



ASUS Server and Workstation

PRODUCT PORTFOLIO



————— The Wall Street Journal Asia

N0.1 in Quality and Services

- Over 24 years of experience building high-quality servers and workstations
- Received 137 benchmark world records for fastest 2P and 1P server performance*
- Ranked No.1 on the Green500 list of energy-efficient supercomputers in 2014
- One of only two server manufactures to win a 2017 Computex Best Choice Award

*All results can be verified on spec.org, January 31 2019.



Interbrand

In Search of Incredible

ASUS is a multinational company known for the world's best motherboards, PCs, monitors, graphics cards and routers, and driven to become the most-admired innovative leading technology enterprise. With a global workforce that includes more than 5,000 R&D professionals, ASUS leads the industry through cutting-edge design and innovations made to create the most ubiquitous, intelligent, heartfelt and joyful smart life for everyone. Inspired by the In Search of Incredible brand spirit, ASUS won more than 11 prestigious awards every day in 2018 and ranked as one of Forbes' Global 2000 Top Regarded Companies, Thomson Reuters' Top 100 Global Tech Leaders and Fortune's World's Most Admired Companies.



Green ASUS

Keeping The Environment In Mind

We at ASUS are fully committed to creating a sustainable future. We believe in adopting an eco-friendly approach towards every aspect of our business. This is where the GreenASUS philosophy comes in — from our internal practices to our production processes — we remain focused on safeguarding our planet. ASUS is focused on safeguarding our planet with responsible products, and ASUS products succeed in combining a lower total cost of ownership (TCO) with the highest environmental standards. It is fully EPEAT, Energy Star, and RoHS certified.

Green Design

Good design extends beyond mere aesthetics, products should use modular components for simple repairs and prolonged life spans, and be easily recyclable at the end of their life cycle.

Green Manufacturing

Green products can't be made without greener manufacturing processes, that's why ASUS adheres to strict guidelines to ensure that hazardous substances like lead and halogens are eliminated during production.

Green Procurement

ASUS is not only committed to reducing its own environmental impact. By ensuring a greener supply chain, it is helping to ensure that steps from shipping to product packaging follow greener principles too.



Service Coverage

1000+
Service Centers

98+
Countries

1000+ service centers located worldwide covering more than 98 Countries.

Industry Leading Quality and Reliability

Vibration Test



Ensures the frame, body and all components are properly secured and built to last.

Voltage and Frequency Test



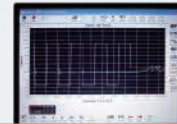
Ensures the system remain fully functional in all regions, even when the local grid voltage and frequency reaches extremes or fluctuates as a result of heavy loading.

Drop Test



Ensures all products can withstand even the roughest handling and shipping conditions.

Thermal Shock Test



Ensures all components can cope with rapid, extreme temperature shifts.

Noise Test



Eliminates unwanted noise and ensures volume levels and tones at idle and under full load cause minimal disturbance.

Thermal Measurement Test



Every server and workstation is subjected to extensive heat tests to build a thermal profile that is then used to design cooling solutions.

Temperature & Humidity Test



Ensures all components and the cooling system can withstand extreme temperatures ranging from -40°C to +60°C.

Non-Operation Shock Test



Ensures systems and motherboards can withstand a wide range of real-world conditions, such as vibrations, knocks and bumps.



Product Portfolio



Accelerator Server

For AI and visual computing, the ESC series accelerator servers deliver extreme performance and stability with patterned electronic designs and high availability (HA) thermal solutions.



Rack/Tower Server

ASUS offers a comprehensive rack/tower server product line featuring high computing density, high expandability, and high manageability, ideal for multi-workload.



Workstation

Professional, ISV certified ESC/E series workstations have server-grade computing power, incredible expandability and advanced I/O, best suited for content creators, professional VR applications, and heavy entertainment loads.



Server and Workstation Motherboard

ASUS offers the most reliable server and workstation motherboards with industry-leading performance, high power-efficiency, and complete IT infrastructure management.



Accessories

OCP Mezzanine cards, high speed LAN cards, and ASUS-exclusive PIKE RAID cards provide the fastest interconnects and highest storage expandability for datacenter topology.

ASUS Servers and Workstations

with **2nd Generation Intel® Xeon® Scalable processors**

1.8

times faster
in **IOPS**

with Intel Optane
DC Memory

3.1

times faster
in **Deep Learning**

New 2nd Generation Intel® Xeon® Scalable processors

- 1.33X average performance improvement in power consumption and clock speed
- Enhanced deep learning capabilities
- Support up to 6 channel DDR4 2933

Latest Intel Optane™ DC persistent memory

Technology – delivers an unique combination of affordable large capacity and persistence (non-volatility)

Exclusive Thermal Rader

- Automatically reduce consumption of overall fan capacity
- Effectively enhance system reliability and thermal efficiency

ASUS Control Center

Server remote management to safeguard all of your devices





Fully Optimized Certified Workstation for Professional Content Creators

Graphic Design



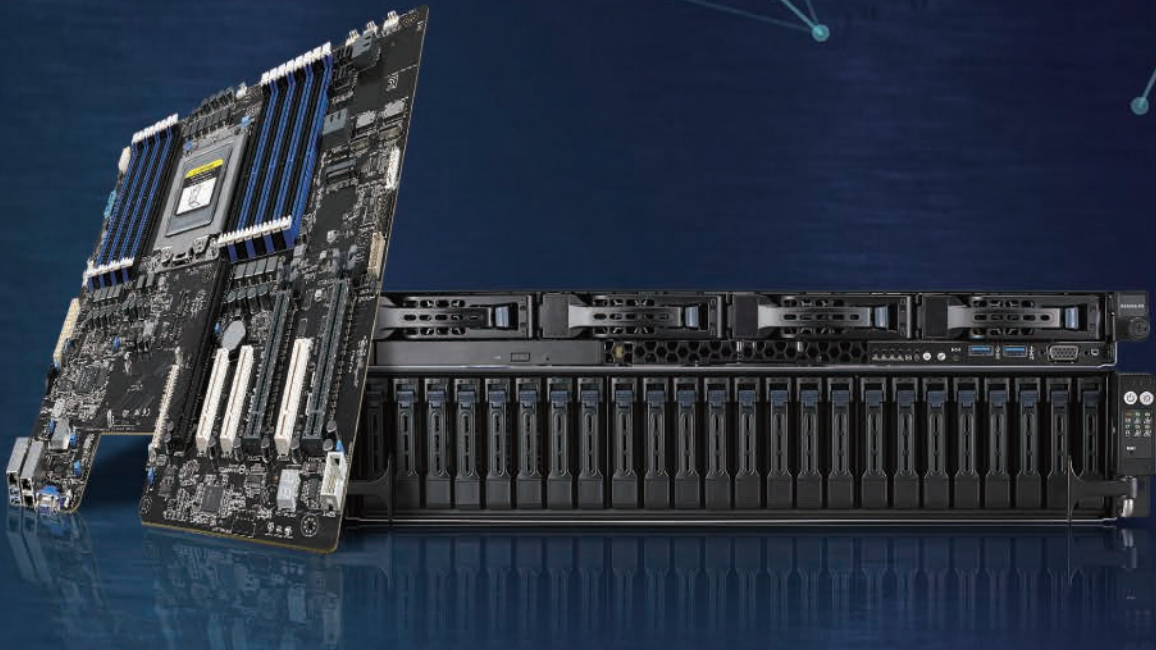
Engineering Design



*Selected Models

Virtual Reality





ASUS AMD EPYC™ Platform Solutions

- ◆ **Best-in Class Performance**
(SPEC.Org)
- ◆ **Flexible Expansion Design**
(8+1 Expandability)
- ◆ **More Secure Protection**

OUTSTANDING PERFORMANCE DRIVES BUSINESS AGILITY

32 24, 16, 8
cores per socket

Wide range of cores
without sacrificing
features

128 PCIe® Gen 3 lanes
in a single CPU

Large I/O capacity®

8 Memory channels
per CPU

Industry leading
memory bandwidth

2^{TB} RAM per
socket

Rich
memory density

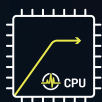




NO.1 SERVER

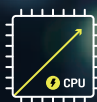
137+ Benchmark World Records

Exclusive Performance Boost Technology



ASUS Core Optimizer

Maximizes the processor frequency in multi-core operations, avoiding frequency shifting for reduced latency



ASUS Engine Boost

Automatic power acceleration with an innovative voltage design to increase server overall performance



Preconfigured Settings for Optimization

Preconfigured BIOS server profiles based on workloads and benchmarks for improved performance and efficiency

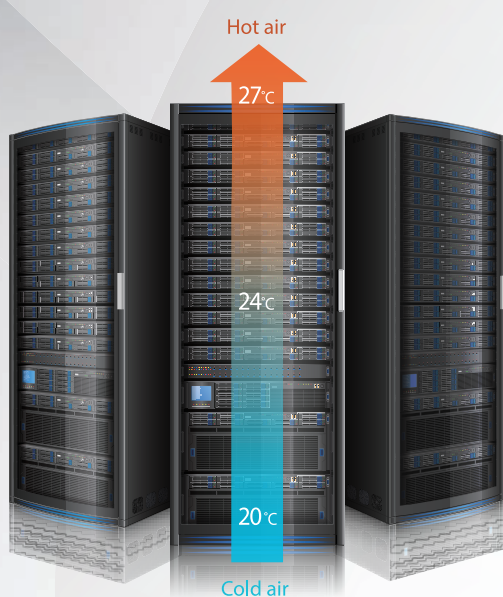
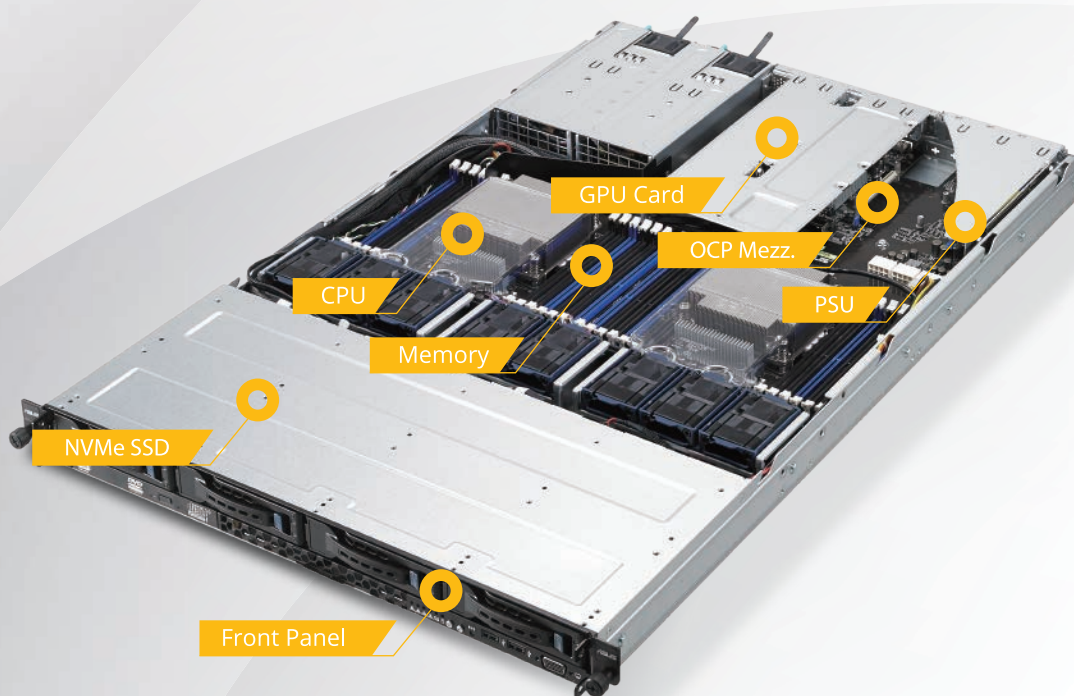
* All results can be verified on spec.org, January 31, 2019

* Product specifications are subject to change without notice. Please contact your suppliers or local representatives for exact product information.

* For more information, please go to <https://www.asus.com/Commercial-Servers-Workstations/>

Smart Thermal Radar Technology

More **ambient thermal sensors** in multiple locations to detect environmental temperatures.



- More Sensors Detected- Sensors are embedded on front panel, CPU, NVMe SSD, OCP Mezz. Card, PSU and Memory. Up to 56 ambient sensors on selected models.
- Multiple Fan zones- Each fan zones has dedicated fan curves to achieve more accurate thermal solution.
- Economic and Eco-friendly - More precise thermal information can reduce power consumption and lower down TCO.

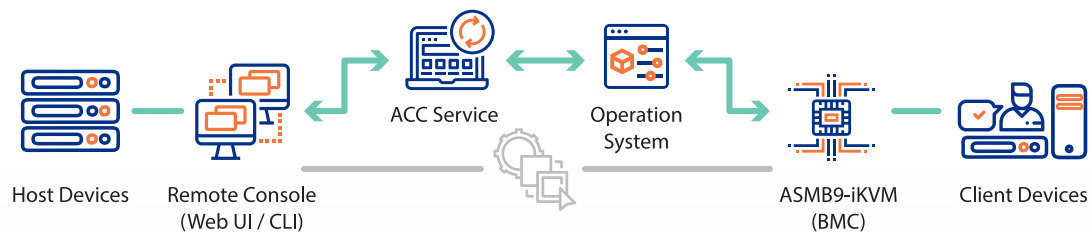
1.2x Better Cooling Efficiency

Dynamically changes fan speed for different thermal areas to achieve better power efficiency

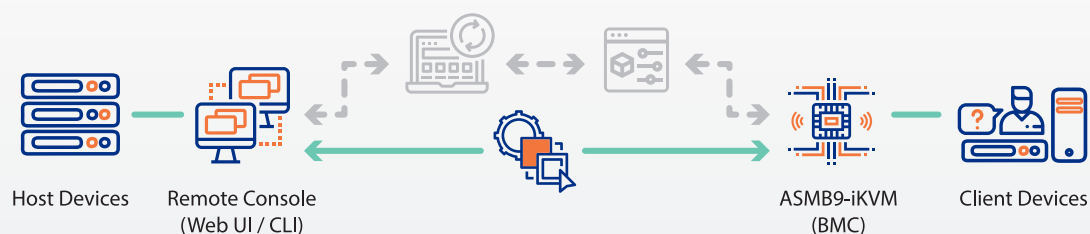
Comprehensive IT Infrastructure Management Solution



IN-BAND



OUT-OF-BAND



ASMB9-iKVM

- Remote server management for troubleshooting, remote OS installation and fan control
- 24/7 monitoring of system status such as temperatures, voltages and fans
- Web-based UI control with high compatibility and security (HTML, HTTPS and Redfish support)

ASUS Control Center

- A centralized IT management software
- Faster and easier for centralized task scheduling and batch deployment
- Web-based user-friendly GUI design with access to devices from anywhere



To find out more about ASUS Control Center, please visit
<https://asuscontrolcenter.asus.com/>



Virtualization Solutions

Server virtualization is a software architecture that allows more than one server operating system to run as a guest on a given physical server host. With the server software abstracted away from the physical machine in this way, the server becomes a "virtual machine," though the server "thinks" it is running exclusively on the compute and memory resources. It's actually running on a virtual imitation of the server hardware.







Server virtualization enables more efficient use of IT resources than was previously possible. Before server virtualization, it was common to have under and over-utilized hardware in the same data center. With virtualization, one can move workloads between virtual machines according to load. The same physical server can also run multiple server operating systems and configurations, further increasing efficiency. Server virtualization is the basis for cloud computing and hybrid IT.

- ◆ Run multiple applications and operating systems independently on a single server
- ◆ Move workloads easily from one virtual workspace to another
- ◆ Configure and deploy new servers in a few minutes instead of hours
- ◆ Reduce equipment and maximize server resources
- ◆ Lower data center costs significantly with power and labor savings

ASUS servers offer you an extensive, adaptable server virtualization with VMWare certification. Working with ASUS server virtualization means you get fast deployment, performance at scale, efficiency and the ability to provide high availability.





	1U		CPU Number	2		PCIe Gen3x16 Link	1	
	Memory Number	24		NVMe	6		Graphic Card	1 Single Deck






RS700-E9-RS12

High-performance 1U server with great scalability and expandability for dense compute environment

This density-optimized server maximizes data center efficiency by delivering uncompromised performance and expandable storage.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory
Drive Bays	12
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



	2U		CPU Number	2		PCIe Gen3x16 Link	2
	Memory Number	16		NVMe	4		







RS520-E9-RS12-E

Great balance on performance, efficiency, and manageability for multi-workload

Fulfill a variety of demands with dual processors that offers an ideal balance of computing power, storage, and cost.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	12
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



	2U		CPU Number	2		PCIe Gen3x16 Link	4	
	Memory Number	16		NVMe	2		Graphic Card	4 Double Deck

ESC4000 G4

GPU-optimized 2U server with hybrid storage availability and expandability

With powerful processors, large memory capacity, hybrid storage and support for up to 4 GPUs, ESC4000 G4 is fully optimized for tackling highly demanding environments and maximizing performance efficiency.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	8
Additional OS Drive	1 X M.2
Networking	Adaptor up to 100 Gb/s LAN



Container Solutions

Containers, a lightweight way to virtualize applications, are an important element of any DevOps plan. Container orchestration programs such as Kubernetes, Mesosphere Marathon, and Docker swarm mode make it possible to manage containers in easier ways. Kubernetes is an open-source system for automating deployment, scaling and management of containerized applications. It groups containers that make up an application into logical units for easy management and discovery. Kubernetes builds upon 15 years of experience of running production workloads at Google, combined with best-of-breed ideas and practices from the community.

Containers represent great change: typically a company can run 4X the number of containers vs. virtual machines for the same workload/capacity. Containers and VMs can also run together, depending on need.

ASUS provides simple K8s (Kubernetes) deployment software that is easy to set up and scale out from one node depending on users' scenarios. Easy deployment and maintenance are key factors for container solutions. With fine-tuned hardware configurations, ASUS offers a better container solution than the original Kubernetes solution with easy scale-out, deployment and multi-tenant management, and can satisfy a wide variety of use cases needed in enterprise settings.



 Form Factor		2U	 CPU Number		2	 PCIe Gen3x16 Link		2
 Memory Number		16	 NVMe		4			

RS520-E9-RS8-E

Great balance on performance, efficiency, and manageability for multi-workload

Fulfill a variety of demands with dual processors that offers an ideal balance of computing power, storage, and cost.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	8
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN

RS540-E9-RS36-E

Great balance on performance, efficiency, and manageability for multi-workload

Fulfill a variety of demands with dual processors that offers an ideal balance of computing power, storage, and cost.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	36
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



 Form Factor		4U	 CPU Number		2	 PCIe Gen3x16 Link		2
 Memory Number		16						



Artificial Intelligence Solutions






AI is based on algorithms and it is used as a computing power to solve specific problems faster and often more accurately than humans can. Much of AI is based on statistics and finding trends and patterns in data.

AI can do a variety of things that a human would have to use intelligence to do, such as analyzing, planning, problem solving, learning and adapting. Anything that makes a system clever is considered AI. Machine learning, which is another part of AI, takes information and learns and adapts as it gathers new data.

ASUS has great experience in designing GPGPU servers for AI applications. ESC8000 G4 and ESC4000 G4 are suitable for model training and machine learning. ESC8000 G4 can house up to eight GPU cards (NV V100 32GB), and the patented ASUS-exclusive Adaptable Topology design enables switching between a single and dual root via software. ESC4000 G4 can hold up to four GPU cards for AI training and up to eight GPU cards for inferencing. ASUS GPGPU servers enable a wide range of possibilities to customers in AI fields based on their needs.





