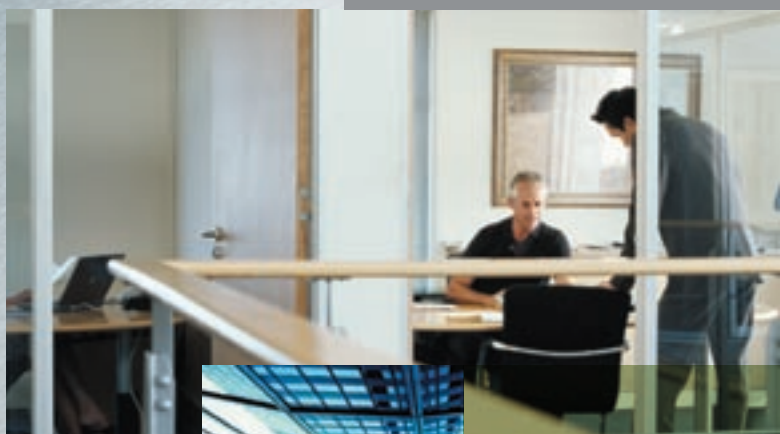


Driving  
**STANDARDS.**  
Developing  
**SOLUTIONS.**  
Delivering  
**SCALABILITY.**



**DELL** in the **ENTERPRISE.**

**DELL ENTERPRISE PRODUCT  
SPECIFICATIONS GUIDE**





## A commitment to open innovation.

As one of the industry's leading proponents of standardization, it's no surprise that Dell has developed an entire IT strategy — The Scalable Enterprise — around open standards. By leveraging our IT expertise and dedication to standards-based technology, Dell can develop an infrastructure that empowers you to:

- **Simplify operations** through integrated, automated systems management, and common images and components.
- **Improve utilization** by consolidating systems, implementing virtualization and enabling high availability.
- **Cost-effectively scale** with a modular approach that leads to dynamic, pay-as-you-grow deployment.



## Products

Dell products and enterprise strategy are designed with **reliability** and scalability in mind, so you can easily and cost-effectively add IT components as your needs change. And since Dell products are built on **industry standards**, you can confidently manage a datacenter that maximizes interoperability and optimizes your current and future IT investments. With rigorous engineering, manufacturing and testing processes, it's no surprise that Dell is a product **leader** in performance and high availability.

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## **Dell PowerEdge Servers**

An essential part of Dell's enterprise IT portfolio, Dell PowerEdge servers have set the industry standard for scalability, reliability and affordability. Whether you need a rack server, blade server, tower server or all of the above, Dell's expansive family of award-winning servers easily integrates with one another — and with other leading enterprise software products — to help drive productivity and improve utilization. Plus, Dell is leading the next wave of innovation by offering PowerEdge servers with multi-core processing.

## **Dell/EMC Storage Arrays**

By partnering with EMC — a world leader in enterprise storage — Dell is uniquely positioned to deliver an impressive portfolio of award-winning storage solutions spanning hardware, software and services. Because it's all delivered through Dell, you can rest assured that Dell/EMC storage solutions are scalable, powerful and affordable.

## **Dell PowerVault Storage**

Leveraging the latest industry-standard storage protocols, Dell delivers a comprehensive portfolio of PowerVault products that enables you to cost-effectively optimize and centralize your storage resources across your IT infrastructure. From storage servers to disk storage to tape backup, Dell PowerVault products offer proven reliability and affordability backed by Dell's commitment to standardization and scalability.

## **Dell PowerConnect Switches**

Dell PowerConnect switches are designed to deliver the ultimate in reliability, scalability and affordability. Based on industry standards, PowerConnect switches can be seamlessly integrated into your network — enabling you to quickly scale your IT infrastructure to meet changes in demand and optimize the performance of your network.

## **Dell Precision Workstations**

Like all our other enterprise products, Dell Precision workstations are built on industry standards with an intense focus on delivering the latest technology, like dual-core processing, at a price every organization can afford. We also partner with industry-leading software providers to ensure that Dell Precision platforms and configurations are stress-tested, optimized and certified for today's complex workstation applications.

## **Dell Latitude Notebooks**

Dell is an industry leader in providing an impressive portfolio of Latitude notebooks that define the enterprise standard. With advanced protection features such as Dell's Strike Zone™ shock absorber and Tri-Metal magnesium alloy chassis, Latitude notebooks are designed to withstand the tough conditions of today's mobile world. Plus, all our Latitude notebooks leverage the latest in leading-edge mobile technology, enabling us to deliver impressive performance, scalability, usability and value.

## **Dell OptiPlex Desktops**

Designed specifically for today's enterprise workplace environments, the Dell OptiPlex family of desktops offers the perfect combination of reliability, flexibility and affordability. From the value-driven OptiPlex 210L to the more stable and secure OptiPlex GX620 and GX520, these corporate desktops provide exceptional quality along with long-term value.

