ASUS
IN SEARCH OF INCREDIBLE

DATA CENTER SOLUTIONS

Mission

ASUS is part of the global RE100 initiative, and strives for 100% renewable energy for all that we do. We're building on that ambition with our latest data center innovations, spearheading digital transformation across diverse applications from telecoms and finance to transportation and mission-critical medical systems.

EMBRACE THE INCREDIBLE FUTURE WITH ASUS DATA CENTER SOLUTIONS

ASUS stands at the forefront of the AI revolution. With seamlessly integrated solutions tailored for enterprises, we're here to guide you on your AI journey with confidence, innovation and endless possibilities.

EXTENSIVE IN-HOUSE DESIGN CAPABILITIES

ASUS has substantial resources on tap to respond quickly to fulfill almost any customization requirement, employing top-tier components, fostering strong ecosystem partnerships, implementing feature -rich designs and utilizing superior in-house design expertise for tailored solutions.

WORLD-CLASS CUSTOMIZATION ABILITY

ASUS retains a dedicated global R&D team refining servers in 113 countries through 70+ branches, supported by 1,400+ customer assistance centers. Our talent pool includes hardware, thermal, testing engineers, and software specialists, ensuring top-quality products worldwide.

TCO-OPTIMIZED DESIGNS

ASUS is dedicated to reducing the total cost of ownership (TCO) to business, through more environmentally sustainable and higher-performance designs. In 2020 alone, ASUS received 69,965 green certifications from leading global organizations.

RE100 °CLIMATE GROUP CDP ENERGY STAR RoHS TCO

Milestone

1995
OEM/ODM

2010
Server Business

2020
Data Center Solutions

1995 Tier 1 OEM/ODM

2000 Data center OEM/ODM

2005 ASUS white-label solution

2008 First delivery of server products to leading cloud-service provider

2010 Joined Open Compute Project 1.0 development

2011 Launched BMC solution – ASMB6-iKVM

Joined VMware technology partnership

2012 Released supercomputing, big data and storage server solutions

Launched BMC solution – ASMB7- iKVM

2014 Achieved Green500 Top 1 with ESC4000-G2S

Launched ASUS System Web-based Management (ASWM)

Launched BMC solution – ASMB8-iKVM

2016 Released GPU servers for deep learning, AI and VDI

2017 Won 2017 Taiwan Excellence Award for server products

Launched data center-level management utility – ASUS Control Center

Performance tuning and No. 1 performance record in 2P solution

Launched BMC solution – ASMB9-iKVM

Joined Microsoft technology partnership

2018 First delivery of server products to medical provider

Ranked Top 20 in Taiwania 2 and ranked Top 10 in Green500

Joined RedHat technology partnership

2019 Joined Open Compute Project

2020 Joined Ubuntu technology partnership

2021 Launched BMC solution – ASMB10-iKVM

First delivery to EEMEA cloud-service provider

Jointly developed 5G edge server with 5G provider

Acquired MLCommons membership

2022 World records on MLPerf training and inference

**2023** Won project for FORERUNNER 1 supercomputer to accelerate AI 2.0 era

Elevating AI Success with
NVIDIA MGX™ Solutions

Make ASUS Your AI Supercomputing Partner

NVIDIA MGX™
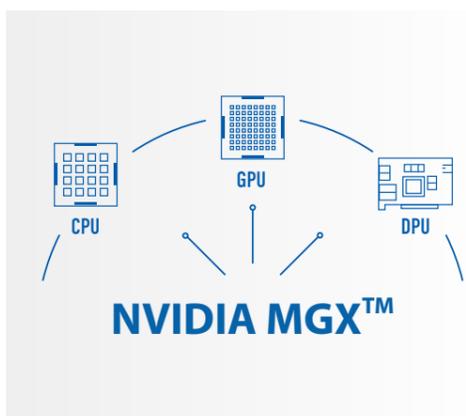
ASUS leads the AI revolution, powered by our partnership with NVIDIA®, a global AI computing leader. Leveraging NVIDIA's groundbreaking technology, we maximize GPU acceleration, simplifying complex AI tasks. From AI data centers to seamless enterprise solutions, we're innovating at every step. Engineered with an innovative modular architecture, ASUS NVIDIA MGX™ servers offer unparalleled flexibility and scalability to accommodate various server configurations, significantly enhancing AI-driven data centers, HPC and Omniverse applications with game-changing performance and memory capabilities.
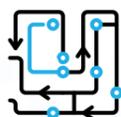
Ultimate Flexibility

MGX, an open, flexible and future compatible reference design provides a single, future-compatible architecture. Thanks to the modular architecture, offering 160 configurations, clients can tailor the AI solution to precise needs. MGX provides a new standard for modular server design by improving ROI and reducing time to market.

Toolless Design

ASUS offers an exclusive toolless M.2 design that ensures seamless operation with its screwless design featuring a latch-and-lock mechanism, allowing for quick installation in just three seconds, while also enabling easy dismantling of the fan bar either individually or as a whole group. This promotes effortless troubleshooting, ultimately streamlining maintenance tasks.

Easy Maintenance

The middle-plane board design facilitates easy maintenance by eliminating the need to remove fans or cables and providing clear visibility of each cable's location, thus obviating the need to dismantle the fan bar. Unlike traditional maintenance methods, which often entail disassembling numerous structural parts before repair, the middle-plane design streamlines the process, resulting in reduced power-cable usage.

ESC NM1-E1

2U Single Grace Hopper CPU+GPU superchip MGX system

CPU	NVIDIA GH200 Grace Hopper 96GB Superchip
M.2	2 x Gen5 x4 (22110)
BMC	DC-SCM 2.0 module (Dual flash back-up)
Cooling	Air Cooled

Form Factor	CPU Number	PCIe Gen5 Slots
2U1Superchip	**1**	**3**

Memory Size	GPU Memory	NVMe
480GB	**96GB**	**4 x U.2** (by BF3 or Raid Card)

ESC NM2-E1

2U Dual Grace Hopper CPU+GPU superchip MGX system

Coming Soon

CPU	2 x NVIDIA GH200 Grace Hopper 144GB Superchip
M.2	2 x Gen5 x4 (22110)
BMC	DC-SCM 2.0 module (Dual flash back-up)
Cooling	Air Cooled

Form Factor	CPU Number	PCIe Gen5 Slots
2U2Superchip	**2**	**5**

Memory Size	GPU Memory	NVMe
960GB	**288GB**	**4 x U.2** (by BF3 or Raid Card)

HPC Data Center Solutions with
5th Gen Intel Xeon Scalable Processors

ASUS meets global data center demands with accelerated computing by integrating 5th Gen Intel® Xeon® processors to provide a diverse array of workload-optimized servers and motherboards. Committed to AI technology growth, ASUS delivers quality server solutions for a sustainable future.
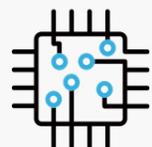
Superior Performance

- Supports the highest-performance CPUs and GPUs and the latest PCIe 5.0, DDR5 CXL 1.1 technologies
- Extends I/O availability and high-bandwidth memory for more computing capability
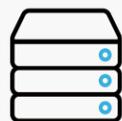
Scalable Storage Solutions

- Unlocks SSD RAID performance with SupremeRAID™ technology, with support for up to 24 NVMe
- More scalable options in middle and rear bays

Comprehensive Cooling Solutions

- New HDD tray and independent airflow tunnel design deliver energy-efficient performance
- Immersion and direct-to-chip (D2C) liquid-cooling solutions for improved PUE and reduced operational costs

Multiple GPU and FPGA Support

- Flexible design to configure PCIe 5.0 x16 slots for specific workloads
- GPU servers designed with space optimization for liquid-cooling solutions
- Stand-out AI training and inference performance proved by MLPerf benchmark

Boosted Performance

21%

average performance gain at the same TDP as 4th Gen Intel® Xeon® processors[1]

Supercharged Memory Speed

Up to 16%

memory bandwidth improvement[2] and 2.7X increased last-level cache[3] vs. 4th Gen Intel® Xeon processors

Faster AI Deployment

Up to 14x

better AI training and inference performance vs. 3rd Gen Intel® Xeon® processor[4]

1. Average performance gain as measured by the geomean of SPEC CPU rate, STREAM Triad, and LINPACK compared to 4th Gen Intel Xeon processor. See G1 at https://www.intel.com/processorclaims: 5th Gen Intel Xeon Scalable processors. Results may vary.
2. See G12 at https://www.intel.com/processorclaims: 5th Gen Intel Xeon Scalable processors. Results may vary. 4. Based on Intel internal modelling as of December 2023.
3. See G11 at https://www.intel.com/processorclaims: 5th Gen Intel Xeon Scalable processors. Results may vary.
4. Based on performance gains of 4.4x to 14.2x for training (ResNet50v1.5, BERT-Large, SSD-ResNet34, RNN-T, MaskRCNN, and DLRM) and 2.9x to14x for inference (ResNet50v1.5, BERT-Large, SSD-ResNet34, RNN-T (BF16 only), Resnext101 32x16d, MaskRCNN (BF16 only), DistilBERT) compared to 3rd Gen Intel® Xeon® processor. See A15-A16 at https://www.intel.com/processorclaims: 5th Gen Intel Xeon Scalable processors. Results may vary.