	4U		2		
	24		2		8 Double Deck






ESC8000 G4/10G

GPU-optimized 4U server with high scalability and patented Adoptable Topology design

ESC8000 G4 features a patented Adoptable Topology design equipped with up to 8 GPUs support for deep learning or AI requirements, allowing your system to switch topology configurations without changing hardware or cable routing.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	8
Additional OS Drive	2 x M.2
Networking	Adaptor up to 100 Gb/s LAN



	2U		2		
	16		2		4 Double Deck






ESC4000 G4S

GPU-optimized 2U server with hybrid storage availability and expandability

With powerful processors, large memory capacity, hybrid storage and support for up to 4 GPUs, ESC4000 G4S is fully optimized for tackling highly demanding environments and maximizing performance efficiency.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	8
Additional OS Drive	1 X M.2
Networking	Adaptor up to 100 Gb/s LAN



	1U		2		
	16		8		4 Double Deck

ESC4000 DHD G4

GPU-optimized 1U server with high density and low latency

ESC4000 DHD G4 supports up to 4 GPUs and all NVMe SSD featuring maximum high density and minimum low latency in upcoming 5G network era.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	4
Additional OS Drive	4 x M.2
Networking	2 x 10G on board + 2 x Adaptor up to 100 Gb/s LAN

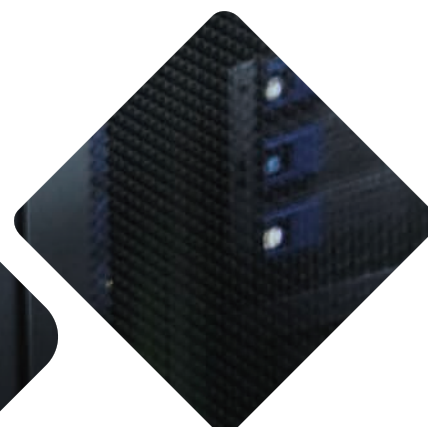


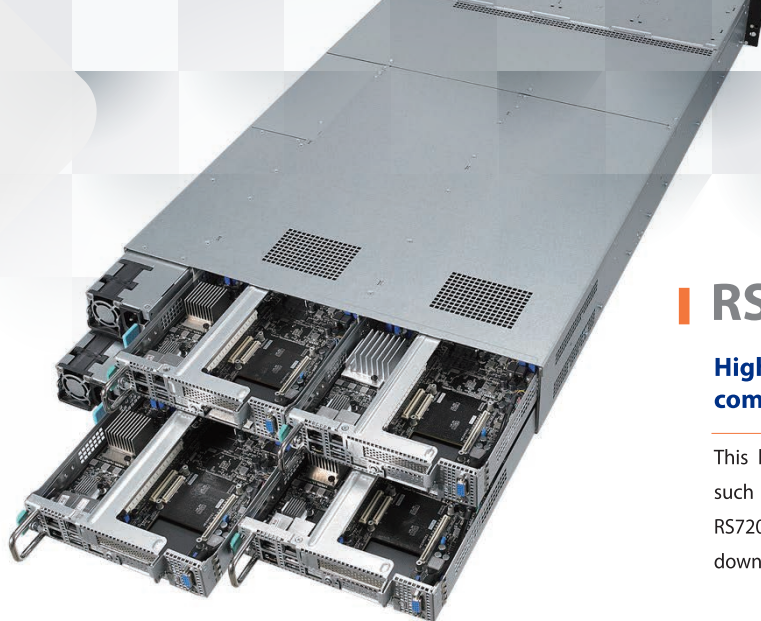
High Performance Computing Solutions






High Performance Computing (HPC) has always been the proving ground for technologies that eventually find their way into mainstream computing. ASUS and its customers have pioneered several of those technologies, and through these types of close collaborations, ASUS can provide what customers need in a HPC cluster, be it raw performance, energy efficiency, price-performance or implementation help.

ASUS can help customers design their own symmetric or cluster architectures and build it to their specifications, help deploy it and ensure it meets their requirements. Engaging in more HPC projects in industry, research, government and

industry, research, government and education sectors enables ASUS to help customers to benchmark applications and find optimum configurations. ASUS has received great results on benchmarks for HPC evaluation and is able to provide these workload settings to customers, so they can experience the same high levels of performance for their own applications.





	2U		8		4
	48		8		







RS720Q-E9-RS24-S

High-density 2U4N server with great scalability for compute-intensive workloads

This high-density server designed for compute-intensive workloads such as data-center, data-analysis and private-cloud applications. RS720Q-E9-RS24-S greatly accelerates performance while sharply cutting down TCO through its shared infrastructure and high density.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	24
Networking	OCP Adaptor up to 100 Gb/s LAN



	1U		2		1
	24		6		1 Double Deck






RS700-E9-RS12

High-performance 1U server with great scalability and expandability for dense compute environment

This density-optimized server maximizes data center efficiency by delivering uncompromised performance and expandable storage.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM)
Drive Bays	12
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



	2U		2		4
	24		24		

RS720-E9-RS24-U

RS720-E9-RS24-U features hybrid storage of 24 NVMe/SATA/SAS with more flexibility and high performance.

RS720-E9-RS24-U features up to 24 NVMe drives to provide high IOPS and low latency storage solution.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 2933/2666 RDIMM/LRDIMM/LRDIMM 3DS Intel® Optane™ DC persistent memory (DCPMM)
Drive Bays	24
Additional OS Drive	2 x M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



Enterprise Solutions






For medium to large enterprises, and managed and cloud service providers, ASUS is recognized to have the optimum 2U—the most widely used server type, two-socket server with 67 No.1 benchmark world records for performance. ASUS 2U servers are engineered to deliver high performance with 205W CPUs, low-latency NVMe drives, and high-power GPUs for increased productivity in busy and competitive business environments.

With ASUS-exclusive Performance Boost technology, the highly flexible and configurable RS series rack server is the ideal platform for hyperconverged infrastructure (HCI) or software-defined storage (SDS) and recent emerging technologies like Openstack, container or other solutions. It creates a rock-solid base for transforming physical resources into services using validated designs for hybrid cloud, performing analytics on streaming data using validated designs for Big Data, and increasing productivity of virtualized transactional systems.

Facing different kinds of applications in enterprise scenarios, RS series rack server provides the balance of compute to I/O that gives users the freedom to take on challenging data-intensive projects. Different workloads and use cases need different kinds of parameters to optimize. With profound experience in performance optimization with ASUS Performance Boost technology, ASUS servers let users adopt settings for their own needs and even set up their own parameters. For enterprise usage, it is optimized for software-defined settings, virtualization database analytics and so on.

ASUS servers are equipped with ASUS Control Center, exclusive management software that helps IT staff monitor hardware and software status, deploy software remotely, and perform inventory reporting. Increasing efficiency and productivity creates more value for customers, and ASUS Control Center is designed to be a great partner for enterprise software portfolios, fully integrating with existing databases to generate more valuable data for business decisions and IT infrastructure management.



 Form Factor	1U	 CPU Number	2	 PCIe Gen3x16 Link	1
 Memory Number	24	 Graphic Card	1	Single Deck	






RS700-E9-RS4

High-performance 1U server with great scalability and expandability for dense compute environment

This density-optimized server maximizes data center efficiency by delivering uncompromised performance and expandable storage.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory
Drive Bays	4
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



 Form Factor	2U	 CPU Number	2	 PCIe Gen3x16 Link	4
 Memory Number	24	 NVMe	4		







RS720-E9-RS12

High performance 2U server with hybrid-storage design and high power-efficiency

RS720-E9-RS12-E offers breakthrough performance with the latest Intel Optane™ DC persistent memory with an over 88% gain in input/output operations per second (IOPS).

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	UPI 10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 2933/2666 RDIMM/LRDIMM/LRDIMM 3DS Intel® Optane™ DC persistent memory
Drive Bays	12
Additional OS Drive	2 x M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



 Form Factor	1U	 CPU Number	2	 PCIe Gen3x16 Link	1
 Memory Number	16	 NVMe	4	 Graphic Card	1
					Single Deck

RS500-E9-RS4-U

Great balance on performance, efficiency, and manageability for dense compute environment

This density-optimized server maximizes data center efficiency by delivering a budget-friendly, dual processors, and energy-efficient design.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)
UPI Speeds	10.4 GT/s
Chipset	Intel® C621
Memory Type	DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS
Drive Bays	4
Additional OS Drive	2 X M.2
Networking	OCP Adaptor up to 100 Gb/s LAN



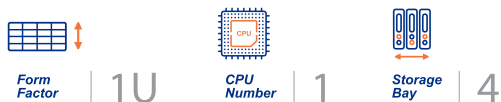
Small and Medium Business Solutions

There are so many different ways in which you might use your server in your company and there is no one server category that fits everyone. Small to medium businesses may need anything from a simple file or web server to complicated storage and virtualization servers depending on business scale and service.

ASUS offers different kinds of server form factors — tower and rack-mount servers —for various space settings and IT designs. For example, ASUS offers tower servers, such as the TS100-E10 and TS300-E10 series, and rack servers such as the RS100-E10 and RS300-E10 series with Intel® Xeon® E processors. This is an optimized portfolio that would be ideal as a bare-metal virtualization host for smaller departments or organizations, with room to grow.

ASUS TS/RS series servers are ideal for daily applications, such as storage, file sharing, virtual desktops and entry-level virtualization, and facilitate increased efficiency and productivity for small and medium businesses. For growing businesses, ASUS TS/RS series servers are designed with for expansion with features such as extra storage bays. They are also equipped with ASUS Control Center, exclusive management software that helps IT staff monitor hardware and software status, deploy software remotely, and perform inventory reporting.



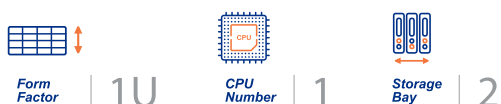


RS300-E10-PS4

GPU-optimized 1U server with flexible storage and expandability

This server delivers high performance combined with storage and expansion flexibility for multiple workloads, making it the perfect choice for a firewall, gateway or business server. It also supports one graphics card for graphics-intensive applications.

CPU	Intel® Xeon® E processors (LGA1151)
Chipset	Intel® C242
Power Supply	400W 80 PLUS Gold Power Supply
Dimension	380mm x 430mm x 44mm



RS100-E10-PI2

Compact 1U server with hybrid storage and faster networking connectivity

RS100-E10-PS4 features four LAN ports with teaming support for ultrafast connectivity. Designed with flexible storage expansion and graphics card support, RS100-E10-PI2 provides all workload requirements for SMB.

CPU	Intel® Xeon® E processors (LGA1151)
Chipset	Intel® C242
Power Supply	250W 80 PLUS Bronze Power Supply 350W 80 PLUS Gold Power Supply
Dimension	380mm x 430mm x 44mm



TS300-E10-PS4

5U tower server for business and data center environments

TS300-E10-PS4 supports Intel® Xeon E processors and NVIDIA® Quadro graphics cards. Designed to fit into business environments, it can also be integrated easily into data centers as a rack server using the flexible tool-less rail kit.

CPU	Intel® Xeon® E processors (LGA1151)
Chipset	Intel® C246
Power Supply	500W 80 PLUS Gold Power Supply
Dimension	445mm x 217.5mm x 545mm

TS100-E10-PI4

Combat tower server for business applications

TS100-E10-PS4 is an entry level business server for web, print and mail-server applications and features Intel® Xeon E processors and ECC memory to ensure reliable and responsive performance. It comes with ASUS Control Center for centralized and integrated IT management.

CPU	Intel® Xeon® E processors (LGA1151)
Chipset	Intel® C242
Power Supply	500W 80PLUS Gold 300W 80PLUS Bronze
Dimension	423mm x 190mm x 435mm



Workstation Solutions



With NVIDIA® Quadro and multi graphic cards, ASUS workstations can be used in content creation and media streaming. As close partnership with NVIDIA®, ASUS workstation continues to test and verify various new graphic cards to satisfy customers' requests in systems.



Independent software vendor (ISV) software is becoming an important factor to users in variety of industries. ASUS is working in close partnership with ISV vendors, including Adobe and Autodesk, to test and verify compatibility, making sure ASUS workstations are reliable, and highly effective for users in different fields.





Virtual reality (VR) is bringing more convenient, cost effective, and time-saving way for professionals across different industries. In architecture, mechanical or interior designing, users can use VR to experience a 360-degree view of their designs, giving engineers and designers a complete understanding of their products before production.

Extreme Workstation



E900 G4

	CPU Number	2
	Memory Number	12

Monster performance, the ultimate workstation



E900 G4 Supports up to 56 processing cores on the Intel® Xeon® Scalable processor. Featuring up to 4-way multi-graphic supported with genuine four PCIe Gen3 x16 link, E900 G4 uses new ID design on front bezel with ASUS branding which is user friendly, tool-less case design for hassle-free maintenance.

CPU	1st and 2nd Gen Intel® Xeon® Scalable processors (LGA3647)
Chipset	Intel® C621
Power Supply	Redundant 2000W 80PLUS Titanium Power Supply
Dimension	532mm x 243mm x 582mm (21.0" x 9.5" x 22.9")

Performance Workstation



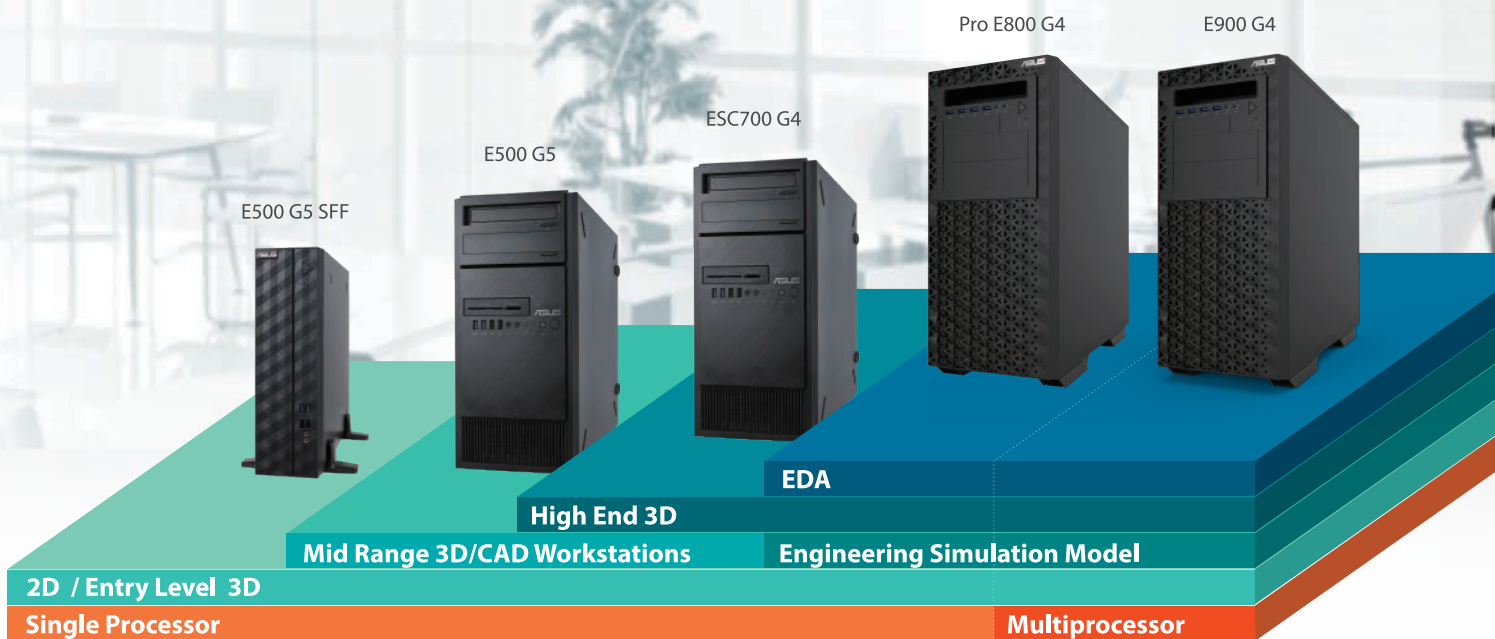
Pro E800 G4

	CPU Number	1
	Memory Number	12

Native 64 PCIe Gen 3 Lanes, high performance workstation for heavy workload

Pro E800 G4 is the latest Intel XEON W3200 Processor family to support up to 4 GPU, which is ideal for content creation workloads to increase overall productivity. Pro E800 G4 is also equipped with dual 10GB LAN to boost overall data transfer speed and internet connectivity for collaborative workflows.

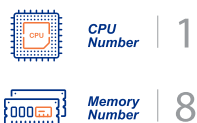
CPU	1 x Socket-P (LGA-3647) Intel® Xeon® W-3200 Processor Family
Chipset	Intel® C621
Power Supply	2000W Platinum ATX Power Supply or 700W Gold ATX Power Supply
Dimension	532mm x 243mm x 582mm (21.0" x 9.5" x 22.9")



Mainstream Workstation



ESC700 G4



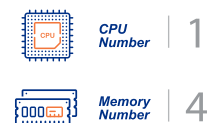
Multiple GPU support, onboard BMC and ACC management

ESC700 G4 has two PCIe Gen3 x16 slots supporting multi graphic cards. It also has ultra-fast storage and I/O options to choose from, such as onboard 2 x M.2 slots with M.2 heatsinks for optimum cooling and onboard U.2 ports with a 32 Gb/s SSD.

CPU	Intel® Xeon® W processors (LGA2066)
Chipset	Intel® C422
Power Supply	1200W 80PLUS Platinum/700W 80 PLUS Gold
Dimension	423mm x 190mm x 435mm



E500 G5



Powerful, full-featured workstation

E500 G5 supports scalable expandability with NVIDIA® Quadro graphics cards. Featuring dual M.2 for up to 32Gbps performance and data redundancy as well as dual Intel® Gigabit LAN with teaming support, E500 G5 delivers maximum performance and faster connectivity.

CPU	Intel® Xeon® E processors (LGA1151)
Chipset	Intel® C246
Power Supply	700W 80 PLUS Gold
Dimension	423mm x 190mm x 435mm

Server Motherboard

Versatile server boards with standard form factor

ASUS provides versatile server boards with standard form factors, such as EEB, ATX, micro ATX, Mini-ITX and follows standard mounting hole locations. Users can choose a rack or tower server chassis that can be fitted in cabinets for enterprise usage, or even a PC ATX chassis which is a cost-effective and readily available form factor. These server boards allow users to build a competitive server with a wide variety of configuration choices.

Comprehensive server management

The ASMB Series (IPMI 2.0-compliant) enables remote update BIOS, standalone KVM/Java utility, video recording and BSOD and BSOD capture. Based on out-of-band management, even if the server operating system is down or offline, the KVM module can still provide round-the-clock remote monitoring and diagnosis through a web-based user-friendly graphical interface via all major browsers.




In addition, ASUS Control Center (ACC) software provides one-to-multiple centralized management including BIOS flash, software dispatch, task scheduler, remote control, and power control, all through a colorful and informative graphical interface. Through ASUS remote management solution, users can save time and effort on server management and troubleshooting.

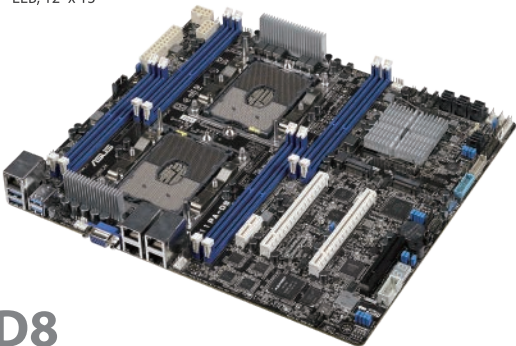


Z11PR-D16

Intel® EEB motherboard with C621 chipset, 12 DIMMs, dual M.2, and 11 SATA

Z11PR-D16 supports dual Intel® Xeon Scalable processors with highly expandable, ultrafast storage options and 16 DDR4 memory slots. Its rack-optimized design enables efficient airflow for excellent thermal performance.




					
CPU Number	2	Memory Number	16	SATA 6Gb/s ports	11
<hr/>					
CPU		Intel® 1st and 2nd Xeon® Scalable processors (LGA 3647)			
Chipset		Intel® C621			
Memory Type		DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS			
Expansion Slots		7			
Lan Port		2			
Form Factor		EEB, 12" x 13"			



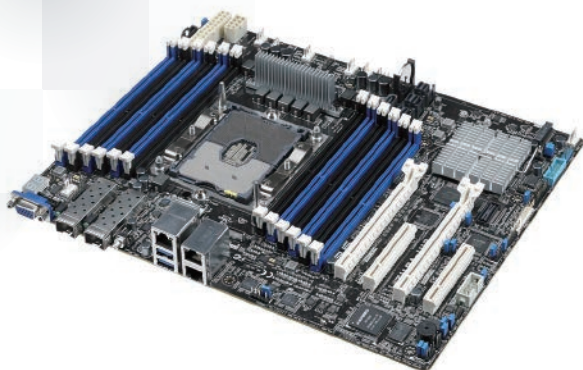
Z11PA-D8

Intel® CEB motherboard with C621 chipset, 8 DIMMs, dual M.2, 16 SATA, and dual OCUlink for NVMe

Z11PA-D8 supports dual Intel® Xeon Scalable processors with dual M.2 SATA SSDs, enabling top performance or data redundancy in RAID mode. Featuring dual onboard OCUlink to provide efficient connections with most OCUlink-supported NVMe devices, Z11PA-D8 eliminates the need for PCIe transaction cards.

