



Dell PowerEdge R815

The Dell™ PowerEdge™ R815 is a 4-socket rack server offering AMD Opteron™ processors with up to 64 processor cores and an excellent balance of advanced manageability, memory scalability, I/O, and redundancy in a space-saving 2U form factor.

Performance-Driven Technology

Purpose-built to provide a reliable foundation and balanced with AMD Opteron processor technology optimized for stability, consistency, and outstanding price for performance, the Dell PowerEdge R815 is designed from the ground up for value and performance. It is an ideal platform for customers looking to maximize data center space and budget.

Purpose-Built for Reliability

We have listened to our customers and built servers endowed with reliability, availability, and quality. Dell's reliability promise is simple: Deliver quality products that stand the test of time.

From the robust, metal hard drive carriers and organized cabling to the interactive LCD screen, dual SD hypervisor modules, and embedded diagnostics, all components are purposefully designed and built to improve server reliability and usability. Dell has developed its reliability processes by:

- Employing robust validation and testing processes for durable product design
- Verifying each supplier meets stringent quality standards
- Implementing a "one-touch" build process to ensure that one person is responsible for the entire server build, resulting in greater quality control
- Ensuring that every fully configured Dell server is tested (and re-tested) before it leaves the factory
- Introducing Unified Server Configurator (USC) which offers embedded and persistent diagnostics with no media required to help minimize downtime
- Utilizing robust and durable industrial materials to enable long product lifecycles
- Improving redundancy generation over generation by adding features such as dual internal failsafe SD modules to provide failover at the hypervisor level.

In addition to these quality measures, all PowerEdge servers are designed with external ports, power supplies, and LED lights or LCD screens in the same location for a more efficient and familiar user experience, as well as easy installation and deployment.

Efficient Infrastructure

Limitations on space, power, and cooling capacity combined with rising energy costs present enormous challenges for IT. Dell PowerEdge servers are made to deliver energy efficiency as a design standard while helping to meet the performance and budget goals your infrastructure requires. Energy-efficient system design built with Energy Smart technologies such as power capping, power inventory, and power budgeting help to better manage power within your specific environment.

Included in the PowerEdge R815 chassis are efficient fans, which spin in accordance with server workload demands. In addition, the internal shrouding and logical layout of the internal components aids with airflow direction, helping to keep the server cool. The PowerEdge R815 also includes power-management features such as volt regulators, power-regulating processors, and an interactive LCD screen for access to power consumption information.

Intelligent, Connected Systems Management

The Dell Lifecycle Controller (an integrated chip) is the engine for advanced embedded management that is delivered as part of the iDRAC6 Express or optional iDRAC6 Enterprise in the PowerEdge R815. It is accessed through a single console called the Unified Server Configurator. Administrators can simplify tasks by performing a complete set of provisioning functions such as system deployment, system updates, hardware configuration, and diagnostics in the pre-OS environment. This avoids the need to use and maintain multiple pieces of disparate CD/DVD media. The PowerEdge R815 also features an interactive LCD screen positioned on the front of the server for ease of monitoring.

Also part of Dell OpenManage™ systems management portfolio is the Dell Management Console, which ships standard with every Dell server and provides IT managers with a consolidated view of their entire IT infrastructure.

Ideal for virtualization, medium-sized databases, high-performance computing, and other highly threaded application implementations.

