



# Flagship Versatile Server R820 Z50M

## Product Description

The R820 Z50M is a premium 2U rack server powered by 4th/5th Gen Intel® Xeon® Scalable processors. Designed for flexible resource allocation to meet diverse industry demands, it excels in cloud computing, HPC, cloud storage, big data, virtualization, enterprise systems, and more.

## Key Features and Highlights

### Extreme Performance with Scalability

- Supports 2\*4th/5th Gen Intel® Xeon® Scalable processors, up to 64 cores per CPU for unparalleled computing power.
- 32\*DDR5 DIMM slots, 5600MHz max frequency, 75% memory bandwidth increase.
- Up to 28\*2.5" drives, NVMe SSD compatibility for customizable storage.
- Flexible expansion with OCP NICs and PCIe slots (supports PCIe 5.0, 100% faster transfer rates).

### Simplified Operations and Intelligent Management

- Tool-Free Maintenance Design: Quick installation/removal of peripherals, minimizing downtime.
- Out-of-Band Visual Management: Remote physical device tracking for optimized efficiency.
- Automatic Logging: Real-time log viewing/download for precise fault diagnosis.
- Health Monitoring: Proactive status reporting for key components, enabling full lifecycle management.

### Energy Efficiency and Advanced Cooling

- 15% Increased Airflow Area: Enhances cooling efficiency by 8%.
- Triple-Speed Dynamic Cooling: Adjusts fan speeds based on temperature and workload for optimal energy savings.
- Patented Custom Fans: 30% higher airflow, 15% lower power consumption, and 10% noise reduction.





## Product Specifications

Processor	Supports 2*4th/5th Gen Intel® Xeon® Scalable Processors (TDP 385W).
Memory	32*DDR5 slots, up to 5600MHz. Supports memory mirroring, hot spare, fault isolation, and CXL expansion (additional 16 slots).
Storage Controller	Supports RAID 0/1/10/5/50/6/60. Features 4G/8G cache supercapacitor protection, disk roaming, remote Web configuration, secure boot, solid-state algorithms, and serial port remote debug.
Local Storage	Max 28*3.5" drives (24* NVMe compatible). Internal: 2*SATA/PCIe M.2, 1*onboard eMMC. Onboard support for 16*SATA drives (no external controller required).
Network Interfaces	1*OCP 3.0 slot with NCSI. Optional interfaces: 2*1GE, 2*10GE, 2*25GE, 2*100GE, 2*200GE.
PCIe Expansion	8*PCIe 5.0 slots + 1*OCP 3.0 slots.
Additional Interfaces	Rear: 1*RJ-45 management port, 2*USB 3.0, 1*VGA. Front: Optional 2*USB 3.0 + VGA or USB 2.0. Internal: 1*USB 3.0.
Power Supply	800W/1300W/2000W/2700W CRPS Titanium/Platinum PSU (hot-swappable, 1+1 redundant). Voltage: 100-240Vac (refer to nameplate).
Fans	6*hot-swappable fans (N+2 redundancy).
Management	Integrated BMC with 1Gbps RJ-45 port. Supports Redfish, SNMP, IPMI 2.0, HTML5/iKVM remote control. BMC dual-flash backup.
OS Support	Windows Server, RHEL, SLES, CentOS, Ubuntu, VMware ESXi, Kylin, RedFlag, etc.
Operating Temperature	5° C ~ 45° C
Chassis Dimensions	770mm (L)*446mm (W) (without ears) / 482mm (W) (with ears) *87mm (H).
Packaging Dimensions	1000mm (L)*600mm (W)*260mm (H).
Weight	Max 40kg (varies by configuration).

