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 DCPMMs or NVDIMMs, 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.

PowerEdge R640
Deliver fast performance and reduce latency with NVMe drives
## PowerEdge R640

### Features | Technical Specification
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**Processor** | Up to two 2<sup>nd</sup> Generation Intel® Xeon<sup>®</sup> 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 NVMe, 192 GB Max
Up to 12 Intel® Optane™ DC persistent memory DCIMM, 6.14TB max, (7.68TB max with DPCMM + LRDIMM)
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 64TB 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** | 495W Platinum
750W Platinum
750W 240HVDC Platinum *
1100W 48VDC
1100W Platinum
1100W 380HVDC Platinum *

**Dimensions** | Form factor: Rack (1U)
Height: 42.8mm (1.69")
Width*: 808.5mm (31.8")
Depth*: 808.5mm (31.8")
Weight: 21.9kg (48.3 lbs.)
*Dimensions include bezel.

**Embedded management** | IDRAC9, IDRAC Direct, IDRAC RESTful API with Redfish, Quick Sync 2 wireless module optional

**Bezel** | Optional LCD bezel or security bezel

**OpenManage™ Software** | OpenManage Enterprise
OpenManage Mobile

**Integrations and connections** | Integrations:
Microsoft® System Center
VMware® vCenter™
BMC TrueSight
Red Hat Ansible Modules
Connections:
IBM Tivoli® Netcool/OMNibus
IBM Tivoli® Network Manager IP Edition
Micro Focus® Operations Manager I
Nagios® Core
Nagios® XI

**Security** | TPM 1.2/2.0, TCM 2.0 optional
Cryptographically signed firmware
Secure Boot
Silicon Root of Trust
Secure erase
System Lockdown (requires OpenManage Enterprise)

**I/O & Ports** | Network Options:
4 x 1GbE
2 x 10GbE + 2 x 1GbE
4 x 10GbE
2 x 25GbE
Front Ports:
1 x Dedicated IDRAC direct USB
1 x USB 2.0
1 x USB 3.0 (optional)
1 x Video
Rear Ports:
1 x Dedicated DRAC network port
1 x Serial
2 x USB 3.0
1 x Video
PCIe: 3 x Gen3 slots all x16
Video Card: 2 x VGA

**Accelerator options** | Up to 3 single-width GPU (NVIDIA T4) or up to 1 FPGA
See Dell.com/GPU for latest information.

**Supported operating systems** | Canonical® Ubuntu® LTS
Citrix® Hypervisor
Microsoft Windows Server® LTSC with Hyper-V
Oracle® Linux
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

### 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 EMC Sales Representative for more information.*

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