

Purpose-built 1U server for dense, fast growing scale-out solutions

The Dell EMC PowerEdge R650xs, with 3rd generation Intel® Xeon® Scalable processors, designed to meet a specific set of requirements for medium-duty workloads with enterprise-class performance and capabilities.



Innovate at scale with challenging and emerging workloads

The new Dell EMC PowerEdge R650xs is a 1U, dual-socket server that's purpose-built to maximize value with distinctive feature sets for scale-out environments. With it, you can:

- Add additional power and cores: Up to two 3rd generation Intel® Xeon® Scalable processors, up to 32 cores per socket
- Accelerate in-memory workloads: Up to 16 DDR4 RDIMMS, 3200 MT/sec
- Improve throughput, reduce latency: With up to 3 PCIe Gen4 slots, OCP 3.0 for network cards, and SNAP I/O support
- Include flexible storage: Up to 4x 3.5" SAS/SATA HDDs or SSDs; or up to 10x 2.5" SAS/SATA HDDs or SSDs, and 10 NVMe drives
- Enable virtualization, medium VM density or VDI, and software-defined storage node workloads

Increase efficiency and accelerate operations with autonomous collaboration

The Dell EMC OpenManage systems management portfolio tames the complexity of managing and securing IT infrastructure. Using Dell Technologies' intuitive end-to-end tools, IT can deliver a secure, integrated experience by reducing process and information silos in order to focus on growing the business. The Dell EMC OpenManage portfolio is the key to your innovation engine, unlocking the tools and automation that help you scale, manage, and protect your technology environment.

- Built-in telemetry streaming, thermal management, and RESTful API with Redfish offer streamlined visibility and control for better server management
- Intelligent automation lets you enable cooperation between human actions and system capabilities for added productivity
- Integrated change management capabilities for update planning and seamless, zero-touch configuration and implementation
- Full-stack management integration with Microsoft, VMware, ServiceNow, Ansible and many other tools for multiple operating environments, from on-premise to cloud to edge

Built-in proactive resilience through a complete portfolio of solutions

From the silicon and supply chain all the way to asset retirement, know that your servers are safe and secure with innovative Dell EMC and Intel technologies. We give you the confidence of cyber resilience with enterprise-class security that minimizes risk for any organization, from small business to hyperscale.

- Stay strong with continuous innovations that bolster cyber resilience, like OpenManage Secure Enterprise Key Manager and Automatic Certificate Enrollment
- Outmaneuver threats with intelligence, automation, and recovery tools that include iDRAC9 Telemetry, BIOS live scanning, and Rapid OS recovery
- Start strong with platform security features, even before the server is built, including Secured Component Verification and Silicon Root of Trust

PowerEdge R650xs

The Dell EMC PowerEdge R650xs offers compelling performance, high-speed memory and capacity, I/O bandwidth and storage to address data requirements – Ideal for:

