

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 create the optimum configuration 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 8 NVMe drives or 12 2.5" drives.
- Scale compute resources with Intel® Xeon® Scalable delivering a 27% increase in processing cores and 50% increase in bandwidth over previous generation Xeon processors.

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 New 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 Quick Sync 2 for secure, wireless management in 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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- NVMe Direct-attached drives reduce latency

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Features	Technical Specification	
Processor	Up to two Intel® Xeon® Scalable processors, up to 28 cores per processor	
Memory	24 DDR4 DIMM slots, Supports RDIMM /LRDIMM, speeds up to 2666MT/s, 1.5TB 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 120GB, 240 GB 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 58TB or up to 4 x 3.5" SAS/SATA HDD max 48TB Rear drive bays: Up to 2 x 2.5" SAS/SATA (HDD/SSD), NVMe SSD max 12TB 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)	Chassis depth: 705.05 mm
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 Software Connections: Nagios & Nagios XI, Oracle Enterprise Manager, HP Operations Manager,	IBM Tivoli Netcool/OMNibus, IBM Tivoli® Network Manager, CA Network and Systems Management
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	
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 .	

Learn more at Dell.com/PowerEdge

Recommended services

ProSupport Plus with SupportAssist provides proactive and predictive support for critical systems. ProSupport provides comprehensive hardware and software support. Get more from your technology starting on day one with ProDeploy Enterprise Suite deployment offers. For more information, visit Dell.com/itlifecycleservices.

End-to-end technology solutions

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell EMC for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell EMC Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services™ has a wide range of options to make technology acquisition easy and affordable. Contact your Dell Sales Representative for more information.*

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