

DELL POWEREDGE R510 SERVER



The PowerEdge™ R510 is a 2-socket 2U high-capacity, multi-purpose rack server offering an excellent balance of internal storage, redundancy, and value in a compact 24" depth chassis.



The PowerEdge R510 was developed with a purposeful design, energy-optimized options, the performance of the Intel® Xeon® 5500 and 5600 series processors, DDR3 memory, and enterprise-class manageability. The PowerEdge R510 is ideal for customers needing large amounts of internal storage capacity and/or seeking a multi-purpose core application server such as remote sites, larger corporation departments, and small and medium businesses.

RIGHT-SIZED, FLEXIBLE TECHNOLOGY AND BUSINESS VALUE

The PowerEdge R510 was designed to meet the needs of many IT environments. Available with advanced systems management capabilities, a short and dense 24 inch chassis, high availability and redundancy features, cost-effective RAID options, and large amounts of internal storage capacity, the R510 can serve the needs of small and medium businesses or corporate environments by providing 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 purposeful, innovative design.

PURPOSEFUL DESIGN

The PowerEdge R510, part of the 11th Generation PowerEdge portfolio, is built with system design commonality and reliability. All 11th Generation servers are designed to make the user experience easier. We put all external ports, power supplies, LCDs, and LEDs in the same location for familiar user experience as well as easy installation and deployment.

Robust, metal hard drive carriers and organized cabling are designed to improve component access and airflow across the server. The PowerEdge R510's purposeful design also provides quiet acoustics and an interactive LCD or LED display positioned on the front of the server for ease of monitoring.

In addition, the R510 is also available with different chassis options. Customers can choose from a 4 hard drive chassis or 8 hard drive chassis. These different configurations allow customers to choose the design and feature set that is most appropriate for their IT environment.

ENERGY-OPTIMIZED TECHNOLOGY

Included in the R510 are low-flow fans, designed to spin faster in accordance with server workload demands and help reduce unnecessary noise when possible. In addition, the logical layout of the internal components aids with airflow direction, helping to keep the server cool. The R510 also includes power management features on select models which include power capping, power inventory, and power budgeting to aid in the management of power within your specific environment.

SIMPLIFIED SYSTEMS MANAGEMENT

The Lifecycle Controller is the engine for advanced embedded management and is delivered as part of the optional iDRAC Express or iDRAC Enterprise in the PowerEdge R510. The Lifecycle Controller is a chip that is integrated on the server. It helps to simplify administrator tasks by performing a complete 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 eliminates the need to use and maintain multiple pieces of disparate CD/DVD media.

Also part of the Dell systems management portfolio is the Dell Management Console, part of OpenManage™, which is included with every Dell server to provide IT managers with a single console view of their entire IT infrastructure.

FEATURES		DELL™ POWEREDGE™ R510	
Form Factor	Rack		
Processors	Latest quad-core or six-Core Intel® Xeon® 5500 and 5600 series processors		
Processor Sockets	2		
Front Side Bus or HyperTransport	Intel® QuickPath Interconnect (QPI)		
Cache	4MB and 8MB		
Chipset	Intel® 5500 Chipset		
Memory	Up to 128GB (8 DIMM slots): 1GB/2GB/4GB/8GB/16GB DDR3 800MHz, 1066MHz or 1333MHz		
I/O Slots	4 PCIe G2 slots: One x8 slot Two x4 slot (both w/ x8 connectors) One Storage x4 slot (w/ x8 connector)		
RAID Controllers	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 Non-Volatile cache PERC H700 (6GB/s) with 512MB battery-backed cache	External: PERC H800 (6Gb/s) with 512MB Non-Volatile cache PERC H800 (6GB/s) with 512MB of 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	Cabled or hot-swap options available: 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	8TB, 16TB or 24.6TB depending on chassis selected		
Hard Drives¹	Hard drive options: 3.5" SATA (7.2K rpm) 160GB, 250GB, 500GB, 1TB, 2TB 3.5" Near Line SAS (7.2K rpm) 500GB, 1TB, 2TB 3.5" SAS (15K rpm) 146GB, 300GB, 450GB, 600GB 3.5" SAS (10K rpm) 600GB 2.5" SAS (10K rpm), 146GB, 300GB 2.5" SATA SSD 50GB, 100GB		
Network Interface Cards	Intel® 10G Base-T Single Port NIC Broadcom® BCM5710 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 Broadcom® NetXtreme™ 5709 Dual Port Gigabit Ethernet NIC, Copper, w/TOE PCIe x4 Broadcom® NetXtreme™ 5709 Dual Port Gigabit Ethernet NIC, Copper, TOE/iSCSI PCIe x4 Intel Gigabit ET Quad Port Adapter, Gigabit Ethernet NIC, PCIe x4		
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 w/ 8MB memory		
Remote Management	iDRAC6 optional		
Systems Management	BMC, IPMI 2.0 compliant Dell™ OpenManage™ featuring Dell Management Console Unified Server Configurator Lifecycle Controller enabled via optional: iDRAC6 Express, iDRAC6 Enterprise and Vflash		
Rack Support	Sliding ReadyRails™ mounting interface for 4-post racks, static ReadyRails™ mounting interface for 4-post and 2-post racks, and optional support for cable management arm		
Operating Systems	Microsoft® Windows® Small Business Server 2008 Microsoft® Windows® Essential Business Server 2008 Microsoft® Windows Server® 2008 SP2, x86/x64 (x64 includes Hyper-V™) Microsoft® Windows Server® 2008 R2, x64 (includes Hyper-V™ v2) Microsoft® Windows® HPC Server 2008 Novell® SUSE® Linux® Enterprise Server Red Hat® Enterprise Linux® For more information on the specific versions and additions, visit www.dell.com/OSsupport .		

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

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