Dell PowerEdge Servers



|  |       |        | DESCRIPTION                                                 | FORM FACTOR                               | BENEFITS                                                                                                             | PROCESSOR(S)                                                                               | RAM (MIN/MAX)                      | PCI SLOTS                                                                                                                                                   | DRIVE CONTROLLER                                                           | RAID CONTROLLER                                                                                                                                                                  | INTEGRATED NIC                            | MAX INTERNAL STORAGE**                                                | EXTERNAL STORAGE                                             | AVAILABILITY FEATURES                                                                                                                                                                                                                                                                                                                 |
|--|-------|--------|-------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Blade | 1955   | High-performance blade server                               | 7U enclosure holds up to 10 blade servers | Complete server-class features combined with a density and price advantage over traditional Dell 1U rack servers     | Up to two 64-bit dual-core Intel® Xeon® processors                                         | 512MB – 32GB Fully Buffered DIMMs  | Optional dual-port daughtercard slot available for flexible I/O options                                                                                     | SAS 5/ir                                                                   | SAS 5/ir with RAID 1 support                                                                                                                                                     | Dual port-embedded Broadcom® Gigabit* NIC | 2 x 73GB = 146GB SAS or 2 x 40GB = 80GB SATA                          | PowerVault Tape, SAS and Fibre Channel storage systems       | ECC memory and Single Device Data Correction (SDDC) support; optional hot-plug redundant power, cooling and I/O modules; dual port embedded NIC with failover and load balancing support; optional redundant Ethernet switches and other I/O technologies; validated for Dell/EMC SAN; optional management redundancy with DRAC/MC    |
|  |       | 6850   | High-performance rack-dense server                          | 4U rack                                   | The new standard for delivering value in high-performance database and consolidation solutions                       | Up to four 64-bit Intel Xeon processors MP, single- or dual-core                           | 1GB – 64GB ECC DDR2 SDRAM          | Seven total: Four hot-plug PCI Express™ (x4 and x8) One hot-plug 64-bit/133MHz PCI-X® Two 64-bit/100MHz PCI-X                                               | Embedded dual-channel Ultra320 SCSI                                        | PERC 5/i PERC 5/E PERC 4e/Di PERC 4/DC PERC 4e/DC                                                                                                                                | Dual-embedded Broadcom Gigabit* NICs      | 5 x 300GB SAS or SCSI = 1.5TB or 8 x 73GB 2.5" SAS = 584GB            | PowerVault Tape, SAS, SCSI and Fibre Channel storage systems | Hot-plug memory, ECC memory with SDDC, Memory RAID and Memory Mirroring; hot-plug PCI Express slots; hot-plug SAS or SCSI hard drives; hot-plug redundant power; hot-plug redundant cooling; tool-less chassis; high-availability Dell/EMC Fibre Channel and PowerVault SCSI cluster support; optional ROMB with battery-backed cache |
|  | Rack  | 2950   | Performance and availability with configuration flexibility | 2U rack                                   | High performance and availability in a rack-dense 2U form factor                                                     | Up to two 64-bit dual-core Intel Xeon processors                                           | 256MB – 32GB Fully Buffered DIMMs  | Three total: Three PCI Express (2 x8 and 1 x4) or Two PCI-X 64-bit/133MHz (x4 and x8) and One PCI Express x8                                                | PERC 5/i RAID or SAS 5/i (SAS or SATA support)                             | PERC 5/i integrated daughtercard (SAS 3.0Gb/s RAID controller with 256MB of battery-backup cache) Optional PERC 5/E adapter (SAS RAID controller for MD1000) Optional PERC 4e/DC | Dual-embedded Broadcom Gigabit* NICs      | 6 x 300GB = 1.8TB SAS or 6 x 250GB = 1.5TB SATA                       | PowerVault Tape, SAS, SCSI and Fibre Channel storage systems | ECC memory, SDDC, Spare Bank; hot-plug SAS/SATA hard drives; optional hot-plug redundant power; hot-plug redundant cooling; tool-less chassis; high-availability Dell/EMC Fibre Channel and PowerVault SCSI cluster support; optional PERC 5/i integrated RAID controller with battery-backed cache                                   |
|  |       | 1950   | High-availability ultra rack-dense server                   | 1U rack                                   | High availability in an ultra-thin 1U form factor                                                                    | Up to two 64-bit dual-core Intel Xeon processors                                           | 256MB – 32GB Fully Buffered DIMMs  | Two total: Two 64-bit/133MHz PCI-X or Two PCI Express (2 x8)                                                                                                | PERC 5/i RAID or SAS 5/i (SAS or SATA support)                             | PERC 5/i integrated daughtercard (SAS 3.0Gb/s RAID controller with 256MB of battery-backup cache) Optional PERC 5/E adapter (SAS RAID controller for MD1000) Optional PERC 4e/DC | Dual-embedded Broadcom Gigabit* NICs      | 2 x 300GB = 600GB SAS or 2 x 250GB = 500GB SATA                       | PowerVault Tape, SAS, SCSI and Fibre Channel storage systems | ECC memory, SDDC, Spare Bank; hot-plug SAS/SATA hard drives; optional hot-plug redundant power; redundant cooling; tool-less chassis; high-availability Dell/EMC Fibre Channel and PowerVault SCSI cluster support; optional PERC 5/i integrated RAID controller with battery-backed cache                                            |
|  |       | 850    | Ultra rack-dense server                                     | 1U rack                                   | Delivers performance and processor flexibility in a cost-effective, rack-dense general purpose server                | Single Intel Pentium® D processor, Intel Pentium 4 processor or Intel Celeron® D processor | 256MB – 8GB ECC DDR2 533/667 SDRAM | Choice of two risers: Riser 1: one PCI-X slot (64-bit/133MHz) and one PCI Express slot (1 x8 lane) Riser 2: two PCI Express slots (1 x4 lane and 1 x8 lane) | Embedded SATA controller, optional SCSI controller                         | Optional CERC SATA channel for SATA hard drives; PERC 4/SC and PERC 4e/DC for SCSI hard drives                                                                                   | Dual-embedded Intel Gigabit* NICs         | 2 x 300GB = 600GB SCSI 2 x 250GB = 500GB SATA                         | PowerVault Tape and SCSI storage systems                     | ECC memory, optional RAID, dual-embedded NICs with failover and load balancing support                                                                                                                                                                                                                                                |
|  |       | SC1425 | High-performance ultra rack-dense server                    | 1U rack                                   | Specifically tailored for the unique availability and manageability requirements of distributed cluster applications | Up to two 64-bit single-core Intel Xeon processors                                         | 256MB – 12GB ECC DDR2 400 SDRAM    | One total: One 64-bit/133MHz PCI-X                                                                                                                          | Optional 39320 SCSI adapter, single-channel SATA, embedded SATA controller | CERC SATA 2S Ultra320 S/W RAID                                                                                                                                                   | Dual-embedded Intel Gigabit* NICs         | 2 x 300GB = 600GB SCSI 2 x 250GB = 500GB SATA                         | Not available                                                | ECC memory, RAID options, tool-less chassis, NIC teaming                                                                                                                                                                                                                                                                              |
|  |       |        |                                                             |                                           |                                                                                                                      |                                                                                            |                                    |                                                                                                                                                             |                                                                            |                                                                                                                                                                                  |                                           |                                                                       |                                                              |                                                                                                                                                                                                                                                                                                                                       |
|  | Tower | 6800   | High-performance database server                            | Tower or 6U rack                          | The new standard for delivering value in high-performance database solutions                                         | Up to four 64-bit Intel Xeon processors MP, single- or dual-core                           | 1GB – 64GB ECC DDR2 SDRAM          | Seven total: Four PCI Express (x4 and x8) One 64-bit/133MHz PCI-X Two 64-bit/100MHz PCI-X                                                                   | Embedded dual-channel Ultra320 SCSI                                        | PERC 5/i PERC 5/E PERC 4e/Di PERC 4/DC PERC 4e/DC                                                                                                                                | Dual-embedded Broadcom Gigabit* NICs      | 10 x 300GB + 2 x 300GB = 3.6TB SCSI                                   | PowerVault Tape, SAS, SCSI and Fibre Channel storage systems | ECC memory with SDDC, Memory RAID and Memory Mirroring; hot-plug SAS or SCSI hard drives; hot-plug redundant power; hot-plug redundant cooling; tool-less chassis; high-availability Dell/EMC Fibre Channel and PowerVault SCSI cluster support; optional ROMB with battery-backed cache                                              |
|  |       | 2900   | Performance tower                                           | Tower or 5U rack                          | Delivers high performance, scalability and availability for departmental applications                                | Up to two 64-bit dual-core Intel Xeon processors                                           | 256MB – 48GB Fully Buffered DIMMs  | Six total: Four PCI Express (3 x4 and x8) Two 64-bit/133MHz PCI-X                                                                                           | PERC 5/i RAID or SAS 5/i (SAS or SATA support)                             | PERC 5/i integrated daughtercard (SAS 3.0Gb/s RAID controller with 256MB of battery-backup cache) Optional PERC 5/E adapter (SAS RAID controller for MD1000) Optional PERC 4e/DC | Dual-embedded Broadcom Gigabit* NICs      | 8 x 300GB + 2 x 300GB = 3TB SAS or 8 x 250GB + 2 x 250GB = 2.5TB SATA | PowerVault Tape, SAS, SCSI and Fibre Channel storage systems | ECC memory, SDDC, Spare Bank; hot-plug SAS/SATA hard drives; optional hot-plug redundant power; hot-plug redundant cooling; tool-less chassis; high-availability Dell/EMC Fibre Channel and PowerVault SCSI cluster support; optional PERC 5/i integrated RAID controller with battery-backed cache                                   |

\* This term does not connote an actual operating speed of 1GB/sec. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.  
\*\* For hard drives, GB means 1 billion bytes and TB means 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