RS720Q-E11-RS8U

Massive computing performance for diverse AI workloads

Form Factor 2U4N	CPU Number 2	PCIe Gen5 Slots 2
Memory Number 16	NVMe 8	

CPU	4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable Processor Family (Up to 350W) (Air cool up to 270W liquid cool up to 350W)
Memory Type	Per node: 16 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600/4800 MHz RDIMM/3DS RDIMM (1DPC) Maximum 4096GB
Drive bays	8
Additional OS Drive	2
Networking	Per Node: 2 x Intel X710-AT2 Gigabit LAN Controller 1 x Management Port

ESC N8-E11

Powerful AI server reduces data-center PUE

Form Factor 7U	CPU Number 2	PCIe Gen5 Slots 12
Memory Number 32	NVMe 10	HGX Baseboard NVIDIA HGX™ H100

CPU	4th Gen Intel® Xeon® Scalable Processor Family (Up to 350W) 5th Gen Intel® Xeon® Scalable Processor Family (Up to 350W)
Memory Type	32 x DIMM, DDR5 4400 RDIMM/ 3DS RDIMM
Drive bays	10
Networking	2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) 1 x Management Port

Empowering Data Center Sustainability

AMD EPYC™ 9004 Solutions

No.1 Benchmark World Records

Taking advantage of the AMD EPYC™ 9004 processors' compute leadership performance, ASUS servers powered by EPYC™ 9004 achieved the No.1 result for performance – securing a top ranking across SPEC CPU 2017 benchmarks on SPEC.org. The results demonstrate that ASUS leadership with the new AMD EPYC processors, delivering outstanding performance for the server industry.

* ASUS RS720A-E12 AND RS520A-E12 servers are tested the highest scores on SPEC CPU 2017 multiple benchmarks. All results can be verified on November 8, 2023 at SPEC.org

Custom-focused ASUS Design

ASUS servers are designed with our customers in mind, offering flexibility to enable easy scale-up of configurations to meet increasing data-center workloads.
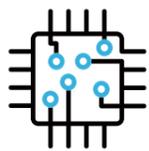
CPU-balanced Architecture

- Offers reliable, optimal CPU performance efficiency between CPUs
- Extends I/O availability for more computing capability

Scalable Storage Solutions

- Unlock SSD RAID performance with SupremeRAID™ Technology, with support for up to 24 NVMe
- More scalable options in middle and rear bays

Comprehensive Cooling Solutions

- New HDD tray and independent airflow tunnel design deliver energy-efficient performance
- Immersion and direct-to-chip (D2C) liquid-cooling solutions for improved PUE and reduced operational costs

Multiple GPU and FPGA Support

- Flexible design to configure PCIe 5.0 x16 slots for specific workloads
- GPU servers designed with space optimization for liquid-cooling solutions
- Stand-out AI training and inference performance proved by MLPerf benchmarks

RS720QA-E12-RS8U

Multi-node server with high core counts and memory bandwidth for compute-intensive workloads

CPU	AMD EPYC™ 9004 Series Processor
Chipset	SoC
Memory Type	Per node: 24 x DIMM slots DDR5 up to 4800 RDIMM/ 3DS RDIMM Maximum 6TB
Drive bays	8
Additional OS Drive	2
Networking	Per node: 2 x 10GbE LAN 1 x Management port

Form Factor **2U**

CPU Number **2**(Per Node)

PCIe Gen5 Slots **2**(Per Node)

Memory Number **24**(Per Node)

NVMe **8**

ESC N8A-E12

NVIDIA HGX H100 eight-GPU server with dual AMD EPYC™ 9004 processors, designed for generative AI and HPC

CPU	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 series processors (Up to 400W)
Memory Type	24 x DIMM slots, DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC)
Drive bays	10 x 2.5", 2 x M.2
Networking	2 x 10Gbe RJ45 port 1 x Management port

Form Factor **7U**

CPU Number **2**

PCIe Gen5 Slots **12**

Memory Number **24**

NVMe **10**

HGX Baseboard **NVIDIA HGX™ H100**

NO.1 BENCHMARK
SPEC.CPU

ASUS holds the most amount of records on the SPEC CPU® 2017 benchmark in single-socket (1P) and dual-socket (2P). These world records are set by servers running across Intel and AMD platforms and workloads ranging from general business infrastructure, software-defined deployment, data analytics, AI, and HPC.

spec®

1772+
All results can be verified on SPEC.org on March, 2024

* SPEC is a corporation formed to establish and endorse standardized benchmarks and tools to evaluate performance and energy efficiency of computer systems.

TOP RECORDS
MLPerf

MLPerf

ASUS is focused on creating complete, optimized solutions and strives to cultivate strong industry partnerships to enhance AI developments in diverse fields to push technology to its limits. As an integrated-solutions partner, we deliver leading hardware for the fields of supercomputing and data centers, supported by an extensive AI portal and AI software stack.

140+
MLPerf Training & Inference

*MLCommons is an open engineering consortium, built on a philosophy of open collaboration and accelerate machine learning innovation.

Performance Boost

ASUS servers feature exclusive Performance Boost technology to achieve the best server performance and agility by tuning servers to match the requirements of workloads, letting you gain greater control of your server environment. This technology improves workload throughput by maximizing processor frequency and boost power, ideal for time-sensitive applications such as financial services or data center operations. In the BIOS you can choose from pre-configured server profiles optimized for specific workloads, maximizing overall performance and reducing server-configuration time.
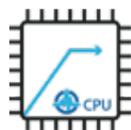
Core Optimizer

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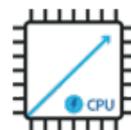
Engine Boost

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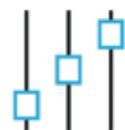
Workload Presets

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

Top records on MLPerf training and inference

ESC N8-E11

ASUS 1st NVIDIA HGX Architecture: The Best Choice for Heavy AI Workloads

12 PCIe GPU Server
NVIDIA HGX™ H100

3

ESC8000A-E12

The AMD EPYC™ 9004 dual-processor 4U GPU server for HPC and AI workloads

11 PCIe GPU Server
NVIDIA H100 x8

17

ESC4000A-E12

This AMD EPYC™ 9004 2U GPU is a single-processor powerhouse server with support for four double-slot GPUs for AI-related workloads

8 PCIe GPU Server
NVIDIA L4 x8

28

ESC4000-E11

Offers a wide array of graphics accelerators, plus support for the NVIDIA NVLink high-speed GPU interconnect, to unleash maximum AI performance

4 PCIe GPU Server
NVIDIA A30 x4

14

SERVER SOFTWARE

ASUS Control Center

ASUS Control Center (ACC) is an enterprise-grade centralized management tool for servers and client devices. It is tailored for efficient IT management, including both hardware- and software-inventory management, and the remote dispatch of both software and firmware updates. It also allows for simple remote device configurations and health checks, plus rapid deployment of latest security policies and patches. In short, ACC is a one-stop portal for IT management, and has been embraced by industries and businesses globally to minimize administration and maximize uptime

Designed for Enterprise

| BIOS Flash Update | Software Inventory | Hardware Inventory | Real-time System Monitor | Software Dispatch Task | Power and Security Control |

| Medical | Enterprise | Manufacturing | Education |

- i BMC IPMI/Redfish Integration
- i Hardware Utilization Record
- i Integrated Hotfix Report
- i NVIDIA Graphic Cards Monitoring

Modern
Graphical dashboard based on responsive HTML5, enabling fast, simple and intuitive navigation from almost any modern device.

Remote
Remote-management capabilities enhance work flexibility, reducing resources for minimized total cost of ownership (TCO).

Centralized
Single console-style interfaces allows IT managers to manage and configure devices collectively, from a central location.

ASUS ASMB11-iKVM

| Friendly User Interface | Redfish API | Exclusive Auxiliary Tool | KVM Support | Serial and USB Interfaces |

Additional Package

| Networking support | HBA and RAID support | NVMe support | CPLD support | PFR support |

Platform

Standard Protocols	Authentication and Security
Server Management	Redfish Support	Power Control
System Thermal and Fan Control	Security Management	Hardening
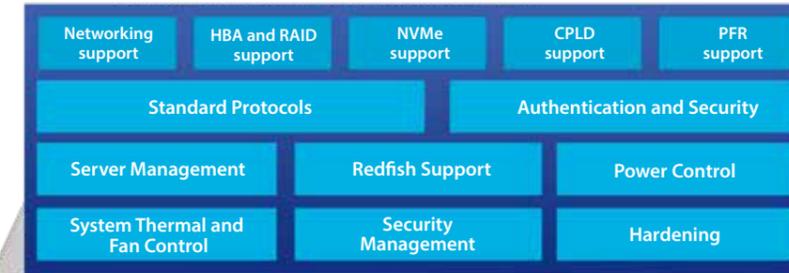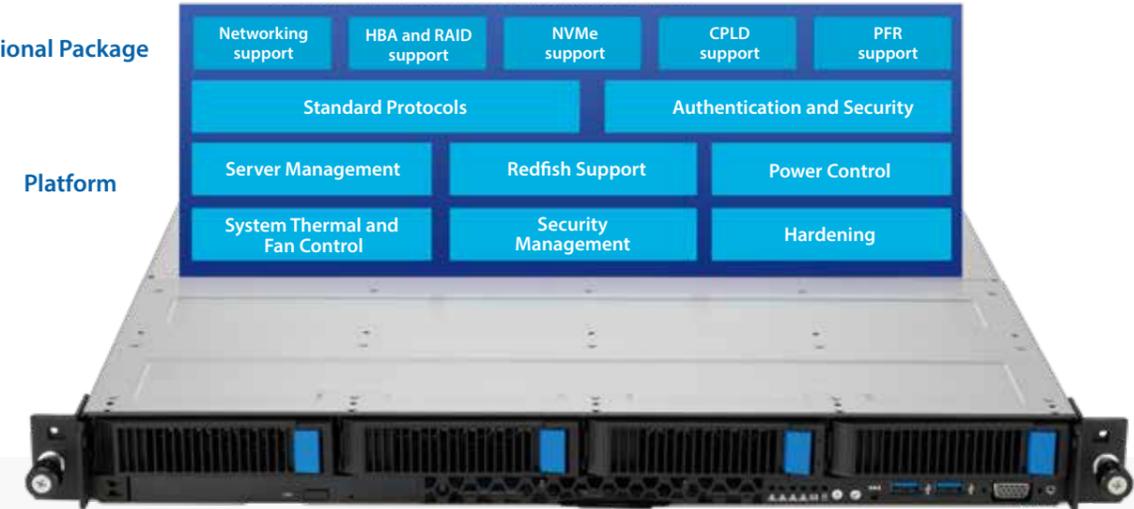
What does ASMB11-iKVM offer?

