R1975

New Generation, High Performance 1U Server

Form Factor	1U	CPU Number	2	Memory Number	32

The R1975 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, the R1975 is optimized for rack placement.

FEATURE
• AMD EPYC 7003 Series Processors with AMD 3D V-Cache™ technology
• PCIe 4.0 Ready
• GPU and FPGA Support
• Cooling Solutions
• Enhanced Security

Target market
• Hot Data Cache Server
• Cloud Solution Provider
• Enterprise Storage
• Virtualized Storage

3rd Gen AMD EPYC processors with AMD 3D V-Cache technology
AMD was first with X86 multi-chip-module server CPUs and continues to innovate with the 3rd Gen AMD EPYC™ processors with AMD 3D V-Cache™ technology.

PCIe 4.0 Ready
PCI Express® (PCIe®) 4.0 delivers 16 GT/s bandwidth, which is double the speed of PCIe 3.0, offering lower power consumption, better lane scalability and backwards compatibility.
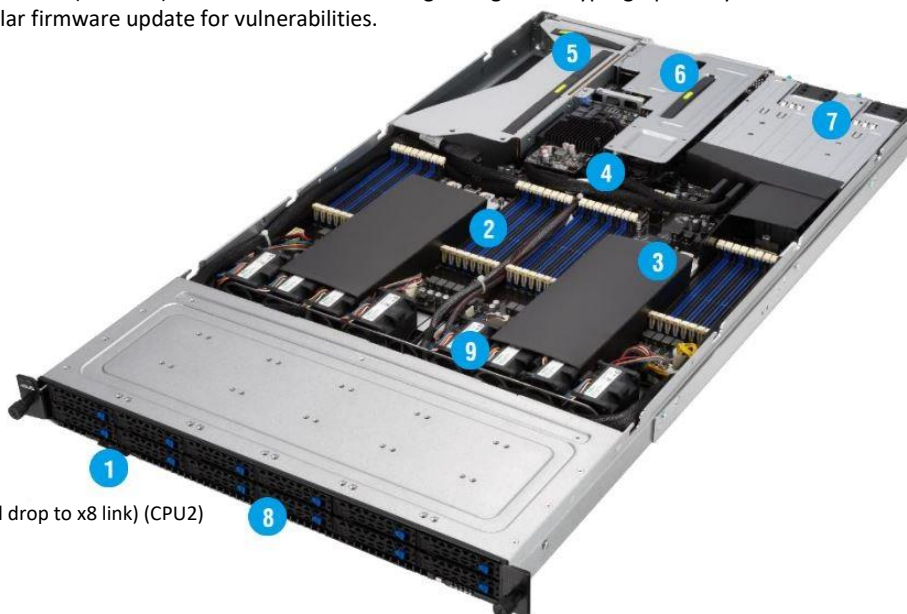
GPU and FPGA Support
Up to four dual-slot GPUs such as NVIDIA A100 in one 2U system and optimized acceleration for workloads across cloud, data center and for hybrid cloud environment.

Cooling Solutions
Air or liquid-cooled solutions. Asetek's Direct-to-Chip (D2C) liquid-cooling technology achieving lower power-usage effectiveness (PUE) and optimized TCO for data centers.

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.

1. Asset Tag
2. 32 x DIMM, DDR4-3200/2933, RDIMM, LRDIMM, LRDIMM 3DS
3. AMD EPYC™ 7003/7002 Series
4. Dual M.2 (Up to 22110)
5. 1 x PCI-E x16 (Gen4 x16 link) (CPU1),
   1 x PCI-E x16 (Gen4 x16 link) or OCP3.0 (CPU2)
6. 1 x PCIe Gen4 x8 or x16 (if PCIe M.2 in use, it will drop to x8 link) (CPU2)
7. 1+1 1200W/1600W 80 PLUS Platinum CRPS
8. 12 x 2.5" Hot-swap HDD Bays
9. 8 x Hot-swap fan

