RS521A-E12-RS24U AMD Turin 9005

AMD Single Socket, High Performance 2U Server

Form Factor / 2U

CPU Number / 1

Memory Number / 24

5th Generation AMD EPYC Processors

ASUS RS521A-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, RS521A-E12-RS24U is optimized for rack placement. Featuring the single processor in a 2U chassis, RS521A-E12 series delivers the right-sized rack server dimensions for price sensitive applications and meets the demanding computing requirements.

Feature

- 1 x AMD EPYC 9005 Series Processor
- With 24*DDR5 DIMM up to 5200Mhz
- PCIe Gen5 slots
- Max 2x DW GPU cards supported
  *24Nvme SKU can't support GPU
- Rack-optimized Design
- 24 x 2.5" Hot-swap HDD bays

Target market

- Data center Storage Server
- Enterprise Application

Industry-leading memory capability

With 2 DIMM per channel design, RS521A-E12 Series supports up to 24 x DIMM slots. The CPU's memory controller supports DDR5 memory with 12 channels up to 5200Mhz . We deliver the industry-leading technology of server memory for our customers' business.

AMD EPYC™ 9005 Series Processors

The RS521A-E12 Series is built on the latest AMD EPYC™ 9005 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)

1. Asset Tag
2. 24*DDR5 DIMM up to 5200Mhz
3. AMD EPYC™ 9005 Processor Family (Up to 360W)
3. 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 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

The specifications and price are subject to change without prior notice 2018 ASUSTek Computer Inc. All rights reserved.

RS521A-E12-RS24U

SPECIFICATION

Processor Support.		1 x Socket SP5 (LGA 6096) Supports AMD EPYC™ 9005 series processors or AMD EPYC™ 9004 series processors, up to 360W*	
Core Logic		System on Chip (SOC)	
Memory	**Total Slots**	**24** 12-channel, 2 DIMM per channel	
	Capacity	Maximum up to 3,072GB	
	Memory Type	AMD EPYC™ 9005 series processors DDR5 6400/5600 RDIMM/3DS RDIMM 2DPC (1 of 2) up to 5200 with "6400 RDIMM", other 4800 2DPC (2 of 2, 1R+1R) up to 4400, with "6400 RDIMM", other 4000 2DPC (2 of 2, 2R+2R) up to 4000, with "6400 RDIMM", other 3600	AMD EPYC™ 9004 series processors DDR5 4800 RDIMM/ 3DS RDIMM 2DPC (1 of 2) up to 4800, 2DPC (2 of 2, 1R+1R) up to 4000 2DPC (2 of 2, 2R+2R) up to 3600
	Memory Size	128GB, 96GB, 64GB, 32GB, 16GB (RDIMM) *Refer to ASUS server AVL for the latest update	
Expansion Slots	**Total PCIe Slots**	Up to 5 PCIe Gen5 slots + 1 OCP3.0	
	Slot Type	**[16 x 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 Gen4 x8, LP 1 x OCP3.0 (PCIe Gen5 x16)	**[24 x NVMe]** **1** x PCIe Gen5 x8, LP + 1 x OCP3.0 (can't support GPU)
Disk Controller	**SATA Controller**	CPU Integrated	
	SAS Controller	Optional kits: Broadcom Mega RAID 9560-16I ASUS PIKE II 3008 8-port SAS HBA card	
Storage Bays		**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 **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)	
Networking	**LAN**	1 x Dual Port Intel I350-AM2 Gigabit LAN Controller, 1 x Dedicated Management port	
Graphic	**VGA**	Aspeed AST2600 64MB	
Front I/O Ports		2 x USB 3.2 Gen1 ports	
Rear I/O Ports		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	
Switch/LED		**Front:** 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 **Rear:** 1 x Port80 LED (Q-Code) 1 x Power Switch w/ LED 1 x Location Switch w/ LED 1 x Message LED	
OS Support		Please find the latest OS support from OS Compatibility Guide | ASUS	
Management Solution	**Software**	ASUS Control Center (Classic)	
	Out of Band Remote Management	On-Board ASMB11-iKVM for KVM-over-IP	
Dimension		840mm x 449mm x 88.1mm (2U) 33.07" x 17.68" x 3.47"	
Net Weight Kg **(CPU, DRAM & HDD not included)**		19.14 kg	
Gross Weight Kg **(CPU, DRAM & HDD not included, Packing include)**		26.63 kg	
Power Supply **(following different configuration by region)**		1+1 Redundant 2000W/1600W Titanium Power Supply 1+1 Redundant 1200W Platinum Power Supply	
Environment		Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 70°C Non operation humidity: 20% ~ 90% (Non condensing)	

*CPU with TDP supported under specific conditions. For higher wattage CPU demand, please contact us

The specifications and price are subject to change without prior notice 2018 ASUSTek Computer Inc. All rights reserved.

RS521A-E12 Series

SPECIFICATION

Series	RS521A-E12 Series Support Matrix	
Model	**RS521A-E12-RS24U**	**RS521A-E12-RS12U**
Processor	1 x Turin CPU or 1 x Genoa CPU	
GPU	Up to 4 single-slot or 2 double-slot GPU cards (RS521A-E12-RS24U, 24 NVMe SKU can't support GPU)	
Memory	24 x DIMM slots with AMD EPYC™ 9005 series processors DDR5 6400/5600 RDIMM/3DS RDIMM Maximum 3,072GB 2DPC (1 of 2) up to 5200 with "6400 RDIMM", other 4800 2DPC (2 of 2, 1R+1R) up to 4400, with "6400 RDIMM", other 4000 2DPC (2 of 2, 2R+2R) up to 4000, with "6400 RDIMM", other 3600 with AMD EPYC™ 9004 series processors DDR5 4800 RDIMM/ 3DS RDIMM Maximum 3,072GB 2DPC (1 of 2) up to 4800, 2DPC (2 of 2, 1R+1R) up to 4000 2DPC (2 of 2, 2R+2R) up to 3600	
M.2	2 x PCIe x4 or 2 x SATA	
Fan	Optional Redundant Fan **optional, cannot be purchased separately	
Expansion	**[24 x NVMe]** **1** x PCIe Gen5 x8, LP + 1 x OCP3.0 (can't support GPU) **[16 x 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 Gen4 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 OCP3.0 (PCIe Gen5 x16)
Storage	**24** x 2.5" 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) **2** x 2.5" hot-swap drive bays (Rear-bay support SATAIII) Support tri-mode Card (Broadcom) *SAS support only from optional SAS HBA/RAID card	**12** x 3.5" hot-swap drive bays -12 x U.2/U.3 NVMe/SATA/SAS* **2** x 2.5" hot-swap drive bays (Rear-bay support SATAIII) Support tri-mode Card (Broadcom) *SAS support only from optional SAS HBA/RAID card
NIC	2 x 1GbE RJ45 onboard LAN ports (Intel i350-AM2 controller) 2 x 10Gb OCP Card (Optional) 1 x Management LAN	

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

The specifications and price are subject to change without prior notice 2018 ASUSTek Computer Inc. All rights reserved.