POWEREDGE R840

Turbocharge your data analytics

Designed to drive faster insights, the PowerEdge R840 delivers four-socket performance in a dense 2U design. Power your business-critical workloads with up to 24 direct-attached NVMe drives.

Maximize performance for demanding workloads

The R840 delivers consistent, high performance results for data-intensive applications and data analytic workloads. With powerful 2nd Generation Intel® Xeon® Scalable processors and up to 112 cores, the R840 can quickly turn analytics into insights to drive your business forward faster. Create an optimal configuration of NVMe, SSD, HDD and GPU resources to address your most demanding workloads - all in a 2U chassis.

- Scale capacity and performance with up to 26 2.5" HDDs and SSDs, 62% more than the previous generation.[1]

- Accelerate applications with up to 2 double-width GPUs or up to 2 FPGAs.

- Speed data transfers with a fully integrated ultra path interconnect across all four sockets.

- Eliminate bottlenecks with up to 48 DIMMs, including up to 24 PMems or 12 NVDIMMs.

Automate everyday tasks with Dell EMC OpenManage

The Dell EMC OpenManage™ portfolio helps deliver peak efficiency for PowerEdge server customers, delivering intelligent, automated management of routine tasks. Combined with unique agent-free management capabilities, the R840 is easy to manage, and by doing routine work automatically, you can free up time for higher-value projects.

- Unify monitoring and management of your IT infrastructure with OpenManage Enterprise.

- Utilize a variety of OpenManage integrations and connections to take advantage of your existing IT management platform.

- Take advantage of QuickSync 2 capabilities and gain access to your servers easily through your phone or tablet.

Safeguard your data center with built-in security

Every PowerEdge server is made with a cyber-resilient architecture, delivering security into all parts of a server's life cycle. The R840 uses these new security features so you can reliably and securely deliver the right data to where your customers are, no matter where they are. Dell EMC considers each part of system security, from design to end of life, to ensure trust and deliver worry-free systems.

- 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.

- Protect your server from malicious malware with iDRAC9 Server Lockdown mode (requires Enterprise or Datacenter license)

- Wipe all data from storage media including hard drives, SSDs and system memory quickly and securely with System Erase.

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Boost performance and minimize latency:

- Choose an all-flash configuration with up to 24 direct-attached NVMe drives

- Add up to 24 PMems of memory

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[1] Based on Dell EMC internal analysis, Jan 2018, comparing to the previous Dell EMC PowerEdge R830.

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Features	Technical Specification	
Processor	Up to four 2nd Generation Intel® Xeon® Scalable processors, up to 28 cores each	
Memory	48 DDR4 DIMM slots, Supports RDIMM /LRDIMM, up to 2933MT/s, 6TB max Up to 12 NVDIMM, 384GB Max Up to 24 Intel® Optane™ DC persistent memory PMem, max 12.28TB, (15.36TB max with PMem and LRDIMM) Supports registered ECC DDR4 DIMMs only	
Storage controllers Internal boot	Internal Controllers: PERC H330, H730P, H740P, HBA330 External Controllers: H840, 12 Gbps SAS HBA Software RAID:S140 Boot Optimized Storage Subsystem (BOSS):HWRAID 2 x M.2 SSDs 240GB, 480GB Internal Dual SD Module[1]	
Drive bays	Front drive bays: Up to 8 x 2.5" SAS SATA (HDDs/SSDs) max 61.44TB, or up to 24 x 2.5" SAS/SATA (HDDs/SSDs) with up to 12 NVMe PCIe SSDs max 184.32TB, or up to 24 NVMe PCIe SSDs max 153TB Rear drive bays: Up to 2 x 2.5" SAS/SATA (HDDs/SSDs), max 15.36TB	
Power supplies	Gold:1100W - 48VDC, Platinum: 750W, 750W 240VDC[2], 1100W, 1100W 240VDC[1] 1600W, 2000W, 2400W	Titanium: 750W Hot plug power supplies with full redundancy option 6 hot plugs fans with N +1 redundancy
Dimensions	Form factor: Rack (2U)	Height: 86.8mm (3.4") Width*: 434.0mm (17.08") Depth*: 835.9mm (32.9") Weight: 36.6kg (80.7lbs.) *Dimensions do not include bezel, brackets or PSU handles
Embedded management	iDRAC9 iDRAC Direct	Quick Sync 2 BLE/wireless
Bezel	Optional LCD bezel or security bezel	
OpenManage™ Software	OpenManage Enterprise	OpenManage Mobile OpenManage Power Center
Integrations and connections	Integrations: Microsoft® System Center, VMware® vCenter™, BMC Truesight ®, Red Hat® Ansible® Modules	Connections: Nagios® Core & Nagios® XI, Microfocus Operations Manager I, IBM Tivoli Netcool/OMNIbus
Tools	Dell EMC Repository Manager Dell EMC Update Package Dell EMC System Update Dell EMC Server Update Utility	iDRAC Service Module iDRAC RESTful API with Redfish OpenManage Server Administrator OpenManage Storage Services
Security	TPM 1.2/2.0, TCM 2.0 optional Cryptographically signed firmware Secure Boot	Secure Boot System Lockdown (requires iDRAC Enterprise and Datacenter) Silicon Root of Trust Secure Erase
I/O & Ports	Network Daughter Card Options 4 x 1GbE, 4 x 10GbE, 2 x 10GbE+2 x 1GbE, or 2 x 25GbE Front ports: 1 x Dedicated iDRAC Direct Micro USB, 1 x USB 2.0, 1 x VGA. (Optional 1 x USB 3.0 only offered on the 8-drive configuration)	Rear ports: 1 x Dedicated iDRAC port, 1 x Serial, 2 x USB 3.0, 1 x VGA Internal port: 1 x USB 3.0 Video card: 2 x VGA PCIe: Up to 6 x Gen3 slots, (4x16 slots or 2x16 + 4x8 slots)
Accelerator Options	Up to 2 doublewidth GPUs or up to 2 full-height FPGAs[3]	See Dell.com/GPU for latest information.
Supported operating systems	Canonical® Ubuntu® Server LTS Citrix® Hypervisor Microsoft Windows Server® LTSC with Hyper-V Red Hat® Enterprise Linux Oracle® 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 EMC ProSupport Plus for critical systems or Dell EMC ProSupport for premium hardware and software support for your PowerEdge solution. Consulting and deployment offerings are also available. Contact your Dell EMC representative today for more information. Availability and terms of Dell EMC Services vary by region. For more information, visit Dell.com/ServiceDescriptions.	

Learn more at Dell.com/PowerEdge

[1] ESXi (only OS supported)
[2] Available in China only.
[3] GPUs/FPGAs not available with the 2 x 2.5" rear drive bay.

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 EMC Financial Services TM 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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