Dell PowerEdge Servers

|       |        | DESCRIPTION                          | FORM FACTOR      | BENEFITS                                                                       | PROCESSOR(S)                                                                             | RAM (MIN/MAX)                      | PCI SLOTS                                                                                                                         | DRIVE CONTROLLER                                        | RAID CONTROLLER                                                                 | INTEGRATED NIC                    | MAX INTERNAL STORAGE**                                     | EXTERNAL STORAGE                                        | AVAILABILITY FEATURES                                                                                                                                                                                                                  |
|-------|--------|--------------------------------------|------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tower | 1800   | Value tower                          | Tower or 5U rack | Delivers performance, scalability and availability at a value price            | Up to two 64-bit single-core Intel Xeon processors                                       | 256MB – 12GB ECC DDR2 SDRAM        | Six total:<br>Two hot-plug PCI Express (x4 and x8)<br>Two 64-bit/100MHz PCI-X<br>One 64-bit/66MHz PCI<br>One 32-bit/33MHz, 5v PCI | Embedded single-channel Ultra320 SCSI                   | PERC 4/SC<br>PERC 4e/DC<br>PERC 4/DC<br>CERC SATA 6ch (HW)<br>CERC SATA 2S (SW) | Embedded Intel Gigabit* NIC       | 6 x 300GB = 1.8TB SCSI<br>or<br>6 x 250GB = 1.5TB SATA     | PowerVault Tape, SCSI and Fibre Channel storage systems | ECC memory, SDDC; optional hot-plug SCSI hard drives; optional hot-plug redundant power; tool-less chassis; high-availability Dell/EMC Fibre Channel and PowerVault SCSI cluster support; optional hardware or software RAID; ActiveID |
|       | 830    | Remote office or small office server | Tower            | Affordable server with advanced hardware and systems management features       | Single Intel Pentium D processor, Intel Pentium 4 processor or Intel Celeron D processor | 256MB – 8GB ECC DDR2 533/667 SDRAM | Five total:<br>Two PCI Express (x8 and x1)<br>Two 64-bit/133MHz, 3.3v PCI-X<br>One 32-bit/33MHz, 5v PCI                           | Embedded four-channel SATA, optional U160               | CERC SATA 6ch<br>PERC 4/SC<br>PERC 4e/DC                                        | Single-embedded Gigabit* Ethernet | 4 x 300GB (1") = 1.2TB SCSI<br>4 x 250GB (1") = 1TB SATA   | PowerVault Tape and SCSI storage systems                | Highly serviceable chassis, ECC memory, hot-plug SCSI hard drives, nonhot-plug SCSI EasyExchange™ hard drives, SCSI and SATA RAID solutions                                                                                            |
|       | SC1420 | Small office tower server            | Tower            | High-performance, affordably priced server designed to grow with your business | Up to two 64-bit single-core Intel Xeon processors                                       | 256MB – 8GB ECC DDR2 400 SDRAM     | Six total:<br>Two PCI Express (x4 and x8)<br>Three 64-bit/100MHz, 3.3v PCI-X<br>One 32-bit/33MHz, 5v PCI                          | Embedded channel SATA                                   | CERC SATA 2s<br>CERC SATA 6ch<br>SCSI Software RAID 1<br>PERC Ultra320          | Embedded Intel Gigabit* NIC       | 4 x 300GB (1") = 1.2TB SCSI<br>4 x 250GB (1") = 1TB SATA   | Not available                                           | Highly serviceable chassis, ECC memory, optional RAID, optional Tape Backup                                                                                                                                                            |
|       | SC430  | Small office/home office server      | Tower            | Combines value and the latest technology for the small business customer       | Single Intel Pentium D processor, Intel Pentium 4 processor or Intel Celeron D processor | 256MB – 4GB ECC DDR2 533 SDRAM     | Five total:<br>Three PCI Express (x8, x4 and x1)<br>Two 32-bit/33MHz, 5v PCI                                                      | Embedded four-channel SATA, optional Adaptec U320 (PCI) | OS-based RAID 0-1                                                               | Single-embedded Gigabit* NIC      | 2 x 300GB (1") = 600GB SCSI<br>2 x 250GB (1") = 500GB SATA | Not available                                           | Highly serviceable chassis, ECC memory, O/S-based RAID, optional Tape Backup                                                                                                                                                           |

Dell PowerEdge Oracle Database and Application Solutions

|                                                                                                  | DESCRIPTION                                                                                                                                                          | SOFTWARE COMPONENTS                                                                                    | BENEFITS                                                                                                                                                                               | ORACLE10g AND ORACLE9i TESTED AND SUPPORTED CONFIGURATIONS                                                                                                                                                                                                                                                                                          | MANAGEABILITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TESTED AND SUPPORTED HARDWARE                                                                                              |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Database solution<br><b>Oracle10g and Oracle9i™ Database tested and supported configurations</b> | Range of tested and supported, fully integrated Oracle database server and storage solutions for maximum performance, interoperability and reliability               | Red Hat® Enterprise Linux® 3 (Oracle Database 9i) and Red Hat Enterprise Linux 4 (Oracle Database 10g) | • Low-cost alternative to proprietary RISC architecture<br>• Tested for interoperability<br>• Configured for performance<br>• Easy to install and manage<br>• Fully supported by Dell† | Dell tested and supported configurations are an optimal way of deploying Oracle databases, either as a single node or a parallel database cluster. Dell tested and supported configurations are a model of computing designed to remove complexity, reduce total cost of ownership (TCO) and render soft costs predictable through standardization. | Dell tested and supported configurations are an open infrastructure and support Dell OpenManage™ and other third-party management tools running on Microsoft Windows® or Linux. Dell tested and supported configurations are also the baseline for Oracle online services, with advanced management features available through Oracle Enterprise Manager.                                                                                                                                           | Dell servers and storage. Visit <a href="http://www.dell.com/oracle">www.dell.com/oracle</a> for supported configurations. |
| Database solution<br><b>Oracle10g and Oracle9i RAC tested and supported configurations</b>       | Range of tested and supported, integrated and pre-installed Oracle9i database server and storage solutions for maximum performance, interoperability and reliability | Red Hat Enterprise Linux 3 (Oracle Database 9i) and Red Hat Enterprise Linux 4 (Oracle Database 10g)   | • Low-cost alternative to proprietary RISC architecture<br>• Tested for interoperability<br>• Configured for performance<br>• Easy to install and manage<br>• Fully supported by Dell† | Dell tested and supported configurations are an optimal way of deploying Oracle databases, either as a single node or a parallel database cluster. Dell tested and supported configurations are a model of computing designed to remove complexity, reduce TCO and render soft costs predictable through standardization.                           | The Oracle9i RAC configurations from Dell feature raw devices and the Oracle Cluster File System option tested by Dell and Oracle. Dell tested and supported configurations are an open infrastructure and support Dell OpenManage and other third-party management tools running on Windows or Red Hat Enterprise Linux. Dell tested and supported configurations are also the baseline for Oracle online services, with advanced management features available through Oracle Enterprise Manager. | Dell servers and storage. Visit <a href="http://www.dell.com/oracle">www.dell.com/oracle</a> for supported configurations. |

Dell PowerEdge Microsoft SQL Server Database Solutions

|                                                                                             | DESCRIPTION                                                                                                                         | SOFTWARE COMPONENTS                                                                                                                                         | BENEFITS                                                                                                                                                                                                                                                                                  | MICROSOFT SQL SERVER 2000 CONFIGURATIONS                                                              | MANAGEABILITY                                                                                                                                                                                                                         | TESTED AND SUPPORTED HARDWARE                                                                                                                 |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Database solution<br><b>Dell's complete solutions for Microsoft SQL Server 2000 or 2005</b> | Dell's complete solutions for Microsoft SQL Server 2000 or 2005 include servers, storage, systems management, services and software | Microsoft SQL Server 2000 or 2005 OEM license for Workgroup Edition and Standard Edition database software or volume licensing including Enterprise Edition | • Servers: industry-leading price/performance**<br>• Storage: essential high availability<br>• Systems management: simplified monitoring and change management<br>• Services: planning, implementation and maintenance<br>• SQL Server software: single-source convenience and confidence | Dell provides complete, integrated, tested and supported configurations for SQL Server 2000 and 2005. | Dell provides the only fully integrated SQL Server systems management solution, allowing you to monitor and update the entire SQL Server database stack from hardware to OS to database and applications — all with one set of tools. | Visit <a href="http://www.dell.com/sql">www.dell.com/sql</a> for more information on using Dell servers and storage for Microsoft SQL Server. |

\* This term does not connote an actual operating speed of 1GB/sec. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.  
\*\* For hard drives, GB means 1 billion bytes and TB means 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.  
† For Dell validated configurations (see [www.dell.com/oracle\\_validated\\_configs](http://www.dell.com/oracle_validated_configs)) with Dell and Oracle support contracts; Dell technicians can resolve known issues and escalate new issues within Dell and Oracle.  
†† Based on top ten TPC-C price/performance results posted on [www.tpc.org](http://www.tpc.org) as of April 26, 2006.

