

SEEED-B102110604

**reServer i51135- Compact Edge Server powered by 11th Gen Intel® Core™ i5
1135G7**



PRODUCT DETAILS

Features

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

- Powered by the latest 11th Gen Intel® Core™ i5 CPU running up to 4.20GHz and Intel® Iris Xe Graphics G7 80EUs
- 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™ i5 CPU running up to 4.20GHz and Intel® Iris Xe Graphics G7 80EUs 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.



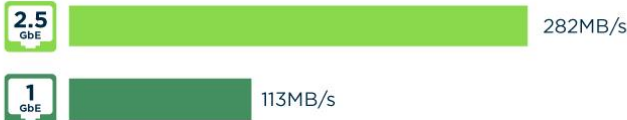
Hybrid Connectivity

- 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 shelf, 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.

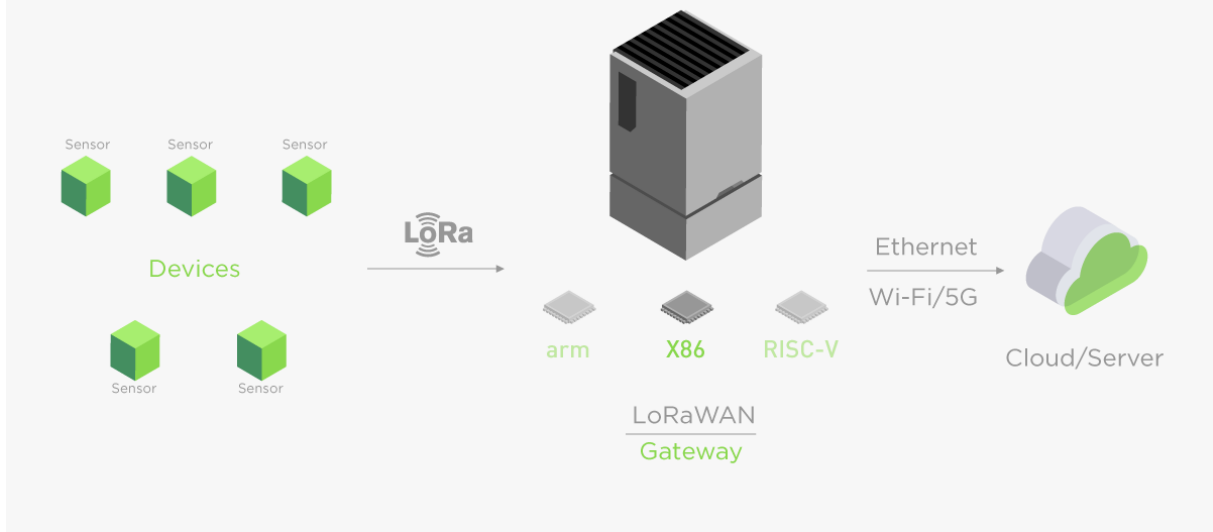
* SATA Internal Hard Disk Drives are not included. SSD is not included in some versions.



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

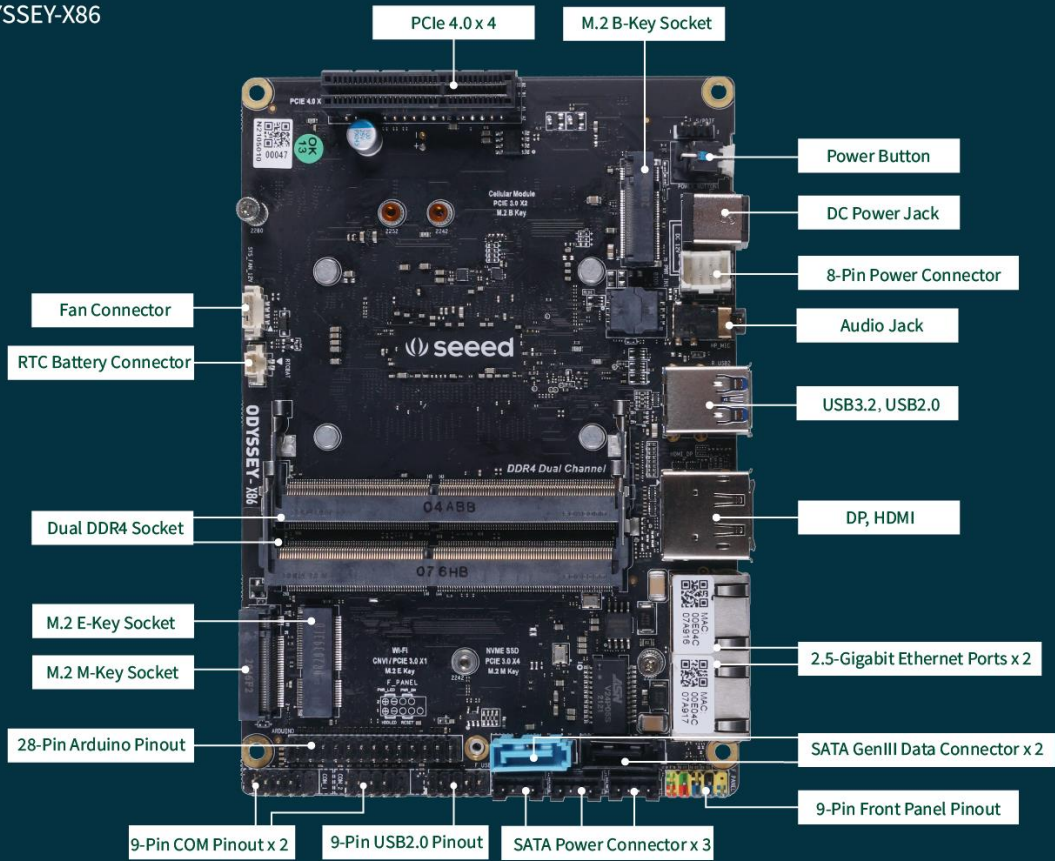
Versions		Basic Versions			High Performance Versions	
Platform	Processor	Intel® Core™ 11th Gen. i3 1115G4	Intel® Core™ 11th Gen. i3 1125G4	Intel® Core™ 11th Gen. i5 1135G7	Intel® Core™ vPro® 11th Gen. i5 1145GRE	Intel® Core™ vPro® 11th Gen. i7 1185GRE
	Cores/Threads	2C/4T	4C/8T	4C/8T	4C/8T	4C/8T
	Frequency	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