Dell PowerEdge M610x

With PCIe expansion options and a feature rich Chassis Management Controller, the Dell™ PowerEdge™ M610x allows you to efficiently run applications, consolidate your data center, and simplify data management.

The PowerEdge M610x enables you to incorporate a vast array of PCIe-based products into the Blade Chassis framework with enough power and cooling to efficiently deploy even the most feature-rich, expansion-card-based solutions. With the addition of the PCIe expansion module, the PowerEdge M610x blade server is an ideal solution for organizations that need maximum flexibility and performance with high reliability. Maximized PCIe 2.0 expansion is finally realized within a blade.

Unparalleled PowerEdge flexibility

The PowerEdge M610x PCIe expansion module includes two full-length x16 PCIe 2.0 slots with supplemental power connectors that enable maximum wattage for one 300W dual-slot card or two 250W single-slot cards. These PCIe slots are capable of supporting everything from H-series external RAID controllers to general-purpose computing-on-graphics processing units (GPGPU).

Now, a single M610x, equipped with a NVIDIA® Tesla™ GPGPU card, can perform over 400 Gigaflops of double-precision computations for demanding, floating-point-intensive workloads. Communication between the host system and the Tesla processors is maximized by providing x16 2.0 PCIe bandwidth while the efficient Dell M1000e chassis powers and cools the solution to its maximum 247W TDP (Thermal Design Power).

Uncompromised performance

The PowerEdge M610x is an energy-efficient, optimized full-height two-socket server for virtualization and database applications. Additional manageability features make it easy to use, manage and deploy. As an ideal PCIe Host server, the M610x features the reliability of two 2.5" SAS or SSD hot-swappable hard drives and the IO throughput of a dual-port embedded gigabit NIC and two additional network daughtercards. Intel® Xeon® processors 5600 series plus up to 192GBs of DDR3 memory offer high performance with low power consumption for a variety of dense-environment workloads. The Platinum level (+94%) powered and modularly cooled PCIe expansion module delivers up to 8 Gigabytes per second of application throughput.

Simplified systems management

Spend more time on your business and less on maintaining your IT with embedded system management features on the PowerEdge M610x and the Chassis Management Controller (CMC). Simplified server and chassis management is achieved through automated discovery which automates configuration of new hardware through a one-to-many relationship and enables pre-provisioning of LAN/SAN resources.

In addition, one-to-many updating through the CMC and Virtual File Share simplifies the update process for BIOS, firmware and drivers without additional software. Proactive management provides immediate access to system status, issues and alerts through a single, easy-to-use interface that includes one-click key functions to help quickly resolve issues.

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.

PCIe expansion capabilities in the PowerEdge M610x bring a new dimension of flexibility and performance to the Dell M-Series.

Feature	PowerEdge M610x technical specification
Processors	Quad-core or six-core Intel® Xeon® processors 5500 and 5600 series
Chipset	Intel 5520
Memory[1]	Up to 192GB (12 DIMM slots): 1GB/2GB/4GB/8GB/16GB DDR3 up to 1333MT/s
Drive bays	Two 2.5" SAS/Solid State hot-pluggable drives
PCIe expansion bay	Two 2nd-generation full-length x16 slots with supplemental power for either two cards at 250-watt draws or one card at a 300-watt draw. **GPGPU options:** NVIDIA® Tesla™ M2050/M2070/M2070Q/M2075/ M2090–448/512 core, double-width PCIe card with 3/6GB of ECC memory ATI FirePro™ v7800P **SAS/PERC options:** Dell™ H800 PERC–dual-port 6Gb/s SAS RAID controller with up to 512MB cache SAS 6/E HBA–dual-port 6Gb/s SAS HBA
Storage	**Hot-plug hard drive options:** 2.5" SATA SSD, SAS (15K, 10K), nearline SAS (7.2K), SATA (7.2K) **Solid state storage cards:** Fusion-io® 160GB ioDrive PCIe solid state storage card Fusion-io 640GB ioDrive Duo PCIe solid state storage card Fusion-io 320GB ioDrive Mono PCIe solid state storage card Fusion-io 640GB ioDrive Mono PCIe solid state storage card Fusion-io 1.28TB ioDrive Mono PCIe solid state storage card **External storage:** For information about Dell external storage options, visit Dell.com/Storage.
RAID controller options	PERC H200 Modular (6Gb/s) PERC H700 Modular (6Gb/s) with 512MB battery-backed cache
I/O mezzanine card options	**Fully populated mezzanine card slots and switch modules will yield 3 redundant I/O fabrics per blade.** **1Gb and 10Gb Ethernet:** Broadcom® Dual Port 1Gb Ethernet with TOE (BCM-5709S) Intel Quad Port 1Gb Ethernet Broadcom Quad Port 1Gb Ethernet (BCM-5709S) Intel Dual Port 10Gb Ethernet Broadcom Dual Port 10Gb Ethernet (BCM-57711) **Fibre Channel:** QLogic® Dual Port FC8 Host Bus Adapter (HBA) (QME2572) Emulex® Dual Port FC8 HBA (LPe1205-M) Emulex 8 or 4 Gb/s FC Pass-Through Module **10Gb Enhanced Ethernet and Converged Network Adapters (CEE/DCB/FCoE):** Intel Dual Port 10Gb Enhanced Ethernet (FCoE Ready for Future Enablement) Emulex Dual Port CNA (OCM10102-F-M) supports CEE/DCB 10GbE + FCoE QLogic Dual-Port CNA (QME8142) supports CEE/DCB 10GbE + FCoE Brocade® BR1741M-k Dual Port Mezzanine CNA **InfiniBand:** Mellanox® ConnectX®-2 Dual Port, Dual Data Rate (DDR) and Quad Data Rate (QDR) InfiniBand
Communications	Two 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 Windows Server 2003 SP1 or higher, Red Hat® Enterprise Linux® 5, and Novell® SUSE® Linux Enterprise Server 10. Scalable Networking Pack for 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
Operating systems	Microsoft® Windows Server® 2012 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® Microsoft Hyper-V through Microsoft Windows Server 2008 VMware® vSphere® ESX™ and ESXi™ Red Hat Enterprise Virtualization® For more information on the specific versions and additions, visit Dell.com/OSsupport.
Featured database applications	Microsoft SQL Server® solutions (see Dell.com/SQL) Oracle database solutions (see Dell.com/Oracle)
Management options	**Dell OpenManage™ software tools** Integration with third-party management solutions through the Dell Certified Partner Program **Altiris™ Deployment Solution for Dell blade servers** Designed to help reduce deployment time from hours to minutes **Integrated Dell Remote Access Controller (iDRAC)** Out-of-band alerting, status, inventory, and troubleshooting through Secure Web GUI/CLI (telnet/SSH) **Console redirection** vMedia (virtual media)—Map optical or hard drives to the blade from remote workstations over a network vKVM (virtual KVM) out-of-band remote console redirection—supports Java or ActiveX plug-ins IPMI 2.0 support
Power supply	Supplied by Dell PowerEdge™ M1000e Blade Chassis
Video	Integrated Matrox® G200 with 8MB memory
Systems management	Dell OpenManage BMC, IPMI 2.0 compliant Unified Server Configurator Lifecycle Controller iDRAC6 Enterprise with optional vFlash media

For more information about the Dell blade solution, see the PowerEdge M1000e Technical Guide or the M1000e Blade Chassis Specification Sheet.

[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.

Discover more at Dell.com/Blades