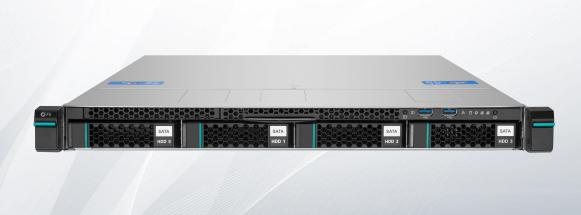**FS**

RS3110 RACK SERVER

HIGH CONFIGURATION AND WIDE RANGE OF APPLICATIONGS

The server can be easily reconfigured for multiple Enterprise and Data Center applications in Virtualization, Big Data, Analytics and Cloud Computing.

Overview

RS3110 is a single-socket high-performance departmental server, using Intel C246 chipset, supporting 1 LGA-1151 (Socket H4), Intel I3/I5/I7/I9 8/9th generation processors, Intel Xeon-E-2100 /2200 series processors, this model supports a maximum memory capacity of 128GB, standard supports 4x 3.5-inch/2.5-inch SATA hot-swap hard disks, and can flexibly expand 3 PCI-E devices. It is suitable for small and medium-sized network applications of small and medium-sized enterprises and users in education, government, military, postal, railway, finance and other industries. The server can act as an e-mail server, WEB server, gateway, small and medium database application server, print server, etc. in the network.

Benefits

• Intel I3/I5/I7/I9 8/9th generation processors,

  Intel Xeon-E-2100/2200 series Processors

• Intel® C246 Series chipset

• Up to 128GB of memory capacity

• Up to 4x 3.5-inch/2.5-inch SATA hot-swap hard disks

• Easily Expand with 1 PCIe 3.0 Slots

• 2 network ports, 1 RJ45 remote management port

Main Highlights

Intel I3/I5/I7/I9 8/9th Generation Processors, Intel Xeon-E-2100/2200 Processors

- Support hyper-threading technology, up to 16 threads when 8 cores.
- Support virtualized device input/output.
- (VT-d)----Increase the virtualization of device input/output on the basis of the previous virtualized CPU, which can effectively improve the performance and efficiency of the virtual machine.
- Kernel acceleration mode 2 (Turbo Mode).
- The kernel runs dynamically accelerated. The operation of the kernel can be turned on, off and accelerated as needed;
- Support Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2 instruction set.
- Cache design----Three-level all-inclusive Cache design, L1 design is the same as Core micro-architecture; L2 adopts ultra-low latency design, each core 256KB; L3 adopts shared design, all cores on the chip shared.
- Integrated Memory Controller (IMC)----Moved from the chipset to the CPU chip, it supports multi-channel DDR4 memory. Compared with the previous generation, the memory read delay is greatly reduced, and the memory bandwidth is greatly improved. up to three times.

Fast Channel—DMI Bus

- DMI is a point-to-point connection technology that replaces the front-side bus (FSB); DMI adopts the serial mode as signal transmission, and adopts LVDS (low-voltage differential signaling technology, which is mainly used for high-speed digital signal interconnection, so that the signal can be transmitted in hundreds of Mbps or more) signaling technology; reliability, practicality and applicability guarantee the high availability of DMI; the bandwidth of 20-bit wide DMI can reach an astonishing 25.6GB per second per connection, which is far from comparable to FSB. Supports Intel Quick Assistant Technology (Intel® QAT) and Intel Advanced Vector Extensions 512 (Intel® AVX-512).

Virtualization Technology (VT)

- Support virtualized device input/output (VT-d)--Increase the virtualization of device input/output on the basis of the previous virtualized CPU, which can effectively improve the performance and efficiency of virtual machines. It provides a strong guarantee for server integration, original data migration and security.

Configure on Demand

- According to the actual needs of users, provide the best configuration options.

High Availability

- With the processor Hyper Threading technology, it supports multi-threading and multi-tasking mode. The processor integrates a DDR4 memory controller, providing a highly selectable memory solution. Provide IRST function to meet the system's requirements for hard disk security, and consider user cost requirements. Integrated Intel server-class dual 1000M network adapters, support link aggregation and binding redundancy functions, suitable for a variety of application requirements.

High System Scalability

- Support quad-core/six-core/eight-core Intel I3/I5/I7/I9 8/9th generation processors, Intel Xeon-E-2100/2200 series processors, 4 DIMM memory slots can support up to 128GB Unbuffered DDR4 ECC 2666MHz Memory, the standard system supports up to 4 SATA hard disk expansion positions (4 hot-swappable), providing a PCI-E interface to provide users with expansion space.

Safety

- The motherboard provides TPM trusted module interface, users can choose according to their needs, and support Intel SGX (Software Guard Extensions) technology.