# Dell/EMC Storage Arrays

|                | FORM FACTOR                                                                             | HARD DRIVES                                                 | MAX DRIVES PER SUBSYSTEM | MAX CONNECTED HOSTS | MAX CAPACITY                                           | MAX CACHE | CONNECTION              |
|----------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------|---------------------|--------------------------------------------------------|-----------|-------------------------|
| CX3-80         | Storage processor enclosure: 4U<br>Disk array enclosure: 3U<br>Standby power supply: 2U | 73GB, 146GB (FC4); 73GB, 146GB, 300GB (FC2); or 500GB LC-FC | 480                      | 256                 | Up to 239TB                                            | 16GB      | Fibre Channel           |
| CX3-40         | Storage processor enclosure: 1U<br>Disk array enclosure: 3U<br>Standby power supply: 1U | 73GB, 146GB (FC4); 73GB, 146GB, 300GB (FC2); or 500GB LC-FC | 240                      | 128                 | Up to 119TB                                            | 8GB       | Fibre Channel and iSCSI |
| CX3-20         | Storage processor enclosure: 1U<br>Disk array enclosure: 3U<br>Standby power supply: 1U | 73GB, 146GB (FC4); 73GB, 146GB, 300GB (FC2); or 500GB LC-FC | 120                      | 128                 | Up to 59TB                                             | 4GB       | Fibre Channel and iSCSI |
| CX300          | Disk processor enclosure: 3U<br>Disk array enclosure: 3U<br>Standby power supply: 1U    | 73GB, 146GB and 300GB FC2 or 500GB ATA                      | 60                       | 60                  | 18TB with Fibre Channel drives or 27TB with ATA drives | 2GB       | Fibre Channel           |
| AX150 & AX150i | Enclosure: 2U<br>Standby power supply: 1U                                               | 250GB or 500GB SATA II                                      | 12                       | 10                  | Up to 6TB                                              | 1GB       | Fibre Channel and iSCSI |

# Dell PowerVault Disk Storage Expansion Enclosures

|        | TYPE                         | FORM FACTOR | HARD DRIVES                                                | DRIVE BAYS          | MAX CAPACITY          | REDUNDANCY                                                                                                                          | RAID CONTROLLER                                                                                        |
|--------|------------------------------|-------------|------------------------------------------------------------|---------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| MD1000 | SAS/SATA expansion enclosure | 3U rack     | SAS: 36GB, 73GB, 146GB and 300GB;<br>SATA: 250GB and 500GB | 15 hot-plug 1" bays | 7,500GB per enclosure | Hot-plug power supplies, cooling fans and hard drives, enclosure managed                                                            | Server-based PowerEdge RAID (PERC 5/E) controller card                                                 |
| 220S   | SCSI Expansion enclosure     | 3U rack     | SCSI: 36GB, 73GB, 146GB and 300GB                          | 14 hot-plug 1" bays | 4,200GB per enclosure | Hot-plug power supplies, cooling fans and hard drives, enclosure managed, Microsoft Cluster Server (MSCS) certification and support | Server-based PowerEdge RAID controller cards, including PERC 4e/DC, PERC 4/DC, PERC 3/DC and PERC 3/QC |
| 221S   | SCSI Expansion enclosure     | Tower       | SCSI: 36GB, 73GB, 146GB and 300GB                          | 14 hot-plug 1" bays | 4,200GB per enclosure | Hot-plug power supplies, cooling fans and hard drives, enclosure managed, Microsoft Cluster Server (MSCS) certification and support | Server-based PowerEdge RAID controller cards, including PERC 4e/DC, PERC 4/DC, PERC 3/DC and PERC 3/QC |

Dell PowerVault Tape and Automation

|        | TYPE                           | MODEL               | MEDIA                      | NATIVE CAPACITY         | NATIVE TRANSFER RATE | NATIVE BACKUP RATE*   | RECOMMENDED DATA CAPACITY** | SERVER ENVIRONMENT                  | SOFTWARE SUPPORTED                                                                                          |
|--------|--------------------------------|---------------------|----------------------------|-------------------------|----------------------|-----------------------|-----------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 100T   | DAT72 Tape Drive               | Internal/external   | DAT72, DDS-3, DDS-4        | 36GB                    | 3.5MB/s              | 12.6GB/hr             | Up to 36GB                  | Single servers                      | Symantec® Backup Exec™ and Yosemite™ Backup                                                                 |
| 110T   | VS160 Tape Drive               | Internal/external   | DLTape™ VS1                | 80GB                    | 8MB/s                | 28.8GB/hr             | Up to 80GB                  | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | SDLT 320 Tape Drive            | Internal/external   | SDLTape™ 1                 | 160GB                   | 16MB/s               | 57.6GB/hr             | Up to 160GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | LTO™-2 Tape Drive              | Internal/external   | Ultrium LTO-2, LTO-1       | 200GB                   | 35MB/s               | 126GB/hr              | Up to 200GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | LTO-2-L Tape Drive             | Internal/external   | Ultrium LTO-2, LTO-1       | 200GB                   | 24MB/s               | 86.4GB/hr             | Up to 200GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | LTO-3 Tape Drive               | Internal/external   | Ultrium LTO-3, WORM, LTO-2 | 400GB                   | 80MB/s               | 288GB/hr              | Up to 400GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        |                                |                     |                            |                         |                      |                       |                             |                                     |                                                                                                             |
| 114T   | DAT72 Tape Drive               | External rack mount | DAT72, DDS-3, DDS-4        | 72GB (with two drives)  | 3.5MB/s (per drive)  | 12.6GB/hr (per drive) | Up to 72GB                  | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | VS160 Tape Drive               | External rack mount | DLTape VS1                 | 160GB (with two drives) | 8MB/s (per drive)    | 28.8GB/hr (per drive) | Up to 160GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | SDLT 320 Tape Drive            | External rack mount | SDLTape 1                  | 320GB (with two drives) | 16MB/s (per drive)   | 57.6GB/hr (per drive) | Up to 320GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | LTO-2 Tape Drive               | External rack mount | Ultrium LTO-2, LTO-1       | 400GB (with two drives) | 35MB/s (per drive)   | 126GB/hr (per drive)  | Up to 400GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | LTO-2-L Tape Drive             | External rack mount | Ultrium LTO-2, LTO-1       | 400GB (with two drives) | 24MB/s (per drive)   | 86.4GB/hr (per drive) | Up to 400GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
|        | LTO-3 Tape Drive               | External rack mount | Ultrium LTO-3, WORM, LTO-2 | 800GB (with two drives) | 80MB/s (per drive)   | 288GB/hr (per drive)  | Up to 800GB                 | Single servers                      | Symantec Backup Exec and Yosemite Backup                                                                    |
| 124T   | VS160 Autoloader               | External rack mount | DLTape VS1                 | 1.3TB                   | 8MB/s                | 28.8GB/hr             | Up to 430GB                 | Workgroup and remote office servers | Symantec Backup Exec, CommVault Galaxy and Yosemite TapeWare                                                |
|        | LTO-2-L Autoloader             | External rack mount | Ultrium LTO-2, LTO-1       | 3.2TB                   | 24MB/s               | 86.4GB/hr             | Up to 1.1TB                 | Workgroup and remote office servers | Symantec Backup Exec, CommVault Galaxy and Yosemite TapeWare                                                |
|        | LTO-3 Autoloader               | External rack mount | Ultrium LTO-3, WORM, LTO-2 | 6.4TB                   | 80MB/s (per drive)   | 288GB/hr (per drive)  | Up to 2.1TB                 | Workgroup and remote office servers | Symantec Backup Exec, CommVault Galaxy and Yosemite Backup                                                  |
| 132T   | LTO-2 Tape Library             | External rack mount | Ultrium LTO-2, LTO-1       | 4.8TB                   | 35MB/s (per drive)   | 126GB/hr (per drive)  | Up to 1.6TB                 | Departmental servers                | Symantec Backup Exec and CommVault Galaxy                                                                   |
|        | LTO-3 Tape Library             | External rack mount | Ultrium LTO-3, WORM, LTO-2 | 9.6TB                   | 80MB/s (per drive)   | 288GB/hr (per drive)  | Up to 3.2TB                 | Departmental servers                | Symantec Backup Exec and CommVault Galaxy                                                                   |
|        | SDLT 320 Tape Library          | External rack mount | SDLTape 1                  | 3.3TB                   | 16MB/s (per drive)   | 57.6GB/hr (per drive) | Up to 1.1TB                 | Departmental servers                | Symantec Backup Exec and CommVault Galaxy                                                                   |
| ML6000 | ML6010 CM Tape Library (LTO-3) | External rack mount | Ultrium LTO-3, WORM, LTO-2 | 14.4TB                  | 160MB/s              | 576GB/hr              | Up to 4.8TB                 | Datacenter and SAN arrays           | Symantec Backup Exec, Symantec NetBackup, CommVault Galaxy and Legato Networker                             |
|        | ML6020 CM Tape Library (LTO-3) | External rack mount | Ultrium LTO-3, WORM, LTO-2 | 51.2TB                  | 480MB/s              | 1,728GB/hr            | Up to 17.1TB                | Datacenter and SAN arrays           | Dell Tape Backup Software (Symantec Backup Exec, Symantec NetBackup, CommVault Galaxy and Legato Networker) |
|        | ML6030 CM Tape Library (LTO-3) | External rack mount | Ultrium LTO-3, WORM, LTO-2 | 87.2TB                  | 800MB/s              | 2,880GB/hr            | Up to 29.1TB                | Datacenter and SAN arrays           | Dell Tape Backup Software (Symantec Backup Exec, Symantec NetBackup, CommVault Galaxy and Legato Networker) |