- Virtualization/Cloud
- Scale-out Database
- High-Performance Compute

| Feature | Technical Specifications | |
|------------------------------|---|---|
| Processor | Up to two 3rd Generation Intel Xeon Scalable processors with up to 32 cores | |
| Memory | <ul style="list-style-type: none"> 16 DDR4 DIMM slots, supports RDIMM 1 TB max, speeds up to 3200 MT/s Supports registered ECC DDR4 DIMMs only | |
| Storage controllers | <ul style="list-style-type: none"> Internal controllers: PERC H345, PERC H745, PERC H755, PERC H755N, HBA355i, S150 Internal Boot: Internal Dual SD Module, Boot Optimized Storage Subsystem (BOSS1): HWRAID 2 x M.2 SSDs, USB External PERC (RAID): PERC H840, HBA355e | |
| Drive Bays | <p>Front bays:</p> <ul style="list-style-type: none"> 0 drive bay Up to 4 x 3.5-inch SAS/SATA (HDD/SSD) max 64 TB Up to 8 x 2.5-inch SAS/SATA/NVMe (HDD/SSD) max 61.44 TB Up to 10 x 2.5-inch SAS/SATA/NVMe (HDD/SSD) max 76.8 TB <p>Rear bays:</p> <ul style="list-style-type: none"> Up to 2 x 2.5-inch SAS/SATA/NVMe (HDD/SSD) max 15.36 TB | |
| Power Supplies | <ul style="list-style-type: none"> 600 W DC/240 V 600 W Platinum AC/100 - 240 V 800 W DC/240 V 800 W Platinum AC/100 - 240 V 1100 W DC/-48-(-60) V 1100 W DC/240 V 1100 W Titanium AC/100 - 240 V 1400 W DC/240 V 1400 W Platinum AC/100 - 240 V | |
| Cooling options | Air cooling | |
| Fans | <ul style="list-style-type: none"> Standard (STD) fans, High performance SLVR fans or High performance GOLD fans Up to seven cabled fans | |
| Dimensions | <ul style="list-style-type: none"> Height – 42.8 mm (1.68 inches) Width – 482 mm (18.97 inches) Depth – 734.95 mm (28.92 inches) – without bezel 748.79 mm (29.47 inches) – with bezel | |
| Form Factor | 1U rack server | |
| Embedded Management | <ul style="list-style-type: none"> iDRAC9 iDRAC Service Module iDRAC Direct Quick Sync 2 wireless module | |
| Bezel | Optional LCD bezel or security bezel | |
| OpenManage Software | <ul style="list-style-type: none"> OpenManage Enterprise OpenManage Power Manager plugin OpenManage SupportAssist plugin OpenManage Update Manager plugin | |
| Mobility | OpenManage Mobile | |
| Integrations and Connections | <ul style="list-style-type: none"> BMC Truesight Microsoft System Center OpenManage Integrations Red Hat Ansible Modules VMware vCenter and vRealize Operations Manager | <ul style="list-style-type: none"> IBM Tivoli Netcool/OMNibus IBM Tivoli Network Manager IP Edition Micro Focus Operations Manager OpenManage Connections Nagios Core Nagios XI |
| Security | <ul style="list-style-type: none"> Cryptographically signed firmware Secure Boot Secure Erase Silicon Root of Trust System Lockdown (requires iDRAC9 Enterprise or Datacenter) TPM 1.2/2.0 FIPS, CC-TCG certified, TPM 2.0 China NationZ | |
| Embedded NIC | 2 x 1 GbE LOM | |
| Network Options | 1 x OCP 3.0 | |
| GPU Options | Not supported | |
| Ports | <p>Front Ports</p> <ul style="list-style-type: none"> 1 x iDRAC Direct (Micro-AB USB) port 1 x USB 2.0 1 x VGA <p>Internal Ports</p> <ul style="list-style-type: none"> 1 x USB 3.0 (optional) | <p>Rear Ports</p> <ul style="list-style-type: none"> 1 x USB 2.0 1 x Serial (optional) 1 x USB 3.0 2 x Ethernet 1 x VGA |
| PCIe | Up to 3 x PCIe Gen4 slots | |

| Feature | Technical Specifications |
|----------------------------------|--|
| Operating System and Hypervisors | <ul style="list-style-type: none"> • Canonical Ubuntu Server LTS • Citrix Hypervisor • Microsoft Windows Server with Hyper-V • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • VMware ESXi <p>For specifications and interoperability details, see Dell.com/OSsupport.</p> |
| OEM-ready version available | From bezel to BIOS to packaging, your servers can look and feel as if they were designed and built by you. For more information, visit Dell.com/OEM . |

Recommended support and services

Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support for your PowerEdge solution. Consulting and deployment offerings are also available. Contact your Dell representative today for more information. Availability and terms of Dell Services vary by region. For more information, visit www.delltechnologies.com/Services.

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