ASMB11-iKVM is optimized firmware-management tool for server and data center operations equipped with IPMI and Redfish Protocols to access and monitor all hardware status, sensor, and update. Out-of-band management significantly reduces redundant IT operations and deployments remotely. Specifically, ASMB11-iKVM connects BIOS, BMC, server information and key parts collectively, offers multiple routes to satisfy customer preferences – making it quick and easy to improve IT operational efficiency.

ASPEED AST2600

ASMB11-iKVM is built upon the ASPEED 2600 chipset running on the latest AMI MegaRAC SP-X. The module provides various interfaces to enable out-of-band server management through WebGUI, Intelligent Platform Management Interface (IPMI) and Redfish® API

American Megatrends

ASUS ASMB11-iKVM is an Intelligent Platform Management Interface (IPMI) 2.0-compliant module that allows you to monitor, control and manage a remote server from a local or central server attached to your network. ASMB11-iKVM also supports Redfish protocol for fast, efficient device management.

LIQUID-COOLING SOLUTIONS
Unparalleled cooling performance for the modern data center

A comprehensive liquid-cooling solution

Deploying high-TDP CPU and GPU servers for demanding workloads poses challenges in building energy-efficient data centers. Liquid-cooling solutions offer optimized space design, reduced power-usage effectiveness (PUE) and lower operating expenditures (OpEx), addressing the need to balance power consumption with green energy initiatives. By working with our partners, we're able to deliver a total solution — from liquid-cooling modules to ready-to-go servers, and even data center floor plans and suggested infrastructure.

The top four reasons to choose liquid cooling

Denser Computational Power
While a server rack with conventional air cooling can manage up to 30 kW of heat dissipation, direct liquid cooling can scale much more. This increase in thermal capacity allows more computational density for servers, upgrading the scale of a data center to accelerate and optimize complex workloads.

Much-improved PUE
The thermal efficiency of liquid cooling dramatically improves the PUE of a data center by reducing the demand for CRAC and cooling fans, and liquid coolant is a more efficient medium of heat exchange than air.

Reduce long-term OpEX
A data center with liquid cooling is customarily designed for heat recirculation. The hot coolant exiting a server is directed though a heat exchanger system that recycles heat into more energy, further reducing OpEx for utilities. Thanks to this system, the initial cost of most direct liquid-cooling servers can be recovered within the first 12 months of operation, providing potentially significant savings over time.

A much-quieter environment
In addition to saving energy through the reduction of CRAC systems and fans, liquid cooling can also reduce fan noise, leading to a healthier work environment for data center personnel. The average acoustic impact of air cooling is between 75 and 95 dBA, whereas liquid cooling averages below 75 dBA. Enterprise, office and military data centers can particularly benefit.

Direct-to-chip cooling solution
ASUS direct-to-chip (D2C) cooling is a quick, simple option that's based on existing infrastructure. D2C can be deployed quickly, and lower power-usage effectiveness (PUE). ASUS servers can support manifolds and cool plates to enable diverse cooling solutions. Moreover, ASUS servers can support a rear-door heat exchanger that complies with standard rack-server designs, so there's no need to replace all racks — just the rear door. This lowers the total cost of ownership, and increases data-center utilization ratio.

Immersive-cooling solution
ASUS immersion cooling is another highly-effective solution from ASUS. This technique offers more advantages on PUE and encompasses higher-density servers. However, it also demands more space, and may require retooling of the data-center infrastructure. But immersion cooling can control temperatures more rapidly, efficiently and cost-effectively than traditional methods. For users of supercomputers in particular, immersion cooling is the preferred option.

ASUS Establishes National-Level Supercomputing Center, FORERUNNER 1

Project background

The National Applied Research Laboratories (NARLabs) is working on upgrading and building the nation's most advanced supercomputer center, offering fast computing power, ample storage, and secure networking. It's Taiwan's largest domestic data and model market, featuring an AI cloud computing platform. This platform delivers real-time and convenient computing services to industries, universities, and research institutes.

The challenge

ASUS won the FORERUNNER 1 project to be responsible for this ambitious project, but starting from scratch presented numerous challenges. FORERUNNER 1 is designed as a replacement for TAIWANIA 1, and is intended to provide the resources needed by all walks of life for supercomputing workloads. These include research topics such as climate prediction, astrophysics simulation, molecular model simulation, engineering design and simulation – and many more applications besides.

Our solution

ASUS managed the construction of the supercomputing infrastructure, which involved data center construction, cabinet installation, testing and onboarding. Rigorous testing ensured optimal performance. Additionally, ASUS meticulously designed the HPC portal architecture. To create a greener FORERUNNER 1 supercomputing system, ASUS refined the liquid-cooling setup, achieving a remarkable PUE of 1.17, surpassing the 1.28 acceptance standard. Despite the hurdles, the project reached completion within a mere four months.

Why ASUS?

- ASUS has comprehensive technological capabilities from hardware servers to software platforms and shows how it is actively exploring and leveraging AI and computing power.
- The dedication and hard work of the ASUS team always response in real-time to provide valuable insights and support and ensure the successful realization of Taiwan's most advanced supercomputer center.

X86_6 Login Nodes	ARM Login Nodes	Interactive Graphic Nodes	Data Transfer Nodes	Special Task Nodes

Cybersecurity Platform	OpenHPC	Slurm Resource Scheduling Platform		
	UFM			
VPN Server	ELK Log Server	Intel oneAPI	GCC/C++ Fortran	MVAPICH	OpenMPI
	Grafana / Zabbix	NVIDIA HPC SDK		Intel MPI	OpenACC
Deployment Platform	Ekran Server			
	ASUS Control Center	RedHat Linux OS		
Log Platform	Slurm	1Gb/ 25Gb/ 100Gb/ 200Gb ETH	NDR200 200Gb IB	
	Database	X86 Computing Nodes	ARM Computing Nodes	X86 Graphic Nodes
Cluster Management Platform	Jump Server			
	HAProxy	IBM Spectrum Scale	NAS	

Recommend model

ESC4000-E11
- 2U 4 GPU dual slots server powered by 5th Gen intel Xeon Scalable processors
- 16 DIMMs, 2 PCIe 5.0 slots and 6 x storage

RS720QN-E11-RS24U
- NVIDIA® Grace Superchip and NVLink®-C2C technology
- ARM SystemReady-certified

RS723Q-E11-RS24
- 2U4N high-density server powered by 5th Gen Intel Xeon Scalable processors
- 16 DIMMs, 3 PCIe 5.0 slots, 8 NVMe, and 1 x Management Port per node

Multinational IT Center Construction: Tailored Solutions for Global Retail Group

Project background

Amidst the dynamic landscape of multinational retail, a leading company recognized the imperative to enhance its IT infrastructure to sustain expanding operations and deliver flawless customer service. Following thorough deliberation, the company selected ASUS as its reliable ally for this significant initiative.

The challenge

The client utilized its own robust management software to oversee the operations of its global chain-store systems. Seeking a data center solution, the client aimed for seamless integration with its existing software, avoiding the need for an additional layer of management interface.

Our solution

The choice to go with ASUS over industry leaders such as HPE and Dell stemmed from the adaptability of ASUS, allowing the company to connect the client's existing management software with ASUS servers through an API. This integration ensured that customer-service logs and other crucial information could be seamlessly shared, enhancing operational efficiency.

Why ASUS?

- ASUS stood out with its flexibility in offering customized solution based on clients requirement.
- The ASUS team worked closely with the company's IT department to address design complexities and tailor the solution to their specific requirements. Through collaborative problem-solving, they created a robust and scalable infrastructure that would support the client's growth for years to come.
- Despite the intricacies involved, the deployment of the new IT infrastructure was completed in an impressively short span of just a few months. The agility ASUS and prompt response to our client's needs played a pivotal role in this speedy implementation.