\* Actual performance is dependent on settings, user environment and applications.  
\*\* Multiple devices can be combined to protect larger servers.

Dell PowerConnect Switches



|                    |              | MANAGED SWITCHES             |                                                                                                                                                                                           |                                                                                                                                                                                                                                     |                                                                                |          |                                                                                                |               |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                    |                                                                                                                                                            |                                                                                                                                                                    |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                    |                                |  |  |  |  |  |
|--------------------|--------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--|--|--|--|--|
|                    |              | DESCRIPTION                  | BENEFITS                                                                                                                                                                                  | PORT CONFIGURATION                                                                                                                                                                                                                  | SWITCHING CAPACITY                                                             | VLAN     |                                                                                                | AVAILABILITY  |                                                                                                                                                                                                                                                  | CLASS OF SERVICE                                                                                                                                                                                   | SECURITY                                                                                                                                                   | SWITCHING FEATURES                                                                                                                                                 | MANAGEMENT                                                                                                                                                                                                                                                                 | FORM FACTOR                                                                                                                                                                                                                                                                                        |                                |  |  |  |  |  |
| MANAGED SWITCHES   | 6024F        | LAYER 3 GIGABIT ETHERNET     | Gigabit Ethernet routing switches offering Layer 3 protocol support, high-availability features, flexible copper/fiber connectivity, and advanced Quality of Service and management tools | Wire-speed Layer 3 routing for wiring closet switch aggregation layer or for core switching applications in small business or branch office networks                                                                                | 8 10/100/1000 BaseT combo ports and 24 SFP fiber slots                         | 48Gb/s   | IEEE 802.1Q tagging and port-based, up to 4,063 VLANs, dynamic VLAN (GVRP), private VLANs      |               | Classic Spanning Tree with FastLink option; Rapid Spanning Tree (IEEE 802.1w); Multiple Spanning Trees (IEEE 802.1s); broadcast storm control; dual hot-swap power supplies and fans                                                             |                                                                                                                                                                                                    | IEEE 802.1p tagging and port-based with eight queues per port; L2, L3 and L4 prioritization; advanced flow-based policies; WRR and strict queue scheduling | MAC-based port security; IP address management filtering; RADIUS and TACACS+ remote authentication; SSL and SSH management encryption; Access Control Lists (ACLs) | RIP, OSPF and VRRP for routing; IGMP and DVMRP for multicast support; port mirroring; Link Aggregation (IEEE 802.3ad); UDP Relay; LACP; IGMP Snooping v1/v2; copper cable diagnostics and fiber transceiver analysis; Virtual Cable Tester™ and fiber transceiver analysis | CLI (Telnet/console) including two out-of-band management interfaces (RS-232 and RJ-45); embedded web server; SNMP v1/v2c/v3, four RMON groups; multiple MIBs; Syslog remote logging; dual configuration files; dual firmware images; Dell OpenManage Network Manager and IT Assistant integration | 1U, rack mounting kit included |  |  |  |  |  |
|                    | 6024         |                              | Gigabit Ethernet routing switches offering Layer 3 protocol support, high-availability features, flexible copper/fiber connectivity, and advanced Quality of Service and management tools | Wire-speed Layer 3 routing for resilient, highly available datacenter server connectivity or for core switching applications in small business or branch office networks                                                            | 24 10/100/1000 BaseT ports and eight SFP fiber combo slots                     | 48Gb/s   | IEEE 802.1Q tagging and port-based, up to 4,063 VLANs, dynamic VLAN (GVRP), private VLANs      |               | Classic Spanning Tree with FastLink option; Rapid Spanning Tree (IEEE 802.1w); Multiple Spanning Trees (IEEE 802.1s); broadcast storm control; dual hot-swap power supplies and fans                                                             |                                                                                                                                                                                                    | IEEE 802.1p tagging and port-based with eight queues per port; L2, L3 and L4 prioritization; advanced flow-based policies; WRR and strict queue scheduling | MAC-based port security; IP address management filtering; RADIUS and TACACS+ remote authentication; SSL and SSH management encryption                              | RIP, OSPF and VRRP for routing; IGMP and DVMRP for multicast support; port mirroring; Link Aggregation (IEEE 802.3ad); UDP Relay; LACP; IGMP Snooping v1/v2; copper cable diagnostics and fiber transceiver analysis; Virtual Cable Tester and fiber transceiver analysis  | CLI (Telnet/console) including two out-of-band management interfaces (RS-232 and RJ-45); embedded web server; SNMP v1/v2c/v3, four RMON groups; multiple MIBs; Syslog remote logging; dual configuration files; dual firmware images; Dell OpenManage Network Manager and IT Assistant integration | 1U, rack mounting kit included |  |  |  |  |  |
|                    | 5324         | GIGABIT ETHERNET             | High-density Gigabit Ethernet switch with advanced security capabilities and enterprise-class management features                                                                         | High-performance, secure Gigabit Ethernet switching for edge connectivity and L2 aggregation layer solutions that require advanced switching features                                                                               | 24 10/100/1000 BaseT ports and four SFP fiber combo slots                      | 48Gb/s   | IEEE 802.1Q tagging and port-based, protocol-based VLANs, up to 247 VLANs, dynamic VLAN (GVRP) |               | Classic Spanning Tree with FastLink option; Rapid Spanning Tree (IEEE 802.1w); broadcast storm control; optional external redundant power with PowerConnect RPS-600                                                                              |                                                                                                                                                                                                    | IEEE 802.1p tagging and port-based with four queues per port; L2 and L3 prioritization; WRR and strict queue scheduling                                    | MAC-based port security; IP address management filtering; RADIUS and TACACS+ remote authentication; SSL and SSH management encryption                              | Port mirroring; Link Aggregation (IEEE 802.3ad), LACP; IGMP Snooping v1/v2; Virtual Cable Tester and fiber transceiver analysis; Virtual Cable Tester and fiber transceiver analysis                                                                                       | CLI (Telnet/console), embedded web server, SNMP v1/v2c; four RMON groups; multiple MIBs; Syslog remote logging; dual configuration files; dual firmware images; Dell OpenManage Network Manager and IT Assistant integration                                                                       | 1U, rack mounting kit included |  |  |  |  |  |
|                    | 3448 & 3448P | FAST ETHERNET                | Resilient, stackable Fast Ethernet switch with advanced management and multi-layer Class of Service features<br><br>Power-over-Ethernet (PoE) available on 3448P                          | Integrated, resilient stacking switch solution with advanced management features to meet the workgroup connectivity needs of medium to large organizations; PoE (3448P) to power industry-standard PoE-enabled devices              | 48 10/100 BaseT ports plus two 10/100/1000 BaseT ports and two SFP fiber slots | 17.6Gb/s | IEEE 802.1Q tagging and port-based, up to 256 VLANs, dynamic VLAN (GVRP), private VLANs        |               | Classic Spanning Tree with FastLink option; Rapid Spanning Tree (IEEE 802.1w); broadcast storm control; Multiple Spanning Trees (IEEE 802.1s); optional external redundant power (RPS-600 for 3448); optional extended power (EPS-470 for 3448P) |                                                                                                                                                                                                    | IEEE 802.1p tagging and port-based with four queues per port; L2 and L3 prioritization; WRR and strict queue scheduling                                    | MAC-based port security; IP address management filtering; RADIUS and TACACS+ remote authentication; SSL and SSH management encryption; MAC-based ACLs              | Port mirroring; Link Aggregation (IEEE 802.3ad), LACP; IGMP Snooping v1/v2; Virtual Cable Tester and fiber transceiver analysis                                                                                                                                            | CLI (Telnet/console), embedded web server, SNMP v1/v2c/v3; four RMON groups; multiple MIBs; Syslog remote logging; dual configuration files; dual firmware images; Dell OpenManage Network Manager and IT Assistant integration                                                                    | 1U, rack mounting kit included |  |  |  |  |  |
|                    | 3424 & 3424P |                              | Resilient, stackable Fast Ethernet switch with advanced management and multi-layer Class of Service features<br><br>PoE available on 3424P                                                | Integrated, resilient stacking switch solution with advanced management and security features to meet the workgroup connectivity needs of medium to large organizations; PoE (3424P) to power industry-standard PoE-enabled devices | 24 10/100 BaseT ports plus two 10/100/1000 BaseT ports and two SFP fiber slots | 12.8Gb/s | IEEE 802.1Q tagging and port-based, up to 256 VLANs, dynamic VLAN (GVRP), private VLANs        |               | Classic Spanning Tree with FastLink option; Rapid Spanning Tree (IEEE 802.1w); broadcast storm control; Multiple Spanning Trees (IEEE 802.1s); optional external redundant power (RPS-600 for 3424); optional extended power (EPS-470 for 3424P) |                                                                                                                                                                                                    | IEEE 802.1p tagging and port-based with four queues per port; L2 and L3 prioritization; WRR and strict queue scheduling                                    | MAC-based port security; IP address management filtering; RADIUS and TACACS+ remote authentication; SSL and SSH management encryption; MAC-based ACLs              | Port mirroring; Link Aggregation (IEEE 802.3ad), LACP; IGMP Snooping v1/v2; Virtual Cable Tester and fiber transceiver analysis                                                                                                                                            | CLI (Telnet/console), embedded web server, SNMP v1/v2c/v3; four RMON groups; multiple MIBs; Syslog remote logging; dual configuration files; dual firmware images; Dell OpenManage Network Manager and IT Assistant integration                                                                    | 1U, rack mounting kit included |  |  |  |  |  |
