

# HP StorageWorks

## HP ProLiant Storage Servers (NAS)

The ideal solution for file-and-print serving and iSCSI-based application data hosting. Storage servers come as a complete solution including hardware, Microsoft Windows Storage Server 2003 and simplified management. The portfolio ranges from cost-effective entry-level servers including storage capacity through to high-end NAS/SAN fusion and includes both tower and rack models.

ML110	DL100	ML350	ML370	DL380	DL380 (SAN)	DL580
<b>Form factor</b> Tower	TU rack	SU tower	SU tower	2U rack	2U rack	4U rack
<b>Processor</b> 1 Intel Celeron 2.8 GHz or Pentium 4 2.8-3.2 GHz	Up to 2 Intel Xeon 3.4 GHz	Up to 2 Intel Xeon 3.4 GHz	Up to 2 Intel Xeon 3.4 GHz	Up to 2 Intel Xeon 3.4 GHz	Up to 2 Intel Xeon 3.4 GHz	Up to 4 Intel Xeon 2.8 GHz
<b>Storage</b> 320 GB, 640 GB or 1 TB using 4 x SATA disk drives	Up to 1.8 TB using 6 x internal SCSI disk drives; expandable for external SCSI and SATA storage	Up to 1.8 TB using 6 x internal SCSI disk drives; expandable for external SCSI and SATA storage	Up to 1.8 TB using 6 x internal SCSI disk drives; expandable for external SCSI and SATA storage	Up to 1.2 TB using 4 x internal SCSI disk drives; expandable for external SCSI and SATA storage	Highly scalable SAN storage	2 GB (max. 8 GB) 2 GB (max. 8 GB)
<b>Memory</b> 256 MB – 1GB (upgrade to max. 4 GB)	512 MB (max. 4 GB) 1 GB (max. 4 GB)	1 GB (max. 4 GB) 2 GB (max. 4 GB)	1 GB (max. 4 GB) 2 GB (max. 4 GB)	1 GB (max. 4 GB) 2 GB (max. 4 GB)	2 GB (max. 8 GB) 2 GB (max. 8 GB)	2 GB (max. 8 GB) 2 GB (max. 8 GB)
<b>NICs</b> 1 single-port NIC 1 dual-port NIC	1 single-port NIC 1 single-port NIC	1 single-port NIC 1 single-port NIC	1 single-port NIC 1 single-port NIC	1 single-port NIC 1 single-port NIC	2 dual-port NIC	2 dual-port NIC
<b>Warranty</b> 1/1/1	<b>Warranty</b> 3/1/3	<b>Warranty</b> 3/1/3	<b>Warranty</b> 3/1/3	<b>Warranty</b> 3/1/3	<b>Warranty</b> 3/1/3	<b>Warranty</b> 3/1/3
<b>rec. HP Care Pack</b> SupportPlus 24	<b>rec. HP Care Pack</b> SupportPlus 24	<b>rec. HP Care Pack</b> SupportPlus 24	<b>rec. HP Care Pack</b> SupportPlus 24	<b>rec. HP Care Pack</b> SupportPlus 24	<b>rec. HP Care Pack</b> SupportPlus 24 and NAS Installation & Startup service	<b>rec. HP Care Pack</b> SupportPlus 24 and NAS Installation & Startup service

## Modular Smart Array – MSA

Simple, affordable entry-level external storage, from disk enclosures to powerful SCSI and fibre-channel networked storage arrays

- Choose from five models to suit different needs
- Easy to order and set up; choose starter kits, high-availability kits and even ready-to-deploy packaged cluster kits



MSA20	MSA30	MSA500 G2	MSA1000	MSA1500
<b>Servers supported</b> HP ProLiant (single-bus connection)	HP ProLiant, Alpha and Integrity (single- or dual-bus connections)	HP ProLiant 300, 500, 700 Series HP ProLiant, Alpha and Integrity (up to 20 connections)	HP ProLiant, Linux, NetWare, Tru64 UNIX, Open VMS	Windows, Linux, NetWare, Tru64 UNIX, Open VMS
<b>Operating system</b> Windows, Linux, NetWare, UNIX, OpenVMS with MSA1500	Windows, Linux, NetWare, Tru64 UNIX, Open VMS	Windows, Linux, NetWare, Tru64 UNIX, Open VMS	Windows, Linux, NetWare, Tru64 UNIX, Open VMS	Windows, Linux, NetWare, Tru64 UNIX, Open VMS, HP-UX
<b>Interfaces</b> Ultra320 SCSI, 1.5 Gb/s (SATA) back panel	Controller dependent; Ultra320 back panel	Ultra160 SCSI; Ultra320 back panel	2GB fibre channel; back panel; see MSA20 or MSA30	2GB fibre channel; back panel; see MSA20 or MSA30
<b>Scalability</b> Up to 4 shelves	Up to 4 shelves	1 drive shelf only	Up to 3 drive shelves	Up to 4 MSA30 or 8 MSA20
<b>Total drives/terabytes</b> 12 / 3 TB per shelf	14 / 4.2 TB per shelf	14 / 4.2 TB per shelf	42 (144 per shelf) / 12.6 TB	Up to 96 / 24 TB (SATA) and / or 56 / 16 TB (SCSI)
<b>RAID</b> 0, 1, 0+1, 5, ADG	Controller dependent	0, 1, 0+1, 5, ADG	Multiple clusters; multipath option; external storage controller; redundant controller; packaged cluster	Multiple clusters; multipath option; external storage controller; redundant controller; packaged cluster
<b>Support for</b> Direct-attached (non-clustered) to Smart Array generation controllers or MSA1000 and MSA1500 systems*	Direct attached (also clustered with option); external storage controllers or MSA1000 and MSA1500 systems*	Single clusters; multipath option; external storage controller; redundant controller; packaged cluster	Multiple clusters; multipath option; external storage controller; redundant controller; packaged cluster	Multiple clusters; multipath option; external storage controller; redundant controller; packaged cluster
<b>Services</b> <b>Warranty:</b> 3-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, 24x7, 4-hour response	<b>Warranty:</b> 3-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, 24x7, 4-hour response	<b>Warranty:</b> 1-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, Support Plus 24	<b>Warranty:</b> 1-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, Support Plus 24	<b>Warranty:</b> 1-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, Support Plus 24

