

RS520QA-E13-RS8U

High-end AMD Turin Platform Single Socket 2U4N Server

**2U4N****1****12/20**

ASUS RS520QA-E13-RS8U is the ideal multi-node server powered by AMD® Turin processors, with each node supports up to 20 DIMMs, one PCIe® 5.0 slots and one OCP 3.0 slot, which is the best choice for EDA application or high performance computing.

FEATURES

- Powered by a single AMD EPYC™ 9005 Turin processor with 12 DIMMs supporting up to 6400MHz (1DPC), built for high scalability, dense computing, and diverse workloads.
- Optional CXL-enabled design supports eight additional DIMMs per node at 5600/4400MHz (2DPC), delivering high capacity and cost-efficient scalability.
- Front-access layout allows IT staff to service the server without entering hot aisles, enhancing convenience and uptime.
- Effort-less ergonomic handle and toolless bracket design for easy maintenance.
- Support up to 500W TDP CPUs with exceptional thermal performance using air-cooling, improving power efficiency

TARGET MARKET

- High Performance Computing
- Electronic Design Automation
- Data Analysis
- Edge Computing

AMD Turin Processors

RS520QA-E13-RS8U is built with the AMD next Gen Turin processor, with per node 12 DDR5 RDIMM up to 6400MT/s (1DPC), designed for the demand of high scalability, high-density computing, and a wide range of existing and emerging workloads.

CXL Memory Expansion

Total 8 additional DIMMs expandability per node by optional CXL memory module to achieve higher memory capacity 8x DIMMs 2DPC. In addition, the on-board 12x DIMMs still remain 1DPC up to 6400MHz speed for extraordinary performance. Besides, achieving huge saving without utilizing the costly large size memory.

PCIe 5.0 Ready

PCI Express® (PCIe®) 5.0 delivers 32GT/s bandwidth, which is double the speed of PCIe 4.0, offering lower power consumption, better lane scalability and backwards compatibility.

Enhanced Security

PFR FPGA as the platform Root-of-Trust solution for firmware resiliency Trusted Platform Module 2.0 (TPM 2.0) to secure hardware through integrated cryptographic keys and offer regular firmware update for vulnerabilities.

RS520QA-E13-RS8U

SPECIFICATION

Processor Support		Per node: 1 x Socket SP5 (LGA 6096P) AMD EPYC™ Turin series processors (Up to 400W/500W* TDP) *500W TDP requires an operating temperature of 25°C
Core Logic		(INTEGRATED I/O – NO CHIPSET)
Memory	Total Slots Capacity Memory Type Memory Size	Per node: Total 12+8 DIMM slots On-board: 12 x DIMM slots 1DPC (DDR5 up to 6400) CXL module: 8 x DIMM slots 2DPC (DDR5 4400/5600*) * CXL modules support 5600 MT/s in 1DPC mode ** CXL support is optional and dependent on configuration.
Expansion Slots	Total PCI/PCI-X/PCI-E/PIKE Slots Slot Type	Total 2 expansion slots per node Per Node: 1 x PCIe Gen5 x16 link (HH, HL) 1 x OCP 3.0 *(SFF)
Storage Bays	I = internal A or S will be hot-swappable	8 x 2.5" Hot-swap Storage Bays (8 x SATA/SAS*/NVMe supported) * SAS support requires an optional HBA/RAID card 2 x M.2 connectors (Gen5 x4 link, 2280)
Networking	LAN	Per Node: 1 x Management Port
Graphic	VGA	Aspeed AST2600 64MB
Front I/O Ports		Per Node: 2 x USB 3.2 Gen1 ports 1 x VGA port 1 x RJ-45 Management LAN port
Rear I/O Ports		Per Node: 1x UART Debug port
Switch/LED		Per Node: Front: 1 x Power switch w/ LED 1 x Message LED 1 x Location switch w/ LED 1 x BMC heartbeat LED 1 x LAN LED 2 x HDD Access LED
OS Support		Please find the latest OS support from http://www.asus.com/
Management Solution	Software	ASUS Control Center (Classic)
	Out of Band Remote Management	On-Board ASM12-iKVM for KVM-over-IP
Dimension		900(L) x 446(W) x 87.2(H) mm 35.43(L) x 17.56(W) x 3.43(H) inch
Net Weight KG (CPU, DRAM & HDD not included)		27KG
Gross Weight KG (CPU, DRAM & HDD not included, Packing included)		39.3KG
Power Supply (following different configuration by region)		2 + 0 3200W 80 PLUS Titanium Power Supply Rating: 220-240 Vac, 16A, 50/60Hz * 1 + 1 Redundant 3200W support with particular configuration
Environment		Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 60°C Non operation humidity: 20% ~ 90% (Non condensing)