Contact Information: sales@equuscs.com   **866.641.1475**

Specifications:

Processor Support		2 x Socket SP3 (LGA 4094) xGMI (External Global Memory Interface Link)
Core Logic		3rd Gen AMD EPYC™ processors with AMD 3D V-Cache™ technology
Memory	**Total Slots** **Capacity** **Memory Type** **Memory Size**	32 (8-channel per CPU, 16 DIMM per CPU) Maximum up to 4096GB DDR4 3200/2933 RDIMM/LR-DIMM/LR-DIMM 3DS *Refer to ASUS server AVL for the latest update 64GB, 32GB, 16GB (RDIMM), 128GB, 64GB (LRDIMM), 256GB, 128GB, 64GB (LRDIMM 3DS) *Refer to ASUS server AVL for the latest update
Expansion Slots	**Total PCI/PCI-X/PCI-E/PIKE Slots** **Slot Type**	3 x Expansion slots + 1 x Internal PIKE slot 1 x PCIe Gen4 x16, FHFL (CPU1) 1 x PCIe Gen4 x16, FHFL or OCP3.0 (CPU2) 1 x PCIe Gen4 x8 or x16, LP (if PCIe M.2 in use, it will operate at x8 link) (CPU2) *Installing GPU cards will occupy expansion slots.
Disk Controller	**SATA Controller**	12 x SATA3 6Gb/s ports 2 x M.2 connector (SATA 6Gb/s & PCI-E Gen4 x4 link)
	SAS Controller	Optional kits: Broadcom 9361-8i 8-port SAS 12G HW RAID card (Optional) 12G SAS Support
Storage Bays	**I = internal** **A or S will be hot-swappable**	12x 2.5" Hot-Swap Storage Device Bays up to (12 x NVMe/SATA/SAS*) 2 x M.2 (Up to 22110) (Support SATA/PCIe M.2) (CPU2) *must use RAID card
Networking	**LAN**	1 x Quad Port Intel I350-AM4 1G LAN Controller or 1 x Dual Port Intel X710-AT2 Gigabit 10G LAN Controller or None 1 x Management Port
Graphic	**VGA**	Aspeed AST2600 64MB
I/O Ports		**Front I/O Ports:** N/A **Rear I/O Ports:** 2 x USB 3.2 Gen 1 ports, 1 x VGA port, optional 2 x 10G or 4 x 1G RJ-45 GbE LAN ports, 1 x RJ-45 Mgmt LAN port, 1 x OCP 3.0 port
Switch/LED		**Rear Switch/LED:** 1 x Q-Code/Port 80 LED, 1 x Power switch, 1 x Location switch/LED, 1 x Message LED **Front Switch/LED:** 1 x Power switch/LED, 1 x Location switch/LED, 1 x Reset switch, 1 x HDD Access LED, 1 x Message LED, LAN 1-4 LED (on NIC module) * LAN3-4 for OCP3.0 card use
OS Support		Windows® Server 2019 RedHat® Enterprise Linux, SuSE® Linux Enterprise Server CentOS, Ubuntu, Vmware Please find the latest OS support from http://www.asus.com/
Management Solution	**Software** **Out of Band Remote Management**	ASUS Control Center (Classic) On-Board ASMB10-iKVM for KVM-over-IP
Dimension		842.5mm x 449mm x 43.85mm (33.17" x 17.68" x 1.73")
Net Weight Kg (CPU, DRAM & HDD not included)		18.85 kg
Gross Weight Kg **(CPU, DRAM & HDD not included, Packing included)**		23.89 kg
Power Supply		1+1 Redundant 1600/1200W 80 PLUS Platinum Power Supply Rating: 100-127/200-240 Vac, 9.4 A/4.72 A, 47-63 Hz, Class I (240Vdc, 4.6A only for China)
Environment		Operation temperature: 10℃ ~ 35℃ Non-operation temperature: -40℃ ~ 60℃ Non-operation humidity: 20% ~ 90% (non-condensing)

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