\* Check www.hp.com/go/msa for details.

## Enterprise Virtual Array – EVA

HP StorageWorks Enterprise Virtual Array 3000 and 5000

Up to enterprise-class performance, capacity and availability in a virtual RAID storage solution

- Choice of EVA3000 – the high-performance, high-availability virtual RAID solution – ideal for data centres with continually increasing capacity and replication requirements
- Outstanding performance, simple management and superior capacity utilization
- Self-healing lets you achieve more in less time, scales capacity on demand and minimises data administration
- Supports lowest FATA drives, making it ideal for tiered storage
- Adds HP StorageWorks Business Copy and Continuous Access to get more value from your investment

EVA3000	EVA5000
<b>Controller</b> Model H51100; 1024MB cache per controller standard with up to 96 hours' battery backup	Model H51110; 1024MB cache per controller standard with up to 96 hours' battery backup
<b>Maximum disks supported</b> 56 per controller pair; supported RAID levels: RAID 0, RAID 1, RAID 5	240 per controller pair; supported RAID levels: RAID 0, RAID 1, RAID 5
<b>Interfaces</b> Host interface: fibre-channel switched fabric; drive interface: 2 x 2GB FCAL ports per controller in redundant pairs; 64, 32, 16- and 8-port optical fibre-channel switched fabric	Host interface: fibre-channel switched fabric; drive interface: 4 x 2GB FCAL ports per controller in redundant pairs; 64, 32, 16- and 8-port optical fibre-channel switched fabric
<b>Operating system compatibility</b> HP-UX, Tru64 UNIX, OpenVMS, Microsoft Windows NT/Storage Server 2003 / SUN Solaris, IBM AIX, Novell NetWare, Linux	HP-UX, Tru64 UNIX, OpenVMS, Microsoft Windows NT/Storage Server 2003 / SUN Solaris, IBM AIX, Novell NetWare, Linux
<b>Services</b> <b>Warranty:</b> 3-year, 24x7; <b>rec. HP Care Pack:</b> 3-year Proactive 24	<b>Warranty:</b> 3-year, 24x7; <b>rec. HP Care Pack:</b> 3-year Proactive 24

HP StorageWorks Reference Information Storage System (RISS)

Central object-based archive system

- Enhances agility with a grid-computing architecture, full content indexing, and rapid search tools
- Reduces risk with authentication and duplicate data harvesting

Performance	Capacity
40 docs/sec (assuming 60KB/doc), expandable to 400+ docs/sec; guaranteed 3-second search results no matter how many documents in the archive	1 TB (base), 1 PB (max.); upgrades in 1.2TB increments
<b>Documents</b> Files, and e-mail (Exchange, Lotus Notes, sendmail) using RFC-822 format (ARPANET standard)	<b>Interfaces</b> Connects via IP, built-in firewall, access via Microsoft Outlook client or web browser
<b>Operating system</b> Linux-based	<b>Form factor</b> Rack (4U)
	<b>Management</b> Via built-in management platform and web browser; SMTP interface
	<b>Services</b> <b>Warranty:</b> 1-year, 9x5 support

## Fibre-channel switches

B-series directors and fabric switches (Brocade)

For storage area networks and to expand core-to-edge infrastructures, delivered with supporting PowerPath software to monitor the network's health and performance

- HP StorageWorks SAN Director 2/128 for large SANs with high-availability requirements
- HP StorageWorks SAN Switch 2/16N Full Fabric and SAN Switch 4/32 for enterprise SANs and storage consolidation
- HP StorageWorks SAN Switch 2/8V and 2/16V for SAN and core-to-edge infrastructure growth
- HP StorageWorks MSA SAN Switch 2/8 for a low-cost, high-performance SAN storage system

Performance	Capacity	Form factor	Management	Services
1,062.5Gb/sec and 2,125Gb/sec line speed; full duplex; auto sensing of 1-Gb/sec and 2-Gb/sec port speeds; optionally programmable between 1-Gb/sec and 2-Gb/sec ports; 2112byte payload max. frame size	1 TB (base), 1 PB (max.); upgrades in 1.2TB increments	Rack (4U)	Via built-in management platform and web browser; SMTP interface	<b>Warranty:</b> 1-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, 24x7 or SupportPlus 24 (for Power Pack versions) and the SAN solution service