					
CPU Number	2	Memory Number	8	SATA 6Gb/s ports	16
<hr/>					
CPU		1st and 2nd Gen Intel® Xeon® Scalable processors (LGA 3647)			
Chipset		Intel® C621			
Memory Type		DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS			
Expansion Slots		3			
Lan Port		4			
Form Factor		CEB, 12" x 10.5"			





CPU Number

1



Memory Number

12



SATA 6Gb/s ports

13

Z11PA-U12/10G-2S

Intel® ATX motherboard with C622 chipset, 12 DIMMs, 13 SATA, dual Intel® 10G LAN and dual OCuLink for NVMe

With built in dual Intel® 10G LAN, Z11PA-U12/10G-2S delivers blazingly fast networking speeds. Featuring dual M.2 for up to 32Gbps performance and data redundancy, it supports up to 2280-length M.2 drives for ultrafast data access.

CPU	Intel® 1st and 2nd Xeon® Scalable processors (LGA 3647)
Chipset	Intel® C622
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Expansion Slots	4
Lan Port	4
Form Factor	ATX, 12" x 9.6" (EEB Mounting Hole Locations)



CPU Number

1



Memory Number

4



SATA 6Gb/s ports

6

P11C-C/4L

Intel® ATX motherboard with dual M.2, Quad LAN, 6 SATA, and USB 3.1 Gen 2 connectors

P11C-C/4L supports Intel® Xeon E processors with four LAN ports with teaming support for ultrafast connectivity. It also features dual M.2 support for up to 32Gbps data-transfer speeds with native NVMe and multiple legacy PCI support for surveillance or industrial applications.

CPU	Intel® Xeon® E Processors (LGA 1151)
Chipset	Intel® C242
Memory Type	DDR4 up to 2666 ECC/non-ECC UDIMM
Expansion Slots	4
Lan Port	4
Form Factor	ATX, 12" x 9.6"



CPU Number

1



Memory Number

4



SATA 6Gb/s ports

6

P11C-M/4L

Intel® Micro-ATX motherboard with dual M.2, Quad LAN, 6 SATA, and USB 3.1 Gen 2 connectors

P11C M/4L is designed with a compact 9.6 x 9.6" size and a full range of features, including Intel® Xeon E processors, dual M.2 support for up to 32Gbps data-transfer speeds with native NVMe and dual PCIe expansion.

CPU	Intel® Xeon® E Processors (LGA 1151)
Chipset	Intel® C242
Memory Type	DDR4 up to 2666 ECC/non-ECC UDIMM
Expansion Slots	2
Lan Port	4
Form Factor	Micro ATX, 9.6" x 9.6"



CPU Number

1



Memory Number

2



SATA 6Gb/s ports

6

P11C-I

Intel® Mini-ITX motherboard with M.2, 6 SATA, and USB 3.1 Gen 2 connectors

Designed with rack-optimized and space-saving in mind, P11C-I features one M.2 for faster data transfers and one PCIe x16 link for flexibility. Six onboard native SATA drives with one mini SAS HD connector allows storage expansion.

CPU	Intel® Xeon® E Processors (LGA 1151)
Chipset	Intel® C242
Memory Type	DDR4 up to 2666 ECC/non-ECC UDIMM
Expansion Slots	1
Lan Port	2
Form Factor	Mini-ITX, 6.7" x 6.7"



CPU Number

1



Memory Number

4



SATA 6Gb/s ports

6

P11C-X

Intel® Xeon® E ATX server motherboard with dual M.2 and USB 3.1 connections

P11C-X supports Intel® Xeon® E processors with two LAN ports with teaming support. Rack-optimized design maximizes cooling for excellent thermal efficiency. Flexible expandability with 6 native SATA 6G ports, two PCIe Gen3 slots and two PCI legacy slots. Dual Intel® Gigabit Ethernet with teaming support

Dual M.2 for independent OS drives with RAID 0/1 Supports the latest 10Gb/s USB 3.1 onboard for high transfer speed.

CPU	Intel® Xeon® E processors (LGA1151)
Chipset	Intel® C242
Memory Type	DDR4 up to 2666 ECC/non-ECC UDIMM
Expansion Slots	4
Lan Port	2
Form Factor	ATX, 12" x 9.6"



CPU Number

1



Memory Number

16



SATA 6Gb/s ports

12

KNPA-U16

Unmatched 32-core performance and PCIe slot expandability

KNPA-U16 is built on AMD EPYC™ platform to deliver incredible server performance. With up to 32 cores per CPU, up to 64 threads and 16 DIMM slots, KNPA-U16 packs incredible power in minimal space. Integrated I/O controller on the processor eliminates the data transfer bottlenecks caused by discrete I/O chipsets for reduced latency and dramatically faster system performance.

CPU	AMD EPYC™ 7000 Series (1 x Socket SP3)
Chipset	System on Chip (SoC)
Memory Type	16 x DIMM(8-channel), Max. 2048GB DDR4 up to 2666 RDIMM/LRDIMM/LRDIMM 3DS
Expansion Slots	7
Lan Port	1 x Dual Port Intel I350-AM2 Gigabit LAN Controller
Form Factor	EEB (12"x13", 305mm x 330mm)

Workstation Board

Unleashing your graphic investment for maximum performance

ASUS provides a variety of workstation motherboards that can accommodate up to four dual slot graphics cards, supporting up to 4-way multi graphic cards. Being the best choice for professionals who depend on powerful graphics performance for tasks such as modeling, design, simulation and 3D-rendering applications or even for multi-screen gaming and live streaming, ASUS workstation motherboards are always ready to run fast and smooth.

Expandable and scalable, customize the configuration to fit your demands

ASUS workstation motherboards are built to fit ultra-fast storage and I/O devices. With onboard M.2 sockets and U.2 connectors, NVMe SSDs can operate with a bandwidth of 32Gbps for transfer bandwidths up to 5.3x faster than traditional storage devices. Also with the rear, backward-compatible USB 3.1 Gen 2 Type-A™, reversible USB 3.1 Gen 2 Type-C™ and future proof USB 3.1 Gen2 front-panel connector, you'll experience ultimate connection flexibility and blazing data-transfer speeds of up to 10Gbps.

Stable, reliable and efficient

Each component is carefully chosen and validated to provide the best stability, reliability, and efficiency. PCIe slots are protected with ASUS SafeSlot, providing 1.6x stronger retention and 1.8x stronger shearing resistance. The DIMM slots are protected by the newly designed DDR4 Safe slots, and Dr. MOS, Beat Thermal Chokes, DIGI+VRM and ProCool Power connectors lower temperature and provide VR efficiency of +90%.



WS C621E SAGE

Intel® EEB motherboard with 12 DIMMs, 7 PCIe slots, 8 SATA, M.2 and 4 U.2, and USB 3.1 Gen 2 connectors

WS C621E SAGE supports dual Intel® Xeon Scalable processors with highly expandable ultrafast storage options, 12 DDR4 memory slots and supports pure PCIe x16 links for 4-way multi-graphic cards, making it an excellent choice for memory or graphics-intensive applications.


CPU Number

| 2

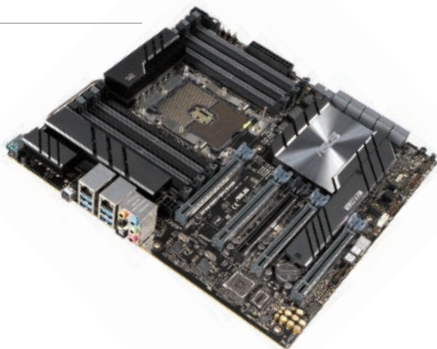

Memory Number

| 12


Graphic Card

| 4

CPU	1st and 2nd Gen Intel® Xeon® Scalable Processors (LGA 3647)
Chipset	Intel® C621
Memory Type	DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Expansion Slots	7
Lan Port	4
Form Factor	EEB, 12"x 13"



WS C621-64L SAGE/10G

Intel CEB motherboard RDIMMs, 5 PCIe slots, 10 SATA, M.2, and USB 3.2 Gen 2 connectors.

WS C621-64L SAGE/10G supports Intel XEON W3200 Processor family, which has 12 DDR4 memory slots and supports native 4 PCIe X16 links for 4-way multi-graphic cards. WS C621-64L SAGE/10G implements dual 10G Lan ports for high speed networking requirements and efficient data transfer.


CPU Number

| 1


Memory Number

| 12


Graphic Card

| 4

CPU	1 x Socket-P (LGA-3647) Intel® Xeon® Processor Scalable Family (up to 205W) Intel® Xeon® W-3200 Processor Family
Chipset	Intel® C621
Memory Type	12 x DIMM (6-channel), Max. 1536GB DDR4 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Expansion Slots	4 x PCIe x16 Slots (Gen3 x16 link) 1 x PCIe x16 Slot (Gen3 x4 link)
Lan Port	1 x Dual port Intel® X550 10GbE LAN Controllers
Form Factor	CEB Form Factor, 12" x 10.6"



| WS C422 SAGE/10G

Intel® CEB motherboard with quad-GPU support, dual Intel® 10G LAN, dual M.2 & U.2, USB 3.1 Gen 2 connectors

With built in dual Intel® 10GBASE-T networking, WS C422 Sage/10G increases data throughput and improves efficiency. Delivering ultimate graphics power with four dual-slot graphics cards, it is perfect for design, rendering and medical research.



CPU
Number

| 1



Memory
Number

| 8



Graphic
Card

| 4

CPU	Intel® Core™ W-Series Processors (LGA2066)
Chipset	Intel® C422
Memory Type	DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Expansion Slots	7
Lan Port	2
Form Factor	CEB, 12"x 10.5"

| WS X299 SAGE/10G

Intel® CEB motherboard with quad-GPU support, dual M.2 & U.2, and USB 3.1 Gen 2 connectors

WS X299 Sage/10G is designed for extreme overclockers with support for up to four dual-slot graphics cards and both NVIDIA® SLI™ and AMD CrossFireX™ 4-way configurations, enabling multi-GPU setups that harness the full power of the latest graphics technologies.



CPU
Number

| 1



Memory
Number

| 8

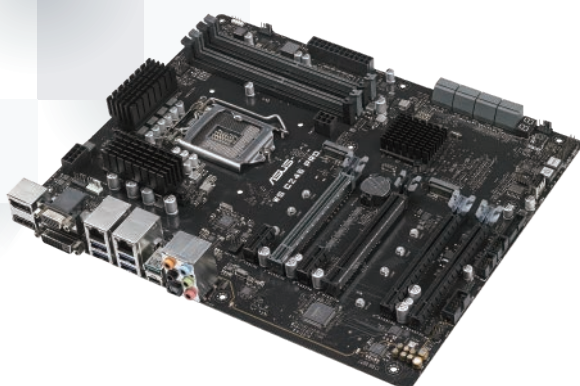


Graphic
Card

| 4



CPU	Intel® Core™ X-Series Processors (LGA2066)
Chipset	Intel® X299
Memory Type	DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS
Expansion Slots	7
Lan Port	2
Form Factor	CEB, 12"x 10.5"



1



4



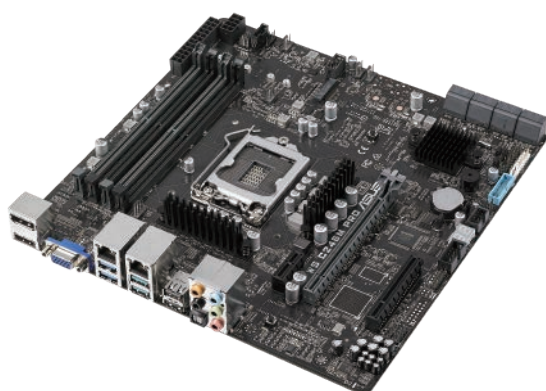
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WS C246 PRO

Intel® ATX motherboard with 6 PCIe slots, dual M.2, and USB 3.1 Gen 2 connectors

WS C246 PRO features four PCIe x16 links for flexible system configurability and expandability, as well as dual M.2 slots that fit up to 22110-length M.2 drives and provide up to 32Gbps transfer speeds for ultrafast data access redundancy.

CPU	Intel® Xeon® E Processors (LGA 1151)
Chipset	Intel® C246
Memory Type	DDR4 up to 2666 ECC/non-ECC UDIMM
Expansion Slots	6
LAN Port	2
Form Factor	ATX, 12" x 9.6"



1



4



1

WS C246M PRO

Intel® Micro-ATX motherboard with M.2, 3 PCIe slots, and USB 3.1 Gen 2 connectors

WS C246M PRO features a rack-optimized layout to maximize cooling efficiency for the best performance and stability, and has one M.2 slot that supports native NVMe for up to 32Gbps data-transfer speeds.

CPU	Intel® Xeon® E Processors (LGA 1151)
Chipset	Intel® C246
Memory Type	DDR4 up to 2666 ECC/non-ECC UDIMM
Expansion Slots	3
LAN Port	2
Form Factor	Micro ATX, 9.6" x 9.6"



1



4



4

WS Z390 PRO

Intel® ATX motherboard with AI overclocking, quad-GPU support, dual M.2, Intel® Optane ready and USB 3.1 Gen 2 connectors

Designed for compute-intensive workloads, WS Z390 PRO blends tremendous GPU performance, comprehensive tuning options and robust connectivity for prosumers and content creators.

CPU	Intel® Core™ i7/i5/i3 Processors (LGA 1151)
Chipset	Intel® Z390
Memory Type	DDR4 up to 4266(O.C.) Non-ECC/un-buffered Memory
Expansion Slots	5
Lan Port	2
Form Factor	ATX, 12" x 9.6"



Case Study Animation

With firm roots in producing commercial films, CGCG studio is one of the few companies in Taiwan that can produce large-scale international 3D animated films. CGCG studio is also a three-time winner of the SIGGRAPH* awards and a designated partner of many international production companies. The company has co-produced a number of popular cartoons, including Bob the Builder (with SD Entertainment/HiT Entertainment), LEGO® BIONICLE®, the world-renowned 3D animated series Star Wars - The Clone Wars, and FanBoy and Chum Chum (with Nickelodeon Animation Studios).

HIGH RELIABILITY AND SERVICEABILITY

In order to refine animation quality with better 3D effects and improve production efficiency by reducing render times, the IT department of CGCG studio added 80 ASUS servers for the animation computing platform of the design team. Dong-Yuan Lu, Assistant Manager of the IT department at CGCG studio, said, "The ASUS servers have been highly stable during the 5-6 years of use. A few power supply units have required replacement, but this didn't affect the operations of the animation platform. ASUS quickly replaced the affected power supplies, and their responsive service became an important factor in our decision to work with ASUS over the long term. Now, when we have new projects, we naturally give priority to ASUS products, such as the ASUS RS720Q-E8-RS8-P server."

POWERFUL PERFORMANCE WITH CUSTOMIZED DESIGN

The ASUS RS720Q-E8-RS8-P server introduced into the CGCG platform supports Intel's Xeon® E5-2600 series processor. A key feature of the server is its support for four independent nodes. Each node can be installed with two processors to provide up to 112 computing cores and 1024GB of memory, which is in line with the company's overall computing needs. The processor can also support the ASUS PIKE II expansion card, which supports 6GB/s SATA and 12GB/s SAS interfaces and provides RAID data protection, thereby expanding storage space, improving data read and write performance, and ensuring data stability during animation rendering. When designing the RS720Q-E8 server, ASUS decided to adopt a special funnel-shaped air duct design to complement its internal cabling configuration. The air duct guides air to effectively cool down each component without extra cooling fans.



* SIGGRAPH (Special Interest Group on Computer GRAPHics and Interactive Techniques) is the annual conference on computer graphics (CG) convened by the ACM SIGGRAPH

Dong-Yuan Lu also mentioned, "ASUS servers have always been stable while providing high performance. The ASUS RS720Q-E8-RS8-P server design of its single-node expansion allows us to purchase computing resources required by the project as needed. That enables us to use our procurement budget effectively and also helps us avoid having idle computing resources."

"THE ASUS RS720Q-E8-RS8-P SERVER HAS CUT OUR ANIMATION RENDERING TIME BY 50%."

DONG-YUAN LU,
ASSISTANT MANAGER,
IT DEPARTMENT AT CGCG

PREMIUM COMPONENTS AND COOLING EFFICIENCY

To ensure the quality of the ASUS RS720Q-E8-RS8-P server, the rare ASUS Beat Thermal Chokes and DrMOS 12K durable solid capacitors have been utilized in its design. This configuration improves calculation efficiency and reduces the generation of heat, enabling it to work for up to 12,000 hours in high-temperature environments. The server also uses two 80 PLUS 2000W platinum-grade power supplies that can be mutually redundant. So, in addition to having up to 94% power efficiency, even if one of the power supplies fails, there will be no interruption to the application service. When a faulty part is discovered, IT personnel can just quickly hot swap it out.

In order to cut down on server management times for IT personnel, ASUS also developed the ASMB-iKVM remote server management chip, which supports a web management interface and comes pre-installed in the server. Enterprise users can see the status of the server remotely without purchasing expensive KVM equipment, saving users the inconvenience of logging into each system, one by one, thereby helping companies improve overall work efficiency.



"ASUS gave us the software source code of the ASMB-iKVM remote server management chip, allowing us to further develop tools that can monitor processor operations. When it finds an animation operation that has failed, it automatically restarts the server." said by Dong-Yuan Lu.

There are currently more than 100 rack servers in CGCG's data center. The IT department has decided to purchase ASUS RS720Q-E8-RS8-P servers to gradually replace the old servers. This upgrade will allow CGCG to significantly reduce electricity costs while simplifying management of its entire data center.

"ASUS SERVERS ALLOW OUR IT DEPARTMENT WITH ONLY FIVE PEOPLE EASILY MANAGE A DATA CENTER WITH MORE THAN ONE HUNDRED COMPUTERS."

DONG-YUAN LU,
ASSISTANT MANAGER,
IT DEPARTMENT AT CGCG

Case Study — Academic

With the dramatic increase of computer processing power in recent years, artificial intelligence, deep learning and big data technologies are becoming more mature. These computing advances are enabling scientists to solve problems that used to be unsolvable, but many complex scientific problems remain. One of these challenges is the accurate prediction of natural disasters.

The Department of Earth Sciences at National Cheng Kung University (NCKU) in Taiwan is actively working on natural-disaster prediction and has created a high-performance computing (HPC) platform using two ASUS RS720Q-E8 servers and one ASUS RS520-E8 storage server to use for 3D full-waveform seismic tomography projects. This will help Taiwan establish a more comprehensive disaster prevention system.

Disaster Prevention System Using HPC Platform

NCKU, which was founded in 1931, is one of the top national universities in Taiwan. In recent years, the Department of Earth Sciences has determined three main areas of focus, based on the specialties of the faculty and the requirements of society: mineral science, natural resources, and the global environment.

Taiwan is located in one of Earth's biggest seismic zones, and as a result Taiwan has suffered severe damage from earthquakes over the years. NCKU's Professor En-jui Lee, who had previously participated in a 3D full-waveform seismic tomography project in southern California, created a high-performance computing platform for a 3D full-waveform seismic tomography system and earth sciences in Taiwan, on a limited budget.



In recent years, the processing power of GPUs has greatly improved. CPUs and GPUs apply different strategies for their processing tasks. CPUs, which can have around a dozen cores, are used to optimize sequence processing. GPUs, on the other hand, have thousands of cores, and excel at processing multiple tasks at the same time in parallel. In this age of rapid developments in artificial intelligence and deep learning, GPUs have become an effective tool for scientists to achieve results much more quickly.

IMPROVED PERFORMANCE AND FASTER CONNECTIVITY

Professor En-jui Lee noted that the objectives of 3D full-waveform seismic tomography can be divided into three aspects. Firstly, full wave field waveform analysis and simulations with multiple iterations are used to improve the resolution of current 3D velocity models. Secondly, strain tensors are calculated using stored high-resolution models, in order to improve the speed and accuracy of earthquake hypocenter simulations. Lastly, more accurate ground motion predictions are applied to improve the reliability of earthquake disaster analyses.

The ASUS RS720Q-E8 server is a high-performance 2U4N server and is responsible in this project for the primary supercomputing task. The two Intel® Xeon® E5-2650 v4 processors and two 16GB DDR4 RAM modules, combined with a 10,000rpm SAS hard drive, can fully satisfy the high-performance computing requirements.

