

# RS520QA-E13-RS8U

## High-end AMD Turin Platform Single socket 2U4N Server for High Density and Efficiency HPC Workloads



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

### FEATURES

- Powered by single AMD next Gen processors, with DDR5 RDIMM up to 6000MHz 1DPC
- CXL memory expandability achieving high memory capacity (12+8 DIMM per node) & speed (1DPC 6000 MTS/2DPC 4400 MTS)
- Achieving greater flexibility and versatility with front access design
- Effort-less ergonomic handle and toolless bracket design for easy maintenance
- Exceptional thermal performance to support up to 400W Processor with air cool solution

### 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 6000MTs (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 DIMM expandability per node by CXL memory module to achieve higher memory capacity 8x DIMM 2DPC (DDR5 up to 4400 MHz). In addition, the on-board 12x DIMM still remain 1DPC up to 6000MHz 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 16 GT/s bandwidth, which is double the speed of PCIe 4.0, offering lower power consumption, better lane scalability and backwards compatibility.

### Enhanced Security

RS520QA-E13-RS8U features EPFR FPGA as the platform root-of-trust solution for firmware resilience - Trusted Platform Module 2.0 (TPM 2.0) to secure hardware through integrated cryptographic keys, and benefits from regular firmware updates for vulnerabilities – elevating security to enterprise-grade heights.

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# SPECIFICATION

|   |   |   |
|---|---|---|
| <b>Processor Support</b>  |   | Per Node:<br>1 x AMD EPYC 9005 Processors (Up to TDP 400W)  |
| <b>Core Logic</b>   |   | (INTEGRATED I/O – NO CHIPSET)   |
| <b>Memory</b>   | <b>Total Slots</b>                                    | Per Node:<br>12x DDR5 up to 6000 MHz (12-channel per CPU, 12 DIMM per CPU)<br>CXL memory module to expand 4 or 8 DIMMs 2DPC (DDR5 up to 4400 MHz)<br>DDR5 6400/5600 RDIMM 128GB, 96GB, 64GB |
| <b>Expansion Slots</b>  | <b>Total PCI/PCI-X/PCI-E/PIKE Slots<br/>Slot Type</b> | Per Node:<br>1 x PCIe Gen5 x16 link (HH, HL)<br>1 x OCP 3.0   |
| <b>Storage Bays</b>   | <b>I = internal<br/>A or S will be hot-swappable</b>  | 8 x 2.5" Hot-swap Storage Bays<br>(8 x SATA/SAS*/NVMe supported)<br>* SAS support with additional RAID card<br>2 x M.2 PCIe Gen5 x4 link, up to 2280  |
| <b>Networking</b>   | <b>LAN</b>  | Per Node:<br>1 x Management Port  |
| <b>Graphic</b>  | <b>VGA</b>  | Aspeed AST2600 64MB   |
| <b>Front I/O Ports</b>  |   | Per Node:<br>2 x USB 3.1 Ports<br>1 x VGA Port<br>1 x RJ-45 Management Port   |
| <b>Rear I/O Ports</b>   |   | Per Node:<br>1x Debug port  |
| <b>Switch/LED</b>   |   | Per Node:<br>Front:<br>1 x Power Switch/LED<br>1 x Location Switch/LED<br>1 x BMC Indication LED<br>1 x Message LED   |
| <b>OS Support</b>   |   | Please find the latest OS support from <a href="http://www.asus.com/">http://www.asus.com/</a>  |
| <b>Management Solution</b>  | <b>Software</b>                                       | ASUS Control Center (Classic)   |
|   | <b>Out of Band Remote Management</b>                  | On-Board ASMB 12-iKVM for KVM-over-IP   |
| <b>Dimension</b>  |   | 448 (W) x 87.3 (H) x 900(D) mm (2U)<br>17.64 (W) x 3.44 (H) x 35.4 (D) inches   |
| <b>Net Weight Kg (CPU, DRAM &amp; HDD not included)</b>                     |   | 40 Kg   |
| <b>Gross Weight Kg (CPU, DRAM &amp; HDD not included, Packing included)</b> |   | 46 Kg   |
| <b>Power Supply (following different configuration by region)</b>           |   | 2+spare Redundant 3200W 80 PLUS Titanium Power Supply<br>1+1 Redundant 3600W 80 PLUS Titanium Power Supply  |
| <b>Environment</b>  |   | Operation temperature: 10°C ~ 35°C<br>Non operation temperature: -40°C ~ 70°C<br>Non operation humidity: 20% ~ 90% (Non condensing)   |