## C-Series directors and fabric switches (Cisco)

For high performance and scalability, delivering intelligent network services for reduced TCO and manageable SAN consolidation

- MDS 9506 and 9509 Multilayer Directors for highly scalable, available storage networks
- MDS 9216 Multilayer Fabric Switch for easy SAN consolidation and MDS 9216 for extending the benefits of SANs into the Ethernet infrastructure
- MDS 9120 and 9140 Multilayer Fabric Switches to simplify deployment and administration

Performance	Capacity	Form factor	Management	Services
1.44 TB/sec internal system throughput; 10 GB/sec 2Gb/sec transfer per FC port	1.0625Gb/sec and 2,125Gb/sec line speed; full duplex; auto sensing of 1-Gb/sec and 2-Gb/sec port speeds; optionally programmable between 1-Gb/sec and 2-Gb/sec ports; 2112byte payload max. frame size	Rack (4U)	Via built-in management platform and web browser; SMTP interface	<b>Warranty:</b> 1-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, 24x7 or SupportPlus 24 (for Power Pack versions) and the SAN solution service

## M-series directors and fabric switches (McDATA)

High availability and industry-leading flexible connectivity in a range of dependable fabric switches

- HP StorageWorks Director 2/64 and 2/140 – high availability for very large networked fabrics
- HP StorageWorks Edge Switch 2/12, 2/24 and 2/32 – flexible connectivity to configure an entry-level SAN

Performance	Capacity	Form factor	Management	Services
1.0625Gb/sec to 2,125Gb/sec; full duplex; 10GB/sec bandwidth end-to-end; 2112byte payload max. frame size	1.0625Gb/sec and 2,125Gb/sec line speed; full duplex; 10GB/sec bandwidth end-to-end; 2112byte payload max. frame size	Rack (4U)	Via built-in management platform and web browser; SMTP interface	<b>Warranty:</b> 1-year next-business-day response; <b>rec. HP Care Pack:</b> 3-year, 24x7 or SupportPlus 24 (for Power Pack versions) and the SAN solution service

## ES-series directors and fabric switches (EMC)

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# HP StorageWorks and ProLiant storage solutions cover everything from entry-level and mid-range through to enterprise-level requirements – including archival, tape and network-attached storage, SAN infrastructure solutions, virtualisation, array systems and more.

## Tape drives

DDS

HP StorageWorks DDS tape drives

Cost-effective, reliable storage and backup for entry-level, mid-range and high-end deployments

- Reliable backup solutions – HP StorageWorks DAT24, DAT40 and DAT72 drives
- Impressively low cost of ownership
- Storage simplicity through complete plug-and-play compatibility with servers, operating systems and backup software

DAT24	DAT40	DAT72
<b>Performance</b> 1.8 MB/s (3.6-Gb/hr) native transfer rate (sustained); 3 MB/s asynchronous, 10-MB/s synchronous burst transfer rate	3 MB/s (10.8 GB/hr) native transfer rate (sustained); 6 MB/s asynchronous, 40 MB/s synchronous burst transfer rate	3 MB/s (10.8 GB/hr) native transfer rate (sustained); 6 MB/s asynchronous, 40 MB/s synchronous burst transfer rate
<b>Capacity</b> 12 GB (native) on a DDS-3 data cartridge	20 GB (native) on a DDS-4 data cartridge	36 GB (native) on a DAT72 data cartridge
<b>Interface</b> Narrow SCSI single-ended	Wide Ultra SCSI3 (LVD/SE)	Wide Ultra SCSI3 (LVD/SE)
<b>Services</b> <b>Warranty:</b> 3-year parts; <b>rec. HP Care Pack:</b> 3-year, 13x5, 4-hour response	<b>Warranty:</b> 3-year parts; <b>rec. HP Care Pack:</b> 3-year, 13x5, 4-hour response	<b>Warranty:</b> 3-year parts; <b>rec. HP Care Pack:</b> 3-year, 13x5, 4-hour response



DLT

HP StorageWorks DLT VS tape drives

Highly affordable upgrade to advanced DLT performance

- Investment protection is ensured through backward-compatibility

DLT VS 80	DLT VS 160
<b>Performance</b> 3 MB/s (native)	8 MB/s (native)
<b>Capacity</b> 40 GB (native)	80 GB (native)
<b>Interface</b> Wide Ultra SCSI2 LVD	Wide Ultra SCSI2 LVD
<b>Services</b> <b>Warranty:</b> 3-year parts; <b>rec. HP Care Pack:</b> 3-year, 13x5, 4-hour response	<b>Warranty:</b> 3-year parts; <b>rec. HP Care Pack:</b> 3-year, 13x5, 4-hour response



SDLT

HP StorageWorks SDLT tape drives

Superior storage capacity and performance over previous DLT tape drives

- SDLT for large businesses with a DLT installed base and a frequent need for fast access DLT-based media
- Industry-leading reliability and performance using advanced drive-head and media technologies
- Delivers the required performance, capacity and operating system compatibility