The ASUS RS720Q-E8 server supports Quad LAN functions. It can offer high network bandwidth and is equipped with load balancing and fault tolerance features, which means it can provide high-speed network connectivity.

Furthermore, the server uses a 1+1 770W 80Plus Gold redundant power supply, allowing it to satisfy the power requirements for HPC reliability. Its hot-swappable design means that the power supply can undergo maintenance and repair without having to shut down the server, thus ensuring the operations of key projects.

"ASUS OFFERS
OUTSTANDING
PERFORMANCE
AND A HIGH LEVEL
OF STABILITY."

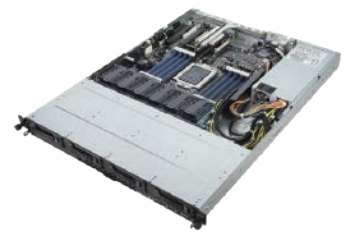


AMD Rack Servers



	RS700A-E9-RS4	RS700A-E9-RS12	RS720A-E9-RS24-E
Motherboard	KNPP-D32 R2.0	KNPP-D32 R2.0	KNPP-D32 R2.0
Processor	2 x Socket SP3 (LGA 4094) AMD EPYC™ 7000 Series	2 x Socket SP3 (LGA 4094) AMD EPYC™ 7000 Series	2 x Socket SP3 (LGA 4094) AMD EPYC™ 7000 Series
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)
Memory	32 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max. 4096GB	32 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max. 4096GB	32 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max. 4096GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 4 slots 1 x PCIe x16 (FH,FL) 1 x PCIe x8 (LP, HL) 1 x PCIe x8 (LP, HL) 1 x 1 x OCP Mezzanine 2.0 X16	Up to 4 slots 1 x PCIe x16 (FH,FL) 1 x PCIe x8 (LP, HL) 1 x PCIe x8 (LP, HL) 1 x 1 x OCP Mezzanine 2.0 X16	Up to 9 slots 6 x PCIe x8 or 3 PCIe x16 (FH, HL) 1 x PCIe x16 LP 1 x PCIe x8 (Default for ASUS PIKE Card) 1 x OCP Mezzanine 2.0 X16
Storage Controller	Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	4 x 2.5" or 3.5" Hot-swap Storage Bays (SATA/SAS) 2 x M.2 (Up to 22110, SATA & PCIe mode)	12 x 2.5" Hot-swap Storage Bays (4 x NVMe/SATA) 4 x SATA/SAS/NVMe + 4 x SATA/SAS) 2 x M.2 (Up to 22110, SATA & PCIe mode)	24 x 2.5" Hot-swap Storage Bays (SATA/SAS) 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adapter: Up to 100Gb/s Ethernet Adapter	2 x 1GbE LAN 1 x Management port Optional OCP Adapter: Up to 100Gb/s Ethernet Adapter	2 x 1GbE LAN 1 x Management port Optional OCP Adapter: Up to 100Gb/s Ethernet Adapter
Optical Drive	1 x Slim-type Optical Drive Bay	N/A	N/A
Front I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port	N/A	2 x USB 2.0 ports
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	686mm x 444mm x 44mm(1U) 27" x 17.48" x 1.73"	686mm x 444mm x 44mm(1U) 27" x 17.48" x 1.73"	750mm x 444mm x 88mm(2U) 29.52" x 17.48" x 3.46"
Net Weight Kg (CPU, DRAM & HDD not included)	11.85 kg	12.15 kg	16.85 kg
Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)	16.05 kg	15.75 kg	22 kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply	1+1 Redundant 800W 80 PLUS Platinum Power Supply	1+1 Redundant 1200W 80 PLUS Platinum Power Supply 1+1 Redundant 800W 80 PLUS Platinum Power Supply



**RS500A-E9-RS4-U****RS500A-E9-RS4****RS500A-E9-PS4**

Motherboard	KNPA-U16	KNPA-U16	KNPA-U16
Processor	2 x Socket SP3 (LGA 4094) AMD EPYC™ 7000 Series	2 x Socket SP3 (LGA 4094) AMD EPYC™ 7000 Series	2 x Socket SP3 (LGA 4094) AMD EPYC™ 7000 Series
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)
Memory	16 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max. 2048GB	16 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max. 2048GB	16 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max. 2048GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 3 slots 1 x PCIe 3.0 x16 (FH,HL) 1 x PCIe 3.0 x8 (FH,HL) 1 x OCP Mezzanine 2.0 X8	Up to 3 slots 1 x PCIe 3.0 x16 (FH,HL) 1 x PCIe 3.0 x8 (FH,HL) 1 x OCP Mezzanine 2.0 x8	Up to 3 slots 1 x PCIe 3.0 x16 (FH,HL) 1 x PCIe 3.0 x8 (FH,HL) 1 x OCP Mezzanine 2.0 x8
Storage Controller	Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	4 x 3.5 or 2.5" Hot-swap Storage Bays (SATA/SAS/NVMe) 1 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5 or 2.5" Hot-swap Storage Bays (SATA/SAS) 1 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5 or 2.5" Hot-swap Storage Bays (SATA/SAS) 1 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adapter: Up to 56Gb/s InfiniBand Adapter	2 x 1GbE LAN 1 x Management port Optional OCP Adapter: Up to 56Gb/s InfiniBand Adapter	2 x 1GbE LAN 1 x Management port Optional OCP Adapter: Up to 56Gb/s InfiniBand Adapter
Optical Drive	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	616 x 444 x 44mm(1U) 24.21" x 17.48" x 1.73"	616 x 444 x 44mm(1U) 24.21" x 17.48" x 1.73"	616 x 444 x 44mm(1U) 24.21" x 17.48" x 1.73"
Net Weight Kg (CPU, DRAM & HDD not included)	11 kg	11 kg	10 Kg
Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)	17 kg	17 kg	16 Kg
Power Supply (following different configuration by region)	1+1 Redundant 770W 80 PLUS Platinum Power Supply	1+1 Redundant 770W 80 PLUS Platinum Power Supply	Single 650W 80 PLUS Platinum Power Supply



For details, please visit our website.
All specs are subject to change without any prior notice.

Rack Servers



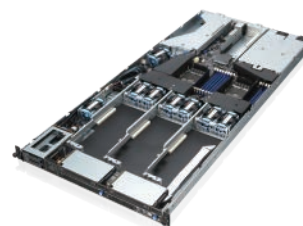
4U, 8 GPU

ESC8000 G4



4U, 8 GPU, 10GbE

ESC8000 G4/10G



1U, 4GPU, 2TB DDR4, 8 NVMe Storage

ESC4000 DHD G4

	ESC8000 G4	ESC8000 G4/10G	ESC4000 DHD G4
Motherboard	Z11PG-D24	Z11PG-D24	Z11PG-D16/HD
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) Intel® Xeon® Scalable processors (Up to 150W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	Up to 8 GPU Cards	Up to 8 GPU Cards	Up to 4 double deck GPU
Expansion Slots	Up to 11 slots 8 x PCIe x16 (FH,FL) Dual root topology: 2 x PCIe x16 (Gen3 x 16 link), LP, HL Single root topology: 1 x PCIe x16 (Gen3 x 16 link), LP, HL 1 x PCIe x8 (LP, HL)	Up to 11 slots 8 x PCIe x16 (FH,FL) Dual root topology: 2 x PCIe x16 (Gen3 x 16 link), LP, HL Single root topology: 1 x PCIe x16 (Gen3 x 16 link), LP, HL 1 x PCIe x8 (LP, HL)	Up to 6 slots 4 x PCIe x16 (FH, FL) 2 x PCIe x16 (LP, HL)
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	8 x 2.5" Hot-swap Storage Bays (8 x SATA or 6 x SATA + 2 x NVMe) 2 x M.2 (Up to 22110, SATA & PCIe mode)	8 x 2.5" Hot-swap Storage Bays (8 x SATA or 6 x SATA + 2 x NVMe) 2 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 2.5" Hot-swap Storage Bays (4 x SATA or 4 x NVMe) 4 x M.2 (Up to 2280, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port	2 x 10GbE LAN 1 x Management port	2 x 10GbE LAN 1 x Management port
Optical Drive	N/A	N/A	N/A
Front I/O ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x COM port	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x COM port	2 x USB 3.1 Gen1 ports
Rear I/O ports	2 x RJ-45 ports 1 x RJ-45 Management port	2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 port 1 x VGA port 1 x RJ-45 Management port 2 x RJ-45 ports
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	798mm x 439mm x 175.6mm(4U) 31.42" x 17.22" x 6.92"	798mm x 439mm x 175.6mm(4U) 31.42" x 17.22" x 6.92"	998mm x 439.5mm x 43.6mm (1U) 39.29" x 17.30" x 1.72"
Net Weight kg (CPU, DRAM & HDD not included)	33.5 kg	33.5 kg	20.1 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	40.925 kg	40.925 kg	23.5 kg
Power Supply (following different configuration by region)	2+1 Redundant 1600W 80 PLUS Platinum Power Supply 2+1 Redundant 2200W 80 PLUS Platinum Power Supply	2+1 Redundant 1600W 80 PLUS Platinum Power Supply 2+1 Redundant 2200W 80 PLUS Platinum Power Supply	2+1 Redundant 2200W 80 PLUS Platinum Power Supply





2U, 4 GPU, 8 2.5" Storage

ESC4000 G4S



2U, 4 GPU, 8 3.5" Storage

ESC4000 G4



2U, 4 GPU, 2 2.5"/3.5" Internal Cage

ESC4000 G4X

Motherboard	Z11PG-D16	Z11PG-D16	Z11PG-D16
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 150W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	16 x DIMM slots DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane® DC Persistent Memory (DCPMM)	16 x DIMM slots DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane® DC Persistent Memory (DCPMM)	16 x DIMM slots DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane® DC Persistent Memory (DCPMM)
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	Up to 4 double deck GPU or 8 single deck GPU	Up to 4 double deck or 8 single deck GPU	Up to 4 double deck or 8 single deck GPU
Expansion Slots	Up to 11 slots 4 x PCIe x16 (FH, HL) or 8 x PCIe x8 (FH, HL) 1 x PCIe x16 & 1 x PCIe x8 (LP, HL) 1 x PCIe x8 (LP, HL); Default for PIKE II	Up to 11 slots 4 x PCIe x16 (FH, HL) or 8 x PCIe x8 (FH, HL) 1 x PCIe x16 & 1 x PCIe x8 (LP, HL) 1 x PCIe x8 (LP, HL); Default for PIKE II	Up to 10 slots 4 x PCIe x16 (FH, FL) or 8 x PCIe x8 (FH, FL) 1 x PCIe x16 & 1 x PCIe x8 (LP, HL)
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1
Storage Bays	8 x 2.5" Hot-swap Storage Bays (8 x SATA or 6 x SATA + 2 x NVMe) 1 x M.2 (Up to 2280, SATA & PCIe mode)	8 x 2.5" Hot-swap Storage Bays (8 x SATA or 6 x SATA + 2 x NVMe) 1 x M.2 (Up to 2280, SATA & PCIe mode)	2 x 3.5" or 2.5" internal Storage Cages (SATA) 1 x M.2 (Up to 2280, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port
Optical Drive	N/A	N/A	N/A
Front I/O ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports
Rear I/O ports	2 x USB 3.1 Gen1 port 1 x VGA port 1 x RJ-45 Management port 2 x RJ-45 ports	2 x USB 3.1 Gen1 port 1 x VGA port 1 x RJ-45 Management port 2 x RJ-45 ports	2 x USB 3.1 Gen1 port 1 x VGA port 1 x RJ-45 Management port 2 x RJ-45 ports
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	800mm x 440mm x 88mm(2U) 31.50" x 17.22" x 3.46"	800mm x 440mm x 88mm(2U) 31.50" x 17.22" x 3.46"	800mm x 440mm x 88mm(2U) 31.50" x 17.22" x 3.46"
Net Weight kg (CPU, DRAM & HDD not included)	27.93 kg	34.1 kg	26.1 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	37.93 kg	44.1 kg	36.1 kg
Power Supply (following different configuration by region)	1+1 Redundant 1600W 80 PLUS Platinum Power Supply 1+1 Redundant 2200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W 80 PLUS Platinum Power Supply 1+1 Redundant 2200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W 80 PLUS Platinum Power Supply 1+1 Redundant 2200W 80 PLUS Platinum Power Supply



For details, please visit our website.
All specs are subject to change without any prior notice.



2U4N, HPC,
8 NVMe/SATA/SAS+16 SATA/SAS



2U4N, HPC, 8 SATA/SAS/NVMe



2U, 3TB DDR4, 24 SATA/SAS/NVMe, 2 M.2

	RS720Q-E9-RS24-S	RS720Q-E9-RS8-S	RS720-E9-RS24-U
Motherboard	Z11PH-D12	Z11PH-D12	Z11PP-D24
Processor	Per Node: 2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)	Per Node: 2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	12 x DIMM slots (per Node) DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 1536GB (per Node)	12 x DIMM slots (per Node) DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 1536GB (per Node)	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 2 slots (per Node) 1 x PCIe x16 (LP, HL) 1 x OCP 2.0 Mezzanine	Up to 2 slots (per Node) 1 x PCIe x16 (LP,HL) 1 x OCP 2.0 Mezzanine	Up to 9 slots 6 x PCIe x16 (FH, HL) 1 x PCIe x16 (LP, HL) 1 x PCIe x16 (FH, HL) 1 x OCP 2.0 Mezzanine x16
Storage Controller	Per Node: Support RAID 0, 1 Onboard Broadcom SAS3008 12G Controller	Per Node: Support RAID 0, 1 Onboard Broadcom SAS3008 12G Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	24 x 2.5" Hot-swap Storage Bays (8 x SATA/SAS/NVMe + 16 x SATA/SAS)	8 x 2.5" Hot-swap Storage Bays (SATA/SAS/NVMe)	24 x 2.5" Hot-swap Storage Bays (SATA/SAS/NVMe) 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	Per Node: 2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100Gb/s Ethernet Adaptor	Per Node: 2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor
Optical Drive	N/A	N/A	1 x External USB Optical Drive (option)
Front I/O ports	N/A	N/A	2 x USB 2.0 ports
Rear I/O ports	Per Node: 2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	Per Node: 2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	800mm x 444mm x 88mm(2U) 31.5" x 17.48" x 3.46"	800mm x 444mm x 88mm(2U) 31.5" x 17.48" x 3.46"	750mm x 444mm x 88mm(2U) 29.52" x 17.48" x 3.46"
Net Weight kg (CPU, DRAM & HDD not included)	37.5 kg	32.5 kg	19.5 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	46.5 kg	41.5 kg	26.87 kg
Power Supply (following different configuration by region)	1+1 Redundant 1600W 80 PLUS Platinum Power Supply 1+1 Redundant 2200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W 80 PLUS Platinum Power Supply 1+1 Redundant 2200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W 80 PLUS Platinum Power Supply





2U, 3TB DDR4, 24 SATA/SAS, 2M.2

RS720-E9-RS24-E



2U, 3TB DDR4,
8 SATA/SAS+4 SATA/SAS/NVMe,

RS720-E9-RS12-E



2U, 3TB DDR4, 2 GPU

RS720-E9-RS8-G

Motherboard	Z11PP-D24	Z11PP-D24	Z11PP-D24
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	Up to 2 double deck GPU Cards
Expansion Slots	Up to 9 slots 6 x PCIe x16 (FH, HL) 1 x PCIe x16 (LP, HL) 1 x PCIe x16 (FH, HL) 1 x OCP 2.0 Mezzanine x16	Up to 9 slots 6 x PCIe x16 (FH, HL) 1 x PCIe x16 (LP, HL) 1 x PCIe x16 (FH, HL) 1 x OCP 2.0 Mezzanine x16	Up to 7 slots 2 x PCIe x16 (FH, FL) 2 x PCIe x16 (FH, HL) 1 x PCIe x16 (LP, HL) 1 x PCIe x16 (FH, HL) 1 x OCP 2.0 Mezzanine x16
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	24 x 2.5" Hot-swap Storage Bays (24 x SATA/SAS) 2 x M.2 (Up to 22110, SATA & PCIe mode)	12 x 3.5" or 2.5" Hot-swap Storage Bays (8 x SATA/SAS + 4 x SATA/SAS/NVMe) 2 x 2.5" Hot-swap Storage Bays (Rear, 2 x SATA/NVMe, Option) 2 x M.2 (Up to 22110, SATA & PCIe mode)	8 x 3.5" or 2.5" Hot-swap Storage Bays (4 x SATA/SAS + 4x SATA/SAS/NVMe) 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor
Optical Drive	1 x External USB Optical Drive (option)	1 x External USB Optical Drive (Option)	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 2.0 ports	2 x USB 2.0 ports	2 x USB 3.1 ports Gen1 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	750mm x 444mm x 88mm(2U) 29.52" x 17.48" x 3.46"	750mm x 444mm x 88mm(2U) 29.52" x 17.48" x 3.46"	750mm x 444mm x 88mm(2U) 29.52" x 17.48" x 3.46"
Net Weight kg (CPU, DRAM & HDD not included)	18 kg	17.55 kg	15.98 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	25.37 kg	24.92 kg	23.25 kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply (for 165W CPU and below) 1+1 Redundant 1200W 80 PLUS Platinum Power Supply	1+1 Redundant 800W 80 PLUS Platinum Power Supply 1+1 Redundant 850W 80 PLUS Titanium Power Supply	1+1 Redundant 1200W 80 PLUS Platinum Power Supply(for 165W CPU and below) 1+1 Redundant 1300W 80 PLUS Platinum Power Supply



2U, 3TB DDR4,
4 x SATA/SAS+4 x SATA/SAS/NVMe



1U, 3TB DDR4, 12 Multi-Storage Bays



1U, 3TB DDR4, Dual M.2 slots

	RS720-E9-RS8	RS700-E9-RS12	RS700-E9-RS4
Motherboard	Z11PP-D24	Z11PP-D24	Z11PP-D24
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB	24 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Intel® Optane™ DC persistent memory (DCPMM) Max 9216GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 9 slots 6 x PCIe x16 (FH, HL) 1 x PCIe x16 (LP, HL) 1 x PCIe x16 (FH, HL) 1 x OCP 2.0 Mezzanine x16	Up to 4 slots 1 x PCIe x16 (FH, HL, Default NVME4-OCuLink Card) 2 x PCIe x8 (LP, HL) 1 x OCP 2.0 Mezzanine x16	Up to 4 slots 1 x PCIe x16 (FH, HL) 2 x PCIe x8 (LP, HL) 1 x OCP 2.0 Mezzanine x16
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	8 x 3.5" or 2.5" Hot-swap Storage Bays(4 x SATA/SAS + 4 x SATA/SAS/NVMe) 2 x 2.5" Hot-swap Storage Bays (Rear, 2 x SATA/NVMe, Option) 2 x M.2 (Up to 22110, SATA & PCIe mode)	12 x 2.5" Hot-swap Storage Bays: Option1: 2 x NVMe + 6 x NVMe/SATA + 4 x SATA Option2: 4 x NVMe/SATA + 8 x SATA/SAS Option3: 2 x NVMe + 2 x NVMe/SATA + 8 x SATA Option4: 4 x SATA + 8 x SATA/SAS Option5: 2 x Dummy + 10 x SATA 2 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-swap Storage Bays 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor
Optical Drive	1 x Slim-type Optical Drive Bay	N/A	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 3.1 ports Gen1 1 x VGA port	N/A	2 x USB 3.1 ports Gen1 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	750mm x 444mm x 88mm(2U) 29.52" x 17.48" x 3.46"	686mm x 444mm x 44mm(1U) 27" x 17.48" x 1.73"	686mm x 444mm x 44mm(1U) 27" x 17.48" x 1.73"
Net Weight kg (CPU, DRAM & HDD not included)	15.98 kg	16.8 kg	16.5 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	23.25 kg	18.35 kg	18.05 kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply 1+1 Redundant 850W 80 PLUS Titanium Power Supply	1+1 Redundant 800W 80 LUS Platinum Power Supply	1+1 Redundant 800W/550W 80 PLUS Platinum Power Supply



