

# RS520A-E12-RS24U

## AMD Single Socket, High Performance 2U Server



2U



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24

### 4th Generation AMD EPYC Processors with AMD 3D V-Cache technology

ASUS RS520A-E12-RS24U was designed to accelerate application performance leveraging accelerator cards and storage scalability. With the CPU and memory configured in a front parallel design that enables efficient airflow for excellent thermal performance, RS520A-E12-RS24U is optimized for rack placement. Featuring the single processor in a 2U chassis, RS520A-E12 series delivers the right-sized rack server dimensions for price sensitive applications and meets the demanding computing requirements.

### Feature

- 1 x AMD EPYC 9004 Series Processor with DDR5 Memory up to 4800Mhz
- PCIe Gen5 Ready
- Max 2x DW GPU cards supported  
\*24Nvme SKU can't support GPU
- Rack-optimized Design
- 24 x 2.5" Hot-swap HDD bays

### Industry-leading memory capability

With 24 x DIMM slots, RS520A-E12 Series supports total 6,144GB memory size. The CPU's memory controller supports 24 x DDR5 memory slots with 12 channels, up to 4800Mhz of RDIMMs or LRDIMMs/3DS. We deliver the industry-leading technology of server memory for our customers' business.

### AMD EPYC™ 9004 Series Processors

The RS520A-E12 Series is built on the latest AMD EPYC™ 9004 Series Processor, and designed for the demand of scale-out computing, and wide range of existing and emerging workloads.

### The best storage interface combination for software-defined storage management

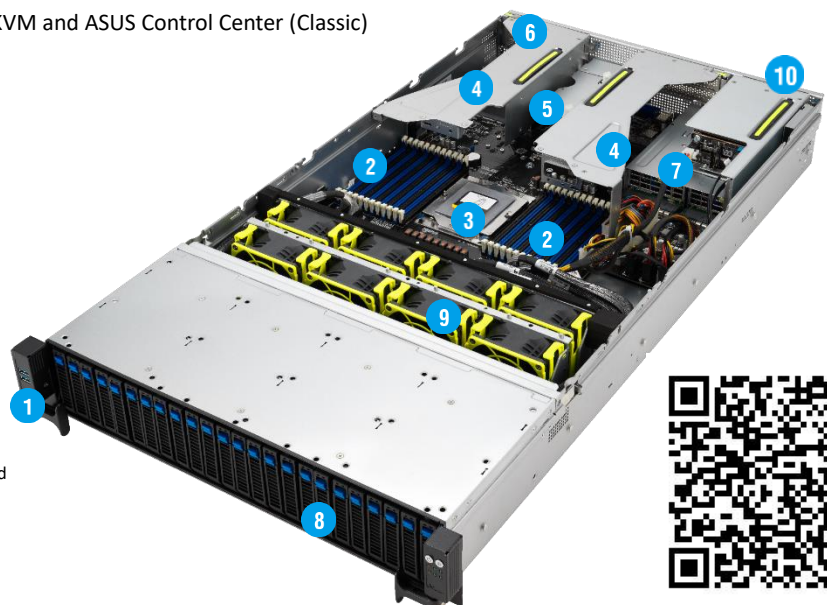
**Front:** 24 x 2.5" hot-swap storage bays (supports maximum 24 x 2.5" U.2/U.3 NVMe devices)  
**Rear:** 2 x 2.5" hot-swap storage bays (supports SATA devices)

### Comprehensive IT infrastructure management solution

ASMB11-iKVM and ASUS Control Center (Classic)

### Target market

- Data center Storage Server
- Enterprise Application



1. Asset Tag
2. 24 x DIMM, DDR5B4800, RDIMM, LRDIMM, LRDIMM 3DS
3. AMD EPYC™ 9004 Processor Family (Up to 400W)
4. 2 x PCIe x16 slot(Gen5 x16 link, FHFL) or dual-slot GPU cards or 4 x PCIe x16 slot(Gen5 x8 link, FHFL)\*
5. 1 x PCIe x16 slot(Gen5x8 link, LP)
6. 1 x OCP 3.0 Mezzanine (Gen5 x16 link)
7. 1+1 80 PLUS Titanium /Platinum PSUs
8. 24 x 2.5" Hot-swap HDD Bays
9. 4 x Redundant fans (optional)\*\*
10. 2 x Rear-bay support SATAIII

\*The 24 NVMe configuration will not support any GPU.  
\*Slot 1-4 in rear panel will not be available with 24 NVMe configuration.  
\*\*Please select it when purchasing order and we will have assembling and standard testing before ship