TICKETING SYSTEM — Error

CSC

DATA CENTER

ONSITE MAINTENANCE
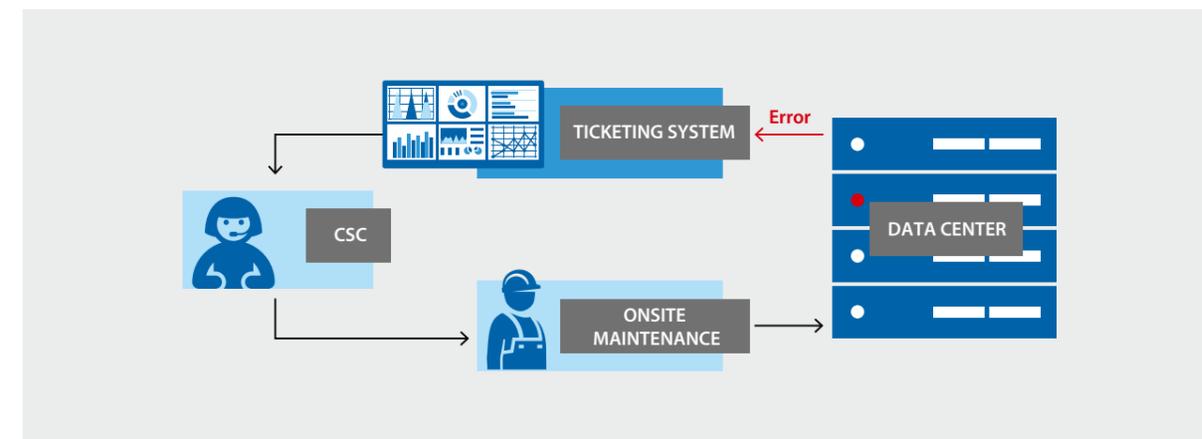
Recommend model

RS721Q-E11-RS8U
- 2U4N high-density server powered by 5th Gen Intel Xeon Scalable processors
- 8 DIMMs, 2 PCIe 5.0 slots, 8 NVMe, and 1 x management port per node

Arm Server   Rack Server

Sample	ESC NM1-E1	ESC NM2-E1	RS720QN-E11-RS24U	RS720A-E12-RS24U
		Coming Soon		
Processor	NVIDIA GH200 Grace Hopper 96GB Superchip	2 x NVIDIA GH200 Grace Hopper 144GB Superchip	Per node: 1* NVIDIA Grace CPU	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)
Chipset	SoC(System on Chip)	SoC(System on Chip)	SoC(System on Chip)	System on Chip (SoC)
Memory	LPDDR5X 480GB co-packaged	2 x LPDDR5X 480GB co-packaged	LPDDR5X 480GB co-packaged	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC) Maximum 6144GB
VGA	N/A	N/A	N/A	Aspeed AST2600 64MB
Graphic	Hopper GPU 96GB co-packaged	Hopper GPU 144GB co-packaged	N/A	Up to 6 single-slot or 3 double-slot GPU cards
Expansion Slots	Up to 3 PCIe Gen5 slots	Up to 5 PCIe Gen5 slots 3 x PCIe Gen5 x16 (FHFL) 2 x PCIe Gen5 x8 (FHFL)	Per node: 2 x PCIe Gen5 x16 slots (LPHL) + 1* OCP3.0	Up to 9 PCIe Gen5 slots + 1 x internal RAID slot 6 x PCIe Gen5 x8 or 3 x PCIe Gen5 x16 (FHFL) 2 x PCIe Gen5 x8 or 1 x PCIe Gen5 x16 or 1 x OCP3.0 (FHFL) 1 x PCIe Gen5 x16 (LPHL) 1 x PCIe Gen4 x8 (LP, internal)
Storage Bays	4 x 2.5" Front Hot-Swap drive bays (NVMe Only) 2 x M.2 (Up to 22110, NVMe only)	4 x 2.5" Front Hot-Swap drive bays (NVMe Only) 2 x M.2 (Up to 22110, NVMe only)	Per Node: 6 x 2.5" Front hot-swap drive bays (Up to 6x NVMe) 2 x M.2 (Up to 22110, Gen5 x4 link)	24 x 2.5" Front Hot-swap drive bays (Up to 16 x NVMe + 8 x NVMe/ SATA/SAS*) (with 2 switch boards) *GPU SKU do not support OCP3.0. *PIKE/RAID card is required to support SAS hard drives
Networking	1 x Management Port	1 x Management Port	Per node: 1 x Gigabit LAN port 1 x Management Port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port
Front I/O ports	2 x USB3.2 Gen1 ports, 1 x Power Button /w LED 1 x UID Button /w LED	2 x USB3.2 Gen1 ports 1 x Power Button /w LED 1 x UID Button /w	1 x Power Button /w LED 1 x UID /w LED	2 x USB 3.2 Gen1 ports 1 x Power Botton
Rear I/O ports	2 x USB3.2 Gen1 ports 1x Mgmt LAN 1 x DP port 1 x Power Button /w LED 1 x UID Button /w LED	2 x USB3.2 Gen1 ports 1x Mgmt LAN 1 x DP port 1 x Power Button /w LED 1 x UID Button /w LED	1 x USB3.1 Gen1 ports 1 x miniDP port 1 x Debug port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port
Security Options	N/A	N/A	N/A	Optional TPM module Optional PFR module
Management Solution	N/A	N/A	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	900mm x 439.5mm x 87.5mm 35.43"x13.19"x2.63"	900mm x 439.5mm x 87.5mm 35.43"x13.19"x2.63"	800mm x 444mm x 88.15mm (2U) 31.5"x 17.48"x 3.46"	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"
Power Supply (following different configuration by region)	1+1 Redundant 2000W 80 PLUS Titanium Power Supply	1+1 Redundant 3200W 80 PLUS Titanium Power Supply	2+0 3000W or 3600W (1+1) redundant Titanium power supplies	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply

Rack Server

Sample	RS720A-E12-RS24	RS720A-E12-RS12	RS700A-E12-RS12U	RS700A-E12-RS4U
Processor	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)
Memory	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC) Maximum 6144GB	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC) Maximum 6144GB	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC) Maximum 6144GB	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC) Maximum 6144GB
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	Up to 6 single-slot or 3 double-slot GPU cards	Up to 8 single-wide GPU or 4 double-wide GPU	Up to 2 single-slot or 1 double-slot GPU cards	Up to 2 single-slot or 1 double-slot GPU cards
Expansion Slots	Up to 9 PCIe Gen5 slots + 1 x internal RAID slot 6 x PCIe Gen5 x8 or 3 x PCIe Gen5 x16 (FHFL) 2 x PCIe Gen5 x8 or 1 x PCIe Gen5 x16 or 1 x OCP3.0 (FHFL) 1 x PCIe Gen5 x16 (LPHL) 1 x PCIe Gen4 x8 (LP, internal)	Up to 9 PCIe Gen5 slots + 1 x internal RAID slot 6 x PCIe Gen5 x8 or 3 x PCIe Gen5 x16 (FHFL) 2 x PCIe Gen5 x8 or 1 x PCIe Gen5 x16 or 1 x OCP3.0 (FHFL) 1 x PCIe Gen5 x16 (LPHL) 1 x PCIe Gen4 x8 (LP, internal)	Up to 3 x PCIe Gen5 slots + 1 x internal RAID slot 1 x PCIe Gen5 x16 1 x PCIe Gen5 x16 or OCP3.0 (FHFL) 1 x PCIe Gen5 x16 (LP) 1 x PCIe Gen4 x8 (LP, internal)	Up to 3 x PCIe Gen5 slots + 1 x internal RAID slot 1 x PCIe Gen5 x16 1 x PCIe Gen5 x16 or OCP3.0 (FHFL) 1 x PCIe Gen5 x16 (LP) 1 x PCIe Gen4 x8 (LP, internal)
Storage Bays	24 x 2.5" Front Hot-swap drive bays (Up to 16 x NVMe + 8 x SATA/ SAS*) *GPU SKU do not support OCP3.0. *PIKE/RAID card is required to support SAS hard drives	12 x 3.5" Front Hot-Swap drive bays (Up to 8 x NVMe+ 8 x SATA/SAS*) 2 x 2.5" Rear Hot-swap drive bays (Optional) Support 2 x NVMe** *PIKE/RAID card is required to support SAS hard drives **Will occupied 2 PCIe slots	12 x 3.5"" Front Hot-Swap drive bays (Up to 12 x NVMe/SATA/SAS*) *PIKE/ RAID card is required to support SAS hard drives	4 x 3.5"" Front Hot-Swap drive bays (Up to 4 x NVMe/SATA/SAS*) *PIKE/ RAID card is required to support SAS hard drives
Networking	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port
Front I/O ports	2 x USB 3.2 Gen1 ports 1 x Power Botton	2 x USB 3.2 Gen1 ports 1 x Power Botton	N/A	2 x USB 3.2 Gen1 ports 1 x VGA
Rear I/O ports	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module"	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	842.5mm x 449mm x 43.85mm (1U) 33.17" x 17.68" x 1.73"	842.5mm x 449mm x 43.85mm (1U) 33.17" x 17.68" x 1.73"
Power Supply (following different configuration by region)	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply

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

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Rack Server

Sample	RS520A-E12-RS24U	RS520A-E12-RS12U	RS500A-E12-RS12U	RS500A-E12-RS4U
Processor	1 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	1 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	1 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	1 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)
Memory	24 x DIMM slots DDR5 4800/4400/4000/3600 RDIMM/ 3DS RDIMM 1DPC up to 4800 2DPC up to 4000(1R+1R) 2DPC up to 3600(1R+2R)/ (2R+2R) Maximum 6144GB	24 x DIMM slots DDR5 4800/4400/4000/3600 RDIMM/ 3DS RDIMM 1DPC up to 4800 2DPC up to 4000(1R+1R) 2DPC up to 3600(1R+2R)/ (2R+2R) Maximum 6144GB	24 x DIMM slots DDR5 4800/4400/4000/3600 RDIMM/ 3DS RDIMM 1DPC up to 4800 2DPC up to 4000(1R+1R) 2DPC up to 3600(1R+2R)/ (2R+2R) Maximum 6144GB	24 x DIMM slots DDR5 4800/4400/4000/3600 RDIMM/ 3DS RDIMM 1DPC up to 4800 2DPC up to 4000(1R+1R) 2DPC up to 3600(1R+2R)/ (2R+2R) Maximum 6144GB
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	4 x single-wide GPU (FHFL) or 2 x double-wide GPU (FHFL) *24 NVMe can't support GPU	Up to 4 single-slot or 2 double-slot GPU cards	Up to 2 single-slot GPU cards	Up to 2 single-slot GPU cards
Expansion Slots	[24x NVMe] (can't support GPU) 1 x PCIe Gen5 x8, LP + 1 x OCP3.0 [16x NVMe or 12x NVMe] up to 5 PCIe Gen5 slots + 1 OCP3.0 2 x PCIe Gen5 x16, FHFL or 4 x PCIe Gen5 x8, FHFL 1 x PCIe Gen5 x8, LP 1 x OCP3.0 (PCIe Gen5 x16)	Up to 5 PCIe Gen5 slots + 1 OCP3.0 2 x PCIe Gen5 x16, FHFL or 4 x PCIe Gen5 x8, FHFL 1 x PCIe Gen5 x8, LP 1 x OCP 3.0 Slot ((PCIe Gen5 x16)	Up to 3 PCIe Gen5 slots + 1 OCP3.0 1 x PCIe x16 slot (Gen5 x16 link, FHHL) 1 x PCIe x16 slot (Gen5 x16 link, LPHL) 1 x PCIe x16 slot (Gen5 x8 link, LPHL) 1 x OCP3.0 Slot (Gen5 x16 link)	Up to 3 PCIe Gen5 slots + 1 OCP3.0 1 x PCIe x16 slot (Gen5 x16 link, FHHL) 1 x PCIe x16 slot (Gen5 x16 link, LPHL) 1 x PCIe x16 slot (Gen5 x8 link, LPHL) 1 x OCP3.0 Slot (Gen5 x16 link)
Storage Bays	24 x 2.5" Front Hot-Swap drive bays (Up to 24 NVMe or 16x NVMe + 8 SAS/SATA) 2 x 2.5"Rear SATA Hot-Swap drive bays 2 x M.2 support (Gen4 x4 link) *SAS support only from optional SAS HBA/RAID card	12 x 3.5" Front Hot-Swap drive bays (Up to 12 x NVMe/SATA/SAS) 2 x 2.5"Rear SATA Hot-Swap drive bays 2 x M.2 support (Gen4 x4 link) *SAS support only from optional SAS HBA/RAID card	12 x 2.5" Front Hot-Swap drive bays (Up to12 x NVME/SATA/SAS) Optional 4 x 2.5" Internal drive bays 4 x SATA/NVME 2 x M.2 support (Gen4 x4 link) *SAS support only from optional SAS HBA/RAID card	4 x 3.5" Hot-Swap drive bays (Up to 4 x NVMe/SATA/SAS*) 2 x M.2 support (Gen4 x4 link) *RAID card is required to support SAS hard drives
Networking	2 x 1GbE LAN ports 1 x Management port	2 x 1GbE LAN ports 1 x Management port	2 x 1GbE LAN ports 1 x Management port	2 x 1GbE LAN ports 1 x Management port
Front I/O ports	2 x USB 3.2 Gen1 ports 1 x Power Botton	2 x USB 3.2 Gen1 ports 1 x Power Botton	1 x Power Botton	1 x Power Botton
Rear I/O ports	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port 2 x 1GbE LAN ports	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port 2 x 1GbE LAN ports	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port 2 x 1GbE LAN ports	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port 2 x 1GbE LAN ports
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	842.5mm x 449mm x 43.85mm (1U) 33.17" x 17.68" x 1.73"	842.5mm x 449mm x 43.85mm (1U) 33.17" x 17.68" x 1.73"
Power Supply (following different configuration by region)	1+1 Redundant 1600W 80 PLUS Titanium Power Supply 1+1 Redundant 1600W/1200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W 80 PLUS Titanium Power Supply 1+1 Redundant 1600W/1200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W 80 PLUS Titanium Power Supply 1+1 Redundant 1600W/1200W 80 PLUS Platinum Power Supply	1+1 Redundant 800*/1200W 80Plus Platinum CRPS Power Supply or 1+1 Redundant 800*/1600W 80Plus Titanium CRPS Power Supply *800W PSU only for non GPU SKU+CPU up to 240W+ 12x DIMM

Sample	RS720-E11-RS24U	RS720-E11-RS12U	RS700-E11-RS12U	RS700-E11-RS4U
Processor	2 x Socket E (LGA4677) 4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable processors (Up to 350w)	2 x Socket E (LGA4677) 4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable processors (Up to 350w)	2 x Socket E (LGA4677) 4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable processors (Up to 350w)	2 x Socket E (LGA4677) 4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable processors (Up to 350w)
Chipset	Intel® C741	Intel® C741	Intel® C741	Intel® C741
Memory	32 x DIMM slots 4th: 4800 MHz (1DPC)/ 4400 MHz (2DPC) 5th: 5600/4800 MHz (1DPC)/4400(2DPC) Maximum 4 TB	32 x DIMM slots 4th: 4800 MHz (1DPC)/ 4400 MHz (2DPC) 5th: 5600/4800 MHz (1DPC)/4400(2DPC) Maximum 4 TB	32 x DIMM slots 4th: 4800 MHz (1DPC)/ 4400 MHz (2DPC) 5th: 5600/4800 MHz (1DPC)/4400(2DPC) Maximum 4 TB	32 x DIMM slots 4th: 4800 MHz (1DPC)/ 4400 MHz (2DPC) 5th: 5600/4800 MHz (1DPC)/4400(2DPC) Maximum 4 TB
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	Up to 2 single-slot or 1 double-slot GPU cards	Up to 8 single-wide GPU or 4 double-wide GPU	Up to 2 single-slot or 1 double-slot GPU cards	Up to 2 single-slot or 1 double-slot GPU cards
Expansion Slots	Up to 4 slots 1 x PCIe Gen5x 16 (FHFL) or 2 x PCIe Gen5x 8(FHHL) 1 x OCP 3.0 1 x PCIe G5 x16 (LP)	Up to 9 slots 6 x PCIe Gen5 x8 or 3 x PCIe Gen5 x16 (FHFL or FHHL) 1 x PCIe Gen5 x16 (FHHL) 1 x OCP 3.0 or PCIe Gen5 x16 (FHHL)* 1 x PCIe Gen5 x16 (LP) *maximum support 3 double-wide GPU if using OCP3.0	Up to 3 x PCIe Gen5 slots + 1 x internal slot 1 x PCIe Gen5 x16 (FHFL) 1 x PCIe Gen5 x16 or OCP3.0 1 x PCIe Gen5 x16 (LP) 1 x PCIe Gen5 x8 (LP, internal)	Up to 3 x PCIe Gen5 slots + 1 x internal slot 1 x PCIe Gen5 x16 (FHFL) 1 x PCIe Gen5 x16 or OCP3.0 1 x PCIe Gen5 x16 (LP) 1 x PCIe Gen5 x8 (LP, internal)
Storage Bays	24 x 2.5"" Front Hot-Swap drive bays (Up to 12x NVMe + 12x NVMe/SATA/SAS*) *RAID card is required to support SAS hard drives	12 x 3.5" Front Hot-swap drive bays (Up to 8 x NVMe/SATA/SAS* + 4 NVMe/SATA) Optional: 2 x 2.5" Rear Hot-swap Storage Bays (Up to 2x NVMe/SATA) *RAID card is required to support SAS hard drives	12 x 2.5" Front Hot-Swap drive bays Up to 12 x NVMe/SATA/SAS* *RAID card is required to support SAS hard drives	4 x 3.5" Front Hot-Swap drive bays (Up to 4 x NVMe/SATA/SAS*) *RAID card is required to support SAS hard drives
Networking	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port	4 x 1GbE or 2 x 10GbE LAN port 1 x Management port
Front I/O ports	2 x USB 3.2 Gen1 ports 1 x Power Botton	2 x USB 3.2 Gen1 ports 1 x Power Buttom	N/A	2 x USB 3.2 Gen1 ports 1 x VGA port
Rear I/O ports	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Management port
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	842.5mm x 449mm x 43.85mm (1U) 33.17" x 17.68" x 1.73"	842.5mm x 449mm x 43.85mm (1U) 33.17" x 17.68" x 1.73"
Power Supply (following different configuration by region)	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply	1+1 Redundant 2600W/1600W 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W/800 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W/ 1200W 80 PLUS Platinum Power Supply	1+1 Redundant 1600W/800 80 PLUS Titanium Power Supply 1+1 Redundant 2000W/1600W/ 1200W 80 PLUS Platinum Power Supply

