

reServer User Manual

Getting Started with reServer



reServer is based on an ODYSSEY X86 v2 board and powered by the latest Intel® Core™ 11th Gen. processor and Intel® UHD Graphics or Intel® Iris Xe Graphics, which delivers high CPU and AI performance for various applications. It has two high-speed 2.5-Gigabit Ethernet ports and supports hybrid connectivity including BLE and WIFI. Meanwhile, reServer is of compact design to work efficiently in almost any scenario. The neat structure of reServer also makes it simple to access to the hard drives, memory and PCIe slots which allows easy installation, upgrades and maintenance.

Having dual SATA III 6.0Gbps data connectors, reServer is able to equip up to two 3.5"/2.5" SATA internal hard disk drives to acquire more storage. It also has M.2 connectors to connect to various SSDs for faster read and write speeds.

Features

- Powered by the latest 11th Gen Intel® Core™ CPU and Intel® UHD Graphics or Intel® Iris Xe Graphics.

- 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 BLE and WIFI
- 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
- Pre-installed Windows 10 Enterprise (Unactuated), also support another Windows OS and Linux OS

Specification

Versions		Detail		
Platform	Processor	Intel® Core™ i10m Gen. i3 1115G4	Intel® Core™ i10m Gen. i5 1125G4	Intel® Core™ i10m Gen. i5 1135G7
	Co-processor	Microsoft® ATSAM021618 32-Bit ARM® Cortex-M0+ @ 48MHz		
Memory	Technology	Dual Channel DDR4-3200		
	Capacity	8GB, 16GB (Support up to 64GB)		
	ECC Memory Supported	NO		
Graphics	Controller	Intel® UHD Graphics 480Us (400 - 1250MHz)	Intel® UHD Graphics 480Us (400 - 1250MHz)	Intel® Iris Xe Graphics G7 80EUs(400-1300MHz)
	Intel® vPro®	NO		
Advanced Technologies	Intel® Intel Memory Encryption	NO		
	Controller	Intel® Ethernet Controller I225-V		
Wireless	WiFi	Wi-Fi 6E (PCIe & CNVi Support), Intel® Wi-Fi 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		

External I/O	USB Type-C	N/A		
	USB Type-A	USB3.0 Type A x3 , USB2.0 Type A x1		
	LED	Power Status		
	Power Supply	1x5.5x2.5mm DC Jack / Water 2.0mm Splice		
Internal I/O	Micro SD Card Slot	1		
	SATA	2 x SATA Gen III 6.0 Gb/s Data Connectors + 2 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		
	Audio	Speaker, High Definition Audio, Microphone + Headphone Combo Connector		
	USB 3.0	USB 3.0 9-pin Header x1 480Mbps		
	Fan	2 x 12V 4-wire Fan Header, PWM Control		
	Front Panel Control	Power-on, Reset, Power Status LED, SATA Status LED		
	SWDP	9-Pin 2.54mm Header		
	SATA Power	WATER4 Pin 2.0 pitch Connector		
Expansion	Co-Processor Debug Port	6-Pin 3.5mm JTAG Connector (SWD)		
	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-Key 2242/2251/2280/PCIe 3.0 x2, USB2.0 x1		
	High-Speed I/O	1 x PCIe x4 Gen4		
Power	Supply Voltage	DC Jack: 12V		
	BTC Battery	Lithium 36/210mAh		
Certification	EMC	CE, FCC, KCTELEC		
Mechanical	Dimensions	132mm*124mm*23.5mm		
	Thermal Solution	Heat Pipe Assemblies/Heat Spreading Vapor Chamber Assemblies		
	Weight	1800g		

Comparison

Appearance:			
Processor	Intel® Core™ 11th Gen. i3 1115G4	Intel® Core™ 11th Gen. i5 1125G4	Intel® Core™ 11th Gen. i5 1155G7
Cores/Threads	2C/4T	4C/8T	4C/8T
Frequency	Up to 4.10 GHz	Up to 5.70 GHz	Up to 4.20 GHz
Co-processor	Microchip® ATSAMR21G18 32-Bit ARM® Cortex-M0+ @ 48MHz		
Intel® vPro®	NO		
Intel® Total Memory Encryption	NO		
Graphics	Intel® UHD Graphics 485Us (400 - 1250MHz)	Intel® UHD Graphics 485Us (400 - 1250MHz)	Intel® Iris Xe Graphics G7 80EU (400-1300MHz)
Memory	Dual Channel DDR4-3200(Support up to 64GB in total)		
ECC Memory Supported	NO		
Network Controller	Intel® Ethernet Controller (225-V)		
Expansion	M.2 M-Key, M.2 B-Key, M.2 E-Key, 1 x PCIe x4 Gen4		
External I/O	USB Type-A(USB2.0 Type-A x1 ; USB3.2 Type-A x1); HDMI; DP; 2.5GbE LAN ports x2; Audio Jack; DC Jack(12V)		
Wireless Connectivity	Support WiFi, BLE		

Quick Start with reServer

If you want to get started with reServer in the fastest and easiest way, you can follow the guide below.