Manage

- Integrated BMC module, support IPMI2.0, provide 1 RJ45 management network port, support remote management, iKVM.

Cost-effective Solution

RS3110 adopts a server motherboard based on Intel® C246 chipset, supports 1 LGA1151 Intel I3/I5/I7/I9 8/9 generation processors, Intel Xeon-E-2100/2200 generation processors, the motherboard provides 4 memory slots. The maximum support is 128GB DDR4 2666MHz ECC UDIMM; the motherboard naively supports 4 SATA3 (6Gbps) hard disk interfaces. Integrated dual Gigabit Intel server network card is very suitable for small and medium-sized enterprises, hosting platform.

Advanced Chassis Design Process

It adopts short chassis design, which can be placed in network cabinets with a depth of 600mm and server cabinets with a standard depth; intelligent cooling system can effectively reduce noise pollution and create a constant temperature space for the cabinet; fully shielded anti-electromagnetic radiation, anti-interference, anti-static (EMI) design.

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Applicable to a Variety of Application Environments

RS3110 is a single-socket rack server with leading technology, suitable for small and medium-sized network applications of small and medium-sized enterprises and users in education, government, military, postal, railway, finance and other industries.

Technical Features: Host Performance

Features	Technical Specification
CPU	Intel I3/I5/I7/I9 8/9 generation processors, Intel Xeon-E-2100/2200 series CPU (LGA 1151)
Chipset	Intel® C246 Chipset Platform Controller Hub (PCH)
Intel®DMI speed	8 GT/s DMI3
RAM	DDR4 ECC/Unbuffered (UDIMM) 2666MHz RAM, up to 128GB
Memory Error Detection	Fix single-bit errors, detect double-bit errors
Hard Drives	Supports 4 hot-swap 3.5/2.5-inch hard drives
SATA RAID	Standard Configuration - No Raid card
Show	ASPEED AST2500 BMC
CD-ROM	One SATA interface thin optical drive
PCIE Expansion Slot	1 PCI-E 3.0 x8 (in x16)
M.2 Interface	1 PCI-E 3.0 x4 M.2 （2280/22110）
Network Card	Integrated Intel210-AT dual Gigabit high-speed Ethernet server card
Manage	Integrated BMC module, support IPMI2.0, provide a 10/100 Mbps RJ45 management network port, support iKVM, support remote management
Keyboard	USB Compatible with USB2.0
Mouse	USB Compatible with USB2.0
Power Supply	450W 1+1 redundant power supply

Extended Performance

Features	Technical Specification
Expansion slot	Supports one PCI-E device (full-height full-length PCI-E 3.0 x8 (in x16))
Internal device interface	1x USB-type A port, 2x 2x5 pin USB 2.0 sockets (supports 1 to 2), 1x 2x5 pin USB 3.0 sockets (supports 1 to 2), 4x SATA3.0 6Gbps interfaces and 1x Serial port, 1 TPM trusted module interface
External device interface	1 VGA display port, 6 USB ports (2xUSB 2.0 on the front panel, 2xUSB 2.0 and 2xUSB 3.0 on the rear panel), 2 network ports, 1 COM, 1 RJ45 remote management port

Strict System Certification

Features	Technical Specification
1	Windows Server 2012R2
2	Windows Server 2016 64bit
3	Red Hat* Enterprise Advanced Server 6.9 _x86 64bit
4	Red Hat* Enterprise Advanced Server 7.3_x86 64bit
5	Red Hat* Enterprise Advanced Server 7.4_x86 64bit
6	Red Hat* Enterprise Advanced Server 7.5_x86 64bit
7	Ubuntu 16.10
8	Ubuntu 17.04
9	Ubuntu 17.10

Environment and Specifications

Features	Technical Specification
Ambient Temperature	Operating: 10℃ to 35℃ (50°F - 5°F)
	Non-operating: –40℃ ~ 70℃ (-40°F ~ 158°F)

Features	Technical Specification
Relative Humidity	Non-operating 95% non-condensing at 25℃ to 30℃
Sound	In operation mode, the sound pressure measured in the lateral position is <50dBA; the sound intensity measured when the ambient temperature is <28℃ is 6.2BA
Electrostatic Discharge	15kv per Intel ambient temperature test specification

Power Supply

Features	Technical Specification
Power Supply	450W server dedicated power supply
AC Voltage/Frequency	110~240V/60/50Hz 6~3A
+5V	1.0~ 15A
+12V	0.4~25A
-12V	0~ 0.5A
+3.3V	0.5~21A
+5VSB	0~2.5

Structure

Features	Technical Specification
Shape System	1U rack type (with cabinet accessories)
High	1.7" (44mm)
Width	16.9" (430mm)
Depth	21.7" (550mm)
Weight	About 37lbs (17KG) (standard/gross weight)