Rack Server   GPU Server

Sample	RS300-E12-RS4	RS300-E12-PS4	ESC N8A-E12	ESC8000A-E12
Processor	1 x Socket V (LGA 1700) Intel Xeon E-2400 processor (Up to 95W)	1 x Socket V (LGA 1700) Intel Xeon E-2400 processor (Up to 95W)	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series processors (Up to 400W)	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)
Chipset	Intel® C262	Intel® C262	System on Chip (SoC)	System on Chip (SoC)
Memory	4 x DIMM slots DDR5 4400/4000/3600 ECC/NON-ECC UDIMM Maximum 128GB	4 x DIMM slots DDR5 4400/4000/3600 ECC/NON-ECC UDIMM Maximum 128GB	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM(1DPC) Maximum 3TB per socket	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM (2DPC) Maximum 3TB per socket
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	N/A	N/A	NVIDIA® HGX H100 8-GPU baseboard	Up to 8 double-slot GPU cards
Expansion Slots	Up to 3 slots 1 x PCIe x16 (Gen5 x16 link) 1 x PCIe x8 (Gen5 x8 link)	Up to 3 slots 1 x PCIe x16 (Gen5 x16 link) 1 x PCIe x8 (Gen5 x8 link)	Up to 12 PCIe Gen5 slots [PCIe Switch directly] 8 x PCIe Gen5 x16 (LPHL) [CPU directly] 2 x PCIe Gen5 x16 (FHHL)*+ 2 x PCIe Gen5 x8 (FHHL) *Support PCIe x16 for DPU	8x PCIe x16 slot (Gen5, FHFL) for dual-slot GPU card SKU-1: Front: 1 x PCIe x8 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 1 x PCIe x16 slot (Gen5) for NIC card Rear: 1 x PCIe x8 slot (Gen5) for NIC card SKU-2: Front: 1 x PCIe x8 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 1 x PCIe x16 slot (Gen5) for NIC card SKU-3: Front: 1 x PCIe x8 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 1 x PCIe x16 slot (Gen5) for OCP socket
Storage Bays	4 x 3.5" Hot-Swap HDD Bays (Up to 4 x NVMe/SATA/SAS) *SAS support only from optional SAS HBA/RAID card *NVMe support only from optional NVMe upgrade kit	4 x 3.5" Hot-Swap HDD Bays (Up to 4 x NVMe/SATA/SAS) *SAS support only from optional SAS HBA/RAID card *NVMe support only from optional NVMe upgrade kit	10 x 2.5" Hot-Swap drive bays (Up to 8 x NVMe + 2 x NVMe/SATA/SAS*)2 x M.2 Gen5 x4 *HBA/RAID card is required to support SATA/SAS hard drives	8 x 3.5" Front Hot-Swap drive bays (backplane supports up to 8 x NVMe/SATA/SAS*) 1 x M.2 support (Gen3 x4 link) *RAID card is required to support SAS hard drives
Networking	2 x 1GbE LAN port(Intel® I210AT) 1 x Management Port	2 x 1GbE LAN port(Intel® I210AT) 1 x Management Port	2 x 10Gbe RJ45 port 1 x Management port	2 x 1GbE or 10GbE LAN ports 1 x Management port
Front I/O ports	1 x VGA port 2 x USB 3.2 Gen2 ports	1 x VGA port 2 x USB 3.2 Gen2 ports	4 x USB3.2 Gen1 ports 1 x VGA port 2 x 10Gb LAN module 1 x Management port	2 x USB 3.2 Gen1 ports
Rear I/O ports	3 x USB 3.2 Gen 2 ports 1 x VGA port 1 x COM port 2 x RJ-45 ports 1 x RJ-45 ports (One for ASMB11-iKVM)	3 x USB 3.2 Gen 2 ports 1 x VGA port 1 x COM port 2 x RJ-45 ports 1 x RJ-45 ports (One for ASMB11-iKVM)	N/A	1 x VGA port 1 x COM port 2 x 1GbE or 10 GbE LAN ports 1 x Management port
Security Options	N/A	N/A	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (Optional)	ASUS Control Center ASUS ASMB11-iKVM (Optional)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	497mm x 439.5mm x 44mm (1U)	497mm x 439.5mm x 44mm (1U)	885mm x 447mm x 306.65mm (7U) 34.84"x17.6"x 12.07"	800mm x 440mm x 174.5mm (4U) 31.5" 17.32" 6.87"
Power Supply (following different configuration by region)	1+1 Redundant 450W 80 PLUS PLATINUM Power Supply	Single 350W 80 PLUS Gold Power Supply	3+3 Redundant 3000W 54V 80 PLUS Titanium Power Supply4+2 Redundant 3000W 54V 80 PLUS Titanium Power Supply	2+2 Redundant 3000W/2600W 80 PLUS Titanium Power Supply 2+1 Redundant 30000W/2600W 80 PLUS Titanium Power Supply

Sample	ESC8000A-E12P	ESC4000A-E12	ESC N8-E11	ESC8000-E11
Processor	2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	1 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 400W)	2 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processor Family (Up to 350W) 5th Gen Intel® Xeon® Scalable Processor Family (Up to 350W)	2 x Socket E (LGA 4677) 4th Intel® Xeon® Processor Scalable Family (Up to 350W) 5th Intel® Xeon® Processor Scalable Family
Chipset	System on Chip (SoC)	System on Chip (SoC)	Intel® C741	Intel® C741
Memory	24 x DIMM slots DDR5 4800/4400 RDIMM/ 3DS RDIMM Maximum 3TB per socket	12 x DIMM slots DDR5 4800/4400 RDIMM/3DS RDIMM Maximum 3TB	32 x DIMM slots DDR5 4400 RDIMM/RDIMM 3DS(2DPC) Maximum 4 TB	32x DIMM slots DDR5 5600/4800 RDIMM/ 3DS RDIMM (2DPC) Maximum 4TB per CPU
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	Up to 8 double-slot GPU cards	Up to 4 double-slot GPU cards	NVIDIA® HGX™ H100	Up to 8 double-slot GPU cards
Expansion Slots	8x PCIe x16 slot (Gen5, FHFL) for dual-slot GPU card SKU-1: Front: 1 x PCIe x16 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 4 x PCIe x16 slot (Gen5) for NIC card SKU-2: Front: 1 x PCIe x16 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 3 x PCIe x16 slot (Gen5 ,FHFL) for NIC card 1 x PCIe x16 slot (Gen5) for OCP socket	Front: 1 x PCIe x8 slot (Gen5 x8 link, LPHL) only for SKU1 Rear: 4 x PCIe x16 slots (Gen5 x16 link, FHFL) for dual-slot GPU cards or 8 x PCIe x16 slots (Gen5 x8 link, FHFL) for single-slot GPU cards 1 x PCIe x16 slots (Gen5 x16 link, FHHL) 1 x PCIe x16 slot (Gen5 x16/x8 link, FHHL) or OCP socket option 1 x PCIe x8 slot (Gen5 x0/x8 link, LPHL)	Up to 12 PCIe Gen5 slots [PCIe Switch directly] 8 x PCIe Gen5 x16 (LPHL) [CPU directly] 2 x PCIe Gen5 x16 (FHHL)*+ 2 x PCIe Gen5 x8 (FHHL) *Support PCIe x16 for DPU	8x PCIe x16 slot (Gen5, FHFL) for dual-slot GPU card SKU-1: Front: 1 x PCIe x8 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 1 x PCIe x16 slot (Gen5) for NIC card Rear: 1 x PCIe x8 slot (Gen5) for NIC card SKU-2: Front: 1 x PCIe x8 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 1 x PCIe x16 slot (Gen5) for NIC card SKU-3: Front: 1 x PCIe x8 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 1 x PCIe x16 slot (Gen5) for OCP socket
Storage Bays	8 x 3.5" Front Hot-Swap drive bays (backplane supports up to 8 x NVMe/SATA/SAS*) 1 x M.2 support (Gen3 x4 link) *RAID card is required to support SAS hard drives	2 x 2.5" & 4 x 3.5" Hot-Swap drive bays SKU1: 2 x 2.5" NVMe/SATA/SAS*+ 2 x 3." NVMe/SATA/SAS* + 2 x 3.5" SATA/SAS* SKU2: 2 x 2.5" NVMe/SATA/SAS* + 4 x 3.5" NVMe/SATA/SAS* (Occupy 1 x PCIe x8 link) **RAID card is required to support SAS hard drives **For SKU1 additional 2 x NVMe support required a RAID card	10 x 2.5" Hot-Swap drive bays (Up to 8 x NVMe + 2 x NVMe/SATA/SAS*) 2 x M.2 Gen5 x4 + 2 x M.2 Gen3 x2 *RAID card is required to support SAS hard drives	8 x 3.5" Front Hot-Swap drive bays (backplane supports up to 8 x NVMe/SATA/SAS*) 1 x M.2 support (Gen3 x4 link) *RAID card is required to support SAS hard drives
Networking	2 x 1GbE or 10GbE LAN ports 1 x Management port	2 x 1GbE LAN ports 1 x Management port	2 x 10GbE LAN ports 1 x Management port	2 x 1GbE or 10GbE LAN ports 1 x Management port
Front I/O ports	2 x USB 3.2 Gen1 ports	4 x USB 3.2 Gen1 ports	4 x USB3.2 Gen1 ports 1 x VGA port 2 x 10Gb LAN module 1 x Management port	2 x USB 3.2 Gen1 ports
Rear I/O ports	1 x VGA port 1 x COM port 2 x 1GbE or 10 GbE LAN ports 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 2 x 1GbE LAN ports 1 x Management port	N/A	1 x VGA port 1 x COM port 2 x 1GbE or 10 GbE LAN ports 1 x Management port
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	800mm x 440mm x 174.5mm (4U) 31.5" 17.32" 6.87"	800mm x 439.5mm x 88.9mm (2U) 31.5" x 17.3" x 3.5"	885mm x 447mm x 306.65mm (7U) 34.84" x 17.6" x 12.07"	800mm x 440mm x 174.5mm (4U) 31.5"x 17.32"x 6.87"
Power Supply (following different configuration by region)	2+2 Redundant 3000W/2600W 80 PLUS Titanium Power Supply 2+1 Redundant 30000W/2600W 80 PLUS Titanium Power Supply	1+1 Redundant 2600W 80 PLUS Titanium Power Supply	3+3 Redundant 3000W 54V 80 PLUS Titanium Power Supply 4+2 Redundant 3000W 54V 80 PLUS Titanium Power Supply	2+2 Redundant 3000W/2600W 80 PLUS Titanium Power Supply 2+1 Redundant 30000W/2600W 80 PLUS Titanium Power Supply