|                    |              | DESCRIPTION                  | BENEFITS                                                                                                                                                                                  | PORT CONFIGURATION                                                                                                                                                                                                                  | SWITCHING CAPACITY                                                             | VLAN     |                                                                                                | MAC ADDRESSES | CLASS OF SERVICE                                                                                                                                                                                                                                 |                                                                                                                                                                                                    | SECURITY                                                                                                                                                   | SWITCHING FEATURES                                                                                                                                                 | MANAGEMENT                                                                                                                                                                                                                                                                 | FORM FACTOR                                                                                                                                                                                                                                                                                        |                                |  |  |  |  |  |
| UNMANAGED SWITCHES | 2724         | WEB-MANAGED GIGABIT ETHERNET | Web-managed Gigabit Ethernet switch with wire-speed performance                                                                                                                           | Web-managed Gigabit Ethernet switching with plug-and-play connectivity; converts to a web-managed switch with a push of a button                                                                                                    | 8 10/100/1000 BaseT ports                                                      | 16Gb/s   | IEEE 802.1Q port-based tagging up to 64 VLANs; honors all 4096 VLAN tags                       |               | 8,000                                                                                                                                                                                                                                            | Layer 2 IEEE 802.1p port-based priority (tagging capabilities), Layer 3-aware prioritization using DSCP values, four priority queues per port, Adjustable Weighted Round Robin and strict priority |                                                                                                                                                            | Web-based management interface, BootP/DHCP IP address management or static IP address assignment and RMON statistics                                               | Link aggregation, up to six groups and up to four aggregated links per group (IEEE 802.3ad), port mirroring (up to four source ports)                                                                                                                                      | Web-based management interface, BootP/DHCP IP address management, or static IP address assignment and RMON statistics                                                                                                                                                                              | 1U, rack/desktop/wall mounting |  |  |  |  |  |
|                    | 2716         |                              | Web-managed Gigabit Ethernet switch with wire-speed performance                                                                                                                           | Web-managed Gigabit Ethernet switching with plug-and-play connectivity; converts to a web-managed switch with a push of a button                                                                                                    | 16 10/100/1000 BaseT ports                                                     | 32Gb/s   | IEEE 802.1Q port-based tagging up to 64 VLANs; honors all 4096 VLAN tags                       |               | 8,000                                                                                                                                                                                                                                            | Layer 2 IEEE 802.1p port-based priority (tagging capabilities), Layer 3-aware prioritization using DSCP values, four priority queues per port, Adjustable Weighted Round Robin and strict priority |                                                                                                                                                            | Web-based management interface, BootP/DHCP IP address management or static IP address assignment and RMON statistics                                               | Link aggregation, up to six groups and up to four aggregated links per group (IEEE 802.3ad), port mirroring (up to four source ports)                                                                                                                                      | Web-based management interface, BootP/DHCP IP address management, or static IP address assignment and RMON statistics                                                                                                                                                                              | 1U, rack/desktop/wall mounting |  |  |  |  |  |
|                    | 2708         |                              | Web-managed Gigabit Ethernet switch with wire-speed performance and fiber uplink                                                                                                          | Web-managed Gigabit Ethernet switching with plug-and-play connectivity; converts to a web-managed switch with a push of a button                                                                                                    | 24 10/100/1000 BaseT ports and two SFP fiber combo slots                       | 48Gb/s   | IEEE 802.1Q port-based tagging up to 64 VLANs; honors all 4096 VLAN tags                       |               | 8,000                                                                                                                                                                                                                                            | Layer 2 IEEE 802.1p port-based priority (tagging capabilities), Layer 3-aware prioritization using DSCP values, four priority queues per port, Adjustable Weighted Round Robin and strict priority |                                                                                                                                                            | Web-based management interface, BootP/DHCP IP address management or static IP address assignment and RMON statistics                                               | Link aggregation, up to six groups and up to four aggregated links per group (IEEE 802.3ad), port mirroring (up to four source ports)                                                                                                                                      | Web-based management interface, BootP/DHCP IP address management, or static IP address assignment and RMON statistics                                                                                                                                                                              | 1U, rack/desktop/wall mounting |  |  |  |  |  |
|                    | 2324         | FAST ETHERNET                | Unmanaged Fast Ethernet switch with built-in Gigabit Ethernet uplinks and wire-speed performance                                                                                          | Cost-effective workgroup connectivity with high-speed traffic aggregation to a server or backbone switch                                                                                                                            | 24 10/100 BaseT ports and two 1000 BaseT Gigabit Ethernet ports                | 8.8Gb/s  | Packet/Tag Pass Through                                                                        |               | 4,000                                                                                                                                                                                                                                            | Layer 2-aware IEEE 802.1p priority (honors tags), two queues per port and Weighted Round Robin scheduling                                                                                          |                                                                                                                                                            | None                                                                                                                                                               | None                                                                                                                                                                                                                                                                       | None                                                                                                                                                                                                                                                                                               | 1U, rack/desktop/wall mounting |  |  |  |  |  |
|                    | 2224         |                              | Unmanaged Fast Ethernet switch with wire-speed performance                                                                                                                                | Economical plug-and-play simplicity for basic workgroup connectivity                                                                                                                                                                | 24 10/100 BaseT ports                                                          | 4.8Gb/s  | Packet/Tag Pass Through                                                                        |               | 4,000                                                                                                                                                                                                                                            | Layer 2-aware IEEE 802.1p priority (honors tags), two queues per port and Weighted Round Robin scheduling                                                                                          |                                                                                                                                                            | None                                                                                                                                                               | None                                                                                                                                                                                                                                                                       | None                                                                                                                                                                                                                                                                                               | 1U, rack/desktop/wall mounting |  |  |  |  |  |
|                    | 2216         |                              | Unmanaged Fast Ethernet switch with wire-speed performance                                                                                                                                | Economical plug-and-play simplicity for basic workgroup connectivity                                                                                                                                                                | 16 10/100 BaseT ports                                                          | 3.2Gb/s  | Packet/Tag Pass Through                                                                        |               | 4,000                                                                                                                                                                                                                                            | Layer 2-aware IEEE 802.1p priority (honors tags), two queues per port and Weighted Round Robin scheduling                                                                                          |                                                                                                                                                            | None                                                                                                                                                               | None                                                                                                                                                                                                                                                                       | None                                                                                                                                                                                                                                                                                               | 1U, rack/desktop/wall mounting |  |  |  |  |  |