SDLT 330	SDLT 600
<b>Performance</b> 1.6 MB/s (native)	3.2 MB/s (native)
<b>Capacity</b> 160 GB (native)	300 GB (native)
<b>Interface</b> Wide Ultra2 SCSI (LVD)	Ultra3 SCSI (LVD)
<b>OS compatibility</b> Microsoft Windows Server 2003 / XP Pro / 2000 Server, HP-UX, Novell NetWare, Linux, Tru64 UNIX, OpenVMS	Microsoft Windows Server 2003 / XP Pro / 2000 Server, HP-UX, Novell NetWare, Linux, Tru64 UNIX, OpenVMS
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Ultrium

HP StorageWorks Ultrium tape drives

Revolutionary performance, reliability and capacity for high-end demands

- HP's premier line of backup devices – choice of entry-level (Ultrium 215), high-performance (Ultrium 230 and Ultrium 460) and latest-generation (Ultrium 960) drives
- Designed for businesses under constant pressure to ensure uptime, future-proof systems and integrated storage that optimises efficiency and productivity

Ultrium 215	Ultrium 230	Ultrium 460	Ultrium 960
<b>Performance</b> 7.5 MB/s (native)	15 MB/s (native)	30 MB/s (native)	80 MB/s (native)
<b>Capacity</b> 100 GB (native)	200 GB (native)	400 GB (native)	800 GB (native)
<b>Interface</b> Wide Ultra2 SCSI (VDS)	Wide Ultra3 SCSI (VDS)	Wide Ultra3 SCSI (VDS)	Wide Ultra3 SCSI (VDS)
<b>OS compatibility</b> Microsoft Windows Server 2003 / XP Pro / 2000 Server, HP-UX, Novell NetWare, Linux, SUN Solaris, IBM AIX	Microsoft Windows Server 2003 / XP Pro / 2000 Server, HP-UX, Novell NetWare, Linux, SUN Solaris, IBM AIX	Microsoft Windows Server 2003 / XP Pro / 2000 Server, HP-UX, Novell NetWare, Linux, SUN Solaris, IBM AIX	Microsoft Windows Server 2003 / XP Pro / 2000 Server, HP-UX, Novell NetWare, Linux, SUN Solaris, IBM AIX
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# Industry-standard servers

HP ProLiant servers are the world's most trusted standards-based server platform, available in a choice of lines and configurations to suit your specific needs and environment. Selected models (+) are also available as HP ProLiant Storage Servers (NAS devices, see back page).

Get complete lifecycle management for your ProLiant server with ProLiant Essentials – see reverse