4U, 36 Storage Bays, Data Center

RS540-E9-RS36-E



2U, 2 M.2,
8 x SATA/SAS+4 x SATA/SAS/NVMe

RS520-E9-RS12-E



2U, 2 M.2,
4 x SATA/SAS+4 x SATA/SAS/NVMe

RS520-E9-RS8

Motherboard	Z11PR-D16	Z11PR-D16	Z11PR-D16
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 85W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 150W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 150W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	16 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 4096GB	16 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 4096GB	16 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 4096GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 7 slots 2 x PCIe x16 (LP, HL) 4 x PCIe x8 (LP, HL) 1 x OCP 2.0 Mezzanine x16	Up to 7 slots 2 x PCIe x16 (LP, HL) 4 x PCIe x8 (LP, HL) 1 x OCP 2.0 Mezzanine x16	Up to 7 slots 2 x PCIe x16 (LP, HL) 4 x PCIe x8 (LP, HL) 1 x OCP 2.0 Mezzanine x16
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support Intel® VROC Software RAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	24 x Front Hot-Swap 3.5" or 2.5" Storage Bays 12 x Rear Hot-Swap 3.5" or 2.5" Storage Bays 2 x Hot-Swap 2.5" Storage Bays (Rear) 2 x M.2 (Up to 2280, SATA & PCIe mode)	12 x 3.5" or 2.5" Hot-swap Storage Bays (Up to 4 NVMe) 2 x 2.5" Hot-Swap Storage Bays (Rear) 2 x M.2 (Up to 2280, SATA & PCIe mode)	8 x 3.5" or 2.5" Hot-swap Storage Bays (Up to 4 NVMe) 2 x 2.5" Hot-Swap Storage Bays (Rear) 2 x M.2 (Up to 2280, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor
Optical Drive	N/A	1 x External USB Optical Drive (Option)	1 x slim-type Optical Drive Bay
Front I/O ports	2 x USB 2.0 ports	2 x USB 2.0 ports	2 x USB 3.1 Gen1 ports 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	615mm x 447mm x 176mm (4U) 24.21" x 17.6" x 6.92"	615mm x 444mm x 88mm (2U) 24.21" x 17.48" x 3.46"	615mm x 444mm x 88mm (2U) 24.21" x 17.48" x 3.46"
Net Weight kg (CPU, DRAM & HDD not included)	27.73 kg	24.55 kg	19.7 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	36.1 kg	30.1 kg	27.97 kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply	1+1 Redundant 800W 80 PLUS Platinum Power Supply	1+1 Redundant 800W 80 PLUS Platinum Power Supply





1U, 2 M.2,
2TB DDR4, 4 SATA/SAS/NVMe



1U, 2TB DDR4, 4 SATA/SAS, 2 M.2



1U, 2TB DDR4, 4 SATA/SAS, 2 M.2

	RS500-E9-RS4-U	RS500-E9-RS4	RS500-E9-PS4
Motherboard	Z11PR-D16-DC	Z11PR-D16-DC	Z11PR-D16-DC
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)
Chipset	Intel® C621	Intel® C621	Intel® C621
Memory	16 x DIMM slots DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 2048GB	16 x DIMM slots DDR4 up to 2666/2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 2048GB	16 x DIMM slots DDR4 up to 2666/2933 RDIMM/LR-DIMM/ LR-DIMM 3DS, Max 2048GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 3 slots 1 x PCIe x16 (FH,HL) 1 x PCIe x8 (FH,HL) 1 x OCP 2.0 Mezzanine x16	Up to 3 slots 1 x PCIe x16 (FH,HL) 1 x PCIe x8 (FH,HL) 1 x OCP 2.0 Mezzanine x16	Up to 3 slots 1 x PCIe x16 (FH,HL) 1 x PCIe x8 (FH,HL) 1 x OCP 2.0 Mezzanine x16
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	4 x 3.5" or 2.5" Hot-swap Storage Bays (SATA/SAS/NVMe) 2 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-swap Storage Bays (SATA/SAS) 2 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-swap Storage Bays (SATA/SAS) 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor
Optical Drive	1 x slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	616 x 444 x 44mm (1U) 24.21" x 17.48" x 1.73"	616 x 444 x 44mm(1U) 24.21" x 17.48" x 1.73"	616 x 444 x 44mm(1U) 24.21" x 17.48" x 1.73"
Net Weight kg (CPU, DRAM & HDD not included)	11 kg	11 kg	10 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	17 kg	17 kg	16 kg
Power Supply (following different configuration by region)	1+1 Redundant 770W 80 PLUS Platinum Power Supply 1+1 Redundant 450W 80 PLUS Gold Power Supply	1+1 Redundant 770W 80 PLUS Platinum Power Supply 1+1 Redundant 450W 80 PLUS Gold Power Supply	Single 650W 80 PLUS Platinum Power Supply





1U, New Mehlow Platform, 1+1 RPSU



1U, New Mehlow Platform, Single PSU



1U, New Mehlow Platform,
2 Internal Storage + 2 M.2

	RS300-E10-RS4	RS300-E10-PS4	RS100-E10-PI2
Motherboard	P11C-C/4L/SYS	P11C-C/4L/SYS	P11C-M/4L
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W)	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W)	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W)
Chipset	Intel® C242	Intel® C242	Intel® C242
Memory	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST2500 32MB	Aspeed AST2500 32MB	Aspeed AST2500 32MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 2 slots 2 x PCIe x8 (FH, HL)	Up to 2 slots 2 x PCIe x8 (FH, HL)	Up to 1 slot 1 x PCIe x16 (FH, HL)
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5
Storage Bays	4 x 3.5" or 2.5" Hot-swap Storage Bays (SATA/SAS) 2 x 2.5" Internal SSD bays 2 x M.2 (Up to 21100, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-Swap Storage Bays (SATA/SAS) 2 x 2.5" Internal SSD Bays 2 x M.2 (Up to 21110, SATA & PCIe mode)	2 x 3.5" Internal Storage Bays (Up to 1 x 3.5" HDD + 4 x 2.5" SSD) 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	4 x 1GbE LAN 1 x Management port	4 x 1GbE LAN 1 x Management port	4 x 1GbE LAN 1 x Management port
Optical Drive	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen2 ports 2 x USB 3.1 Gen1 ports 1 x VGA port 1 x External COM port 4 x RJ-45 ports 1 x RJ-45 Management port (Optional)	2 x USB 3.1 Gen2 ports 2 x USB 3.1 Gen1 ports 1 x VGA port 1 x External COM port 4 x RJ-45 ports 1 x RJ-45 Management port (Optional)	2 x USB 3.1 Gen2 ports 2 x USB 3.1 Gen1 ports 1 x VGA port 1 x External COM port 4 x RJ-45 ports 1 x RJ-45 Management port (Optional)
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center Optional ASMB9-ikVM for KVM-over-IP	ASUS Control Center Optional ASMB9-ikVM for KVM-over-IP	ASUS Control Center Optional ASMB9-ikVM for KVM-over-IP
Dimension	615mm x 444mm x 44mm (1U) 24.21" x 17.48" x 1.73"	615mm x 444mm x 44mm (1U) 24.21" x 17.48" x 1.73"	380mm x 430mm x 44mm (1U) 14.96" x 16.93" x 1.73"
Net Weight kg (CPU, DRAM & HDD not included)	12.87 kg	11.04 kg	7.5 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	18.99 kg	17.16 kg	11.72 kg
Power Supply (following different configuration by region)	1+1 Redundant 450W 80 PLUS Gold Power Supply	Single 400W 80 PLUS Gold Power Supply	Single 250W 80 PLUS Bronze Power Supply Single 350W 80 PLUS Gold Power Supply



For more information, please visit our website.
All specs are subject to change without any prior notice.



	ESC8000 G3	ESC4000 G3	ESC4000 G3S
Motherboard	Z10PG-D24	Z10PG-D16	Z10PG-D16
Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (160W)
Chipset	Intel® C612	Intel® C612	Intel® C612
Memory	24 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM Max 1536GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM Max 1024GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM Max 1024GB
VGA	Aspeed AST2400 32MB	Aspeed AST2400 32MB	Aspeed AST2400 32MB
Graphic	Up to 8 GPU Cards	Up to 4 GPU Cards	Up to 4 GPU Cards
Expansion Slots	Up to 10 slots Full-length/Full-height 8 x PCIe 3.0 x16 (x16 Link) + 1 x PCIe 3.0 x16 (x8 Link) Half-length/Low-profile 1 x PCIe 3.0 x8 (x8 Link)	Up to 10 slots 10 x PCIe x8 or 4 x PCIe x16 (FL, FH) + 2 x PCIe x8 Gen3	Up to 10 slots 10 x PCIe x8 or 4 x PCIe x16 (FL, FH) + 2 x PCIe x8 Gen3
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support LSI® MegaRAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support LSI® MegaRAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for PCIe RAID: Support LSI® MegaRAID Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	6 x 2.5" Hot-swap Storage Bays (SATA/SAS) 1 x M.2 (Up to 22110, SATA & PCIe mode)	8 x 2.5" Hot-swap Storage Bays (SATA/SAS)	6 x 2.5" Hot-swap Storage Bays (SATA/SAS)
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port
Optical Drive	N/A	1 x Slim-type Optical Drive Bay	N/A
Front I/O ports	1 x COM port 2 x USB 3.0 ports 2 x USB 2.0 ports 1 x VGA port	2 x USB 2.0 ports 1 x Internal Serial Port	2 x USB 2.0 ports 1 x Internal Serial Port
Rear I/O ports	2 x RJ-45 ports 1 x RJ-45 Management port	2 x USB 3.1 Gen1 ports 2 x RJ-45 ports 1 x RJ-45 Management port 1 x VGA port	2 x USB 3.1 Gen1 ports 2 x RJ-45 ports 1 x RJ-45 Management port 1 x VGA port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center	ASUS Control Center	ASUS Control Center
Dimension	759mm x 447mm x 130.6mm (3U) 29.88" x 17.6" x 5.14"	750mm x 444mm x 87mm (2U) 29.52" x 17.48" x 3.46"	750mm x 444mm x 87mm (2U) 29.52" x 17.48" x 3.46"
Net Weight kg (CPU, DRAM & HDD not included)	29.2 kg	19 kg	19 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	38.8 kg	29.8 kg	27.7 kg
Power Supply (following different configuration by region)	2+1 Redundant 1600W 80 PLUS Platinum Power Supply	1+1 Redundant 2000W 80PLUS Platinum Power Supply 1+1 Redundant 1620W 80PLUS Platinum Power Supply	1+1 Redundant 2000W 80PLUS Platinum Power Supply 1+1 Redundant 1620W 80PLUS Platinum Power Supply



**RS720-E8-RS24-ECP****RS700-E8-RS8 V2****RS540-E8-RS36-ECP**

Motherboard	Z10PE-D16	Z10PP-D24	Z10PR-D16
Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (120W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (95W)
Chipset	Intel® C612	Intel® C612	Intel® C612
Memory	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM 3DS Max 1024GB	24 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1536GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1024GB
VGA	Aspeed AST2500 64MB	Aspeed AST2400 32MB	Aspeed AST2400 32MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 5 slots 3 x PCIe x16 (LP) 1 x PCIe x8 (LP) 1 x PCIe x4 (LP)	Up to 4 slots 1 x PCIe x16 (FH, HL) 1 x PCIe x8 (LP, HL) 1 x PCIe x8, proprietary for ASUS PIKE II 1 x OCP Mezzanine x8	Up to 4 slots 3 x PCIe x8 (LP, HL) 1 x OCP Mezzanine x8
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	24 x 2.5" Hot-swap Storage Bays (SATA) 2 x 2.5" Hot-swap SSD Bays (Rear) 1 x M.2 (Up to 2242, SATA & PCIe mode)	8 x 2.5" Hot-swap Storage Bays (SATA/SAS) 1 x M.2 (Up to 2242, SATA & PCIe mode)	24 x Front 3.5"or 2.5" Hot-Swap Storage Bays 12 x Rear 3.5"or 2.5" Hot-Swap Storage Bays 2 x Hot-Swap 2.5" Storage Bays (Rear) 2 x M.2 (Up to 2242, SATA & PCIe mode)
Networking	4 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 56 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 56 Gb/s Ethernet Adaptor
Optical Drive	N/A	1 x Slim-type Optical Drive Bay	N/A
Front I/O ports	2 x USB 2.0 ports	2 x USB 2.0 ports 1 x VGA port	2 x USB 2.0 ports
Rear I/O ports	1 x COM port 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 4 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port	1 x COM port 2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port	1 x COM port 2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 1.2)	Trusted Platform Module (TPM 1.2)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	615mm x 444mm x 88mm (2U) 24.21" x 17.48" x 3.46"	686mm x 444mm x 44mm(1U) 27" x 17.48" x 1.73"	615mm x 447mm x 176mm (4U) 24.21" x 17.6" x 6.92"
Net Weight kg (CPU, DRAM & HDD not included)	15.66 kg	12.65 kg	25.915 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	23.12 kg	19.05 kg	34.95 kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply	1+1 Redundant 800W 80 PLUS Gold Power Supply	1+1 Redundant 800W 80 PLUS Platinum Power Supply



For more information, please visit our website.
All specs are subject to change without any prior notice.

**RS520-E8-RS12-EV2****RS520-E8-RS8 V2****RS500-E8-RS4 V2**

Motherboard	Z10PR-D16	Z10PR-D16	Z10PR-D16
Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)
Chipset	Intel® C612	Intel® C612	Intel® C612
Memory	16 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1024GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1024GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1024GB
VGA	Aspeed AST2400 32MB	Aspeed AST2400 32MB	Aspeed AST2400 32MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 4 slots 3 x PCIe x8 (LP, HL) 1 x OCP Mezzanine x8	Up to 4 slots 3 x PCIe x8 (LP, HL) 1 x OCP Mezzanine x8	Up to 3 slots 2 x PCIe x8 (FH, HL) 1 x OCP Mezzanine x8
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	12 x 3.5" or 2.5" Hot-swap Storage Bays 2 x 2.5" Hot-Swap Storage Bays (Rear) 2 x M.2 (Up to 2242, SATA & PCIe mode)	8 x 3.5" or 2.5" Hot-swap Storage Bays 1 x M.2 (Up to 2242, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-swap Storage Bays 1 x M.2 (Up to 2242, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 56 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 56 Gb/s Ethernet Adaptor	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 56 Gb/s Ethernet Adaptor
Optical Drive	N/A	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 2.0 ports	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 2.0 ports 1 x VGA port
Rear I/O ports	1 x COM port 2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port	1 x COM port 2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port
Security Options	Trusted Platform Module (TPM 1.2)	Trusted Platform Module (TPM 1.2)	Trusted Platform Module (TPM 1.2)
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP
Dimension	615mm x 444mm x 88mm (2U) 24.21" x 17.48" x 3.46"	615mm x 444mm x 88mm (2U) 24.21" x 17.48" x 3.46"	615mm x 444mm x 44mm (1U) 24.21" x 17.48" x 1.73"
Net Weight kg (CPU, DRAM & HDD not included)	15.05 kg	14.80 kg	10.93 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	22.15 kg	21.53 kg	17.18 kg
Power Supply (following different configuration by region)	1+1 Redundant 770W 80 PLUS Platinum Power Supply	1+1 Redundant 770W 80 PLUS Platinum Power Supply	1+1 Redundant 770W 80 PLUS Platinum Power Supply





	RS500-E8-PS4 V2	RS300-E9-RS4	RS300-E9-PS4
Motherboard	Z10PR-D16	P10S-C/4L/SYS	P10S-C/4L/SYS
Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (145W)	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v5/v6 processors (Up to 80W)	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v5/v6 processors (Up to 80W)
Chipset	Intel® C612	Intel® C232	Intel® C232
Memory	16x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1024GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST2400 32MB	Aspeed AST2400 32MB	Aspeed AST2400 32MB
Graphic	N/A	N/A	N/A
Expansion Slots	Up to 3 slots 2 x PCIe x8 link (FH, HL) 1 x OCP Mezzanine x8	Up to 2 slots 1 x PCIe x16 (FH, HL) 1 x PCIe x8 (FH, HL)	Up to 2 slots 1 x PCIe x16 (FH, HL) 1 x PCIe x8 (FH, HL)
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	4 x 3.5" or 2.5" Hot-swap Storage Bays 1 x M.2 (Up to 2242, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-Swap Storage Bays 2 x 2.5" Internal SSD Bays 2 x M.2 (Up to 2280, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-Swap Storage Bays 2 x 2.5" Internal SSD Bays 2 x M.2 (Up to 2280, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 56 Gb/s Ethernet Adaptor	4 x 1GbE LAN 1 x Management port	4 x 1GbE LAN 1 x Management port
Optical Drive	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay	1 x Slim-type Optical Drive Bay
Front I/O ports	2 x USB 2.0 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 1 x VGA port
Rear I/O ports	2 x USB 3.1 Gen1 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port	4 x RJ-45 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x PS/2 keyboard/mouse combo port 1 x RJ-45 management port (Optional)	4 x RJ-45 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x PS/2 keyboard/mouse combo port 1 x RJ-45 management port (Optional)
Security Options	Trusted Platform Module (TPM 1.2)	-	-
Management Solution	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP
Dimension	615mm x 444mm x 44mm (1U) 24.21" x 17.48" x 1.73"	615mm x 444mm x 44mm (1U) 24.21" x 17.48" x 1.73"	615mm x 444mm x 44mm (1U) 24.21" x 17.48" x 1.73"
Net Weight kg (CPU, DRAM & HDD not included)	9.84 kg	10.64 kg	8.98 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	16.10 kg	16.75 kg	15.09 kg
Power Supply (following different configuration by region)	Single 600W 80 PLUS Gold Power Supply Single 650W 80 PLUS Platinum Power Supply	1+1 Redundant 450W 80 PLUS Gold Power Supply	Single 400W 80 PLUS Gold Power Supply





RS200-E9-PS2

RS100-E9-PI2

Motherboard	P10S-C/4L/SYS	P10S-M-DC
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v5/v6 processors (Up to 80W)	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v5/v6 processors (Up to 80W)
Chipset	Intel® C232	Intel® C232
Memory	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST2400 32MB	Aspeed AST2400 32MB
Graphic	N/A	N/A
Expansion Slots	Up to 2 slots 1 x PCIe x16 (FH, HL) 1 x PCIe x8 (FH, HL)	Up to 1 slot 1 x PCIe x16 (FH, HL)
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	2 x 2.5" Hot-Swap Storage Bays 2 x 2.5" Internal SSD Bays 2 x M.2 (Up to 2280, SATA & PCIe mode)	2 x 3.5" Internal Storage Bays or 1 x 3.5" HDD + 2 x 2.5" SSD)
Networking	4 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port
Optical Drive	N/A	1 x Slim-type Optical Drive Bay
Front I/O ports	1 x COM port (Optional)	2 x USB 3.1 Gen1 ports 1 x VGA port
Rear I/O ports	4 x RJ-45 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x PS/2 keyboard/mouse combo port 1 x RJ-45 management port (Optional)	1 x COM port 2 x RJ-45 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x PS/2 keyboard/mouse port 1 x RJ-45 management port (Optional)
Security Options	-	N/A
Management Solution	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP
Dimension	383mm x 444mm x 44mm (1U) 15.08" x 17.48" x 1.73"	380mm x 430mm x 44mm (1U) 14.96" x 16.93" x 1.73"
Net Weight kg (CPU, DRAM & HDD not included)	5.96 kg	5.3 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	12.12 kg	10.6 kg
Power Supply (following different configuration by region)	Single 250W 80 PLUS Bronze Power Supply	Single 250W 80 PLUS Bronze Power Supply