Hardware Required

You need to prepare the following hardware before getting started with reServer.

- reServer
- Power Adapter(provided)
- External monitor
- HDMI/DP cable
- Keyboard and Mouse

Hardware Installation

For this part, we will introduce how to install or replace some hardware inside reServer. If there are no needs for you, please skip it. You might follow the Assembly Guide Manual attached at the end of this page to access to the main board of

reServer before reading this part.

DDR4 Installation

DDR4-3200MT/s has been pre-installed for all versions of reServer but you can also add a new DDR4 to the other channel or replace the pre-installed one with your own to expand memory. The dual-channel SO-DIMM slots support DDR4-3200MT/s up to 64GB in total.



SSD Installation

A NV Me SSD has been pre-installed for all versions of reServer, while, still, the M.2 M-Key 2242/2280(PCIe 3.0 x4) allows you to replace it with the SSD you desire.



WIFI Module Installation

All versions of reServer have installed 2230 Dual Band WIFI AX201 Module at M.2 E-Key 2242/2280(PCIe 3.0x4). If you want to replace the pre-installed WIFI Module, feel free to follow the steps below.

Step 1. Remove the SSD from M.2 M-Key slot.

Step 2. Take off the WIFI antenna cable and remove the pre-installed WIFI Module from M.2 E-Key.



Step 3. Install the new WIFI Module and connect the WIFI antenna cable back to it.

Step 4. Install the SSD back to M.2 M-Key.



Note: reServer is shipped with two 2.4GHz WiFi Antennas, you can attach the antenna to the adapter which connects with the antenna cable of the WiFi module inside the reServer to achieve better WiFi connectivity.



HDD Installation

reServer supports installing two 3.5"/2.5" internal hard disk drives to acquire more

storage. (The HDDs are not included in reServer) Please follow the steps to install the HDDs.

Step 1. Remove the screws and pull out the brackets

Step 2. Attach the HDDs to the brackets with screws

Step 3. Push the HDD brackets down to connect the HDDs with the SATA ports.

Step 4. Fix the HDD brackets with screws



Hardware Connection

For this part, we will introduce the interface connection of reServer. There are two versions of reServer. Please note that different versions might have different interfaces.

Display Connection

There are three methods for reServer to connect to a display while the third method is only for High-performing versions.

Method 1. HDMI Port,

Method 2. DP Port

Keyboard and Mouse Connection

Connect keyboard and mouse through USB ports. There are one USB 3.2 port and one USB 2.0 port for Basic versions while there are one USB 3.2 port and two USB 2.0 ports for High-performing versions. Basic version

Audio Connection

For Basic versions, the Audio Jack is on the left side I/O panel, while, for High-performing versions, it's on the right side I/O panel for High-performing versions

Power Connection

There are two methods to power up reServer, and the second one is only for High-performing versions.

Method 1. Simply connect AC-DC power adapter (included in the product box) with AC power cord (Out of the product box but still in the package), then connect it to 12V DC Jack of reServer.

Method 2. Connect USB Type-C charging cable (Not included in reServer) to the Thunderbolt 4 USB Type-C port (This port is only available with High-performing versions)

Operation System Installation

For all versions of reServer, Windows 10 Enterprise (Unactuated) has been pre-installed, you can simply boot it up and activate the OS. However, reServer still supports another Windows OS and, also, Linux OS, so you can cover the pre-installed OS with the one you want.

Note: 5G Band(W52): indoor use only

Warning

The user's manual or instruction manual shall include the following statement in a prominent location in the text of the manual:

This device needs to be used at a distance greater than 20cm.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
- Consult the dealer or an experienced radio/TV technician for help.

And the following additional information shall be contained in the user or instruction manual:

- 1) The Responsible party information: Name, Address, Telephone Number
- 2) The name and model number of the product

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.