## ProLiant ML Line

	ML110 (+)	ML110 SATA	ML150	ML150 G2	ML1310 G2	ML330 G3	ML350 G3	ML350 G4 (+)	ML370 G3	ML370 G4 (+)	ML570 G2
<b>Entry-level 1U server for true ProLiant performance at a desktop-like price</b>	• Ideal for small business networks, shared web access and light application hosting	• Shellable chassis offers the flexibility to meet growing needs	• On-going ProLiant dependability and ease of use								
<b>High-size technology providing simple and affordable computing</b>	• Affordable dual-processor tower server for value-conscious growing businesses	• Provides easy increases in computing capacity as business needs evolve									
<b>The right balance of performance, manageability, expandability and price</b>	• Excellent value	• 2-way tower server for remote locations and corporate workgroups	• Includes the latest Intel Xeon processors with Extended Memory 64 Technology (EM64T) for 64-bit applications	• Expandable chassis accepts hot-pluggable hard disk drives and optional RAID controllers to limit network downtime							
<b>Rick reliability and manageability features at a scaled-down price</b>	• Ideal for sophisticated applications or single function workgroups	• Includes the latest Intel Xeon processors with Extended Memory 64 Technology (EM64T) for 64-bit applications	• Full ProLiant management suite including HP SIM, Smart Array support and optional RAID controllers to limit network downtime								
<b>Cost-effective dual-processor performance and essential availability</b>	• Expandable rack or tower design offers the perfect balance of price and performance for mail, file, print, Internet, /intranet applications	• 2-way capabilities, essential availability (with optional redundant power and hot-plug tape), and significant headroom for growth	• Full ProLiant management suite including HP SIM, Smart Array support and optional RAID controllers to limit network downtime								
<b>Affordable 2-way performance and essential availability</b>	• Expandable rack or tower design offers the perfect balance of price and performance for mail, file, print, Internet, /intranet applications	• 2-way capabilities, essential availability (with optional redundant power and hot-plug tape), and significant headroom for growth	• Full ProLiant management suite including HP SIM, Smart Array support and optional RAID controllers to limit network downtime								
<b>Variable, dependable backbones for growing businesses</b>	• A traditional tower server refined with essential availability features	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Enhanced server design, computer performance and availability								
<b>Meet broader needs with a multi-purpose server solution</b>	• The industry's most versatile two-way expansion server, available as a SU rack or tower	• Maximum performance, accessibility and uptime	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications								
<b>2-way server with leading management, performance and availability</b>	• Engineered to excel in a variety of environments, requiring continuous accessibility and uptime	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• High-performance models provide convenient fully loaded configurations								
<b>Performance, expansion and flexibility to meet your enterprise computing needs</b>	• Advanced Memory Protection Technology (AMPT) offering hot-plug hot-add memory	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• High-performance models provide convenient fully loaded configurations								
<b>Low-price 2P/1U computer server optimized for HPC workloads</b>	• Compact, dual-processor HPC solution for an attractively low price	• Sleek 1U chassis with cross fans	• Runs on your choice of Microsoft® Windows® or Linux® operating systems								
<b>Outstanding 2-way performance from a density-optimized 1U server</b>	• Affordable floating-point performance and cluster scalability	• Available with Option 200 processors, faster memory access and inter-processor communication	• Support for a massive 16 GB of memory								
<b>Fast deployment and effortless management for front-end and single-function applications</b>	• Low-cost, rack-optimized 1U server designed for flexible deployment and easy manageability	• Perfect for complex, growing, multi-tier environments, and for Internet/ intranet services, ASP and single-function applications	• Offers flexible network connectivity and remote control of multiple servers								
<b>Rack-optimized server for space-constrained data-center installations</b>	• A high-performance two-processor system ideal for the full range of scale-out applications	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• ProLiant engineering delivers optional full tolerance in an ultra-dense form factor, with redundant fans, online spare memory and optional redundant power								
<b>New generation of the world's best-selling server</b>	• Enterprise-class uptime and manageability in a 2U density for a variety of rack deployments and applications	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• High-performance models provide convenient fully loaded configurations								
<b>Brand new server combining DL380 design excellence with enhanced performance</b>	• Enterprise-class uptime and manageability in a 2U density for a variety of rack deployments and applications	• Features the latest AMD Opteron 200 processors, faster memory access and inter-processor communication	• Maintained for best performance and power efficiency								
<b>Groundbreaking 4-processor performance in a scalable, ultra-dense 2U design</b>	• Enterprise-class uptime and manageability in a 2U density for a variety of rack deployments and applications	• Compact, 2U chassis uses 50 percent less rack space than other enterprise servers	• Ultra-efficient power supplies provide complete redundancy – including hot-plug components for maximum power and cooling efficiency								
<b>Maximum 4-way performance and availability in a rack-optimized design</b>	• Highest-level fault resilience for business critical applications, such as messaging, collaboration, medium to large databases, ERP and complex intensive applications	• Offers simple serviceability and easy deployment in space-constrained environments	• Versatile, 4U rack server provides unparalleled high availability – including Advanced Memory Protection and hot-plug components								
<b>The best 32-bit performance and price performance of any x86 4-way server</b>	• Combines AMD Opteron 800 processors with best-in-class management and uptime features	• Ideal for large data centre deployments, messaging, collaboration and other complex applications	• Excels in both 32- and 64-bit modes, and offers high PCI slot expandability								
<b>Enterprise power, flexibility and manageability in a space-saving 8-way design</b>	• Provides maximum performance per U and dynamic management and uptime features	• Ideal for large data centre deployments, messaging, collaboration and other complex applications	• Excels in both 32- and 64-bit modes, and offers high PCI slot expandability								
<b>Leading 8-way performance and enterprise-level availability and scalability</b>	• Provides high-level fault resilience and power and tape support	• Optimized for internal expansion – great for scale-up or server consolidation									
<b>Dual-processor performance and enterprise availability</b>	• Next-generation power and flexibility for SAN implementations and clustering capabilities	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Up to 8 GB of PC 3200 DDR2 memory and four gigabit NICs as standard								
<b>High-performance dual-processor server blade for the enterprise</b>	• Optional fibre channel support for SAN implementations and clustering capabilities	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Up to 8 GB of PC 3200 DDR2 memory and four gigabit NICs as standard								
<b>Dual-processor server blade engineered for enterprise performance and scalability</b>	• Designed for front-end and mid-tier 32-bit applications, enabling simple management and uptime features	• Features AMD Opteron 2.6-GHz processors, 1-MB L2 cache and 4-Gigabit NICs	• Optional fibre channel support for SAN implementations and clustering capabilities								
<b>For maximum density, high performance and external storage systems</b>	• New ultra-dense blade optimized for maximum density deployments, 32-bit HPC systems and environments with external storage	• Spacing server components to increase performance, density and manageability	• Utilises common BL-Class infrastructure components – including dual-port fibre-channel power and interconnects								
<b>Uncompromising manageability, maximum compute density and breakthrough power efficiency for high-performance data centres</b>	• Modular, spacing server blade design consumes less power, enabling denser rack architectures	• Simple SAN connectivity, plus standard power and fans	• Has a free, high-speed networking and effortless remote management								
<b>High-performance 4-way blade for mission-critical back-end applications</b>	• 6U-high, four-processor blade offering enterprise-level availability and performance	• Simple SAN connectivity, plus standard power and fans	• Has a free, high-speed networking and effortless remote management								

