

DELL POWEREDGE FULL-HEIGHT M805 AND M905 BLADE SERVERS



Built for virtualization 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 a larger capacity of 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 VIRTUALIZATION PERFORMANCE

The Dell PowerEdge M805 and M905 Blade Servers were designed from the ground up for enhanced virtualization capabilities. They combine the latest 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 virtualization performance in a two-socket blade server environment.

For high-density virtualization 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 minimizes space intrusion, the M905 delivers industry-leading virtualization and robust application and database capabilities all in a four-socket server with three highly available I/O fabrics.

SIMPLIFIED VIRTUALIZATION

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

Further simplifying blade technology and virtualization 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.



Dell PowerEdge M805 Blade Server

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 organizations 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.

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. Utilizing dynamic frequency and voltage support to deliver performance on demand, they can greatly reduce power consumption without compromising performance.

The M805 and M905 can join the M600 and M605 in the PowerEdge M1000e Modular Blade Enclosure, further assisting organizations 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 (>91%) even at low utilization⁴
- Dynamic Power Supply Engagement that provides maximum power utilization based on system demands⁴
- Optimized 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

THE DELL DIFFERENCE

Centralized 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 industry-leading switch flexibility with Flex/IO and unmatched ease of use with FlexAddress for persistent WWN/MAC addresses.

ABOUT DELL GLOBAL 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.



Dell PowerEdge M905 Blade Server



Dell PowerEdge 1000e Chassis

FEATURES	DELL™ POWEREDGE™ BLADE M805 SERVER	DELL POWEREDGE M905 BLADE SERVER
Processors	Up to Six-Core AMD Opteron™ 2000 series processors <ul style="list-style-type: none"> Includes support for two 105W, 3.1GHz processors 105W, 75W, 55W ACP options 	Up to Six-Core AMD Opteron 8000 series processors <ul style="list-style-type: none"> Includes support for four 105W, 3.1GHz processors 105W, 75W, 55W ACP options
Memory	16 DIMM slots 1GB/2GB/4GB ECC DDR2 667/800MHz Options Support for up to 128GB1 using 16x8GB DIMMs	24 DIMM slots 1GB/2GB/4GB ECC DDR2 667/800MHz Options Support for up to 192GB1 using 24x8GB DIMMs
Chipset	NVIDIA® MCP55	
Embedded Hypervisor via SD card (optional)	VMware™ Infrastructure 3, standard or enterprise; with VMware ESXi 3.5 Citrix® XenServer™ Dell Express or Enterprise Editions VMware® vSphere 4/ESXi 4	
Operating Systems	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® Sun® Solaris™ For more information on the specific versions and additions, visit www.dell.com/OSsupport .	
Storage	<p>Up to two Hot-Swappable Internal Drives: 2.5" SAS (10K rpm): 73GB1, 146GB1 or 300GB1 2.5" SAS (15K rpm): 36GB1, 73GB1 or 146GB1 25GB2, 50GB2 Solid State Drive (SSD)</p> <p>Up to two Hot-Swappable Internal Drives: Up to 600GB² per blade via two 2.5" 300GB¹ hot-swappable SAS (10k rpm) hard drives</p>	<p>External Storage Options: Dell/EqualLogic PS5000 Series PowerVault™ NX1950 Unified Storage Solution PowerVault™ MD3000i</p> <p>Dell/EMC products: Dell/EMC fibre channel and/or iSCSI external storage, including Dell/EMC AX150i, CX300, CX3-10c, CX3-20, CX3-40, and CX3-80</p>
Drive Bays	Two 2.5" Hot-Swappable SAS/Solid State Drives	
I/O Mezzanine Card Options	<p>1Gb & 10Gb Ethernet: Dual-Port Broadcom® Gb Ethernet w/ TOE (BCM-5709S) Quad-Port Intel Gb Ethernet (BCM-82576) Quad-Port Broadcom® Gb Ethernet (BCM-5709S) Dual-Port Broadcom® 10Gb Ethernet (BCM-57711)</p> <p>10Gb Enhanced Ethernet & Converged Network Adapters (CEE/DCB): Dual-Port QLogic® Converged Network Adapter (QME8142) - Supports CEE/DCB 10GbE + FCoE</p>	<p>Fibre Channel: Dual-Port QLogic® FC8 Fibre Channel Host Bus Adapter (HBA) (QME2572) Dual-Port Emulex® FC8 Fibre Channel Host Bus Adapter (HBA) (LPe1205-M)</p> <p>InfiniBand: Dual-Port Mellanox® ConnectX Quad Data Rate (QDR) InfiniBand Dual-Port Mellanox® ConnectX Dual Data Rate (DDR) InfiniBand</p>
RAID Controller Options	SAS6/IR (Raid 0/1) hardware based CERC6/IR (Raid 0/1 w/ Cache) PERC 6i Modular (RAID 0/1 w/ battery-backed cache) PERC 6.2 Firmware	
Communications	<p>Four embedded Broadcom® NetXtreme II™ 5709 Gigabit Ethernet NICs with failover and load-balancing TOE (TCPIP 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® Enterprise Linux® 5, and Novell® SUSE® Linux® Enterprise Server 10. Scalable Networking Pack for Microsoft® Windows Server® 2003 is not required. Boot from SAN (iSCSI and FC) supported</p> <p>Optional add-in NICs: Dual Port 10Gb Enhanced Intel® Ethernet Server Adapter X520-DA2 (FcoE Ready for Future Enablement) See I/O Mezzanine Card Options</p> <p>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.</p>	
Power	Supplied by Dell's M1000e Blade Chassis	
Graphics/Video	ATI® RN50 (32MB Memory)	



FEATURES	DELL™ POWEREDGE™ BLADE M805 SERVER	DELL POWEREDGE BLADE M905 SERVER
Chassis	<p>The PowerEdge M805 and M905 blade servers only fits 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)⁵ • 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) 	<ul style="list-style-type: none"> • Operating Vibration: 0.26Grms at 10Hz to 350Hz for 15 minutes • Storage Vibration: 1.54Grms Random Vibration at 10Hz to 250Hz for 15 minutes • Operating Shock: 1 shock pulse of 41G for up to 2ms • Storage Shock: 6 shock pulses of 71G for up to 2ms • Operating Altitude: -16 to 3,048m (-50 ft to 10,000 ft) • Storage Altitude: -16m to 10,600m (-50 ft to 35,000 ft)
Regulatory	<p>FCC (U.S. only) Class A ICES (Canada) Class A CE Mark (EN 55022 Class A, EN55024, EN61000-3-2, EN61000-3-3) VCCI (Japan) Class A BSMI (Taiwan) Class A C-Tick (Australia/New Zealand) Class A SABS (South Africa) Class A</p>	<p>CCC (China) Class A MIC (Korea) Class A UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 IEC 60950-1</p>

¹RAM 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>)

²HP BL680c and BL685c and IBM LS41.

³RAM 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/ls41/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.

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