# Dell Precision Workstations



|     | FORM FACTOR                       | DESCRIPTION                                                                       | BENEFITS                                                                                                                                                            | CHIPSET/ PROCESSORS                                                                                                                | OPERATING SYSTEM                                                                                                                      | MEMORY                                                       | GRAPHICS                                                                                                                                                                                                                                                                                                                  | STORAGE                                                                                                                                                                                                                                                            |
|-----|-----------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 690 | Tower                             | Maximum performance and scalability, dual-socket, 64-bit and multi-core capable   | Maximum performance and scalability for advanced engineering and 3D graphics and compute-intensive applications with head room to grow as needs evolve              | Intel 5000X chipset; up to two dual-core Intel Xeon processors, 64-bit                                                             | Microsoft Windows XP Professional x64 Edition<br>Microsoft Windows XP Professional<br>Red Hat Enterprise Linux WS v4 (EM64T)          | Up to 64GB* ECC quad-channel DDR2 fully buffered DIMM memory | PCI Express x16 graphics cards up to 150 watts, NVIDIA® FX Quadro FX 4500 512MB High-end 3D, NVIDIA FX Quadro FX 3500 256MB Midrange 3D, ATI FireGL 7200 256MB Midrange 3D, NVIDIA FX Quadro FX 3450 256MB Midrange 3D, NVIDIA Quadro FX550 128MB Entry 3D, ATI FireGL V3400 128MB Entry 3D, NVIDIA NVS285 128MB Entry 2D | Up to 2TB+ of integrated SATA storage or up to 1.2TB+ of integrated SAS storage, both with integrated support for RAID 0 and 1; up to 1.7TB+ of storage with 500GB+ SATA boot drive plus 4 SAS drives                                                              |
| 490 | Desktop or mini-tower orientation | Space-efficient, rackable form factor, dual-socket, 64-bit and multi-core capable | High-end performance designed for space-constrained environments such as graphics compute clusters and financial services                                           | Intel 5000X chipset; up to two dual-core Intel Xeon processors, 64-bit                                                             | Microsoft Windows XP Professional x64 Edition<br>Microsoft Windows XP Professional<br>Red Hat Enterprise Linux WS v4 (IA32 and EM64T) | Up to 32GB* ECC quad-channel fully buffered DIMM memory      | PCI Express x16 graphics cards up to 150 watts, NVIDIA FX Quadro FX 4500 512MB High-end 3D, NVIDIA FX Quadro FX 3500 256MB Midrange 3D, ATI FireGL 7200 256MB Midrange 3D, NVIDIA FX Quadro FX 3450 256MB Midrange 3D, NVIDIA Quadro FX550 128MB Entry 3D, ATI FireGL V3400 128MB Entry 3D, NVIDIA NVS285 128MB Entry 2D  | Up to 1.5TB+ of integrated SATA storage with support for RAID 0, 1, 5 or up to 900GB+ SAS storage on mini-tower, 600GB+ on desktop with support for RAID 0 and 1 with optional SAS/5i PCI-E card; support for SAS RAID 0, 1 and 5 with optional PERC/5i PCI-E card |
| 380 | Desktop or mini-tower orientation | Entry-level workstation, single-socket, dual-core and 64-bit enabled              | Relevant technology that redefines entry-level performance and value; perfect for graphic design and AEC applications                                               | Intel 955X chipset; single 64-bit dual-core Intel Pentium D or Extreme Edition processor, or single-core Intel Pentium 4 processor | Microsoft Windows XP Professional x64 Edition<br>Microsoft Windows XP Professional<br>Red Hat Enterprise Linux WS v4 (IA32 and EM64T) | Up to 8GB* ECC dual-channel** memory; non-ECC also available | PCI Express graphics cards up to 150 watts, NVIDIA Quadro FX 4500 512MB, NVIDIA Quadro FX 3450 256MB, NVIDIA Quadro FX 1400 128MB, ATI FireGL V3100 128MB, NVIDIA Quadro NVS 285 64MB                                                                                                                                     | Up to 2TB+ of internal storage; integrated SATA RAID 0, 1, 5, 10 (tower chassis holds 4 drives; desktop chassis holds 3 drives)                                                                                                                                    |
| M90 | Mobile workstation                | Engineered for maximum performance                                                | Create, analyze and design anywhere through exceptional workstation performance and stunning wide-screen displays                                                   | Intel 945PM chipset; Intel dual-core processor with 2MB L2 cache                                                                   | Microsoft Windows XP Professional                                                                                                     | Up to 4GB* 667MHz dual-channel** DDR2 SDRAM memory           | NVIDIA Quadro FX 2500M 512MB or 1500M 256MB OpenGL graphics<br>Displays: 17" UltraSharp™ WUXGA (1,920 x 1,200) or WXGA+ (1,440 x 900)                                                                                                                                                                                     | Serial ATA hard drives up to 120GB+ (5,400 RPM) or 100GB+ (7,200 RPM)                                                                                                                                                                                              |
| M65 | Mobile workstation                | A balance of performance and mobility                                             | Enables engineers, architects, 3D graphics artists and publishers to reliably run workstation-class applications on an ISP-certified, exceptionally mobile platform | Intel 945PM chipset; Intel Core™ Duo dual-core processor with 2MB L2 cache                                                         | Microsoft Windows XP Professional                                                                                                     | Up to 4GB* dual-channel** DDR2 SDRAM memory                  | NVIDIA Quadro FX 350M 512MB TurboCache OpenGL graphics<br>Displays: 15.4" UltraSharp WUXGA (1,920 x 1,200), WSXGA+ (1,680 x 1,050) or active matrix WXGA (1,280 x 800)                                                                                                                                                    | Serial ATA hard drives up to 120GB+ 5,400 RPM or 100GB+ 7,200 RPM; optional second HDD module for media bay or D/Dock Expansion Station media bay                                                                                                                  |



Dell Precision 380 Workstation

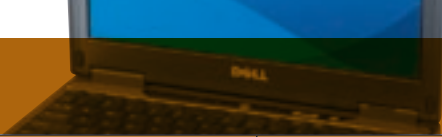


\* The total amount of usable memory available will be less, depending on the actual system configuration. To utilize more than 4GB of memory requires a 64-bit OS. To expand memory to more than 32GB requires a Dell Precision 690 1KW system with memory risers.

\*\* Dual-channel memory requires 2 each of the same capacity memory DIMMs.

\* 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.