## ProLiant DL Line

	DL140	DL145	DL320 G2	DL320 G3	DL360 G4	DL360 G4p	DL380 G4 (+)	DL385	DL560	DL580 G2 (+)	DL585	DL740	DL760 G2
<b>The low-price 2P/1U computer server optimized for HPC workloads</b>	• Compact, dual-processor HPC solution for an attractively low price	• Sleek 1U chassis with cross fans	• Runs on your choice of Microsoft® Windows® or Linux® operating systems										
<b>Outstanding 2-way performance from a density-optimized 1U server</b>	• Affordable floating-point performance and cluster scalability	• Available with Option 200 processors, faster memory access and inter-processor communication	• Support for a massive 16 GB of memory										
<b>Fast deployment and effortless management for front-end and single-function applications</b>	• Low-cost, rack-optimized 1U server designed for flexible deployment and easy manageability	• Perfect for complex, growing, multi-tier environments, and for Internet/ intranet services, ASP and single-function applications	• Offers flexible network connectivity and remote control of multiple servers										
<b>Rack-optimized server for space-constrained data-center installations</b>	• A high-performance two-processor system ideal for the full range of scale-out applications	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• ProLiant engineering delivers optional full tolerance in an ultra-dense form factor, with redundant fans, online spare memory and optional redundant power										
<b>New generation of the world's best-selling server</b>	• Enterprise-class uptime and manageability in a 2U density for a variety of rack deployments and applications	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• High-performance models provide convenient fully loaded configurations										
<b>Brand new server combining DL380 design excellence with enhanced performance</b>	• Enterprise-class uptime and manageability in a 2U density for a variety of rack deployments and applications	• Features the latest AMD Opteron 200 processors, faster memory access and inter-processor communication	• Maintained for best performance and power efficiency										
<b>Groundbreaking 4-processor performance in a scalable, ultra-dense 2U design</b>	• Enterprise-class uptime and manageability in a 2U density for a variety of rack deployments and applications	• Compact, 2U chassis uses 50 percent less rack space than other enterprise servers	• Ultra-efficient power supplies provide complete redundancy – including hot-plug components for maximum power and cooling efficiency										
<b>Maximum 4-way performance and availability in a rack-optimized design</b>	• Highest-level fault resilience for business critical applications, such as messaging, collaboration, medium to large databases, ERP and complex intensive applications	• Offers simple serviceability and easy deployment in space-constrained environments	• Versatile, 4U rack server provides unparalleled high availability – including Advanced Memory Protection and hot-plug components										
<b>The best 32-bit performance and price performance of any x86 4-way server</b>	• Combines AMD Opteron 800 processors with best-in-class management and uptime features	• Ideal for large data centre deployments, messaging, collaboration and other complex applications	• Excels in both 32- and 64-bit modes, and offers high PCI slot expandability										
<b>Enterprise power, flexibility and manageability in a space-saving 8-way design</b>	• Provides maximum performance per U and dynamic management and uptime features	• Ideal for large data centre deployments, messaging, collaboration and other complex applications	• Excels in both 32- and 64-bit modes, and offers high PCI slot expandability										
<b>Leading 8-way performance and enterprise-level availability and scalability</b>	• Provides high-level fault resilience and power and tape support	• Optimized for internal expansion – great for scale-up or server consolidation											
<b>Dual-processor performance and enterprise availability</b>	• Next-generation power and flexibility for SAN implementations and clustering capabilities	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Up to 8 GB of PC 3200 DDR2 memory and four gigabit NICs as standard										
<b>High-performance dual-processor server blade for the enterprise</b>	• Optional fibre channel support for SAN implementations and clustering capabilities	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Up to 8 GB of PC 3200 DDR2 memory and four gigabit NICs as standard										
<b>Dual-processor server blade engineered for enterprise performance and scalability</b>	• Designed for front-end and mid-tier 32-bit applications, enabling simple management and uptime features	• Features AMD Opteron 2.6-GHz processors, 1-MB L2 cache and 4-Gigabit NICs	• Optional fibre channel support for SAN implementations and clustering capabilities										
<b>For maximum density, high performance and external storage systems</b>	• New ultra-dense blade optimized for maximum density deployments, 32-bit HPC systems and environments with external storage	• Spacing server components to increase performance, density and manageability	• Utilises common BL-Class infrastructure components – including dual-port fibre-channel power and interconnects										
<b>Uncompromising manageability, maximum compute density and breakthrough power efficiency for high-performance data centres</b>	• Modular, spacing server blade design consumes less power, enabling denser rack architectures	• Simple SAN connectivity, plus standard power and fans	• Has a free, high-speed networking and effortless remote management										
<b>High-performance 4-way blade for mission-critical back-end applications</b>	• 6U-high, four-processor blade offering enterprise-level availability and performance	• Simple SAN connectivity, plus standard power and fans	• Has a free, high-speed networking and effortless remote management										

