



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 Gen2 PCIe expansion is finally realized within a blade.

Unparalleled PowerEdge Flexibility

The PowerEdge M610x PCIe expansion module includes two full-length x16 PCIe Gen2 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 Gen2 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 | Technical Specifications | |
|---------------------------------------|--|---|
| Processors | Quad-core or six-core Intel® Xeon® processors 5500 and 5600 series | |
| Chipset | Intel® 5520 | |
| Memory¹ | Up to 192GB (12 DIMM slots): 1GB/2GB/4GB/8GB/16GB DDR3 up to 1333MHz | |
| Drive Bays | Two 2.5" SAS/Solid State hot-swappable drives | |
| PCIe Expansion Bay | <p>Two 2nd-generation full-length x16 slots with supplemental power for either two cards at 250 watt draws or one card at 300 watt draw.</p> <p>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</p> | <p>SAS/PERC Options: Dell™ H800 PERC–Dual-port 6Gb/s SAS RAID controller with up to 512MB cache Dell™ SAS 6/E HBA–Dual-port 6Gb/s SAS HBA</p> |
| Storage¹ | <p>Hot-plug Hard Drive Options: 2.5" SATA SSD, SAS (15K, 10K), nearline SAS (7.2K), SATA (7.2K)</p> <p>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</p> | <p>Maximum Internal Storage: Up to 1.8TB per blade</p> <p>External Storage: For information about Dell external storage options, visit Dell.com/Storage.</p> |
| RAID Controller Options | PERC H200 Modular RAID Controller (6Gb/s) PERC H700 Modular RAID Controller (6Gb/s) with 512MB battery-backed cache | |
| I/O Mezzanine Card Options | <p>1Gb & 10Gb Ethernet: Dual-Port Broadcom® Gb Ethernet w/ TOE (BCM-5709S) Quad-Port Intel® Gb Ethernet Quad-Port Broadcom® Gb Ethernet (BCM-5709S) Dual-Port Intel® 10Gb Ethernet Dual-Port Broadcom® 10Gb Ethernet (BCM-57711) Brocade® BR1741M-k Dual-Port Mezzanine CNA</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) Emulex® 8 or 4 Gb/s Fibre Channel Pass-Through Module</p> | <p>10Gb Enhanced Ethernet & Converged Network Adapters (CEE/DCB/FCoE): Dual-Port Intel® 10Gb Enhanced Ethernet (FcoE Ready for Future Enablement) Dual-Port Emulex® Converged Network Adapter (OCM10102-F-M) - Supports CEE/DCB 10GbE + FCoE Dual-Port Qlogic® Converged Network Adapter (QME8142) –Supports CEE/DCB 10GbE + FCoE</p> <p>Infiniband: Dual-Port Mellanox® ConnectX-2™ Dual Data Rate (DDR) and Quad Data Rate (QDR) InfiniBand</p> <p>Fully populated mezzanine card slots and switch modules will yield 3 redundant I/O fabrics per blade.</p> |
| 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 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® 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™ | <p>Virtualization Options: Citrix® XenServer™ Microsoft® Hyper-V™ through Microsoft® Windows Server® 2008 VMware® vSphere™ 4.1 (including VMware ESX® 4.1, VMware ESXi™ 4.1, or VMware ESXi 5.0) For more information on the specific versions and additions, visit Dell.com/OSsupport.</p> |
| Featured Database Applications | Microsoft® SQL Server® solutions (see Dell.com/SQL) Oracle® database solutions (see Dell.com/Oracle) | |
| Management Options | <p>Dell™ OpenManage™ software tools Integration with 3rd party management solutions through the Dell Certified Partner Program</p> <p>Altiris™ Deployment Solution for Dell Blade Servers Designed to help reduce deployment time from hours to minutes</p> | <p>Integrated Dell Remote Access Controller (iDRAC) Out-of-band alerting, status, inventory, and troubleshooting through Secure Web GUI/CLI (telnet/SSH)</p> <p>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</p> |
| 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.

Discover more at Dell.com/Blades

© 2011 Dell Inc. All rights reserved. Dell, the DELL logo, the DELL badge, PowerEdge, and OpenManage are trademarks of Dell Inc. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims proprietary interest in the marks and names of others. This document is for informational purposes only. Dell reserves the right to make changes without further notice to any products herein. The content provided is as is and without express or implied warranties of any kind.