# Dell Latitude Notebooks



|      | FORM FACTOR   | DESCRIPTION                                    | BENEFITS                                                                                                                                                                                                                                                                                 | CHIPSET/ PROCESSORS                                                                                                                | OPERATING SYSTEM                                                                            | MEMORY                                                                                                                                      | DISPLAY & VIDEO GRAPHICS                                                                                                                                                                                                                                                                            | WIRELESS                                                                                                                                                  |
|------|---------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| D820 | Performance   | Unyielding performance meets mobility          | Redefines the performance corporate notebook by providing high-end graphics solutions for 3D applications and a mainstream graphics solution for those who require a 15.4" LCD for mainstream office applications                                                                        | Intel 945 GM & PM<br>Intel Solo & Duo processor                                                                                    | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition<br><br>Vista capable | Supports 256MB to 4,056MB of 533 or 667MHz DDR2 SDRAM shared*                                                                               | Wide-aspect<br>15.4" WXGA (1,280 x 800 resolution), 15.4" WSXGA+ (1,680 x 1,050 resolution), 15.4" WUXGA (1,920 x 1,200 resolution)<br><br>Choice of Intel Graphics Media Accelerator 950 (up to 224MB shared*), 256MB NVIDIA Quadro NVS 110M TurboCache or 512MB NVIDIA Quadro NVS 120M TurboCache | Intel PRO/Wireless 3945A/G (802.11a/g), Dell Wireless 1490 (802.11a/g), Dell Wireless 1390 (802.11g), Dell Wireless 350 Bluetooth® internal wireless card |
| D620 | Mainstream    | Ideal blend of technology and mobility         | Dell's best-selling notebook that redefines the mainstream corporate notebook with an innovative, new wide-screen design, excellent reliability, smart security and extended wireless options                                                                                            | Intel 945 GM & PM<br>Intel Solo & Duo processor                                                                                    | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition<br><br>Vista capable | Supports 256MB to 4,056MB of 533 or 667MHz DDR2 SDRAM shared*                                                                               | Wide-aspect<br>14.1" WXGA (1,280 x 800 resolution) or 14.1" WXGA+ (1,440 x 900 resolution)<br><br>Choice of Intel Graphics Media Accelerator 950 (up to 224MB shared*) or 256MB NVIDIA Quadro NVS 110M TurboCache                                                                                   | Intel PRO/Wireless 3945A/G (802.11a/g), Dell Wireless 1490 (802.11a/g), Dell Wireless 1390 (802.11g), Dell Wireless 350 Bluetooth internal wireless card  |
| D520 | Value         | Essential productivity at an exceptional value | Users who desire essential features and enterprise-class manageability at an attractive price                                                                                                                                                                                            | Intel Core Duo processor<br>T2300 1.66GHz, T2400 1.83GHz<br><br>Intel Celeron M processor<br>410 1.46GHz, 420 1.60GHz, 430 1.73GHz | Microsoft Windows XP Professional SP2<br><br>Microsoft Windows XP Home SP2                  | Min 256MB DDR shared; 533 or 667MHz<br><br>Max 4GB DDR2 shared* 533 or 667MHz with 945GM; or max 2GB DDR2 shared* 533 or 667MHz with 940GML | Standard-aspect<br>14.1" XGA (1,024 x 768 resolution), 15" XGA (1,024 x 768 resolution) or 15" SXGA+ (1,400 x 1,050 resolution)<br><br>Intel Graphics Media Accelerator 950                                                                                                                         | Intel PRO/Wireless 3945A/G (802.11a/g), Dell Wireless 1490 (802.11a/g), Dell Wireless 1390 (802.11g), Dell Wireless 350 Bluetooth internal wireless card  |
| D410 | Ultramobile   | Ultimate mobility — with no compromises        | Users who require mobility with a sub-4-pound notebook, without compromising performance, features or D-family compatibility                                                                                                                                                             | Intel Pentium M processor 760 (2GHz with 533MHz FSB)                                                                               | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition                      | Up to 2GB 533/400MHz dual-channel** shared+<br>DDR2 SDRAM memory                                                                            | 12.1" XGA active matrix (TFT) displays<br><br>Intel Graphics Media Accelerator 900 with up to 128MB shared graphics memory                                                                                                                                                                          | Intel PRO wireless LAN (standard)<br>Dell Wireless LAN (optional)<br>Internal Bluetooth (optional)                                                        |
| X1   | Ultraportable | Absolute mobility for the productive traveler  | Users who require a lightweight notebook that meets corporate standards for connectivity, performance and features<br><br>Frequent travelers or customers who need a high degree of mobility<br><br>Customers who value mobility with less concern for docking or D-family compatibility | Intel Pentium M ULV processor 733 (1.10GHz, 2MB L2 cache)                                                                          | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition                      | Up to 1,280MB (one open slot) of shared+ 400MHz DDR2 SDRAM memory                                                                           | 12.1" WXGA active matrix (TFT) wide-aspect display<br><br>Integrated Intel 915GMS with Intel Graphics Media Accelerator 900 featuring up to 128MB shared graphics memory                                                                                                                            | Intel PRO wireless LAN (standard)<br>Internal Bluetooth (standard)                                                                                        |



Latitude D820 Notebook

\* Up to 224MB of system memory may be allocated to support graphics, depending on system memory size and other factors.  
\*\* Dual-channel memory requires 2 each of the same capacity memory DIMMs.  
+ Up to 128MB of shared system memory may be allocated to support graphics, depending on system memory size and other factors.

# Dell OptiPlex Desktops



|       | FORM FACTOR                                                                                                                                                                                                                     | DESCRIPTION                                      | BENEFITS                                                                                                                                                   | CHIPSET/<br>PROCESSORS                                                                                  | OPERATING<br>SYSTEM                                                    | MEMORY                                             | GRAPHICS                                                                                                                          | STORAGE                                                                                                                                                                                          |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GX620 | Choice of four chassis with a PCIe x16 graphics slot and up to three PCI slots and one PCIe x1 slot                                                                                                                             | Ultimate business desktop for today and tomorrow | Business and institutional users who require best-in-class security processor, graphics and memory expandability; dual monitor and DVI monitor deployments | Intel Pentium 4 processor with up to 2MB L2 cache supporting Hyper-Threading Technology                 | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition | Up to 4GB*** 533MHz dual-channel* shared** SDRAM   | Intel Graphics Media Accelerator 950 (GMA950); 128MB ATI Radeon X600SE graphics adapter with DVI and TV out; DVI graphics adapter | Serial ATA 80GB <sup>++</sup> , 160GB <sup>++</sup> , 250GB <sup>++</sup> 7,200 RPM hard drives and 80GB <sup>++</sup> 10,000 RPM hard drives with the latest in S.M.A.R.T. technology (ATA 6.0) |
| GX520 | Choice of three chassis and up to three PCI slots and one PCIe x1 slot                                                                                                                                                          | Mainstream business desktop of choice            | Mainstream business and institutional users requiring robust office productivity solutions that deliver low ownership costs                                | Intel Pentium 4 processor with up to 2MB L2 cache supporting Hyper-Threading Technology and XD Security | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition | Up to 2GB 533MHz dual-channel* shared** DDR2 SDRAM | Intel Graphics Media Accelerator 950 (GMA950)                                                                                     | Serial ATA 80GB <sup>++</sup> and 160GB <sup>++</sup> 7,200 RPM hard drives with the latest in S.M.A.R.T. technology (ATA 6.0)                                                                   |
| 210L  | Desktop chassis with two external bays, one internal bay, two low-profile PCI slots and one low-profile PCIe x1 slot<br><br>Micro-tower chassis with three external bays, two internal bays, two PCI slots and one PCIe x1 slot | Basic managed PC                                 | A basic managed desktop with proven industry-standard technology for affordable desktop computing                                                          | Intel Pentium 4 processor supporting Hyper-Threading Technology                                         | Genuine Windows XP Professional<br><br>Genuine Windows XP Home Edition | Up to 2GB 533MHz dual-channel* shared+ DDR2 SDRAM  | Intel Graphics Media Accelerator 900 (GMA900)                                                                                     | Serial ATA 80GB <sup>++</sup> and 160GB <sup>++</sup> 7,200 RPM hard drives with the latest in S.M.A.R.T. technology (ATA 6.0)                                                                   |



\* Dual-channel memory requires 2 each of the same capacity memory DIMMs.  
\*\* Up to 224MB of system memory may be allocated to support graphics, depending on system memory size and other factors.  
\*\*\* The total amount of usable memory available will be less depending on the actual system configuration.  
+ Up to 128MB of system memory may be allocated to support graphics, depending on system memory size and other factors.  
++ 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.



OptiPlex GX620 Desktop



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