## ProLiant BL Line

	BL20p G2	BL20p G3	BL25p	BL30p	BL35p	BL40p
<b>Dual-processor performance and enterprise availability</b>	• Next-generation power and flexibility for SAN implementations and clustering capabilities	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Up to 8 GB of PC 3200 DDR2 memory and four gigabit NICs as standard			
<b>High-performance dual-processor server blade for the enterprise</b>	• Optional fibre channel support for SAN implementations and clustering capabilities	• Includes the latest Intel Xeon processors with EM64T for 64-bit applications	• Up to 8 GB of PC 3200 DDR2 memory and four gigabit NICs as standard			
<b>Dual-processor server blade engineered for enterprise performance and scalability</b>	• Designed for front-end and mid-tier 32-bit applications, enabling simple management and uptime features	• Features AMD Opteron 2.6-GHz processors, 1-MB L2 cache and 4-Gigabit NICs	• Optional fibre channel support for SAN implementations and clustering capabilities			
<b>For maximum density, high performance and external storage systems</b>	• New ultra-dense blade optimized for maximum density deployments, 32-bit HPC systems and environments with external storage	• Spacing server components to increase performance, density and manageability	• Utilises common BL-Class infrastructure components – including dual-port fibre-channel power and interconnects			
<b>Uncompromising manageability, maximum compute density and breakthrough power efficiency for high-performance data centres</b>	• Modular, spacing server blade design consumes less power, enabling denser rack architectures	• Simple SAN connectivity, plus standard power and fans	• Has a free, high-speed networking and effortless remote management			
<b>High-performance 4-way blade for mission-critical back-end applications</b>	• 6U-high, four-processor blade offering enterprise-level availability and performance	• Simple SAN connectivity, plus standard power and fans	• Has a free, high-speed networking and effortless remote management			

Specialised services include ProLiant Essentials deployment, and installation and startup services.

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Find out more at <http://h18004.www1.hp.com/products/servers/platforms/options.html>

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# High-performance clusters

	HP Cluster Platform 3000	HP Cluster Platform 4000	HP Cluster Platform 6000
<b>Bringing more power, flexibility and choice to clustered computing</b>	• An innovative modular clustering package of hardware, software and services for scalable computation, data management and visualisation	• Combining the flexibility of custom solutions with the simplicity, reliability and value of pre-configured, factory-built products	• Optional cluster-management software effectively turns a cluster into a large-scale supercomputing utility
<b>Processor family</b>	Intel Xeon with EM64T	AMD Opteron	Intel Itanium 2
<b>Cluster nodes</b>	ProLiant DL360 G4 and ProLiant DL380 G4 servers	ProLiant DL145 and DL585 servers	ProLiant DL145 and DL585 servers
<b>Cluster interconnects</b>	Myrinet, InfiniBand, Gigabit Ethernet	Quadrics, Myrinet, InfiniBand, Gigabit Ethernet	Quadrics, Myrinet, InfiniBand, Gigabit Ethernet
<b>Console and administration network</b>	10/100 or Gigabit Ethernet plus 10/100 console console connections to IO interface on nodes	10/100 or Gigabit Ethernet plus 10/100 console console connections to IO interface on nodes	10/100 or Gigabit Ethernet plus 10/100 console console connections to IO interface on nodes
<b>Operating system</b>	Linux (Red Hat EL or SUSE SLES); Microsoft Windows Server 2003	Linux (Red Hat EL or SUSE SLES); Microsoft Windows Server 2003	Linux (Red Hat EL or SUSE SLES); Microsoft Windows Server 2003
<b>HP Cluster libraries and drivers</b>	HPMP; HP MLB	HPMP; HP MLB	HPMP; HP MLB
<b>Cluster managers available from HP Services</b>	Linux: XC System Software; Scali Connect	Linux: XC System Software; Scali Connect	Linux: XC System Software; Scali Connect
<b>Services</b>	For information on the HP Services offerings for HP Cluster Platforms, visit <a href="http://www.hp.com/techservers/products/consulting_and_integration">www.hp.com/techservers/products/consulting_and_integration</a>		

	NonStop S78 / 780 / 7800 / 78000 / S8000
<b>Continuous availability and fault tolerance for mission-critical business applications</b>	• Designed to meet the needs of real-time e-commerce and business-intelligence applications in finance, tele, manufacturing, healthcare and government
<b>High-end data integrity through fault-tolerant, self-checking hardware and software</b>	• Online expansion and linear scalability – expand to 4,080 processors and integrate growth without disruption
<b>Outstanding fault resilience and best-in-class business-continuity solutions</b>	• Easy service and management with HP OpenView
<b>Processor*</b>	2 to 4,080 processors (MPS R16000 for S8000; MPS R14000 for S78 / 780 / 7800 / 78000); up to 16-Gb main memory per processor
<b>Operating system</b>	NonStop Kernel with Guardian personality and / or Open System Services (UNIX APIs)
<b>Memory (maximum)</b>	65,280 GB for S8000 (2, 4, 8, 16 Gb / processor); 32,640 GB for S7800 (2, 4, 8 Gb / processor); 16,320 GB for S7800 (2, 4 Gb / processor); 16 Gb for S780 (limited to 2 processors with 2, 4, 8 Gb / processor); 8 Gb for S78 (limited to 2 processors with 2, 4 Gb / processor)
<b>I/O slots / interfaces</b>	Up to 44,000 (S78000 / S8000) ServerNet adaptor cards; up to 2,304 adaptor cards for S7800; Gigabit Ethernet, fibre channel, ATM, WAN (X.25, SNA), token ring
<b>Form factor</b>	118U in rack or standalone cabinet
<b>Storage</b>	Up to 50,688 TB (S78000 / S8000) or 27,648 TB (S7800) and / or connectivity to HP StorageWorks XP Array
<b>Services</b>	Full portfolio of HP services to fit your needs; visit <a href="http://www.hp.com/go/hpservices">www.hp.com/go/hpservices</a> for details or contact your local HP Services representative