GPU Server / High Density Server

Sample	**ESC8000-E11P**	**ESC4000-E11**	**RS720QA-E12-RS8U**	**RS720Q-E11-RS8U**
Processor	2 x Socket E (LGA 4677) 4th Intel® Xeon® Processor Scalable Family 5th Intel® Xeon® Processor Scalable Family (Up to 350W)	2 x Socket E (LGA 4677) 4th Intel® Xeon® Processor Scalable Family 5th Intel® Xeon® Processor Scalable Family (Up to 350w)	Per node: 2 x Socket SP5 (LGA 6096) AMD EPYC™ 9004 Series Processors (Up to 240W) (With air cool up to 240W, with liquid cool up to 400W)	Per node: 2 x Socket E (LGA4677) 4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable processors (with Air cool up to 270W, with Liquid cool up to 350W)
Chipset	Intel® C741	Intel® C741	System on Chip (SoC)	Intel® C741
Memory	32x DIMM slots DDR5 5600/4800 RDIMM/ 3DS RDIMM (2DPC) Maximum 4TB per CPU	16 x DIMM slots DDR5 4800/4400 RDIMM/3DS RDIMM(1DPC) Maximum 2TB	Per node: 24 x DIMM slots DDR5 4800 RDIMM/RDIMM 3DS(1DPC) Maximum 6144GB	Per node: 16 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600/4800 MHz RDIMM/3DS RDIMM (1DPC) Maximum 4096GB
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	Up to 8 double-slot GPU cards	Up to 4 double-slot GPU cards	N/A	N/A
Expansion Slots	8x PCIe x16 slot (Gen5, FHFL) for dual-slot GPU card SKU-1: Front: 1 x PCIe x16 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 4 x PCIe x16 slot (Gen5) for NIC card SKU-2: Front: 1 x PCIe x16 slot (Gen5 ,LPHL) for HBA/RAID cards Rear: 3 x PCIe x16 slot (Gen5 ,FHFL) for NIC card 1 x PCIe x16 slot (Gen5) for OCP socket	Front: 1 x PCIe x8 slot (Gen4 x8 link, LPHL) Only for SKU1 Rear: 4 x PCIe x16 slots (Gen5 x16 link, FHFL) for dual-slot GPU cards or 8 x PCIe x16 slots (Gen5 x8 link, FHFL) for single-slot GPU cards 2 x PCIe x16 slots (Gen5 x16 link, FHFL)	Per node: Up to 2 slots 2 x PCIe Gen5 x16 (HHHL)	Per node: Up to 2 slots 2 x PCIe x16 slot (Gen5 x16 link, HHHL)
Storage Bays	Front Bays: 8 x 3.5"" Hot-Swap drive bays (backplane supports up to 8 x NVMe/SATA/SAS*) 1 x M.2 support (Gen3 x4 link) *RAID card is required to support SAS hard drives	SKU-1:2 x 2.5" NVMe/SATA/SAS* + 2 x3.5" SATA/SAS*/NVMe + 2 x 2.5" SATA/ SAS* SKU-2:2 x 2.5" NVMe/SATA/SAS* + 4 x3.5" NVMe/SATA/SAS* (Occupy 1 x PCIe x8 link), 1 x M.2 socket (Gen3 x4 link PCIe mode, up to 2280) *RAID card is required to support SAS hard drives **For SKU1 additional 2 x NVMe support required a RAID card	8 x 2.5" Front Hot-Swap drive bays (Up to 8x NVMe/SATA/SAS*) 8 x M.2 (Up to 22110, PCIe mode) *SATA/SAS support from optional CB board	8 x 2.5" Front Hot-swap drive bays (NVMe/SATA/SAS) (Up to 8 x NVMe/SATA/SAS) 8 x M.2 (Up to 22110, SATA & PCIe mode) *SATA/SAS support from optional CB board
Networking	2 x GbE or 10GbE LAN ports 1 x Management port"	2 x 1GbE LAN ports 1 x Management port	Per node: 2 x 10GbE LAN port 1 x Management port	Per node: 2 x 10GbE LAN port 1 x Management port
Front I/O ports	2 x USB 3.2 Gen1 ports	4 x USB 3.2 Gen1 ports	N/A	N/A
Rear I/O ports	1 x VGA port 1 x COM port 2 x 1GbE or 10GbE LAN ports 1 x Management port	2 x USB 3.2 Gen1 ports 1 x VGA port 2 x 1GbE LAN ports	Per node: 2 x USB 3.2 Gen1 ports 1 x VGA port 1 x Mini-DP port 1 x Management port	Per node: 2 x USB 3.2 Gen1 ports 1 x VGA port 2 x 10GbE ports 1 x Management port
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	800mm x 440mm x 174.5mm (4U) 31.5" x 17.32"x 6.87"	800mm x 439.5mm x 88.9mm (2U) 31.5" x 17.3" x 3.5"	847mm x 444mm x 87.3mm (2U) 33.35" x 17.48" x 3.44"	800mm x 444mm x 88mm (2U) 31.5" x 17.48"x 3.46"
Power Supply (following different configuration by region)	2+2 Redundant 3000W/2600W 80 PLUS Titanium Power Supply 2+1 Redundant 3000W/2600W 80 PLUS Titanium Power Supply	1+1 Redundant 2600W 80 PLUS Titanium Power Supply	1+1 Redundant 2600W 80 PLUS Titanium Power Supply 1+1 Redundant 3200W 80 PLUS Titanium Power Supply	1+1 Redundant 3000W 80 PLUS Titanium Power Supply 1+1 Redundant 3600W 80 PLUS Titanium Power Supply

Edge server

Sample	**RS723Q-E11-RS24**	**EG520-E11-RS10-R**	**EG520-E11-RS6-R**	**EG520-E11-RS6-F**
Processor	Per node: 2 x Socket E (LGA4677) 4th Gen Intel® Xeon® Scalable processors 5th Gen Intel® Xeon® Scalable processors (with Liquid cool up to 350W)	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 350W)	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 350W)	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 205W or 225W EE SKUs)
Chipset	Intel® C741	Intel® C741	Intel® C741	Intel® C741
Memory	Per node: 16 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600/4800 MHz RDIMM/3DS RDIMM (1DPC) Maximum 4096GB	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	N/A	Up to 2 double-slot GPU cards *0–35°C for GPU-equipped SKUs	Up to 2 double-slot GPU cards *0–35°C for GPU-equipped SKUs	Up to 2 double-slot GPU cards *0–35°C for GPU-equipped SKUs
Expansion Slots	Per node: Up to 2 slots + 1 OCP 3.0 socket 1 x PCIe x16 slot (Gen5 x16 link, HHHL) 1 x PCIe x16 slot (Gen5 x8 link, HHHL) 1 x OCP 3.0 NIC socket (Gen5 x16 link)	Up to 5 slots 3 x PCIe G5 x16 link (FHHL) or 3 x PCIe G5 x16/x8/x8 link (FHHL) + 2 x PCIe G5 x8 link (FHHL)	Up to 5 slots 1 x PCIe G5 x16 link (FHHL) or 2 x PCIe G5 x8 link (FHHL)+ 2 x PCIe G5 x16 link (FHFL) or 3 x PCIe G5 x16/x8/x8 link (FHFL)	Up to 5 slots 1 x PCIe G5 x16 link (FHHL) or 2 x PCIe G5 x8 link (FHHL)+ 2 x PCIe G5 x16 link (FHFL) or 3 x PCIe G5 x16/x8/x8 link (FHFL)
Storage Bays	24 x 2.5" Hot-Swap drive bays (NVMe/SATA/SAS*) (Up to 8 x SATA/SAS/NVMe + 16 x SATA/SAS) 8 x M.2 (Up to 22110, SATA & PCIe mode) *SATA/SAS support from optional CB board	6x 2.5" Front Hot-swap drive bays (NVME/SATA)+ 4x 2.5" Rear Hot-swap drive bays(SATA) 2x M.2 (22110/2280, PCIe) Gen5 x8 Link	2x 2.5" Front Hot-swap drive bays(NVME/SATA)+ 4x 2.5" Rear Hot-swap drive bays 2x M.2 (22110/2280, PCIe) Gen5 x8 Link	4x 2.5" Front Hot-swap drive bays (NVME/SATA)+ 2x E1.S (optional for E1.S SKU) 2x M.2 (22110/2280, PCIe) Gen5 x8 Link *E1.S only supported for E1.S SKU, cannot be purchased separately
Networking	Per node: 1 x 1GbE LAN ports 1 x Management port	2 x 10GbE LAN port 1x Management port	2 x 10GbE LAN port 1x Management port	2 x 10GbE LAN port 1x Management port
Front I/O ports	N/A	2 x USB 3.2 Gen1 ports 1 x VGA port	2 x USB 3.2 Gen1 ports 1 x VGA port	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port
Rear I/O ports	Per node: 1 x USB 3.2 Gen1 ports 1 x mini Display port 1 x RJ-45 1GbE LAN ports 1 x RJ-45 Mgmt LAN port	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port	2 x USB 3.2 Gen1 ports 1 x VGA port
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	890mm x 444mm x 88mm (2U) 35.04" x 17.48" x 3.46"	430mm x 438.5mm x 87mm(2U) 16.93" x 17.26" x 3.43"	430mm x 438.5mm x 87mm(2U) 16.93" x 17.26" x 3.43"	399*mm x 438.5mm x 87mm(2U) 15.71" x 17.26" x 3.43" *ear to rear wall
Power Supply (following different configuration by region)	1+1 Redundant 3600W 80 PLUS Titanium Power Supply	1+1 Redundant 2000W 54.5MM SLIM Titanium Power Supply 1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply	1+1 Redundant 2000W 54.5MM SLIM Titanium Power Supply 1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply	1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 1300W 50.5MM SLIM 48V Power Supply

