

DELL™ POWEREDGE™ FULL-HEIGHT M805 AND M905 BLADE SERVERS



Built for virtualisation and engineered to address the key challenges faced by IT personnel, the Dell™ PowerEdge™ M805 and M905 full-height Blade Servers deliver leading enterprise class functionality. With features including three highly available, fully redundant I/O fabrics, massive total throughput, and greater DIMM capacity than the competition, these PowerEdge™ Servers enable the lowest possible cost for high RAM configurations.

ENHANCED VIRTUALISATION PERFORMANCE

The Dell™ PowerEdge™ M805 and M905 Blade Servers were designed from the ground up for enhanced virtualisation capabilities. They combine the latest Quad-Core AMD Opteron™ processors with increased RAM capacity and unmatched I/O to deliver powerful performance in virtual environments. The M805 offers 16 DIMM slots, up to 128GB total RAM, an internal SD card for embedded hypervisors, and highly available fully redundant I/O connectivity delivering improved virtualisation performance in a twosocket blade server environment.



Dell™ PowerEdge™ M805 Blade Servers

For high-density virtualisation environments demanding the highest available RAM and I/O, the PowerEdge™ M905 delivers 24 DIMM slots, up to 192GB total RAM, and highly available redundant throughput capacity. Combining an internal SD card for embedded hypervisors, with a form factor that minimises space intrusion, the M905 delivers industry-leading virtualisation and robust application and database capabilities all in a four-socket server with three highly available I/O fabrics. The CX4-960 is Dell's largest and most powerful storage array, providing a high performance platform for your critical data that is highly available and highly flexible. It enables a scalable approach to storage for applications that require high bandwidth and massively scalable drive counts and capacity. The adaptability offered by this array helps protect your organisation's investment by allowing your storage infrastructure to scale to meet your needs today and tomorrow.

SIMPLIFIED VIRTUALISATION

Designed to improve performance across the board for both virtualised and non-virtualised applications, both the PowerEdge™ M805 and M905 feature AMD's Rapid Virtualisation Indexing, which can improve the performance of some virtualised applications by utilising its Nested Page Table technology.

Further simplifying blade technology and virtualisation in business data centers, these full-height blade servers offer embedded hypervisors from industry-leading vendors: VMware™, Citrix® XenServer™, and Microsoft® Hyper-V™ technology. Both PowerEdge™ servers provide the ability to begin migrating live virtual machines within minutes of installing them in the chassis.

EXPANDED NETWORK CONNECTIVITY

The M805 and M905 deliver three highly available, fully redundant fabrics, which are necessary for true enterprise-class data access. The proliferation of external storage for ease of management demands this functionality to ensure organisations can always access their data. No competitive blade chassis can match the number of highly available fabrics and the total throughput of these blades. Dell™ designed these servers and the M1000e chassis to meet the critical needs of a data center.

GREATER COMPUTING DENSITY

Featuring 33% more DIMM slots than the competition¹, the PowerEdge™ M805 helps remove the barriers to running memory-bound applications such as Oracle®, MS Exchange 2007™, and Microsoft SQL Server® and virtualisation applications such as VMware's ESX Server™ on two-socket blade servers. It delivers the same total number of DIMM slots in a two-socket blade that the competition requires a four-socket blade to match.²

The PowerEdge™ M905 features 50% greater memory capacity and higher I/O than the competition's³ four-socket blades. The barriers are down for running high processor resource, memory, and I/O bound applications such as Oracle®, MS Exchange 2007™, Microsoft® SQL Servers and virtualisation applications on blades. More DIMM slots allow you to use smaller, less expensive DIMMs to reach larger RAM capacities.



Dell™ PowerEdge™ M905 Blade Servers



Dell™ PowerEdge™ M1000e Chassis

ENHANCED ENERGY EFFICIENCY FOR INCREASED PRODUCTIVITY

For businesses that require the highest levels of performance while maintaining a low energy footprint, the PowerEdge™ M805 and M905 feature AMD PowerNow!™ technology. Utilising dynamic frequency and voltage support to deliver performance on demand, they can help reduce power consumption without compromising performance.

The M805 and M905 join the M600 and M605 in the PowerEdge™ M1000e Modular Blade Enclosure, further assisting organisations to increase capacity, lower operating costs, and deliver outstanding performance/watt. Built on Dell™ Energy Smart technology, the M1000e chassis is designed to be one of the most power-efficient blade solutions available. Energy Smart technologies in the M1000e include:

- Ultra-efficient power supplies that deliver high levels of efficiency (up to 91%) even at low utilisation⁴
- Dynamic Power Supply Engagement that provides maximum power utilisation based on system demands⁴
- Optimised airflow design with ultra-efficient dynamically scaling fans. Nine fans, deployed in three separate cooling zones, help ensure that only the amount of air required by the enclosure is circulated, helping to improve blade and overall data center efficiency
- Lead-free chassis and blades, with low lead I/O module options

SUPPORT & SERVICES

Dell™ Services and ProSupport options align to the way organisations use technology — rapidly responding to their needs and helping to protect their investment, productivity, and sensitive data. We can also provide enhanced proactive support options to help reduce the risk and complexity of managing infrastructure.

