

RS501A-E12-RS4

AMD Single-socket, 1U Rack Server



1U



1



24

5th Generation AMD EPYC Processors with AMD 3D V-Cache technology

ASUS RS501A-E12-RS4 was designed for general purpose application. With the front 4 hot-swap bays supporting 3.5" and 2.5" drives , RS501A-E12-RS4 is the economic design for rack placement.

FEATURE

- 1 x AMD EPYC 9005 Series Processor
- With 24*DDR5 DIMM up to 5200Mhz
- 2 x M.2 socket support
- 3 x PCIe + 1 x OCP expansion in 1U rack sever.

AMD EPYC™ 9005 series processors support

RS501A-E12 series is built on the AMD platform to deliver incredible performance, and offer more CPU cores powered by AMD EPYC 9005 series processors.

Industry-leading memory capability

With 2 DIMM per channel design, RS501A-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.

Target market

- General-purpose Rack Server
- Enterprise Application

Comprehensive IT infrastructure management solution

ASUS RS501A-E12 features an embedded ASMB11-iKVM (BMC, AST2600) and is bundled with ASUS Control Center to provide comprehensive out-of-band and in-band management capability.

1. 4 x 3.5" / 2.5" Hot-swap Storage Bays
2. 1+1 80 PLUS Platinum/ Titanium CRPS CRPS
3. 1 x PCIe Gen5 x16 slot for full-height, half-length card
4. 1 x PCIe Gen5 x16 slot for low-profile card
5. 1 x PCIe Gen5 x16 slot for low-profile card
6. 1 x OCP 3.0 Mezzanine socket
7. AMD EPYC™ 9005 Processor Family (Up to 360W)
8. 24*DDR5 DIMM up to 5200Mhz



RS501A-E12-RS4

SPECIFICATION

| | | | |
|----------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor | | 1 x Socket SP5 (LGA 6096) Supports AMD EPYC™ 9005 series processors or AMD EPYC™ 9004 series processors, up to 360W, with AMD 3D V-Cache technology | |
| Memory | Total Slots | 24 , 12-channel, 2 DIMM per channel | |
| | Capacity | Up to 2,304GB | |
| | Memory Type | AMD EPYC™ 9005 series processors DDR5 5600 RDIMM 2DPC (1 of 2) up to 5200 2DPC (2 of 2, 1R+1R) up to 4400, 2DPC (2 of 2, 2R+2R) up to 4000 | AMD EPYC™ 9004 series processors DDR5 4800 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 | 96GB, 64GB, 32GB, 16GB (RDIMM), *Refer to ASUS server AVL for the latest update | |
| Expansion Slots | Total Slots | 3 PCIe Gen5 slots + 1 OCP3.0 | |
| | Slot Type | 1 x PCIe x16 slot (Gen5 x16 link, FH, HL) 1 x PCIe x16 slot (Gen5 x16 link, LP, HL) 1 x PCIe x16 slot (Gen5 x8 link, LP, HL) 1 x OCP3.0 socket (Gen5 x16 link) | |
| Storage Bays | | Front: 4 x 3.5"/2.5" Hot-swap Storage Bays (4 x SATA/SAS Devices) 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 (BMC, AST2600) | |
| Security | | Optional TPM module Optional PFR module | |
| Front I/O Ports | | - | |
| Rear I/O Ports | | 2 x USB 3.2 Gen1 ports 2 x Gigabit LAN ports (RJ45) 1 x Management port (RJ45) 1 x VGA port 1 x COM port | |
| Switch/LED | | Front: 1 x Power Button/LED 1 x Location Button/LED 1 x Message LED 1 x HDD LED 4 x LAN LED (1-2 for on-board LAN, 3-4 for OCP LAN) 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 https://www.asus.com/event/Server/OS_support_list/OS.html | |
| Management Solution | Software | ASUS Control Center (in-band) | |
| | Out of Band Remote Management | ASMB11-iKVM (BMC, AST2600) | |
| Dimension | | 842.5mm x 449mm x 43.85mm (1U) 33.15" x 17.68" x 1.73" | |
| Net Weight Kg (CPU, DRAM & HDD not included) | | 13.15 kg | |
| Gross Weight Kg (CPU, DRAM & HDD not included, Packing include) | | 18.15 kg | |
| Power Supply (following different configuration by region) | | 1+1 Redundant 1200W 80 PLUS Platinum Power Supply 1+1 Redundant 1600W 80 PLUS Titanium Power Supply | |
| Environment | | Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 70°C Non operation humidity: 20% ~ 90% (Non condensing) | |

RS501A-E12 Series

SPECIFICATION

| Series | RS501A-E12 Series Support Matrix | |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model | RS501A-E12-RS12U | RS501A-E12-RS4 |
| Processor | 1 x Turin CPU or 1 x Genoa CPU | |
| GPU | Up to 2 single-slot GPU cards | |
| Memory | AMD EPYC™ 9005 series processors 24 x DIMM DDR5 5600/4800/4400/4000/3600 RDIMM/ 3DS RDIMM 2DPC (1 of 2) up to 5200 2DPC (2 of 2, 1R+1R) up to 4400, 2DPC (2 of 2, 2R+2R) up to 4000 | AMD EPYC™ 9004 series processors 24 x DIMM DDR5 4800/4400/4000/3600 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 |
| M.2 | 2 x PCIe x4 or 2 x SATA | |
| Expansion | 1 x PCIe x16 slot (Gen5 x16 link, FH, HL) 1 x PCIe x16 slot (Gen5 x16 link, LP, HL) 1 x PCIe x16 slot (Gen5 x8 link, LP, HL) 1 x OCP3.0 socket (Gen5 x16 link) | |
| Storage | Front bays: 12 x 2.5" Hot-Swap drive bays 12 x SATA/SAS/NVME* Optional 4 x 2.5" Internal drive bays 4 x SATA/NVME** *SAS support only from optional SAS HBA/RAID card **optional, cannot be purchased separately | Front bays: 4 x 3.5" Hot-Swap drive bays Support up to 4 x SATA/SAS* *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.