



Dell PowerEdge R510

The Dell™ PowerEdge™ R510 is a multipurpose 2-socket 2U high-capacity rack server offering an excellent balance of internal storage, redundancy, and value.

The Dell PowerEdge R510 was developed with a purposeful design, energy-optimized technology, the performance of the Intel® Xeon® processors and enterprise-class manageability. It is ideal for customers needing large amounts of internal storage capacity and/or seeking a multi-purpose core application server.

Right-sized, flexible technology and business value

The PowerEdge R510 was designed to meet the needs of many IT environments with advanced systems management capabilities, a compact chassis, high-availability and redundancy features, and large amounts of internal storage capacity. The R510 is an excellent platform for core business applications such as Microsoft® SQL Server® and Microsoft® Exchange.

Dell aims to add value to your business by including the features you need for your specific IT environment. Our goal is to deliver value through tailored solutions based on industry standards, as well as innovative design of our servers.

Purposeful design

The PowerEdge R510 follows the eleventh generation PowerEdge portfolio specifications and features the same system design commonality and reliability true to the entire portfolio. All eleventh generation servers are designed to make the experience easier. We put all external ports, power supplies, LCD screens, and LED lights in the same location for familiar experience as well as easy installation and deployment. Robust, metal hard drive carriers and organized cabling are designed to help improve component access and airflow across the server.

In addition, the R510 is also available with 4, 8, or 12 hard drive chassis options, providing choice of the design and feature set that is most appropriate for your IT environment.

Energy-optimized technology

The PowerEdge R510 incorporates Energy Smart design using logical component layout of the internal components which aids with airflow direction, helping to keep the server cool.

Simplified systems management

With the optional advanced embedded systems management capabilities of Lifecycle Controller, Dell provides comprehensive enterprise-class manageability already on the motherboard. Lifecycle Controller is delivered as part of the optional iDRAC Express or iDRAC Enterprise in the PowerEdge R510. It helps to simplify administrator tasks by performing a comprehensive set of provisioning functions such as system deployment, system updates, hardware configuration and diagnostics from a single intuitive interface called Unified Server Configurator (USC) in a pre-OS environment. This helps eliminate the need to use and maintain multiple pieces of disparate CD/DVD media.

Also part of the Dell OpenManage™ portfolio is the Dell Management Console which is included with every Dell server and provides IT administrators with a consolidated console view of their IT infrastructure.

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.

The PowerEdge R510 is ideal for customers needing large amounts of internal storage capacity or a multi-purpose core application server such as remote sites, larger corporation departments, and small and medium businesses.