Tower Servers



Tower/5U, 8+2 Storage Bays, 4 USB3.1

TS700-E9-RS8



Tower/5U, New Mehlow Platform, 4 Storage Bays

TS300-E10-P54



Tower, 3+1 Storage Bays, 2 M.2

TS100-E10-PI4

	TS700-E9-RS8	TS300-E10-P54	TS100-E10-PI4
Motherboard	WS C621E SAGE	P11C-E 4L	P11C-X/AUDIO
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W)	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i7/i5/i3, Pentium® and Celeron® processors
Chipset	Intel® C621	Intel® C246	Intel® C242
Memory	12 x DIMM slots DDR4 up to 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max 1536GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB
VGA	BMC Integrated (Aspeed AST2500 64MB)	BMC Integrated (Aspeed AST2500 64MB)	BMC Integrated (Aspeed AST2500 64MB)
Graphic	Up to 2 GPU Cards	Up to 1 GPU Card	Up to 1 GPU Card
Expansion Slots	Up to 7 Slots 3 x PCIe x16 (Gen3 x16 link, FH, FL) 1 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 1 x PCIe x16 (Gen3 x0/x8 link, FH, FL) 2 x PCIe x16 (Gen3 x8 link, FH, FL)	Up to 5 slots 1 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 1 x PCIe x8 (Gen3 x0/x8 link, FH, FL) 1 x PCIe x8 (Gen3 x8 link, FH, FL) 1 x PCI 1 x MIO for Audio Card	Up to 4 slots 1 x PCIe x16 (Gen3 x16 link, FH, FL) 1 x PCIe x8 (Gen3 x8 link, FH, FL) 2 x PCI
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0,1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008-8i 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108-8i/16PD/1G 8-port SAS 12Gb/s RAID card ASUS PIKE II 3108-8i/16PD/2G 8-port SAS 12Gb/s RAID card	Support RAID 0,1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008-8i 8-port SAS 12G HBA card
Storage Bays	8 x 3.5" or 2.5" Hot-swap Storage Bays (4 x 3.5" SATA + 4 x 2.5" SAS with PIKE II) 2 x 2.5" Hot-swap Storage Bays (Rear) 1 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-swap Storage Bays	3 x 3.5" Internal Storage bays 1 x 2.5" Internal Storage bay 1 x Optional internal 5.25" to 3.5" or 2.5" drive cage 2 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN	4 x 1GbE LAN 1 x Management port	2 x 1GbE LAN
Optical Drive	3 x 5.25" media bays	4 x 5.25" media bays No ODD/DVD-RW;DVD-RW default for North America	2 x 5.25" media bays
Front I/O ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Headphone port 1 x Microphone port	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Headphone port 1 x Microphone port	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Headphone port 1 x Microphone port
Rear I/O ports	2 x USB3.1 Gen2 ports (USB Type-C™) 4 x USB3.1 Gen1 ports 2 x USB 2.0 ports 1 x USB BIOS Flashback button 1 x PS/2 KB port 2 x RJ-45 ports 5+1 Audio Jacks	2 x USB 3.1 Gen2 ports 2 x USB 3.1 Gen1 ports 1 x VGA port 1 x COM port 5 x RJ-45 ports	2 x USB 3.1 Gen2 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 2 x RJ-45 ports 3 x Audio Jacks 1 x PS/2 Keyboard/ Mouse port
Security Options	Trusted Platform Module (TPM 2.0) Chassis Intrusion Switch	N/A	Trusted Platform Module (TPM 2.0) Chassis Intrusion Switch
Management Solution	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Control Center
Dimension	455mm x 217.5mm x 545mm (SU) 17.91" x 8.54" x 21.45"	445mm x 217.5mm x 545mm (SU) 17.91" x 8.54" x 21.45"	423mm x 190mm x 435mm 16.65" x 7.48" x 17.1"
Net Weight kg (CPU, DRAM & HDD not included)	18.33 kg	15 kg	12.77 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	23.15 kg	18.9 kg	15.74 kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply 1+1 Redundant 1300W 80 PLUS Platinum Power Supply	Single 500W 80 PLUS Gold Power Supply	Single 500W 80 PLUS Gold Power Supply Single 300W 80 PLUS Bronze Power Supply

**TS700-E8-RS8 V2****TS500-E8-PS4 V2****TS300-E9-PS4**

Motherboard	Z10PE-D16 WS	Z10PA-D8	P10S-E/4L
Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (Up to 145W)	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5-2600 v4/v3 processors (Up to 120W)	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v5/v6 processors (Up to 80W)
Chipset	Intel® C612	Intel® C612	Intel® C236
Memory	16 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 1024GB	8 x DIMM slots DDR4 up to 2400 RDIMM/LRDIMM Max 512GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	BMC Integrated (Aspeed AST2400 32MB)	BMC Integrated (Aspeed AST2400 32MB)	BMC Integrated (Aspeed AST2400 32MB)
Graphic	Up to 2 GPU Cards	Up to 1 GPU Card	Up to 1 GPU Card
Expansion Slots	Up to 6 slots 4 x PCIe x16 (Gen3 x16 link, FH, FL) 2 x PCIe x16 (Gen3 x8 link, FH, FL)	Up to 6 slots 2 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 2 x PCIe x8 (Gen3 x0/x8 link, FH, FL) 1 x PCIe x8 (Gen3 x8 link, FH, FL) 1 x MIO for Audio Card	Up to 5 slots 1 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 1 x PCIe x8 (Gen3 x0/x8 link, FH, FL) 1 x PCIe x8 (Gen3 x4 link, FH, FL) 1 x PCI 1 x MIO for Audio Card
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12Gb/s HBA card ASUS PIKE II 3108 8-port SAS HW 12Gb/s RAID card
Storage Bays	8 x 3.5" or 2.5" Hot-swap Storage Bays 2 x 2.5" Hot-Swap SSD Bays (Rear) 1 x M.2 (Up to 22110, SATA & PCIe mode)	4 x 3.5" or 2.5" Hot-swap Storage Bays 1 x M.2 (Up to 2242, SATA & PCIe mode)	4 x 3.5" Hot-swap Storage Bays Optional: additional 4 x 3.5" Storage Bays
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port	4 x 1GbE LAN 1 x Management port
Optical Drive	3 x 5.25" media bays	3 x 5.25" media bays	3 x 5.25" media bays
Front I/O ports	1 x Headphone jack 1 x Microphone jack 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports	1 x Headphone jack (with optional MIO card) 1 x Microphone jack (with optional MIO card) 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Headphone port (with optional MIO card) 1 x Microphone in port (with optional MIO card)
Rear I/O ports	1 x PS/2 KB/MS port 1 x SPDIF port 1 x RJ-45 Management port 2 x RJ-45 port 6 x Audio jacks 4 x USB 3.1 Gen1 ports 4 x USB 2.0 ports 1 x VGA port	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 2 x RJ-45 ports 1 x RJ-45 Management port 1 x PS/2 KB/Mouse port	4 x RJ-45 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 2 x internal USB 3.1 Gen1 connector (Type A USB socket) 1 x VGA port 1 x PS/2 keyboard/mouse port 1 x RJ-45 management port (Optional)
Security Options	Trusted Platform Module (TPM 1.2) Chassis Intrusion Switch	Trusted Platform Module (TPM 1.2) Chassis Intrusion Switch	N/A
Management Solution	ASUS Control Center On-Board ASMB8-iKVM for KVM-over-IP	ASUS Control Center On-board ASMB8-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP
Dimension	455mm x 217.5mm x 545mm (5U) 17.91" x 8.54" x 21.45"	455mm x 217.5mm x 545mm (5U) 17.91" x 8.54" x 21.45"	445mm x 217.5mm x 545mm (5U) 17.91" x 8.54" x 21.45"
Net Weight kg (CPU, DRAM & HDD not included)	17.68 kg	15.11 kg	15.0kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	23.15 kg	20.30 kg	18.9kg
Power Supply (following different configuration by region)	1+1 Redundant 800W 80 PLUS Platinum Power Supply	Single 500W 80 PLUS Bronze Power Supply	Single 500W 80 PLUS Bronze Power Supply





TS100-E9-PI4

Motherboard	P10S-X
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v5/v6 processors (Up to 80W)
Chipset	Intel® C232
Memory	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST1400 64MB
Graphic	Up to 1 GPU Card
Expansion Slots	Up to 6 slots 1 x PCIe x16 (Gen3 x16 link, FH, FL) 1 x PCIe x8 (Gen3 x4 link, FH, FL) 4 x PCI 1 x MIO for Audio Card
Storage Controller	Support RAID 0, 1, 10, 5
Storage Bays	3 x 3.5" Internal Storage Bays 1 x 2.5" Internal Storage Bay
Networking	2 x 1GbE LAN
Optical Drive	2 x 5.25" media bays
Front I/O ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Microphone port (with optional MIO card) 1 x Headphone port (with optional MIO card)
Rear I/O ports	1 x COM Port 2 x RJ-45 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x VGA port 1 x PS/2 keyboard/mouse port
Security Options	N/A
Management Solution	ASUS Control Center
Dimension	423mm x 190mm x 435mm 16.65" x 7.48" x 17.13"
Net Weight kg <small>(CPU, DRAM & HDD not included)</small>	10.32kg
Gross Weight kg <small>(CPU, DRAM & HDD not included, Packing include)</small>	14.95kg
Power Supply <small>(following different configuration by region)</small>	Single 300W 80 PLUS Bronze Power Supply Single 500W 80PLUS Bronze Power Supply



For more information, please visit our website.
All specs are subject to change without any prior notice.

Workstations



Tower, 4 GPU, Dual Titanium Power



Tower, 4 GPU, ATX Power Supply



Tower, BMC, 7.1 HD Audio, U.2 & M.2, 3+1 Storage Bays

	E900 G4	Pro E800 G4	ESC700 G4
Motherboard	WS C621E SAGE	Pro WS C621-64L SAGE/10G	WS C422 PRO/SE
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	1 x Socket P (LGA 3647) Intel® Xeon® W-3200 Processor Family (Up to 205W)	1 x Socket R4 (LGA2066) Intel® Xeon W Series Processors (Up to 140W)
Chipset	Intel® C621	Intel® C621	Intel® C422
Memory	12 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max 1536GB	12 x DIMM slots DDR4 2933/2666 RDIMM/LR-DIMM/LR-DIMM 3DS Max 1536GB	8 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM Max 512GB
VGA	BMC Integrated (Aspeed AST2500 64MB)	BMC Integrated (Aspeed AST2500 64MB)	N/A
Graphic	Up to 4 GPU Cards	Up to 4 GPU Cards	Up to 2 GPU Cards
Expansion Slots	Up to 7 slots 3 x PCIe x16 (Gen3 x16 link, FH, FL) 2 x PCIe x16 (Gen3 x8 link, FH, FL) 1 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 1 x PCIe x16 (Gen3 x0/x8 link, FH, FL)	Up to 5 slots 4 x PCIe x16 (Gen3 x16 link, FH, FL) 1 x PCIe x16 (Gen3 x4 link, FH, FL)	Up to 5 slots 2 x PCIe x16 (Gen3 x16 link, FH, FL) 1 x PCIe x4 (Gen3 x4 link, FH, FL) 1 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 1 x PCIe x16 (Gen3 x0/x8 link, FH, FL)
Storage Controller	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12G/s HBA card ASUS PIKE II 3108 8-port SAS HW 12G/s RAID card	Support RAID 0, 1, 10, 5 Optional kits for SAS: ASUS PIKE II 3008 8-port SAS 12G/s HBA card ASUS PIKE II 3108 8-port SAS HW 12G/s RAID card	Support RAID 0, 1, 10, 5
Storage Bays	8 x 3.5" or 2.5" tool-less Storage Bay (4 x 3.5" SATA + 4 x 2.5" SAS with PIKE II) 1 x M.2 (Up to 22110, SATA & PCIe mode)	8 x Internal 3.5" tool-less Storage Bay 1 x M.2 (Up to 22110, SATA & PCIe mode)	3 x Internal 3.5" Storage Bays 1 x Internal 2.5" SSD Bays 1 x M.2 (Up to 22110, PCIe mode) 1 x M.2 (Up to 2280, SATA & PCIe mode) 1 x U.2
Networking	2 x 1GbE LAN	2 x 10GbE LAN	2 x 1GbE LAN
Audio	Realtek® ALC S1220A 7.1-Channel HD Audio	Realtek® ALC S1220A 7.1-Channel HD Audio	Realtek® ALC S1220A 7.1-Channel HD Audio
Optical Drive	2 x 5.25" media bays	2 x 5.25" media bays	2 x 5.25" media bays
Front I/O ports	4 x USB 3.1 Gen1 ports 1 x Headphone port 1 x Microphone port	4 x USB 3.1 Gen1 ports 1 x Headphone port 1 x Microphone port	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Headphone port 1 x Microphone port
Rear I/O ports	2 x USB3.1 Gen2 ports (1 USB TypeC™) 4 x USB3.1 Gen1 ports 2 x USB 2.0 ports (1 for USB BIOS Flashback) 1 x PS/2 and keyboard Mouse port 2 x RJ-45 LAN ports 5 x Audio Jacks 1 x Optical S/PDIF output	2 x USB 3.1 Gen2 ports (1 x Type-A, 1 x Type-C) 4 x USB 3.1 Gen1 ports 2 x 10GbE LAN ports (RJ45) 5 x Audio Jacks 1 x Optical S/PDIF output	1 x USB BIOS Flashback Button 2 x USB 3.1 Gen2 ports (1 USB TypeC™) 4 x USB 3.1 Gen1 ports 4 x USB 2.0 ports (1 for USB BIOS Flashback) 2 x RJ-45 ports 5 x Audio Jacks 1 x Optical S/PDIF output
Security Options	N/A	Trusted Platform Module (TPM 2.0) Chassis Intrusion Switch	Trusted Platform Module (TPM 2.0) Chassis Intrusion Switch
Management Solution	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center On-Board ASMB9-iKVM for KVM-over-IP (Both Share LAN)
Dimension	532mm x 243mm x 582mm 21.0" x 9.5" x 22.9"	532mm x 243mm x 582mm 21.0" x 9.5" x 22.9"	423mm x 190mm x 435mm 16.7" x 7.48" x 17.1"
Net Weight kg (CPU, DRAM & HDD not included)	18.33 kg	18 Kg	14 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	23.15 kg	23 Kg	16.2 kg
Power Supply (following different configuration by region)	1+1 Redundant 2000W 80PLUS Titanium Power Supply	Single 2000W 80PLUS Platinum Power Supply, Single 700W 80PLUS Gold Power Supply	Single 500W 80PLUS Bronze/Gold Power Supply, Single 700W 80PLUS Gold Power Supply, Single 1200W 80PLUS Platinum Power Supply



**Tower, HDMI/Displayport/DVI-D/VGA,
7.1 HD Audio**



**Mehlow platform Workstation,
Small Form Factor**



	E500 G5	E500 G5 SFF	ESC500 G4
Motherboard	WS C246 PRO	WS C246M PRO	P105 WS
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E processor (Up to 95W) Intel® Core™ i7/i5/i3, Pentium® and Celeron® Processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processor (Up to 95W) Intel® Core™ i7/i5/i3, Pentium® and Celeron® Processors	1 x Socket H4 (LGA1151) Intel® Xeon® E 1200 v6/v5 processors (Up to 80W) Intel® Core™ i7/i5/i3, Pentium® and Celeron® Processors
Chipset	Intel® C246	Intel® C246	Intel® C236
Memory	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	CPU Integrated	CPU Integrated	CPU Integrated
Graphic	Up to 2 GPU Card	Up to 1 GPU Card	Up to 1 GPU Card
Expansion Slots	Up to 6 slots 4 x PCIe x16 (FH, FL) 2 x PCIe x1	Up to 3 Slot 1 x PCIe x16 (LP, HL) 1 x PCIe x8 (LP, HL) 1 x PCIe x1	Up to 4 slots 1 x PCIe x16 (Gen3 x16/x8 link, FH, FL) 1 x PCIe x16 (Gen3 x8 link, FH, FL) 2 x PCIe x16 (Gen3 x4 link, FH, FL)
Storage Controller	Support RAID 0, 1, 10, 5	Support RAID 0, 1	Support RAID 0, 1, 10, 5
Storage Bays	3 x Internal 3.5" Storage Bays 1 x Internal 2.5" SSD Bays 1 x M.2 (Up to 2280, SATA & PCIe mode) 1 x M.2 (Up to 22110, PCIe mode)	2 x Internal 3.5" Storage Bays (Or switch to Up to 2 x 2.5" SSD by cage) 1 x M.2 (Up to 2280, SATA & PCIe mode)	3 x Internal 3.5" HDD Bays 1 x Internal 2.5" SSD Bays 1 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN	2 x 1GbE LAN	2 x 1GbE LAN
Audio	Realtek® ALC887 7.1-Channel HD Audio	Realtek® ALC887 7.1-Channel HD Audio	Realtek® ALC 1150 7.1-Channel HD Audio
Optical Drive	2 x 5.25" media bays	1 x 5.25" media bays	2 x 5.25" media bays
Front I/O ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Headphone port 1 x Microphone port	2 x USB 3.1 Gen1 ports 2 x USB 2.0 1 x Headphone port 1 x Microphone port	2 x USB 3.1 Gen1 2 x USB 2.0 1 x Headphone port 1 x Microphone port
Rear I/O ports	2 x USB 3.1 Gen2 ports (1 USB TypeC™) 4 x USB 3.1 Gen1 ports 1 x HDMI 1 x Displayport 1 x DVI-D 1 x VGA 2 x RJ-45 ports 5 x Audio Jacks 1 x Optical S/PDIF output	2 x USB 3.1 Gen2 ports 2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x HDMI 1 x Displayport 1 x VGA 2 x RJ-45 ports 5 x Audio Jacks 1 x Optical S/PDIF output	2 x USB 3.1 Gen2 ports (1 USB Type C™) 4 x USB 3.1 Gen1 ports 1 x Optical S/PDIF Out 1 x HDMI port 1 x DisplayPort 2 x RJ-45 ports 1 x DVI-D 1 x VGA 5 x Audio Jacks 1 x Optical S/PDIF output
Security Options	Trusted Platform Module (TPM 2.0) Chassis Intrusion Switch	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center	ASUS Control Center	ASUS Control Center
Dimension	423mm x 190mm x 435mm 16.7" x 7.48" x 17.1"	410mm x 96mm x 330 mm 16.14" x 3.78" x 13"	423mm x 190mm x 435mm
Net Weight kg (CPU, DRAM & HDD not included)	12.65 kg	6 kg	12.653 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	14.51 kg	7.5 kg	14.513 kg
Power Supply (following different configuration by region)	Single 300W 80PLUS Bronze Power Supply Single 500W 80PLUS Gold Power Supply Single 700W 80PLUS Gold Power Supply	Single 300W 80 PLUS Bronze Power Supply	Single 300W 80 PLUS Bronze Power Supply Single 500W 80 PLUS Bronze Power Supply Single 700W 80 PLUS Gold Power Supply





ESC500 G4 SFF

ESC510 G4 SFF

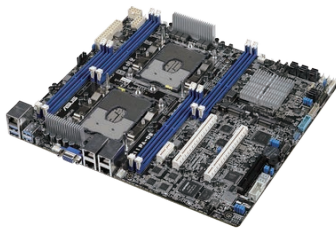
Motherboard	P105-M WS	P105-M WS
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E 1200 v6/v5 processors (Up to 80W) Intel® Core™ i7/i5/i3, Pentium® and Celeron® Processors	1 x Socket H4 (LGA1151) Intel® Xeon® E 1200 v6/v5 processors (Up to 80W) Intel® Core™ i7/i5/i3, Pentium® and Celeron® Processors
Chipset	Intel® C236	Intel® C236
Memory	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	CPU Integrated	CPU Integrated
Graphic	Up to 1 GPU Card	Up to 1 GPU Card
Expansion Slots	Up to 3 slots 1 x PCIe x16 (Gen3 x16 link, LP, FL) 1 x PCIe x8 (Gen3 x4 link, LP, FL) 1 x PCIe x1 (Gen3 x1 link, LP, FL)	Up to 3 slots 1 x PCIe x16 (Gen3 x16 link, LP, FL) 1 x PCIe x8 (Gen3 x4 link, LP, FL) 1 x PCIe x1 (Gen3 x1 link, LP, FL)
Storage Controller	Support RAID 0, 1, 10, 5	Support RAID 0, 1, 10, 5
Storage Bays	2 x Internal 3.5" HDD Bays (Or switch to Max 2 x 2.5" SSD by cage) 1 x M.2 (Up to 22110, SATA & PCIe mode)	2 x Internal 3.5" HDD Bays (Or switch to Max 2 x 2.5" SSD by cage) 1 x M.2 (Up to 22110, SATA & PCIe mode)
Networking	2 x 1GbE LAN	2 x 1GbE LAN
Audio	Realtek® ALC 1150 7.1-Channel HD Audio	Realtek® ALC 1150 7.1-Channel HD Audio
Optical Drive	1 x 5.25" media bays	1 x 5.25" media bays
Front I/O ports	2 x USB 3.1 Gen1 2 x USB 2.0 1 x Headphone port 1 x Microphone port	2 x USB 3.1 Gen1 2 x USB 2.0 1 x Headphone port 1 x Microphone port
Rear I/O ports	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Optical S/PDIF Out 1 x HDMI 1 x DisplayPort 2 x RJ-45 ports 1 x DVI-D 5 x Audio Jacks 1 x Optical S/PDIF output	2 x USB 3.1 Gen1 ports 2 x USB 2.0 ports 1 x Optical S/PDIF Out 1 x HDMI 1 x DisplayPort 2 x RJ-45 ports 1 x DVI-D 5 x Audio Jacks 1 x Optical S/PDIF output
Security Options	Trusted Platform Module (TPM 2.0)	Trusted Platform Module (TPM 2.0)
Management Solution	ASUS Control Center	ASUS Control Center
Dimension	410mm x 96mm x 330 mm	410mm x 96mm x 330 mm
Net Weight kg (CPU, DRAM & HDD not included)	6 kg	6 kg
Gross Weight kg (CPU, DRAM & HDD not included, Packing include)	7.5 kg	7.5 kg
Power Supply (following different configuration by region)	Single 250W 80 PLUS Power Supply	Single 300W 80 PLUS Power Supply



Server Motherboards



Z11PR-D16



Z11PA-D8

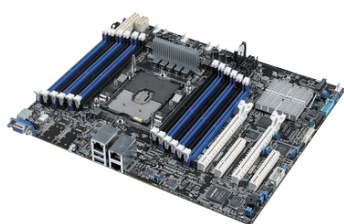


Z11PA-U12/10G-2S

	Z11PR-D16	Z11PA-D8	Z11PA-U12/10G-2S
Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 150W)	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)	1 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)
Chipset	Intel® C621	Intel® C621	Intel® C622
Memory	16 x DIMM slots DDR4 up to 2933 RDIMM/LR-DIMM/LR-DIMM 3DS Max 4096GB	8 x DIMM slots DDR4 up to 2666 RDIMM/LRDIMM/NVDIMM/3DS DIMM Max 1024GB	12 x DIMM slots DDR4 up to 2666 RDIMM/LRDIMM/NVDIMM/3DS DIMM Max 1536GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Expansion Slots	Up to 7 slots 2 x PCIe 3.0 x16 4 x PCIe 3.0 x8 1 x OCP 2.0 Mezzanine x16	Up to 3 slots 2 x PCIe 3.0 x16 1 x PCIe 3.0 x8	Up to 4 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 1 x PCIe 3.0 x4 *Switch to x8 link if x8 slot is occupied
Storage	11 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x M.2 (Up to type 2280, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support Optional kits for SAS upgrade	12 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 4 x SATA 6Gb/s ports 2 x M.2 (Up to type 22110, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support Optional kits for SAS upgrade	13 SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (Up to type 2280, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support Optional kits for SAS upgrade
Networking	2 x 1GbE LAN 1 x Management port Optional OCP Adaptor: Up to 100 Gb/s Ethernet Adaptor	4 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 2 x 10GbE LAN 1 x Management port
Audio	N/A	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 2 x USB 2.0 headers at mid-board 1 x VGA port 1 x TPM header 1 x COM port header 1 x Micro SD card slot	4 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x VGA port 1 x PS/2 KB/Mouse 1 x TPM header 1 x COM port header	2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x VGA port 1 x PS/2 KB/Mouse 1 x TPM header 1 x COM port header
Management Solution	ASUS Control Center ASMB9-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP
Form Factor	SSI EEB, 12" x 13"	CEB, 12" x 10.5"	ATX, 12" x 9.6"

For more information, please visit our website.
All specs are subject to change without any prior notice.