To help with the decision-making process, Dell™ Professional Services can assist with power and thermal evaluations, virtualisation assessments, and design, deployment, and implementation assistance.

To help you get the most from your Dell systems, visit DELL.COM/AP/services⁵

THE DELL DIFFERENCE

Centralised networks can vastly improve the productivity of individuals and businesses. The PowerEdge™ M-Series is specifically designed to simplify deploying, managing, and maintaining networks for years to come. The M-Series offers impressive switch flexibility with Flex/IO and unmatched ease of use with FlexAddress for persistent WWN/MAC addresses.

FEATURES	DELL™ POWEREDGE™ M805 BLADE SERVER	DELL™ POWEREDGE™ M905 BLADE SERVER
Processors	AMD Opteron™ 2000 series Dual and Quad Core • 105W, 75W, 55W ACP options	AMD Opteron™ 8000 series Dual and Quad Core • 75W, 55W ACP options
Memory	<ul style="list-style-type: none"> • 16 DIMM slots • 512MB/1GB/2GB/4GB ECC DDR2 SDRAM • 8GB ECC DDR2 SDRAM when available • Support up to 128GB using 16 x 8GB DIMMs 	<ul style="list-style-type: none"> • 24 DIMM slots • 512MB/1GB/2GB/4GB ECC DDR2 SDRAM • 8GB ECC DDR2 SDRAM when available • Support up to 192GB using 24 x 8GB DIMMs
Chipset	• NVIDIA® MCP55	
Embedded Hypervisor via SD card (optional)	<ul style="list-style-type: none"> • VMware™ Infrastructure 3, standard or enterprise; with VMware™ ESXi 3.5 • Citrix® XenServer™ Dell Express or Enterprise Editions* 	
Operating Systems	Factory Installed O/S:	
	<ul style="list-style-type: none"> • Microsoft® Windows® Server 2008, Standard and Enterprise Edition x32 • Microsoft® Windows® Server 2008, Standard and Enterprise Edition x64, including Hyper-V™ • Microsoft® Windows® Server 2008 x64 Datacenter, including Hyper-V • Microsoft® Windows® Server 2008 x64, Web Edition x32 and x64 	<ul style="list-style-type: none"> • Microsoft® Windows® Server 2003 R2 x64, Standard and Enterprise Edition • Red Hat® Linux® Enterprise v5, x32 and 64 • Red Hat® Linux® Enterprise v4.5, AS, ES • RHEL 5AP • SUSE® Linux® Enterprise Server 10, x86-64
	Supported O/S:	
	<ul style="list-style-type: none"> • Microsoft® Windows® Server 2003 • SUSE® Linux® Enterprise Server 9 • Solaris* 	<ul style="list-style-type: none"> • VMware™ Infrastructure 3, Standard or Enterprise • VMware™ 3.0 • VMware™ 3.5
Storage	Internal Hot Swap SAS Hard Drives: 2 Maximum <ul style="list-style-type: none"> • 2.5" SAS (10K rpm): 36GB⁷, 73GB⁷, 146GB⁷ • 2.5" SAS (15K rpm): 36GB⁷, 73GB⁷ • Maximum Internal Storage: Up to 300GB⁷ via two x 2.5" 146GB⁷ hot-plu SAS hard drives 	External Storage: Disk Storage Options <ul style="list-style-type: none"> • Dell™/EqualLogic® PS5000 Series • PowerVault™ NX1950 Unified Storage Solution • PowerVault™ MD3000i Dell™/EMC® products: <ul style="list-style-type: none"> • Dell™/EMC® fibre channel and/or iSCSI external storage, including Dell™/EMC® AX150i, CX300, CX3-10c, CX3-20, CX3-40, and CX3-80
Drive Bays	• Two 2.5" SAS hard drive hot swap	
I/O Mezzanine Card Options	Four PCIe x8 Mezzanine Card slots (optional) Available options for all 4 slots: <ul style="list-style-type: none"> • Dual Port Gb Ethernet w/ TOE (New Broadcom 5709) • Dual Port FC4 Qlogic QME2472 • Dual Port FC4 Emulex M Lpe1105 (FC8 only) 	<ul style="list-style-type: none"> • Dual Port Mellanox ConnectX-MDI 4xDDR Infiniband mezzanine card • 10Gb Ethernet* • Dual Port FC8* <small>*Available for shipment only next month. Date is estimate only and is subject to delays.</small>
RAID Controller Options	<ul style="list-style-type: none"> • SAS6/IR (Raid 0/1) hardware based • CERC6/IR (Raid 0/1 w/ Cache) 	
Communications	<ul style="list-style-type: none"> • Four embedded Broadcom® NetXtreme II™ 5709 Gigabit Ethernet NICs with failover and load-balancing TOE (TCP/IP Offload Engine) supported on Microsoft® Windows® Server 2003, SP1 or higher with Scalable Networking Pack. iSCSI Offload supported on Microsoft® Windows® Server 2008, Microsoft® Windows® Server 2003 SP1 or higher, Red Hat® Linux® Enterprise 5, and SUSE® LINUX® Enterprise Server 10. Scalable Networking Pack for Microsoft® Windows® Server 2003 is not required. • Boot from SAN (iSCSI and FC) supported Optional add-in NICs: See I/O Mezzanine Card Options Optional add-in HBAs: See I/O Mezzanine Card Options Fully populated mezz card slots and switch modules will yield 3 highly available, redundant I/O fabrics for each blade	
Power	• Supplied by Dell's M1000e Blade Chassis	
Graphics/Video	• ATI® RN50 (32MB Memory)	