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

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Edge server

Sample	EG500-E11-RS4-R	EG500-E11-RS4-F	EG500-E11-RS2-R	EG500-E11-RS2-F
Processor	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 350W)	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 205W or 225W EE SKUs)	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 350W)	1 x Socket E (LGA 4677) 4th Gen Intel® Xeon® Scalable Processors Family 5th Gen Intel® Xeon® Scalable Processors Family (Up to 205W or 225W EE SKUs)
Chipset	Intel® C741	Intel® C741	Intel® C741	Intel® C741
Memory	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB	8 x DIMM slots 4th: DDR5 4800 MHz RDIMM/3DS RDIMM (1DPC) 5th: DDR5 5600 MHz RDIMM/3DS RDIMM (1DPC) Maximum 2048GB
VGA	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB	Aspeed AST2600 64MB
Graphic	Up to 1 double-slot GPU card and 1 single-slot GPU card	Up to 2 single-slot GPU cards	Up to 1 double-slot GPU card and 1 single-slot GPU card	Up to 2 single-slot GPU cards
Expansion Slots	Up to 3 PCIe Gen5 slots 3 x PCIe G5 x16 link (FHHL)	Up to 3 PCIe Gen5 slots 3 x PCIe G5 x16 (FHHL)	Up to 3 PCIe Gen5 slots 1 x PCIe G5 x16 link (FHHL)+2 x PCIe G5 x16 link (FHFL)	Up to 3 PCIe Gen5 slots 1 x PCIe G5 x16 link (FHHL)+2 x PCIe G5 x16 link (FHFL)
Storage Bays	2x 2.5" Front Hot-swap drive bays (SATA/NVME)+ 2x 2.5" Int. SATA + 2x E1.S Hot-swap drive bays 2x M.2 (22110/2280, PCIe) Gen5 x8 Link *E1.S is optional and only supported for E1.S SKU, cannot be purchased separately * Internal SATA SSD is optional for 650W PSU/ short PSU and only for internal bay SKU, cannot be purchased separately	2x 2.5" Front Hot-swap drive bays (SATA)+ 2x 2.5" Int. SATA + 2x E1.S Hot-swap drive bays 2x M.2 (22110/2280, PCIe) Gen5 x8 Link *E1.S is optional and only supported for E1.S SKU, cannot be purchased separately * Internal SATA SSD is optional for 650W PSU/ short PSU and only for internal bay SKU, cannot be purchased separately	2x E1.S + 2x 2.5" Int. SATA for 650W/ Short PSU 2x E1.S for 1300W/Long PSU 2x M.2 (22110/2280, PCIe) Gen5 x8 Link *E1.S is optional and only supported for E1.S SKU, cannot be purchased separately * Internal SATA SSD is optional for 650W PSU/ short PSU and only for internal bay SKU, cannot be purchased separately	2x E1.S + 2x 2.5" Int. SATA for 650W/ Short PSU 2x E1.S for 1300W/Long PSU 2x M.2 (22110/2280, PCIe) Gen5 x8 Link *E1.S is optional and only supported for E1.S SKU, cannot be purchased separately * Internal SATA SSD is optional for 650W PSU/ short PSU and only for internal bay SKU, cannot be purchased separately
Networking	2 x 10GbE LAN 1x Management port	2 x 10GbE LAN port 1 x Management port	2 x 10GbE LAN port 1x Management port	2 x 10GbE LAN port 1x Management port
Front I/O ports	2 x USB 3.2 Gen1 ports 1 x VGA port	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port	2 x USB 3.2 Gen1 ports 1 x VGA port	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port
Rear I/O ports	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port	2 x USB 3.2 Gen1 ports 1 x VGA port	1 x VGA port 2 x USB 3.2 Gen1 ports 2 x RJ-45 10G LAN port 1 x RJ-45 Mgmt LAN port 1 x RJ-45 Console port	2 x USB 3.2 Gen1 ports 1 x VGA port
Security Options	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module	Optional TPM module Optional PFR module
Management Solution	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)	ASUS Control Center ASUS ASMB11-iKVM (on-board)
Dimension	430mm x 438.5mm x 43.7mm(1U) 16.93" x 17.26" x 1.72"	399*mm x 438.5mm x 43.7mm(1U) 15.71" x 17.26" x 1.72" *ear to rear wall	430mm x 438.5mm x 43.7mm(1U) 16.93" x 17.26" x 1.72"	399*mm x 438.5mm x 43.7mm(1U) 15.71" x 17.26" x 1.72" *ear to rear wall
Power Supply (following different configuration by region)	1+1 Redundant 650W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 800W 50.5MM SLIM Titanium Power Supply(TBD)	1+1 Redundant 650W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 650W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 48V Power Supply 1+1 Redundant 1300W 50.5MM SLIM 48V Power Supply	1+1 Redundant 650W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 800W 50.5MM SLIM Titanium Power Supply(TBD)	1+1 Redundant 650W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 1300W 50.5MM SLIM Platinum Power Supply 1+1 Redundant 650W 50.5MM SLIM 48V Power Supply 1+1 Redundant 1300W 50.5MM SLIM 48V Power Supply

Storage Solutions

Sample	VS320D-RS26	VS320D-RS12
Architecture	Dual-active controller	Dual-active controller
Processor	Intel®Xeon® 64-bit 4-core	Intel®Xeon® 64-bit 4-core
Memory	Per Node: 4 x DIMM slots DDR4 up to 2400 RDIMM DDR4 up to 3200 ECC DIMM Maximum 256GB	Per Node: 4 x DIMM slots DDR4 up to 2933 RDIMM DDR4 up to 3200 ECC DIMM Maximum 256GB
Storage	26 x 2.5"Front Hot-swap drive bays Compatible Drive Type: 2.5"SAS,NL-SAS,SED HDD/2.5"SAS,SED SSD Maximum Drive Bays with Expansion Unit: 546 Bays Drive Interface: SAS 12Gb/s Maximum Internal Raw Capacity: 798 TB (calculate 30.72 TB HDD) Maximum Raw Capacity with Expansion Units: 16,773 TB (calculate 30.72TB HDD)	12 x 3.5"Hot-swap drive bays Compatible Drive Type: 3.5"&2.5" SAS,NL-SAS,SED HDD/2.5"SAS,SED SSD Maximum Drive Bays with Expansion Unit: 492 Bays Drive Interface: SAS 12Gb/s Maximum Internal Raw Capacity: 264 TB (calculate 22 TB HDD) Maximum Raw Capacity with Expansion Units: 10,824 TB (calculate 22 TB HDD)
Connectivity Port	Up to 2 PCIe Gen3 slots 2 x PCIe Gen3 x8 Optional (per controller): 4 x 10GbE SFP+ LAN Port 4 x 10GbE RJ45 LAN Port 2 or 4 x 25GbE SFP28 LAN Port 2 or 4 x 16Gb SFP+ Fibre Channel 2 x 32Gb SFP28 Fibre Channel 1 x Management port (onboard per controller) 4 x 10GbE SFP+ LAN Port (onboard per controller)	Up to 2 PCIe Gen3 slots 2 x PCIe Gen3 x8 Optional (per controller): 4 x 10GbE SFP+ LAN Port 4 x 10GbE RJ45 LAN Port 2 or 4 x 25GbE SFP28 LAN Port 2 or 4 x 16Gb SFP+ Fibre Channel 2 x 32Gb SFP28 Fibre Channel 1 x Management port (onboard per controller) 4 x 10GbE SFP+ LAN Port (onboard per controller)
Expansion and External Port	2 x 12Gb/s SAS Wide Port (onboard per controller) 1x USB Port (front) 2x USB Ports(rear) 1x Console Port 1x Service Port (UPS)	2 x 12Gb/s SAS Wide Port (onboard per controller) 1x USB Port (front) 2x USB Ports(rear) 1x Console Port 1x Service Port (UPS)
Software Specification	Storage OS: ASUS Storage Manager RAIDType: 0/1/3/5/6/10/30/50/60/5EE /6EE /50EE /60EE /N-waymirror Storage Efficiency: Thin provisioning Software Acceleration: SSD cache(optional)/Autotiering (optional) Data Protection: Snapshot /Local volume clone Remote Replication: Asynchronous (built-in)/Synchronous (optional) Security: HTTPS/SSH /iSCSICHAP /ISE&SED Management: WebUI/Serialconsole/RESTfulAPI/S.E.S./LCM	Storage OS: ASUS Storage Manager RAIDType: 0/1/3/5/6/10/30/50/60/5EE /6EE /50EE /60EE /N-waymirror Storage Efficiency: Thin provisioning Software Acceleration: SSD cache(optional)/Autotiering (optional) Data Protection: Snapshot /Local volume clone Remote Replication: Asynchronous (built-in)/Synchronous (optional) Security: HTTPS/SSH /iSCSICHAP /ISE&SED Management: WebUI/Serialconsole/RESTfulAPI/S.E.S./LCM
Memory Protection	Cache-to-Flash(Super capacitor Module+Flash Module) (optional)	Cache-to-Flash(Super capacitor Module+Flash Module) (optional)
Dimension	88mm x 438mm x 515mm (2U)	88mm x 438mm x 515mm (2U)
Net Weight kg (CPU, DRAM & HDD not included)	16.3 kg	16.4 kg
Gross Weight kg (GPU, DRAM & HDD not included, Packing included)	18.6 kg	18.8 kg
Power Supply (following different configuration by region)"	1+1 Redundant 850W 80 PLUS Titanium Power Supply 1+1 Redundant 850W 80 PLUS Platinum Power Supply	1+1 Redundant 850W 80 PLUS Titanium Power Supply 1+1 Redundant 850W 80 PLUS Platinum Power Supply

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