Z11PA-U12

P11C-C/4L

P11C-X

Processor	1 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 165W)	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C622	Intel® C242	Intel® C242
Memory	12 x DIMM slots DDR4 up to 2666 RDIMM/LRDIMM/NVDIMM/3DS DIMM Max 1536GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST2500 64MB	Aspeed AST2500 32MB	Aspeed AST2510 64MB
Expansion Slots	Up to 4 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 1 x PCIe 3.0 x4 *Switch to x8 link if x8 slot is occupied	Up to 4 slots 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 1 x MIO 1 x PCI 32bit/33 MHz *Switch to x8 link if x8 slot is occupied	Up to 4 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x4 2 x PCI 32bit/33 MHz
Storage	13 SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (Up to type 2280, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support Optional kits for SAS upgrade	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x M.2 (Up to type 22110, SATA & PCIe mode) Optional kits for SAS upgrade	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x M.2 (Up to type 22110, SATA mode) Optional kits for SAS upgrade
Networking	2 x 1GbE LAN 1 x Management port	4 x 1GbE LAN 1 x Management port	2 x 1GbE LAN
Audio	N/A	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x VGA port 1 x PS/2 KB/Mouse 1 x TPM header 1 x COM port header	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 2.0 connector (Type A USB socket) 1 x VGA header at mid-board 1 x VGA port 1 x TPM header 2 x COM port headers	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 port at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x VGA port 1 x COM port header 1 x PS/2 KB/Mouse 1 x TPM header
Management Solution	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Control Center
Form Factor	ATX, 12" x 9.6"	ATX, 12" x 9.6"	ATX, 12" x 9.6"





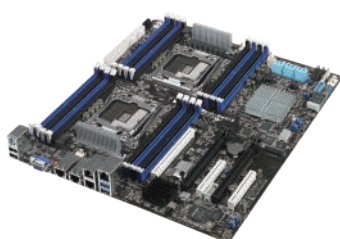
	P11C-X/Audio	P11C-M/4L	P11C-M/10G-2T
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel®Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C242	Intel® C242	Intel® C242
Memory	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST2510 64MB	Aspeed AST2500 32MB	Aspeed AST2500 32MB
Expansion Slots	Up to 4 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x4 2 x PCI 32bit/33 MHz	Up to 2 slots 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 *Switch to x8 link if x8 link is occupied	Up to 2 slots 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 *Switch to 8 link if x8 link is occupied
Storage	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x M.2 (Up to type 22110, SATA mode) Optional kits for SAS upgrade	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x M.2 (Up to type 22110, SATA & PCIe mode) Optional kits for SAS upgrade	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x M.2 (Up to type 22110, SATA & PCIe mode) Optional kits for SAS upgrade
Networking	2 x 1GbE LAN	4 x 1GbE LAN 1 x Management port	2 x 10GbE LAN 1 x Management port
Audio	Realtek ALC887 7.1 HD Audio	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x VGA port 1 x COM port header 1 x PS/2 KB/Mouse 1 x TPM header	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 2.0 connector (Type A USB socket) 1 x VGA header 1 x VGA port 1 x COM port header 1 x COM port header 1 x TPM header	2 x USB3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header st mid-board 1 x USB 2.0 header at mid-board 1 x VGA header 1 x VGA port 1 x COM port header 1 x TPM header
Management Solution	ASUS Control Center	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Contorl Center On-Board ASMB9-iKVM for KVM-over-IP
Form Factor	ATX, 12" x 9.6"	Micro ATX, 9.6" x 9.6"	Micro ATX, 9.6" x 9.6"





	P11C-I	KNPA-U16	Z10PH-D16
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket SP3 AMD EPYC™ 7000 Series	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family
Chipset	Intel® C242	System on Chip (SoC)	Intel® C612
Memory	2 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 32GB	16 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/ LR-DIMM 3DS Max 2048GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max 1024GB
VGA	Aspeed AST2500 32MB	Aspeed AST2500 64MB	N/A
Expansion Slots	Up to 1 slot 1 x PCIe 3.0 x16	Up to 7 slots 1x PCIe 3.0 x16 Slot (x16 link) FL 1x PCIe 3.0 x8 Slot (x8 link q-switch from slot-3) FL 1x PCIe 3.0 x16 Slot* 2x PCIe 3.0 x8 Slot (x8 link) HL 1x PCIe 3.0 x24 Slot (x16 link + x8 link) HL 1 x OCP 2.0 Mezzanine (x8 link) *Switch to 8 link if x8 link is occupied	Up to 1 slot 1 x PCIe 3.0 x 24
Storage	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade	4 x SATA3 6Gb/s ports (RAID 0, 1, 10, 5) 8 x SATA3 6Gb/s ports by 2 Mini-SAS HD connectors 1 x M.2 (Up to type 22110, SATA & PCIe mode) Optional kits for SAS upgrade	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 5 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 1 x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port
Audio	N/A	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 2.0 connector (Type A USB socket) 1 x VGA port 1 x COM port header 1 x TPM header	2 x USB 3.1 Gen1 ports at rear 2 x USB 3.1 Gen1 (for front panel) 1 x USB 3.1 Gen 1 (Type-A vertical) 1 x Micro SD Card Slot 1 x Serial Port Header 1 x VGA Header 1 x VGA port 1 x TPM header	2 x USB 3.1 Gen1 ports at rear 1 x USB 2.0 header at mid-board 1 x USB 2.0 connector at mid-board 1 x TPM header 1 x VGA port 1 x COM port header
Management Solution	ASUS Control Center Optional ASMB9-iKVM for KVM-over-IP	ASUS Contorl Center On-Board ASMB9-iKVM for KVM-over-IP	ASUS Control Center ASMB8-iKVM for KVM-over-IP
Form Factor	Mini-ITX, 6.7" x 6.7"	EEB (12"x13", 305mm x 330mm)	Proprietary, 18.04" x 6.86"





Z10PE-D16/4L



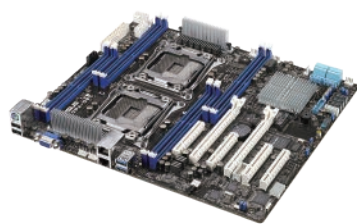
Z10PE-D16



Z10PR-D16

Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family
Chipset	Intel® C612	Intel® C612	Intel® C612
Memory	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max1024GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max1024GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max1024GB
VGA	N/A	N/A	N/A
Expansion Slots	Up to 5 slots 2 x PCIe 3.0 x16 2 x PCIe 3.0 x8 1 x PCIe 3.0 x4	Up to 5 slots 3 x PCIe 3.0 x16 1 x PCIe 3.0 x8 1 x PCIe 3.0 x4	Up to 3 slots 1 x PCIe 3.0 x16 2 x PCIe 3.0 x8
Storage	10 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) Optional kits for SAS upgrade	10 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 9 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 1 x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade	9 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 1 x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port
Audio	N/A	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x VGA port 1 x COM port header	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x VGA port 1 x COM port header	2 x USB 3.1 Gen1 ports at rear 1 x USB 2.0 ports at mid-board 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x VGA port 1 x COM port header
Management Solution	ASUS Control Center ASMB8-iKVM for KVM-over-IP	ASUS Control Center ASMB8-iKVM for KVM-over-IP	ASUS Control Center ASMB8-iKVM for KVM-over-IP
Form Factor	SSI EEB, 12" x 13"	SSI EEB, 12" x 13"	SSI EEB, 12" x 13"





Z10PA-D8C



Z10PA-D8



Z10PA-U8

Processor	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family	2 x Socket R3 (LGA 2011-3) Intel® Xeon® E5 Product family
Chipset	Intel® C612	Intel® C612	Intel® C612
Memory	8 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max512GB	8 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max512GB	8 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM/LR-DIMM Max 512GB
VGA	N/A	N/A	N/A
Expansion Slots	Up to 6 slots 2 x PCIe 3.0 x16 4 x PCIe 3.0 x8	Up to 5 slots 1 x PCIe 3.0 x16 3 x PCIe 3.0 x8 1 x PCIe 3.0 x4	Up to 6 slots 2 x PCIe 3.0 x16 3 x PCIe 3.0 x8 1 x PCI 32bit/33MHz
Storage	10 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 9 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 1x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade	10 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 9 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 1x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade	10 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 9 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 1x M.2 (Up to type 2242, SATA & PCIe mode) Optional kits for SAS upgrade
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN 1 x Management port
Audio	N/A	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x VGA port 1 x COM port header	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x VGA port 1 x COM port header	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x VGA port 1 x COM port header
Management Solution	ASUS Control Center	ASUS Control Center ASMB8-iKVM for KVM-over-IP	ASUS Control Center ASMB8-iKVM for KVM-over-IP
Form Factor	ATX,12" x 10"	ATX,12" x 10"	ATX, 12" x 9.6"





	P10S-E/4L	P10S-C/4L	P10S-V/4L
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 Processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 Processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C236	Intel® C232	Intel® C236
Memory	4 x DIMM slots DDR4 up to 2400/2133 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2400/2133 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST 2400 32MB	Aspeed AST 2400 32MB	Aspeed AST 1400 64MB
Expansion Slots	Up to 5 slots 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 1 x PCIe 3.0 x4 1 x PCI 32bit/33 MHz 1 x MIO *Switch to x8 link if x8 slot is occupied	Up to 3 slots 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 1 x PCI 32bit/33 MHz 1 x MIO *Switch to x8 link if x8 slot is occupied	Up to 7 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x4 1 x MIO 4 x PCI 32bit/33 MHz
Storage	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 2 x M.2 (Up to 2242, SATA & PCIe mode)	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 4 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) + 2 x M.2 (Up to 2242, SATA & PCIe mode)	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5)
Networking	4 x 1GbE LAN 1 x Management LAN	4 x 1GbE LAN 1 x Management LAN	4 x 1GbE LAN
Audio	Support MIO Card (Optional)	Support MIO Card (Optional)	Support MIO Card (Optional)
Other Onboard I/O Devices	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 2 x USB 2.0 header at mid-board 2 x USB 3.0 connector at mid-board (Type A USB socket) 1 x VGA port / header 2 x COM port header 1 x TPM connector	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 header at mid-board 1 x USB 2.0 header at mid-board 2 x USB 3.0 connectors at mid-board (Type A USB socket) 2 x COM port header 1 x VGA port / header 1 x TPM header	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 3.1 Gen1 connector (Type A USB Socket) 1 x VGA port / header 1 x COM port 1 x TPM connector
Management Solution	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP	ASUS Control Center
Form Factor	ATX, 12" x 9.6"	ATX, 12" x 9.6"	ATX, 12" x 9.6"



For more information, please visit our website.
All specs are subject to change without any prior notice.



P10S-X

P10S-M-DC

P10S-M

Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C232	Intel® C232	Intel® C232
Memory	4 x DIMM slots DDR4 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 2400 ECC/non-ECC UDIMM Max 64GB
VGA	Aspeed AST 1400 64MB	Aspeed AST 2400 32MB	Aspeed AST 2400 32MB
Expansion Slots	Up to 7 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x4 1 x MIO 4x PCI 32bit/33 MHz	Up to 2 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x4	Up to 4 slots 3 x PCIe 3.0 x4 or 1 x PCIe 3.0 x8 + 1 x PCIe 3.0 x4 1 x PCIe 3.0 x8
Storage	6 x SATA 6Gb/s ports	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 4 x SATA 6 Gb/s + 2 x M.2 connector	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5)
Networking	2 x 1GbE LAN	2 x 1GbE LAN 1 x Management LAN	2 x 1GbE LAN 1 x Management LAN
Audio	N/A	N/A	N/A
Other Onboard I/O Devices	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 3.1 Gen1 connector at mid-board 1 x COM port 1 x VGA port/header 1 x TPM header	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 3.1 Gen1 connector at mid-board (Type A USB Socket) 1 x COM port 1 x COM port header 1 x VGA port/header 1 x TPM header	2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x USB 3.1 Gen1 connector at mid-board (Type A USB Socket) 1 x COM port 1 x COM port header 1 x VGA port/header 1 x TPM header
Management Solution	ASUS Control Center	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP
Form Factor	ATX, 12" x 9.6"	Micro ATX, 9.6" x 9.6"	Micro ATX, 9.6" x 9.6"





P10S-I

Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E3-1200 v6 / v5 processors Intel® Core™ i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
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Chipset	Intel® C232
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Memory	2 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 32GB
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VGA	N/A
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Expansion Slots	Up to 1 slot 1 x PCIe 3.0 x16
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Storage	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 connector
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Networking	2 x 1GbE LAN
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Audio	N/A
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Other Onboard I/O Devices	1 x USB 3.1 Gen1 ports at mid-board (Type A USB Socket) 2 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 1 x VGA connector 1 x TPM header
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Management Solution	ASUS Control Center Optional ASMB8-iKVM for KVM-over-IP
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Form Factor	Mini-ITX, 6.7" x 6.7"
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Workstation Motherboards



WS C621E SAGE



WS C422 PRO/SE



WS C422 SAGE/10G

Processor	2 x Socket P (LGA 3647) 1st and 2nd Gen Intel® Xeon® Scalable processors (Up to 205W)	1 x Socket R4 (LGA2066) Intel® Xeon® W Series processors (Up to 140 W)	1 x Socket R4 (LGA2066) Intel® Xeon® W Series processors (Up to 140 W)
Chipset	Intel® C621	Intel® C422	Intel® C422
Memory	12 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM/RDIMM 3DS/LR-DIMM 3DS Max 1536 GB	8 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM Max 512GB	8 x DIMM slots DDR4 up to 2666 RDIMM/LR-DIMM Max 512GB
VGA	Aspeed AST2500 64MB Support VGA	N/A	N/A
Multi-GPU support	Support NVIDIA® 4-Way SLI® Technology Support AMD® 4-Way CrossFireX™ Technology	Support NVIDIA® 3-Way SLI® Technology Support AMD® 3-Way CrossFireX™ Technology	Support NVIDIA® 4-Way SLI® Technology Support AMD® 4-Way CrossFireX™ Technology
Expansion Slots	Up to 7 slots 3 x PCIe 3.0 x16 2 x PCIe 3.0 x16 (single at x16, dual at x8/x8) 2 x PCIe 3.0 x8	Up to 5 slots 2 x PCIe 3.0 x16 2 x PCIe 3.0 x16 (single at x16, dual at x8/x8) 1 x PCIe 3.0 x4	Up to 7 slots 7 x PCIe 3.0 x16 Slots (Single at x16, Dual at x16/x16, Quad at x16/x16/x16/x16, Seven at x16/x8/x8/x8/x8/x8/x8)
Storage	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x SATA 6Gb/s ports 4 x U.2 connectors 1 x M.2 (Up to 22110 type, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support	6 x SATA 6Gb/s ports (RAID 0, 1, 10) 1 x U.2 connector 1 x M.2 (Up to 22110 type, PCIe mode) 1 x M.2 (Up to 2280 type, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x U.2 connector 1 x M.2 (Up to 2280 type, PCIe Mode) 1 x M.2 (Up to 22110 type, PCIe Mode) Optional kits for Intel® VROC Software RAID support
Networking	2 x 1GbE LAN	2 x 1GbE LAN	2 x 10GbE LAN
Audio	Realtek® ALC S1220A 7.1 HD Audio	Realtek® ALC S1220A 7.1 HD Audio	Realtek® ALC S1220A 7.1 HD Audio
Other Onboard I/O Devices	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 4 x USB 3.1 Gen1 headers at mid-board 2 x USB 2.0 headers at mid-board 1 x PS/2 KB/Mouse 5 x Audio Jacks 1 x COM port header 1 x VGA connector 1 x TPM connector	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 1 x USB 3.1 Gen2 header at mid-board 2 x USB 3.1 Gen1 headers at mid-board 2 x USB 2.0 headers at mid-board 5 x Audio Jacks 1 x COM port header 1 x VGA connector 1 x TPM header	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen2 header at mid-board 2 x USB 3.1 Gen1 headers at mid-board 5 x Audio Jacks 1 x COM port header 1 x TPM header
Management Solution	Optional ASMB9-iKVM for KVM-over-IP	ASMB9-iKVM for KVM-over-IP	N/A
Form Factor	EEB, 12"x 13"	ATX, 12" x 9.6"	CEB, 12" x 10.5"





	WS C246 PRO	WS C246M PRO	WS C246M PRO/SE
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i9/i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i9/i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C246	Intel® C246	Intel® C246
Memory	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/ non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2666 ECC/non-ECC UDIMM Max 64GB
VGA	Integrated Graphics	Integrated Graphics	Integrated Graphics
Multi-GPU support	Support AMD® 3-Way CrossFireXTM Technology	N/A	N/A
Expansion Slots	Up to 6 slots 2 x PCIe 3.0 x1 1 x PCIe 3.0 x16* 1 x PCIe 3.0 x8 1 x PCIe 3.0 x4 1 x PCIe 3.0 x4 *Switch to x8 link if x8 slot is occupied	Up to 3 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x8 1 x PCIe 3.0 x1	Up to 3 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x8 1 x PCIe 3.0 x1
Storage	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (Up to 22110 type, PCIe mode) 1 x M.2 (Up to 2280 type, SATA & PCIe mode)	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (Up to 2280 type, SATA & PCIe mode)	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (Up to 2280 type, SATA & PCIe mode)
Networking	2 x 1GbE LAN	2 x 1GbE LAN	2 x 1GbE LAN
Audio	Realtek® ALC887 7.1 HD Audio	Realtek® ALC887 7.1 HD Audio	Realtek® ALC887 7.1 HD Audio
Other Onboard I/O Devices	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 2 x USB 2.0 header at mid-board 1 x HDMI port 1 x Displayport 1 x DVI-D port 1 x VGA port / header 5+1 Audio jacks 1 x COM port header 1 x TPM connector	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 2 x USB 2.0 ports at rear 2 x USB 2.0 headers at mid-board 1 x HDMI port 1 x Displayport 1 x VGA port / header 5+1 Audio jacks 1 x COM port header 1 x TPM connector	2 x USB 3.1 Gen2 ports at rear 2 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen1 header at mid-board 2 x USB 2.0 ports at rear 2 x USB 2.0 headers at mid-board 1 x HDMI port 1 x Display port 1 x VGA port 2x VGA port headers 5+1 Audio jacks 1 x COM port header 1 x TPM connector
Management Solution	ASUS Control Center	ASUS Control Center	ASUS Control Center
Form Factor	ATX, 12" x 9.6"	Micro ATX, 9.6" x 9.6"	Micro ATX, 9.6" x 9.6"