# RS520A-E12-RS24U

# SPECIFICATION

<b>Processor Support.</b>		1 x Socket SP5 (LGA 6096) Supports 4th Generation AMD EPYC Processors with AMD 3D V-Cache technology Supports AMD EPYC™ 9004 series processors (up to 400W)
<b>Core Logic</b>		System on Chip (SOC)
<b>Memory</b>	<b>Total Slots</b>	24 12-channel, 2 DIMM per channel
	<b>Capacity</b>	Maximum up to 6,144GB
	<b>Memory Type</b>	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)
	<b>Memory Size</b>	128GB, 64GB, 32GB, 16GB (RDIMM), 128GB, 64GB (LRDIMM), 256GB, 128GB, 64GB (LRDIMM 3DS) *Refer to ASUS server AVL for the latest update
<b>Expansion Slots</b>	<b>Total PCIe Slots</b>	Up to 5+1
	<b>Slot Type</b>	2 x PCIe x16 slot(Gen5 x16 link, FHFL) or dual-slot GPU cards or 4 x PCIe x16 slot(Gen5 x8 link, FHFL)* 1 x PCIe x16 slot(Gen5 x8 link, LP) 1 x OCP 3.0 Mezzanine (Gen5 x16 link)  *support NOT available on 24 NVMe SKU
<b>Disk Controller</b>	<b>SATA Controller</b>	CPU Integrated
	<b>SAS Controller</b>	Optional kits: Broadcom Mega RAID 9560-16i ASUS PIKE II 3008 8-port SAS HBA card
<b>Storage Bays</b>		24 x 2.5" hot-swap drive bays (24 x U.2/U.3 NVMe or 16 x U.2/U.3 NVMe + 8x SATA/SAS or 12 x U.2/U.3 NVMe + 1 2x SATA/SAS or 8 x U.2/U.3 NVMe + 16 x SATA/SAS ) 2 x 2.5" hot-swap drive bays (Rear-bay support SATAIII) 2 x M.2 socket (Gen4 x4 link or SATA mode, up to 22110 module)
<b>Networking</b>	<b>LAN</b>	1 x Dual Port Intel I350-AM2 Gigabit LAN Controller, 1 x Dedicated Management port
<b>Graphic</b>	<b>VGA</b>	Aspeed AST2600 64MB
<b>Front I/O Ports</b>		2 x USB 3.2 Gen1 ports
<b>Rear I/O Ports</b>		2 x USB 3.2 Gen1 ports, 1 x VGA port, 2 x RJ-45 GbE LAN ports, 1 x RJ-45 Management LAN port
<b>Switch/LED</b>		<b>Front:</b> 1 x Power Switch (w/ LED) 1 x Reset Switch 1 x Location Switch (w/ LED) 1 x HDD Access LED 1 x Message LED LAN 1-2 LED  <b>Rear:</b> 1 x Port80 LED (Q-Code) 1 x Power Switch w/ LED 1 x Location Switch w/ LED 1 x Message LED
<b>OS Support</b>		Please find the latest OS support from <a href="#">OS Compatibility Guide   ASUS</a>
<b>Management Solution</b>	<b>Software</b>	ASUS Control Center (Classic)
	<b>Out of Band Remote Management</b>	On-Board ASMB11-iKVM for KVM-over-IP
<b>Dimension</b>		840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"
<b>Net Weight Kg (CPU, DRAM &amp; HDD not included)</b>		19.14 kg
<b>Gross Weight Kg (CPU, DRAM &amp; HDD not included, Packing include)</b>		26.63 kg
<b>Power Supply (following different configuration by region)</b>		1+1 Redundant 1600W 80 PLUS Titanium Power Supply 1+1 Redundant 1200W/1600W 80 PLUS Platinum Power Supply
<b>Environment</b>		Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 70°C Non operation humidity: 20% ~ 90% ( Non condensing)



# RS520A-E12 Series

# SPECIFICATION

Series	RS520A-E12 Series Support Matrix	
Model	RS520A-E12-RS24U	RS520A-E12-RS12U
Processor	1 x Genoa CPU	
GPU	Up to 4 single-slot or 2 double-slot GPU cards (RS520A-E12-RS24U, 24 NVMe SKU can't support GPU)	
Memory	24 x DIMM 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)	
M.2	2 x PCIe x4 or 2 x SATA	
Fan	Optional Redundant Fan **optional, cannot be purchased separately	
Expansion	<p><b>[24 x NVMe]</b> 1 x PCIe Gen5 x8, LP + 1 x OCP3.0 (can't support GPU)</p> <p><b>[16 x NVMe or 12x NVMe]</b> 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 Gen4 x8, LP 1 x OCP3.0 (PCIe Gen5 x16)</p>	<p>up to 6 PCIe Gen5 slots + 1 OCP3.0 2 x PCIe Gen5 x16, FHFL or 4 x PCIe Gen5 x8, FHFL 2 x PCIe Gen5 x8, LP 1 x OCP3.0 (PCIe Gen5 x16)</p>
Storage	<p><b>24 x 2.5"</b> hot-swap drive bays (optional) -24 x U.2/U.3 NVMe -16 x U.2/U.3 NVMe + 8x SAS/SATA (must use RAID card) -12x U.2/U.3 NVMe + 12x SAS/SATA - 8 x U.2/U.3 NVMe + 16x SAS/SATA</p> <p><b>2 x 2.5"</b> hot-swap drive bays (Rear-bay support SATAIII)</p> <p>Support tri-mode Card (Broadcom) *SAS support only from optional SAS HBA/RAID card</p>	<p><b>12 x 3.5"</b> hot-swap drive bays -12 x U.2/U.3 NVMe + 12x SATA/SAS*</p> <p><b>2 x 2.5"</b> hot-swap drive bays (Rear-bay support SATAIII)</p> <p>Support tri-mode Card (Broadcom) *SAS support only from optional SAS HBA/RAID card</p>
NIC	<p>2 x 1GbE RJ45 onboard LAN ports (Intel i350-AM2 controller) 2 x 10Gb OCP Card (Optional) 1 x Management LAN</p>	

\* The total number of NVMe drives installed will affect the total number of GPUs that can be installed.