Feature	Technical Specification	
Form Factor	2U rack	
Processors	AMD Opteron™ 6100 and 6200 series processors	
Processor Sockets	4	
Front Side Bus or HyperTransport	HyperTransport-3 Links	
Cache	L2: 512K/core L3: 16MB	
Chipset	AMD (SR5650, SR5670 and SP5100)	
Memory¹	Up to 512GB (32 DIMM Slots): 1GB/2GB/4GB/8GB/16GB up to 1600MHz	
I/O Slots	6 PCIe G2 slots + 1 storage slot: Five x8 slots One x4 slot One x4 storage slot	
RAID Controller	Internal Controllers: PERC H200 (6Gb/s) PERC H700 (6Gb/s) with 512MB battery-backed cache; 512MB, 1GB Non-Volatile battery-backed cache External HBAs (non-RAID): 6Gb/s SAS HBA SAS 5/E HBA LSI2032 PCIe SCSI HBA	External Controllers: SAS 5/E with 512MB battery-backed cache PERC H800 (6Gb/s) with 512MB of battery-backed cache; 512MB, 1GB Non-Volatile battery-backed cache PERC 6/E with 256MB or 512MB of battery-backed cache
Drive Bays	Up to six 2.5" hot-plug SATA SSD, SAS, nearline SAS, or SATA drives	
Maximum Internal Storage	Up to 6TB	
Hard Drives¹	Hot-plug Hard Drive Options: 2.5" SAS SSD, SATA SSD, SAS (15K, 10K), nearline SAS (7.2K), SATA (7.2K)	
Communications	Intel® 10GBase-T Copper Single Port NIC, PCI-E x8 Intel® Single Port Server Adapter, 10Gigabit, SR Optical, PCI-E x8 Broadcom® BMC57710 10Base-T Copper Single Port NIC, PCI-E x8 Broadcom® 10GbE NIC, Broadcom Dual Port 10GbE SFP+ Intel® Gigabit ET Dual Port Server Adapter Intel® Gigabit ET Quad Port Server Adapter Brocade® CNA Dual port adapter Emulex® CNA iSCSI HBA stand up adapter OCE10102-IX-D Emulex® CNA iSCSI HBA stand up adapter OCE10102-FX-D	Optional add-in HBAs: Qlogic® QLE 2462 FC4 Dual Port 4 Gbps Fiber Channel HBA Qlogic® QLE 220 FC4 Single Port 4 Gbps Fiber Channel HBA Qlogic® QLE 2460 FC4 Single Port 4 Gbps Fiber Channel HBA Qlogic® QLE2562 FC8 Dual-channel HBA, PCI-E Gen 2 x4 Qlogic® QLE2560 FC8 Single-channel HBA, PCI-E Gen 2 x4 Emulex® LPe-1150 FC4 Single Port 4 Gbps Fiber Channel HBA, PCI-E x4 Emulex® LPe-11002 FC4 Dual Port 4 Gbps Fiber Channel HBA, PCI-E x4 Emulex® LPe-12000 FC8 Single Port 4 Gbps Fiber Channel HBA, PCI-E Gen 2 x4 Emulex® LPe-12002 FC8 Dual Port 4 Gbps Fiber Channel HBA, PCI-E Gen 2 x4 Brocade® FC4 and 8GB HBAs
Power Supply	One hot-pluggable non-redundant 1100W power supply	Two hot-pluggable redundant 1100W power supplies
Availability	Hot-plug hard drives, hot-plug redundant power, dual SD modules, ECC memory, interactive LCD screen	
Video	Matrox® G200eW with 8MB memory	
Remote Management	iDRAC6 Express (standard), iDRAC6 Enterprise, and vFlash (upgrade optional)	
Systems Management	Dell™ OpenManage™ BMC, IPMI 2.0 compliant Unified Server Configurator Lifecycle Controller enabled: iDRAC6 Express, optional iDRAC6 Enterprise, and vFlash Microsoft® System Center Essential (SCE) 2010 v2	
Rack Support	ReadyRails™ sliding rails with optional cable management arm for 4-post racks (optional adapter brackets required for threaded hole racks)	
Operating Systems	Microsoft® Windows® Server 2008 SP2, x86/x64 (x64 includes Hyper-V™) Microsoft® Windows® Server 2008 R2 SP1, x64 (includes Hyper-V™ v2) Microsoft® Windows® HPC Server 2008 Novell® SUSE® Linux Enterprise Server Red Hat® Enterprise Linux Oracle® Solaris™ Virtualization Options: Citrix® XenServer™ VMware® vSphere™ 4.1 (including VMware ESX® 4.1, VMware ESXi™ 4.1, or ESXi 5.0)	
Featured Database Applications	Microsoft® SQL Server® solutions (see Dell.com/SQL) Oracle® database solutions (see Dell.com/Oracle)	

¹ GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

Dell Services

Dell Services can help reduce IT complexity, lower costs, and eliminate inefficiencies by making IT and business solutions work harder for you. The Dell Services team takes a holistic view of your needs and designs solutions for your environment and business objectives while leveraging proven delivery methods, local talent, and in-depth domain knowledge for the lowest TCO.

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