FEATURES	DELL™ POWEREDGE™ M805 BLADE SERVER	DELL™ POWEREDGE™ M905 BLADE SERVER
Chassis	<p>The PowerEdge™ M805 and M905 blade servers only fit in the M1000e blade enclosure. A total of 8 x M805/M905's or 16 x M600/M605's can fit into every M1000e enclosure. Full-height and half-height blades can be mixed in M1000e enclosures with no limitations.</p> <ul style="list-style-type: none"> • Height: 38.5cm (15.2") • Width: 5cm (2") • Depth: 48.6cm (19.2") • Weight (Maximum Configuration): 11.1 kg (24.5 lbs.) • Full-height blade fits inside the M1000e Blade Chassis • Maximum of eight per blade chassis 	
Management	<p>Dell OpenManage™ Software Tools</p> <ul style="list-style-type: none"> • IT Assistant — manage multiple Dell servers from a single console • OpenManage Server Administrator - 1:1 monitoring agents • Integration with 3rd party management solutions via Dell's Certified Partner Program <p>Altiris™ Deployment Solution for Dell Blade Servers</p> <ul style="list-style-type: none"> • Help reduce deployment time from hours to minutes 	<p>Integrated Dell Remote Access Controller (iDRAC) with:</p> <ul style="list-style-type: none"> • Out of Band alerting, status, inventory, and troubleshooting via Secure Web GUI / CLI (telnet/SSH) • Remote Virtual Media (vMedia) and Virtual KVM (vKVM) • vMedia (virtual media) Map media from remote workstation/network to the blade • vKVM (virtual KVM) out of band remote console, supports Java or ActiveX plug-ins • IPMI 2.0 support
Environmental	<ul style="list-style-type: none"> • Operating Temperature: 10° C to 35° C (50° F to 95° F)⁶ • Storage Temperature: -40° C to 65° C (-40° F to 149° F) • Operating Relative Humidity (non-condensing twmax=29C): 8% to 80% non-condensing • Maximum humidity gradient: 10% per hour, operational and non-operational conditions. • Storage Relative Humidity: 5% to 95% non-condensing (twmax=38C) 	

¹ RAM capacity compared in June 2008 to HP BL480c (<http://h18004.www1.hp.com/products/ blades/components/c-class-bladeservers.html>) and IBM LS21 (<http://www-03.ibm.com/systems/ bladecenter/hardware/servers/index.html>)

² HP BL680c and BL685c and IBM L541.

³ RAM capacity compared in June 2008 to HP BL680c and HP BL685c (www1.hp.com/products/servers/proliant-bl/c-class/680c/comparison.html) and IBM LS41 (www-03.ibm.com/systems/bladecenter/hardware/servers/l541/features.html)

⁴ "The Next-Generation Dell PowerEdge M1000e Modular Blade Enclosure," by Chad Fenner, in Dell Power Solutions, February 2008, DELL.com/Downloads/Global/Power/ps1q08-20080206-Fenner.PDF.

⁵ Services vary by region.

⁶ For altitudes above 2950 feet, the maximum operating temperature is derated 1°F/550ft.

⁷ For hard drives, GB means 1 billion bytes; one TB = one trillion bytes. Actual capacity varies with preloaded material and operating environment and will be less.

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PE M805&M905/0808/NEW