	WS X299 PRO	WS X299 PRO/SE	WS X299 SAGE
Processor	1 x Socket R4 (LGA2066) Intel® Core™ X-Series processors (Up to 165W)	1 x Socket R4 (LGA2066) Intel® Core™ X-Series processors (Up to 165W)	1 x Socket R4 (LGA2066) Intel® Core™ X-Series processors (Up to 165W)
Chipset	Intel® X299	Intel® X299	Intel® X299
Memory	8 x DIMM slots DDR4 up to 4133(O.C.) non-ECC/un-buffered memory Max 128GB	8 x DIMM slots DDR4 up to 4133(O.C.) non-ECC/un-buffered memory Max 128GB	8 x DIMM slots DDR4 up to 4200(O.C.) non-ECC/un-buffered memory Max 128GB
VGA	N/A	N/A	N/A
Multi-GPU support	Support NVIDIA® 3-Way SLI® Technology Support AMD® 3-Way CrossFireX™ Technology	Support NVIDIA® 3-Way SLI® Technology Support AMD® 3-Way CrossFireX™ Technology	Support NVIDIA® 4-Way SLI® Technology Support AMD® 4-Way CrossFireX™ Technology
Expansion Slots	Up to 5 slots 2 x PCIe 3.0 x16 1 x PCIe 3.0 x8 2 x PCIe 3.0 x4	Up to 5 slots 2 x PCIe 3.0 x16 1 x PCIe 3.0 x8 2 x PCIe 3.0 x4	Up to 7 slots 7 x PCIe 3.0 x16 Slots (Single at x16, Dual at x16/x16, Quad at x16/x16/x16/x16, Seven at x16/x8/x8/x8/x8/x8/x8)
Storage	6 x SATA 6.0 Gb/s ports (RAID 0, 1, 10, 5) 1 x U.2 connector 1 x M.2 (Up to 22110 type, PCIe mode) 1 x M.2 (Up to 2280 type, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support	6 x SATA 6.0 Gb/s ports (RAID 0, 1, 10, 5) 1 x U.2 connector 1 x M.2 (Up to 22110 type, PCIe mode) 1 x M.2 (Up to 2280 type, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support	8 x SATA 6.0 Gb/s ports (RAID 0, 1, 10, 5) 2 x U.2 connectors 1 x M.2 (Up to 22110 type, PCIe mode) 1 x M.2 (Up to 2280 type, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support
Networking	2 x 1GbE LAN	2 x 1GbE LAN	2 x 1GbE LAN
Audio	Realtek® ALC S1220A 7.1 HD Audio	Realtek® ALC S1220A 7.1 HD Audio	Realtek® ALC S1220A 7.1 HD Audio
Other Onboard I/O Devices	2 x USB 3.1 Gen2 ports at rear 4 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 1 x USB 3.1 Gen2 header at mid-board 2 x USB 3.1 Gen1 headers at mid-board 2 x USB 2.0 headers at mid-board 1 x COM port header 1 x TPM header	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 1 x USB 3.1 Gen2 header at mid-board 2 x USB 3.1 Gen1 headers at mid-board 2 x USB 2.0 headers at mid-board 1 x COM port header 5 x Audio jacks 1 x VGA connector 1 x TPM header	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 6 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 1 x USB 3.1 Gen2 header at mid-board 2 x USB 3.1 Gen1 headers at mid-board 5 x Audio jacks 1 x COM port header 1 x TPM header
Management Solution	N/A	ASMB9-iKVM for KVM-over-IP	N/A
Form Factor	ATX, 12" x 9.6"	ATX, 12" x 9.6"	CEB, 12" x 10.5"



**WS X299 SAGE/10G****WS Z390 PRO****Z10PE-D16 WS**

Processor	1 x Socket R4 (LGA2066) Intel® Core™ X-Series processors (Up to 165W)	1 x Socket H4 (LGA1151) Intel® Core™ i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	2 x socket R3(LGA2011-3) Intel® Xeon® E5 processors Intel® Core™ i7 processors
Chipset	Intel® X299	Intel® Z390	Intel® C612
Memory	8 x DIMM slots DDR4 up to 4200(O.C.) non-ECC/un-buffered memory Max 128GB	4 x DIMM slots DDR4 up to 4266(O.C.) Non-ECC/Un-buffered Memory Max 64GB	16 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM Max 1024GB
VGA	N/A	Integrated Graphics	ASpeed AST2400 32MB
Multi-GPU support	Support NVIDIA® 4-Way SLI® Technology Support AMD® 4-Way CrossFireX™ Technology	Support NVIDIA® 4-Way SLI® Technology Support AMD® 4-Way CrossFireX™ Technology	N/A
Expansion Slots	Up to 7 slots 7 x PCIe 3.0 x16 Slots (Single at x16, Dual at x16/x16, Quad at x16/x16/x16/x16, Seven at x16/x8/x8/x8/x8/x8/x8)	Up to 5 slots 4 x PCIe 3.0/2.0 x16 (single at x16, dual at x16/x16, triple at x16/x8/x8, quad x8/x8/x8/x8) 1 x PCIe x4	Up to 6 slots 4 x PCIe 3.0 x16 2 x PCIe 3.0 x8
Storage	8 x SATA 6.0 Gb/s ports (RAID 0, 1, 10, 5) 1 x U.2 connector 1 x M.2 (Up to 22110 type, PCIe mode) 1 x M.2 (Up to 2280 type, SATA & PCIe mode) Optional kits for Intel® VROC Software RAID support	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x U.2 connectors 2 x M.2 connectors (Up to 22110 type, SATA & PCIe mode)	10 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x M.2 (up to 22110 type)
Networking	2 x 10GbE LAN	2 x 1GbE LAN	2 x 1GbE LAN 1 x Mgt LAN
Audio	Realtek® ALC S1220A 7.1 HD Audio CODEC	Realtek® ALC S1220A 7.1 HD Audio	Realtek® ALC1150 7.1 HD Audio
Other Onboard I/O Devices	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 1 x USB 3.1 Gen2 header at mid-board 2 x USB 3.1 Gen1 headers at mid-board 5 x Audio jacks 1 x COM port header 1 x TPM header	6 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 2 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 2 x USB 3.1 Gen2 headers at mid-board 2 x USB 2.0 headers at rear 1 x HDMI port 1 x Displayport 5 x Audio jacks 1 x COM port header 1 x TPM Header	4 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 1 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x VGA header 1 x TPM header 1 x COM port header 1 x ASMB8-iKVM header
Management Solution	N/A	N/A	N/A
Form Factor	CEB, 12"x 10.5"	ATX, 12" x 9.6"	EEB, 12"x 13"



For more information, please visit our website.
All specs are subject to change without any prior notice.



Z10PE-D8 WS

Z270-WS

P10S WS

Processor	2 x socket (LGA2011) Intel® Xeon® E5 processors Intel® Core™ i7 processors	1 x Socket H4 (LGA1151) Intel® Core™ i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C612	Intel® Z270	Intel® C236
Memory	8 x DIMM slots DDR4 up to 2400 RDIMM/LR-DIMM Max 512GB	4 x DIMM slots DDR4 3866(O.C.) non-ECC/un-buffered memory Max 64GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	ASpeed AST2400 32MB	Integrated Graphics	Integrated Graphics
Multi-GPU support	N/A	Support NVIDIA® 4-Way/Quad-GPU SLI® Technology Support AMD® 4-Way/Quad-GPU CrossFireX™ Technology	Support AMD® Quad-GPU CrossFireXTM Technology
Expansion Slots	Up to 7 slots 4 x PCIe 3.0 x16 (Quad x8/x8/x8/x8) 2 x PCIe 3.0 x16 1 x PCIe 3.0 x16 (x8)	Up to 5 slots 4 x PCIe 3.0 x16 (Single at x16, Dual at x16/x16, Triple at x16/x8/x8, Quad at x8/x8/x8/x8) 1 x PCIe 3.0 x4	Up to 4 slots 1 x PCIe 3.0 x16 (x16/x8) 1 x PCIe 3.0 x8 2 x PCIe 3.0 x4
Storage	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 1 x SATA 6Gb/s Express port 1 x M.2 (up to 22110 type)	6 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) 2 x U.2 connectors 1 x M.2 connectors (Up to 22110 type, SATA & PCIe mode) 1 x M.2 connectors (Up to 22110 type, PCIe mode)	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 6 x SATA 6Gb/s with 2 x M.2 (Up to 22110 type, SATA & PCIe mode)
Networking	2 x 1GbE LAN	2 x 1GbE LAN	2 x 1GbE LAN
Audio	Realtek® ALC1150 7.1 HD Audio	Realtek® S1220A 7.1 HD, DTS® Connect/DTS® Headphone:X	Realtek® ALC1150 7.1 HD Audio
Other Onboard I/O Devices	6 x USB 3.1 Gen1 ports at rear 2 x USB 2.0 ports at rear 2 x USB 3.1 Gen1 header at mid-board 1 x USB 2.0 header at mid-board 1 x TPM header 1 x COM port header 1 x VGA header 1 x ASMB8-iKVM header	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 4 x USB 2.0 ports at rear 1 x USB 3.1 Gen2 header at mid-board (optional Type A or USB Type-C™) 2 x USB 3.1 Gen1 headers at mid-board 2 x USB 2.0 headers at mid-board 1 x HDMI port 1 x Displayport 5 x Audio jacks 1 x Optical S/PDIF out 1 x COM port header 1 x TPM Header	2 x USB 3.1 Gen2 ports at rear (1 USB Type-C™) 4 x USB 3.1 Gen1 ports at rear 2 x USB 3.1 Gen1 header at mid-board 2 x USB 2.0 headers at mid-board 1 x TPM header 1 x serial port header 1 x 8-channel Audio I/O 1 x DVI-D 1 x HDMI 1 x Displayport 1 x VGA
Management Solution	N/A	WfM 2.0, DMI 3.0, WOL by PME, PXE	ASUS Control Center
Form Factor	EEB, 12"x 13"	ATX, 12"x 9.6"	ATX, 12"x 9.6"





	P10S-M WS/IPMI-O	P10S-M WS
Processor	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors	1 x Socket H4 (LGA1151) Intel® Xeon® E processors (Up to 95W) Intel® Core™ i7/i5/i3 processors Intel® Pentium™ processors Intel® Celeron™ processors
Chipset	Intel® C236	Intel® C236
Memory	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB	4 x DIMM slots DDR4 up to 2400 ECC/non-ECC UDIMM Max 64GB
VGA	Integrated Graphics	Integrated Graphics
Multi-GPU support	NA	NA
Expansion Slots	Up to 3 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x8 1 x PCIe 3.0 x1	Up to 3 slots 1 x PCIe 3.0 x16 1 x PCIe 3.0 x8 1 x PCIe 3.0 x1
Storage	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 7 x SATA 6Gb/s ports with 1 x M.2 (Up to 22110 type, SATA & PCIe mode)	8 x SATA 6Gb/s ports (RAID 0, 1, 10, 5) or 7 x SATA 6Gb/s ports with 1 x M.2 (Up to 22110 type, SATA & PCIe mode)
Networking	2 x 1GbE LAN 1 x Management port	2 x 1GbE LAN
Audio	Realtek® ALC1150 7.1 HD Audio	Realtek® ALC1150 7.1 HD Audio
Other Onboard I/O Devices	2 x USB 2.0 ports at rear 2 x USB 3.1 Gen1 headers at mid-board 1 x USB 2.0 at mid-board 1 x 8-channel Audio I/O 1 x VGA header 1 x TPM header 1 x COM port header 2 x USB 3.1 Gen1 ports at rear 1 x DVI-D 1 x HDMI 1 x Displayport	2 x USB 2.0 ports at rear 2 x USB 3.1 Gen1 headers at mid-board 1 x USB 2.0 headers at mid-board 1 x 8-channel Audio I/O 1 x VGA header 1 x TPM header 1 x COM port header 2 x USB 3.1 Gen1 Ports at rear 1 x DVI-D 1 x HDMI
Management Solution	ASUS Control Center	ASUS Control Center
Form Factor	Micro ATX 9.6" x 9.6"	Micro ATX 9.6" x 9.6"



Accessory PIKE II



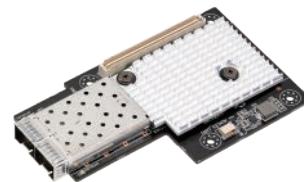
	PIKE II 3108-8i/240PD/2G	PIKE II 3108-8i/240PD	PIKE II 3108-8i/16PD/2G
Controller	Broadcom (LSI) SAS3108	Broadcom (LSI) SAS3108	Broadcom (LSI) SAS3108
Interface	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8
Ports	8 internal ports (by 2 Mini-SAS HD SFF-8643)	8 internal ports (by 2 Mini-SAS HD SFF-8643)	8 internal ports (by 2 Mini-SAS HD SFF-8643)
Supported Device	SAS/SATA Devices	SAS/SATA Devices	SAS/SATA Devices
Data Transfer Rate	Max SAS 12Gb/s Max SATA 6Gb/s	Max SAS 12Gb/s Max SATA 6Gb/s	Max SAS 12Gb/s Max SATA 6Gb/s
RAID Level Supported	0, 1, 10, 5, 6, 50, 60 (Max Physical Devices for RAID: 240)	0, 1, 10, 5, 6, 50, 60 (Max Physical Devices for RAID: 240)	0, 1, 10, 5, 6, 50, 60 (Max Physical Devices for RAID: 16)
JBOD Mode	Yes	Yes	Yes
Embedded Memory	2GB DDR3	1GB DDR3	2GB DDR3
Cache Protection	CacheVault Module (Optional)	CacheVault Module (Optional)	CacheVault Module (Optional)
Board Form Factor	Low profile MD2 card	Low profile MD2 card	Low profile MD2 card
Dimension	6.6" x 2.71"	6.6" x 2.71"	6.6" x 2.71"



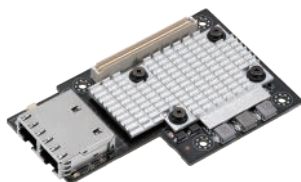
	PIKE II 3108-8i/16PD	PIKE II 3008-8i
Controller	Broadcom (LSI) SAS3108	Broadcom (LSI) SAS3008
Interface	PCIe 3.0 x8	PCIe 3.0 x8
Ports	8 internal ports (by 2 Mini-SAS HD SFF-8643)	8 internal ports (by 2 Mini-SAS HD SFF-8643)
Supported Device	SAS/SATA Devices	SAS/SATA Devices
Data Transfer Rate	Max SAS 12Gb/s Max SATA 6Gb/s	Max SAS 12Gb/s Max SATA 6Gb/s
RAID Level Supported	0, 1, 10, 5, 6, 50, 60 (Max Physical Devices for RAID: 16)	0, 1, 10, 1E
JBOD Mode	Yes	Yes
Embedded Memory	1GB DDR3	N/A
Cache Protection	CacheVault Module (Optional)	N/A
Board Form Factor	Low profile MD2 card	Low profile MD2 card
Dimension	6.6" x 2.71"	5.81" x 2.71"



Accessory LAN



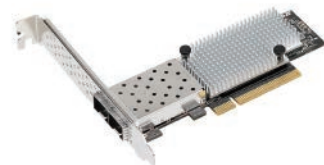
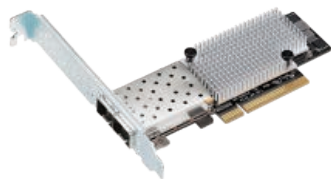
	MCC-25G/41202-2S	MCB-10G-2S	MCI-10G/82599-2S
Controller	Cavium QL41202	BCM 57840S	Intel® 82599
Data Transfer Rate	25Gbps Ethernet	10Gbps Ethernet	10Gbps Ethernet
Connection Port	SFP28, Dual Port	SFP+, Dual Port	SFP+, Dual Port
Host Interface	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 2.0 x8
Board Form Factor	OCP Mezzanine Card	OCP Mezzanine Card	OCP Mezzanine Card
Dimension	2.68" x 4.33"	2.68" x 4.33"	2.68" x 4.33"
Feature	RDMA SR-IOV iSCSI Boot PXE	SR-IOV FCoE Boot iSCSI Boot PXE	SR-IOV FCoE Boot iSCSI Boot PXE



	MCI-10G/X550-2T	MCI-1G/350-4T	MCI-1G/350-2T
Controller	Intel® X550-AT2	Intel® I350-AM4	Intel® I350-AM2
Data Transfer Rate	10Gbps Ethernet	1Gbps Ethernet	1Gbps Ethernet
Connection Port	RJ45, Dual Port	RJ45, Quad Port	RJ45, Dual Port
Host Interface	PCIe 3.0 x8	PCIe 2.0 x4	PCIe 2.0 x4
Board Form Factor	OCP Mezzanine Card	OCP Mezzanine Card	OCP Mezzanine Card
Dimension	2.68" x 4.33"	2.68" x 4.33"	2.68" x 4.33"
Feature	SR-IOV FCoE Boot iSCSI Boot PXE	SR-IOV PXE	SR-IOV PXE

For more information, please visit our website.
All specs are subject to change without any prior notice.





	PEB-10G/57840-2S	PEB-10G/57840-2T	PEI-10G/82599-2S
Controller	BCM 57840S	BCM 57840S BCM 84833 (PHY)	Intel® 82599
Data Transfer Rate	10Gbps Ethernet	10Gbps Ethernet	10Gbps Ethernet
Connection Port	SFP+, Dual Port	RJ45, Dual Port	SFP+, Dual Port
Host Interface	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 2.0 x8
Board Form Factor	Low Profile Card	Low Profile Card	Low Profile Card
Dimension	4.72" x 1.77"	4.72" x 1.77"	4.72" x 1.77"
Feature	SR-IOV FCoE Boot iSCSI Boot PXE	SR-IOV FCoE Boot iSCSI Boot PXE	SR-IOV FCoE Boot iSCSI Boot PXE



Server & Workstation Care



ASUS guarantees quality, service and reliability. That's why we offer an exclusive one-day advanced replacement and return merchandise authorization service —1-Day ARS. In addition to rapid replacement, all ASUS barebones servers, server motherboards and workstations carry a 3-year limited warranty in most territories — with satisfaction guaranteed.



1 Day ARS

ASUS 1-Day ARS allows for convenient return and replacement of defective products (barebone servers, server motherboards and workstations) via system integrators (SI) and value-added resellers (VAR) throughout the United States, Canada with 1 day.





3-Year Warranty

The ASUS 3-year limited warranty protects all ASUS server products that means barebone servers, server motherboards and workstations are all covered. During the 3-year warranty period ASUS will repair or replace defective components, allowing your business or organization to continue with minimal disruption.

5 Step of 1-Day ARS


- 1

Contact
ASUS for Tech Support

 or 


Email or Phone call
- 2

Problem
Define




Software problem? Hardware problem?
- 3


Fill out Advance
RMA Form


- 4

Send RMA Form
and get RMA No.


- 5

Receive Replacement
and Return Defective Parts





ASUS Control Center

Comprehensive IT Infrastructure Management Software

Optimized IT infrastructure administration

Monitor and control devices within your corporate network via a detailed dashboard that provides real-time data to identify system failures, and perform timely asset management checking.

Secure management of all network endpoints

Remotely disable the registry editor to block USB storage for all nodes at once, monitor client device status, and perform automatic reboots via watchdog programs.

Automated IT maintenance

Schedule automatic updates of the latest BIOS, software and utilities to multiple devices spontaneously with batch deployment and optimize energy usage and reduce outage risks with robust power management tools.

* Software functions may vary by version. Please consult your local sales representative for more information. ** To find out more about ASUS Control Center, please visit <https://asuscontrolcenter.asus.com/>



<https://www.asus.com/Commercial-Servers-Workstations/>



Version 2.2000