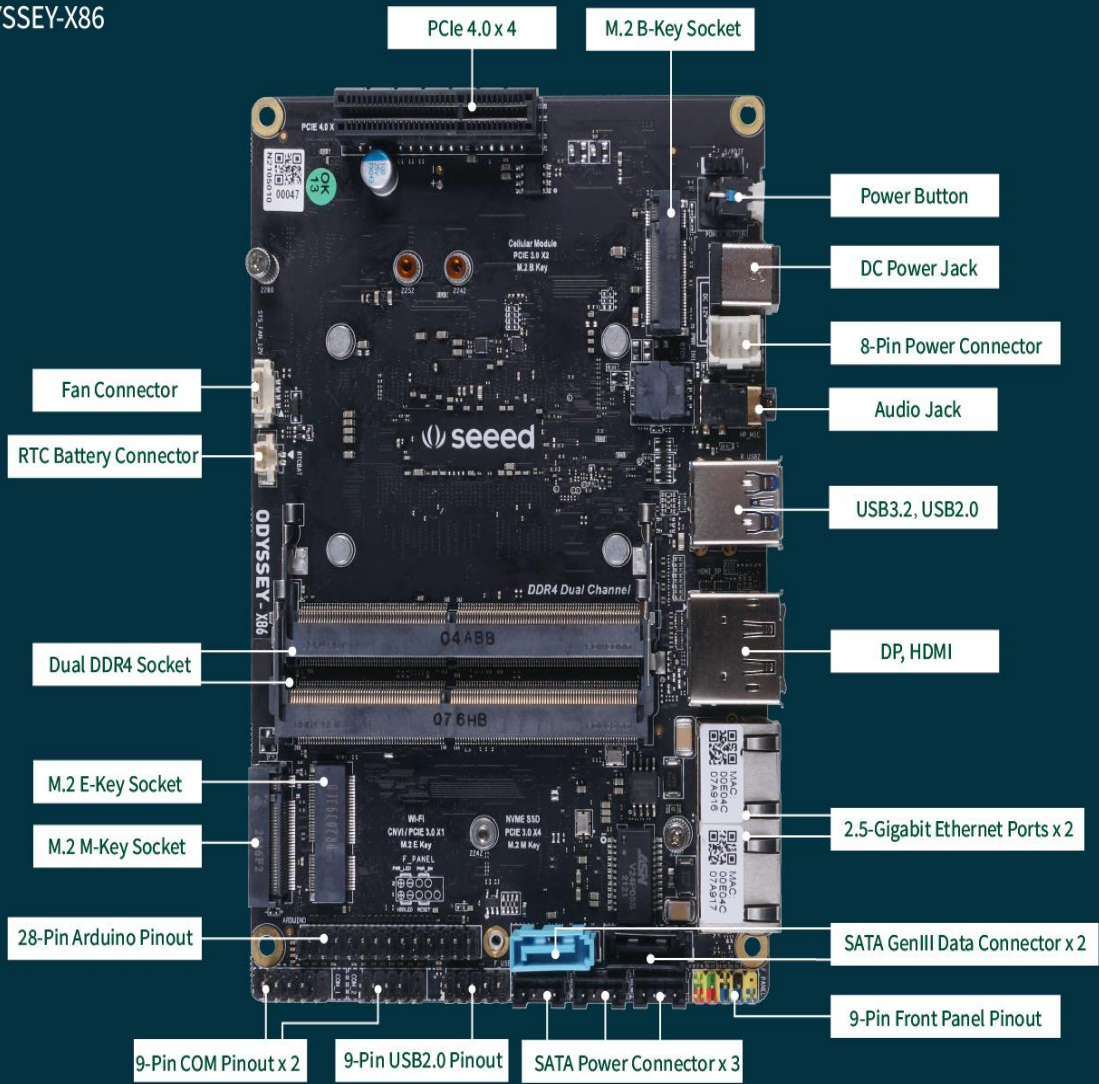
| Versions | | Basic Versions | | | High Performance Versions | |
|-----------------------|--------------------------------|--|---|---|--|---|
| Platform | Processor | Intel® Core™ 11th Gen. i3 1115G4 | Intel® Core™ 11th Gen. i3 1125G4 | Intel® Core™ 11th Gen. i5 1135G7 | Intel® Core™ vPro® 11th Gen. i5 1145GRE | Intel® Core™ vPro® 11th Gen. i7 1185GRE |
| | Cores/Threads | 2C/4T | 4C/8T | 4C/8T | 4C/8T | 4C/8T |
| | Frequency | Up to 4.10 GHz | Up to 3.70 GHz | Up to 4.20 GHz | 1.50 GHz ~ 4.10 GHz | 1.80 GHz ~ 4.40 GHz |
| | Co-processor | Microchip® ATSAM D21 G18 32-Bit ARM® Cortex-M0+ @ 48MHz | | | Raspberry Pi® RP2040 32-Bit Dual ARM Cortex-M0+ @ 133MHz | |
| Memory | Technology | Dual Channels DDR4-3200 | | | | |
| | Capacity | Support up to 64GB | | | | |
| | ECC Memory Supported | NO | | | YES | |
| Graphics | Controller | Intel® UHD Graphics 48EUs (400 - 1250MHz) | Intel® UHD Graphics 48EUs (400 - 1250MHz) | Intel® Iris Xe Graphics G7 80EUs(400-1300MHz) | Intel® Iris Xe Graphics G7 80EUs(400-1300MHz) | Intel® Iris Xe Graphics G7 96EUs(400-1300MHz) |
| Advanced Technologies | Intel® vPro® | NO | | | YES | |
| | Intel® Total Memory Encryption | NO | | | YES | |
| Network | Controller | Intel® Ethernet Controller I225-V | | | Intel® Ethernet Controller I225-LM | |
| | WiFi | M.2 E-Key(PCIE & CNVi Support), Intel® Wi-Fi 6 AX201(Optional) | | | | |

