

POWEREDGE R640

Uncompromising performance and density



The PowerEdge R640 is the ideal dual-socket, 1U platform for dense scale-out data center computing. The R640 combines density, performance and scalability to optimize application performance and data center density.

Maximize application performance and density

The scalable business architecture of the R640 is designed to maximize application performance and provide the flexibility to optimize configurations based on the application and use case. With the R640 you can create an NVMe cache pool and use either 2.5" or 3.5" drives for data storage. Combined with up to 24 DIMM's, 12 of which can be NVDIMM's, you have the resources to maximize application performance with the optimum configuration in only a 1U chassis.

- Simplify deployments and speed deployments with Dell EMC ready nodes for ScaleIO and VSAN.
- Maximize storage performance with up to 10 NVMe drives or 12 2.5" drives.
- Scale compute resources with 2nd Generation Intel® Xeon® Scalable processors and tailor performance based on your unique workload requirements.

Automate maintenance with Dell EMC OpenManage

The Dell EMC OpenManage™ portfolio helps deliver peak efficiency for PowerEdge servers, delivering intelligent, automated management of routine tasks. Combined with unique agent-free management capabilities, the R640 is simply managed, freeing up time for high profile projects.

- Simplify management with the OpenManage Enterprise™ console, with customized reporting and automatic discovery.
- Take advantage of QuickSync 2 capabilities and gain access to your servers easily through your phone or tablet.

Guard your data center with built in security

Every PowerEdge server is designed as part of a cyber resilient architecture, integrating security into the full server life cycle. The R640 leverages new security features built-into every new PowerEdge server strengthening protection so you can reliably and securely deliver accurate data to your customers no matter where they are. By considering each aspect of system security, from design to retirement, Dell EMC ensures trust and delivers a worry-free, secure infrastructure without compromise.

- Rely on a secure component supply chain to ensure protection from factory to the data center.
- Maintain data safety with cryptographically signed firmware packages and Secure Boot.
- Prevent unauthorized or malicious change with Server Lockdown.
- Wipe all data from storage media including hard drives, SSDs and system memory quickly and securely with System Erase.

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Deliver fast performance and reduce latency with NVMe drives

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Features	Technical Specification	
Processor	Up to two 2 nd Generation Intel® Xeon® Scalable processors, up to 28 cores per processor	
Memory	24 DDR4 DIMM slots, Supports RDIMM /LRDIMM, speeds up to 2933MT/s, 3TB max Up to 12 NVDIMM, 192 GB Max Supports registered ECC DDR4 DIMMs only	
Storage controllers	Internal controllers: PERC H330, H730p, H740p, Software RAID (SWRAID) S140 Boot Optimized Storage Subsystem: HWRAID 2 x M.2 SSDs 240GB, 480GB External PERC (RAID): H840 12Gbps SAS HBAs (non-RAID): External - 12Gbps SAS HBA (non-RAID), Internal - HBA330 (non-RAID)	
Drive bays	Front drive bays: Up to 10 x 2.5" SAS/SATA (HDD/SSD) with up to 8 NVMe SSD max 76.8TB or up to 10 NVMe drives max 64TB, or up to 4 x 3.5" SAS/SATA HDD max 56TB Rear drive bays: Up to 2 x 2.5" SAS/SATA (HDD/SSD), NVMe SSD max 15.36TB Optional DVD-ROM, DVD+RW	
Power supplies	Titanium 750W, Platinum 495W, 750W, 1100W, and 1600W	48VDC 1100W, 380HVDC 1100W, 240HVDC 750W Hot plug power supplies with full redundancy option
Dimensions	Form factor: Rack (1U)	Max depth: 757.75mm – For the 8 x 2.5" front bay drive configuration. 808.51mm – For the 4 x 3.5" or 10 x 2.5" front bay drive configurations (plus up to 2 rear drives).
Embedded management	IPMI 2.0 compliant iDRAC9 with Lifecycle Controller (Express, Enterprise) Quick Sync 2 wireless module optional	
Bezel	Optional LCD bezel or security bezel	
OpenManage™ Software	OpenManage Enterprise OpenManage Essentials	OpenManage Mobile OpenManage Power Center
Integrations and connections	Integrations: Microsoft® System Center VMware® vCenter™ BMC Truesight (available from BMC) Red Hat Ansible	Connections: Nagios Core & Nagios XI Micro Focus Operations Manager i (OMi) IBM Tivoli Netcool/OMNibus
Security	TPM 1.2/2.0 optional Cryptographically signed firmware Secure Boot	System Lockdown Secure erase
I/O & Ports	Network daughter card options 4 x 1GE or 2 x 10GE + 2 x 1GE or 4 x 10GE or 2 x 25GE Front ports: Video, 1 x USB 2.0, available USB 3.0, dedicated iDRAC Direct USB Rear ports: Video, serial, 2 x USB 3.0, dedicated iDRAC network port Video card: VGA, NVIDIA NVS310 available as PCIe card Up to 3 x Gen3 slots, all x16	
Accelerator options	Up to 1 single-width GPU or up to 1 single-width FPGA	See Dell.com/GPU for latest information.
Supported operating systems	Canonical® Ubuntu® LTS Citrix® XenServer® Microsoft Windows Server® with Hyper-V Red Hat® Enterprise Linux SUSE® Linux Enterprise Server VMware® ESXi	For specifications and interoperability details, see Dell.com/OSsupport .
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	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 Dell.com/ServiceDescriptions .	

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End-to-end technology solutions

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