Feature	PowerEdge R510 Technical Specification	
Form Factor	2U rack	
Processors	Quad-core or six-core Intel® Xeon® processors 5500 and 5600 series	
Processor Sockets	2	
Front Side Bus or HyperTransport	Intel QuickPath Interconnect (QPI)	
Cache	4MB, 8MB and 12MB	
Chipset	Intel 5500	
Memory ¹	Up to 128GB (8 DIMM slots): 1GB/2GB/4GB/8GB/16GB DDR3 up to 1333MHz	
I/O Slots	3 PCIe G2 slots + 1 storage slot: One x8 slot Two x4 slots One storage x4 slot	
RAID Controller	Internal: SAS 6/iR PERC 6/i PERC S100 (software based), Available on 4 HDD only PERC S300 (software based), Available on 4 and 8 HDD only PERC H200 (6GB/s) PERC H700 (6Gb/s) with 512MB battery-backed cache; 512MB, 1GB Non-Volatile battery-backed cache	External: 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 SAS 5/E HBA LSI2032 PCIe SCSI HBA External HBAs (non-RAID): 6Gbps SAS HBA SAS 5/E HBA LSI2032 PCIe SCSI HBA
Drive Bays	Up to four cabled 3.5" SAS or SATA drives in 4 hard drive chassis Up to eight hot-swap 2.5"/3.5" SAS, SATA or SSD drives in 8 hard drive chassis Up to 12 hot-swap 2.5"/3.5" SAS, SATA or SSD drives in 12 hard drive chassis with 2 additional 2.5" internal cabled hard drives	
Maximum Internal Storage ¹	12TB–37.8TB (depending on chassis)	
Hard Drives	Hot-plug hard drive options: 2.5" SAS SSD, SATA SSD, SAS (10K) 3.5" SAS (15K, 10K), nearline SAS (7.2K), SATA (7.2K)	Cabled hard drive options: 2.5" SATA SSD, SAS (10K), nearline SAS (7.2K) 3.5" SAS (15K, 10K), nearline SAS (7.2K), SATA (7.2K)
Communications	Intel 10G Base-T Single Port NIC Broadcom® BMC5710 10 Base-T Copper Single Port NIC Intel PRO/1000 PT Single Port Adapter, Gigabit Ethernet NIC, PCIe x1 Intel Gigabit ET Dual Port Adapter, Gigabit Ethernet NIC, PCIe x4 Intel Ethernet X520 DA2 Dual-Port 10 Gigabit Server Adapter Intel Gigabit ET Quad Port Adapter, Gigabit Ethernet NIC, PCIe x4 Emulex® CNA iSCSI HBA stand up adapter OCE10102-IX-D Emulex CNA iSCSI HBA stand up adapter OCE10102-FX-D	Broadcom NetXtreme® 5709 Dual Port Gigabit Ethernet NIC, Copper, TOE/iSCSI PCIe x4 Broadcom NetXtreme II 57711 Dual-Port SFP+/Direct Attach 10Gb Ethernet PCI-Express Network Interface Card with TOE and iSCSI Offload Broadcom NetXtreme 5709 Dual Port Gigabit Ethernet NIC, Copper, w/TOE PCIe x4 Brocade® CNA Dual-port adapter Brocade FC4 and 8 GB HBAs Brocade CNA BR1020
Power Supply	4 hard drive configuration: <ul style="list-style-type: none"> • Non-redundant 480W power supply 8 hard drive configuration: <ul style="list-style-type: none"> • One non-redundant 750W hot-plug power supply • One non-redundant 1100W hot-plug power supply • Two redundant 750 hot-plug power supplies • Two redundant 1100W hot-plug power supplies 	12 hard drive configuration: <ul style="list-style-type: none"> • One non-redundant 750W hot-plug power supply • Two redundant 750 hot-plug power supplies Uninterruptible power supplies: <ul style="list-style-type: none"> • 1000W-5600W • 2700W-5600W High Efficiency Online • Extended Battery Module (EBM) • Network Management Card
Availability	Hot-plug hard drives, hot-plug redundant power, ECC memory, Quad-Pack LED lights, LCD display screen, and redundant cooling (availability of some features dependent on chassis selected)	
Video	Matrox® G200eW with 8MB memory	
Remote Management	iDRAC6 optional	
Systems Management	Dell™ OpenManage™ BMC, IPMI 2.0 compliant Unified Server Configurator Lifecycle Controller enabled though optional: iDRAC6 Express, iDRAC6 Enterprise and vFlash media	
Rack Support	ReadyRails™ sliding rails with optional cable management arm for 4-post racks (optional adapter brackets required for threaded hole racks); ReadyRails static rails for 2-post and 4-post racks	
Operating Systems	Microsoft Windows Server® 2012 Microsoft Windows® Small Business Server 2011 Microsoft Windows Server® 2008 SP2, x86/x64 (x64 includes Hyper-V®) Microsoft Windows Server 2008 R2 SP1, x64 (includes Hyper-V v2) Windows HPC Server 2008 R2 Novell® SUSE® Linux® Enterprise Server Red Hat® Enterprise Linux®	Virtualization Options: VMware® vSphere™ ESXi™ and ESXi For more information on the specific versions and additions, visit Dell.com/OSsupport .
Featured Database Application	Microsoft SQL Server® solutions (see Dell.com/SQL)	

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.

OEM Ready Models Available

OEM Ready platforms are grab-and-go products for OEM customers delivering a fast and simple path to a custom-branded solution. For more information, please visit Dell.com/OEM.

Learn more at Dell.com/PowerEdge

