POWEREDGE R940xa

Extreme acceleration for Artificial Intelligence and Machine Learning

Rapidly transform data insights into business outcomes with the PowerEdge R940xa. The R940xa accelerates applications with powerful four-socket performance in a scalable 4U design.

Accelerate application performance

The PowerEdge R940xa drives GPU database acceleration to deliver real-time decisions for compute-intensive applications. By combining four CPUs with four GPUs, the R940xa delivers consistent high performance for demanding applications. The R940xa allows you to dynamically scale capacity and performance as your business-critical workloads evolve including:

- Maximizing performance with 2nd Generation Intel® Xeon® Scalable processors, up to 112 cores.
- Choosing up to 4 double-width GPUs or up to 4 double-width or 8 single-width FPGAs for application acceleration.
- Supporting large data sets with up to 48 DIMMs (24 of which can be PMems) and up to 15.36TB of memory.
- Scaling on-premise capacity with up to 32 x. 2.5" HDDs/SSDs and up to 4 direct-attached NVMe drives.
- Expanding quickly with up to 12 PCIe slots for external device connections.

Streamline operations with Dell EMC OpenManage

The Dell EMC OpenManage™ portfolio helps simplify IT operations across your data center, delivering intelligent, automated management of routine tasks. Combined with unique agent-free management capabilities, the R940xa is simply managed, freeing up time for high profile projects.

- 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.

Deliver comprehensive data center protection 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 R940xa 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.

R940xaSpec Sheet
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## 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 NVMe/
- Up to 24 Intel® Optane DC persistent memory PMem, max 12.28TB, (15.36TB max with PMem and LRDIMM)

### Storage controllers
- External Controllers: H840, 12 Gbps SAS HBA, HBA355e
- Software RAID: S140
- Boot Optimized Storage Subsystem (BOSS): HWRAID 2 x M.2 SSDs 240GB, 480GB

### Internal Boot
- Internal Dual SD Module

### Drive bays
- Front drive bays: Up to 8x 2.5" SAS SATA (HDD/SSD) max 61.44TB, or up to 24 x 2.5" SAS/SATA (HDD/SSD) max 184.32TB, or up to 32 SAS/SATA (HDD/SSD) with up to 4 NVME PCIe SSDs max 245.76TB

### Power supplies
- Gold 1100W -48VDC
- Platinum: 1100W, 1100W 240VDC²
- 1600W, 2000W, 2400W
- Titanium: 1600W HLAC, 2600W HLAC
- Hot plug power supplies with full redundancy option
- 6 hot plugs fans with N+1 redundancy

### Dimensions
- Form factor: Rack (4U)
- Height: 174.3 mm (6.87")
- Width: 441.16 mm (17.37")
- Depth: 835.9 mm (32.9")
- Weight: 56.0 kg (123.5 lbs.)

### 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 Update Utility
- 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 optional
- Cryptographically signed firmware
- Secure Boot
- Secure Boot Lockdown (requires iDRAC Enterprise or Datacenter)
- Silicon Root of Trust Secure Erase

### I/O & Ports
- Network Daughter Card Options
- Rear ports: 1 x Dedicated iDRAC Direct
- Internal port: 1 x USB 3.0
- Video card: 2 x VGA
- PCIe: Up to 12 x Gen3 slots, 6x16 slots or 2x16 + 10x8 slots

### Accelerator Options
- Up to 4 double-width GPUs or up to 4 double-width or 8 single-width full-height FPGAs
- See Dell.com/GPU for latest information.

### Supported operating systems
- Canonical® Ubuntu® LTS
- Citrix® Hypervisor
- Microsoft Windows Server® LTSC 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 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.

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