## Ordering List

Part Number	Server Configuration		
	Front Ports	Rear Ports	Server Suits
S24000 ABNN	24*2.5" (SATA/SAS) 2*USB3.0+1*VGA	➤ 4*x8+2*x16 PCIe 5.0 ➤ 1*RJ45 management ➤ 2*USB3.0 ➤ 1*VGA 1300W redundant power supplies	➤ 2*heat sinks, TDP≥270W 3*raid card cable applicable for 95 series of raid cards 24*2.5" hard drive brackets
S24000 ABCN	24*2.5" (SATA/SAS) 2*USB3.0+1*VGA	➤ 6*x8+2*x16 PCIe 5.0 ➤ 1*RJ45 management ➤ 2*USB3.0 ➤ 1*VGA 1300W redundant power supplies	➤ 2*heat sinks, TDP≥270W 3*raid card cable applicable for 95 series of raid cards 24*2.5" hard drive brackets
S24000 ABN2	24*2.5" (SATA/SAS) 2*USB3.0+1*VGA	➤ 2*2.5" (SATA/SAS) ➤ 4*x8+2*x16 PCIe 5.0 ➤ 1*RJ45 management ➤ 2*USB3.0 ➤ 1*VGA 1300W redundant power supplies	➤ 2*heat sinks, TDP≥270W 3*raid card cable applicable for 95 series of raid cards 26*2.5" hard drive brackets
S24000 AB22	24*2.5" (SATA/SAS) 2*USB3.0+1*VGA	➤ 4*2.5" (SATA/SAS/NVME) ➤ 4*x8+2*x16 PCIe 5.0 ➤ 1*RJ45 management ➤ 2*USB3.0 ➤ 1*VGA 1300W redundant power supplies	➤ 2*heat sinks, TDP≥270W 3*raid card cable applicable for 95 series of raid cards 28*2.5" hard drive brackets
S24000 ABC2 (custom)	24*2.5" (SATA/SAS) 2*USB3.0+1*VGA	➤ 2*2.5" (SATA/SAS) ➤ 6*x8+2*x16 PCIe 5.0 ➤ 1*RJ45 management ➤ 2*USB3.0 ➤ 1*VGA 1300W redundant power supplies	➤ 2*heat sinks, TDP≥270W 3*raid card cable applicable for 95 series of raid cards 26*2.5" hard drive brackets



Part Numbers	Product Configurations		
	Front	Rear	Kits
E24000 ABNN	24*2.5" (SATA/SAS) EXP 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 4*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>2*raid card cable applicable for 95 series of raid cards</li><li>24*2.5" hard drive brackets</li></ul>
E24000 ABCN	24*2.5" (SATA/SAS) EXP 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 6*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>2*raid card cable applicable for 95 series of raid cards</li><li>24*2.5" hard drive brackets</li></ul>
E24000 ABN2	24*2.5" (SATA/SAS) EXP 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 2*2.5" (SATA/SAS)</li><li>➤ 4*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>2*raid card cable applicable for 95 series of raid cards</li><li>26*2.5" hard drive brackets</li></ul>
E24000 AB22	24*2.5" (SATA/SAS) EXP 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 4*2.5" (SATA/SAS/NVME)</li><li>➤ 4*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>2*raid card cable applicable for 95 series of raid cards</li><li>28*2.5" hard drive brackets</li></ul>
E24000 ABC2 (custom)	24*2.5" (SATA/SAS) EXP 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 2*2.5" (SATA/SAS)</li><li>➤ 6*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>2*raid card cable applicable for 95 series of raid cards</li><li>26*2.5" hard drive brackets</li></ul>

Part Numbers	Product Configurations		
	Front	Rear	Kits
N24000 ABNN	24*2.5" (NVME Only) 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 2*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>24*2.5" hard drive brackets</li><li>➤ 12*NVME CABLE</li></ul>
N24000 ABN2	24*2.5" (NVME Only) 2*USB3.0+1*VGA	<ul style="list-style-type: none"><li>➤ 2*2.5" (SATA/SAS)</li><li>➤ 2*x8+2*x16 PCIE 5.0</li><li>➤ 1*RJ45management</li><li>➤ 2*USB3.0</li><li>➤ 1*VGA</li><li>1300W redundant power supplies</li></ul>	<ul style="list-style-type: none"><li>➤ 2*heat sinks, TDP≥270W</li><li>26*2.5" hard drive brackets</li><li>➤ 12*NVME CABLE</li></ul>