| | | | |
|--------------|---------------------|--|--|
| Wireless | WiFi | M.2 E-Key(PCIE & CNVi Support), Intel® Wi-Fi 6 AX201(Optional) | |
| | Bluetooth | Bluetooth 5.0, BLE(Optional) | |
| Display | LCD | eDP 40-Pin 4 Lane Connector | |
| | HDMI | 1 x HDMI 2.0b, up to 4Kx2Kx24bpp@60Hz | |
| | DP | 1 x DP1.4a 7680x4320x24bpp@60Hz | |
| | Multiple Display | 4 simultaneous displays with each display interface combination | |
| External I/O | Ethernet | 2 x 2.5GbE LAN ports (RJ45, supports 10/100/1000/2500 Mbps), Intel® i225 | |
| | HDMI/DP | One/One | |
| | USB Type-C | N/A | USB PD / USB 4.0 / Thunderbolt 4 |
| | USB Type-A | USB2.0 Type A x1 ; USB3.2 Type A x1 | USB2.0 Type A x2 ; USB3.2 Type A x1 |
| | LED | Power Status | |
| | Power Supply | 1x5.5x2.5mm DC Jack / Wafer 2.0mm 8pin | |
| | Micro Sim Card Slot | 1 | |
| Internal I/O | SATA | 2 x SATA Gen III 6.0 Gb/s Data Connectors + 3 x SATA Power Connectors | |
| | COM Port | 1 x RS-232/422/485, 1 x RS-232 | |
| | GPIO | 28-Pin Arduino Co-processor 2.54mm header | 30-Pin Raspberry Pi Co-processor 2.54mm header |
| | Audio | Realtek High Definition Audio, Microphone + headphone Combo Connector | |
| | USB2.0 | USB2.0 9-pin Header x2 480Mbps | |
| | Fan | 2 x 12V 4-wire Fan header, PWM Control | |

| | | | |
|---------------|---------------------|--|---|
| | Front Panel Control | Power-on, Reset, Power Status LED, SATA Status LED | |
| | S/PDIF | 3-Pin 2.54mm Header | |
| | SATA Power | WAFER4-Pin 2.0 pitch Connector | |
| | Co-CPU. Debug Port | 6-Pin 0.5mm FPC Connector (SWD) | |
| Expansion | M.2 M-Key | 1 x M-Key 2242/2280(PCIe 3.0 x4) | |
| | M.2 E-Key | 1 x E-Key 2230(PCIe 3.0 x1; USB2.0 x1;Intel CNVi) | |
| | M.2 B-Key | 1 x B-Key2242/2252/2280(PCIe 3.0 x2; USB2.0 x1) | |
| | High Speed I/O | 1 X PCIe x4 Gen4 | 1 X PCIe 3.0 x4/SMBus/LPC/USB 2.0/CPU GPIO etc. |
| Power | Supply Voltage | DC Jack: 12V | DC Jack: 12V-19V |
| | RTC Battery | Lithium 3V/210mAH | |
| Feature | TPM | Support | |
| | Secure Boot | Support | |
| Certification | EMC | CE,FCC,TELEC | |
| Mechanical | Dimension | 124mm*132mm*233mm | |
| | Thermal Solution | Heat Pipe Assemblies/Heat Spreading Vapor Chamber Assemblies | |
| | Weight | 1800g | |

Hardware Overview





Dimensions



Part List

- 1 x reServer
- 1 x User Manual
- 1 x Screwdriver
- 1 x Fan Cable
- 2 x 2.4/5GHz Wi-Fi Antenna
- 1 x 60W AC-DC Power Adapter