	HP NonStop S-series servers
<b>Continuous availability and fault tolerance for mission-critical business applications</b>	• Designed to meet the needs of real-time e-commerce and business-intelligence applications in finance, tele, manufacturing, healthcare and government
<b>High-end data integrity through fault-tolerant, self-checking hardware and software</b>	• Online expansion and linear scalability – expand to 4,080 processors and integrate growth without disruption
<b>Outstanding fault resilience and best-in-class business-continuity solutions</b>	• Easy service and management with HP OpenView

# Business-critical systems

HP AlphaServer, 9000, Integrity and NonStop servers – based on best-in-class Alpha, PA-RISC and Intel Itanium 2 processor technology – offer choices for a range of operating environments, plus a host of high-performance clustering options.

## HP AlphaServer systems

	DS15	DS25	ES45	ES47 2P tower	ES47 2-4P rack	ES80 28P rack	GS1280 264P rack	rp2405	rp2430 / rp2470	rp34102 / 3440-4	rp4440-8	rp5405	rp5430 / rp5470	rp7420-16	rp8420-32	HP 9000 Superdome	rx16002	rx1620-2	rx2600-2	rx2620-2	rx4640-8	rx5670	rx7620-16	rx8620-32	HP Integrity Superdome
<b>Entry-level server to replace the DS10</b>	• Offers long life and increased capacity	• More built-in functionality provides greater connectivity	• The platform of choice for service and telecom providers developing and deploying applications																						
<b>High-performance, affordable solution for sophisticated applications</b>	• Space-saving 5U server designed for high-density applications	• Powerful and expandable dual-processor solution delivers impressive performance and reliability	• Supports high availability Tru4 UNIX or OpenVMS clusters																						
<b>Proven system architecture and excellent price / performance</b>	• Delivers high-end performance and reliability for demanding business and telecom applications	• High-performance, memory and bandwidth system offers distinctive dynamic multi-path CPU or I/O-intensive tasks	• Includes redundant hot-swap power and cooling, n+1 power and optional UPS for fault resilience																						
<b>Innovative server using two new EV7 processors for performance and growth</b>	• Entry-level tower allows you to build and grow at your own pace	• High-performance, memory and bandwidth system offers distinctive dynamic multi-path CPU or I/O-intensive tasks	• Includes redundant hot-swap power and cooling, n+1 power and optional UPS for fault resilience																						
<b>Outstanding network scalability and up to 4-socket performance</b>	• Powerful departmental UNIX performance and availability of a PC server	• Superior online UNIX performance and reliability in a compact, self-contained 2U chassis	• Offers high-availability features typically found in larger, more expensive servers – such as UNIX I/O and high-availability features including dynamic processor resilience																						
<b>8-socket performance and impressive growth in a compact, ready-to-go system</b>	• Powerful departmental UNIX performance and availability of a PC server	• Superior online UNIX performance and reliability in a compact, self-contained 2U chassis	• Offers high-availability features typically found in larger, more expensive servers – such as UNIX I/O and high-availability features including dynamic processor resilience																						
<b>Unparalleled performance with maximum headroom for growth</b>	• The most powerful AlphaServer, providing maximum expandability for the future	• Includes exceptional scaling as you grow – up to an incredible 64 CPUs – with linear growth in processor and I/O performance	• Includes enterprise RAS, RAID memory, multi-path processors, n+1 regulator modules, plus hot-plug-capable disks, power and fans																						
<b>Enterprise-level functionality and availability at the most affordable price</b>	• Scalable, faster, affordable 2-way server for superior SMP performance, density, availability and price / performance	• Offers high-availability features typically found in larger, more expensive servers – such as UNIX I/O and high-availability features including dynamic processor resilience	• Includes enterprise RAS, RAID memory, multi-path processors, n+1 regulator modules, plus hot-plug-capable disks, power and fans																						
<b>UNIX functionality and robustness for the price of a PC server</b>	• Superior online UNIX performance																								



# Deskbased solutions

HP offers a broad choice of deskbased solutions built on proven technologies and innovations, making it easy to select the right mix of performance, quality, value and investment protection, in whatever size or shape is right for your business.

## HP Compaq Business Desktops



**HP Compaq dc5100 Business Desktop<sup>1</sup>**

**Mainstream features and flexibility to increase productivity and flexibility in any business environment**

- Proven Intel technologies allow background tasks to run with minimal loss of performance
- Small-form-factor or microtower designs save space and are simple to deploy, service and expand

**HP Compaq dc7100 Business Desktop series**

**dc7100 SFF<sup>2</sup>**      **dc7100 USDT<sup>2</sup>**      **dc7100 CMT<sup>2</sup>**

Ideal for customers who need expandability even in space-constrained environments

The ideal mix of features and performance in a chassis the size of an average dictionary!

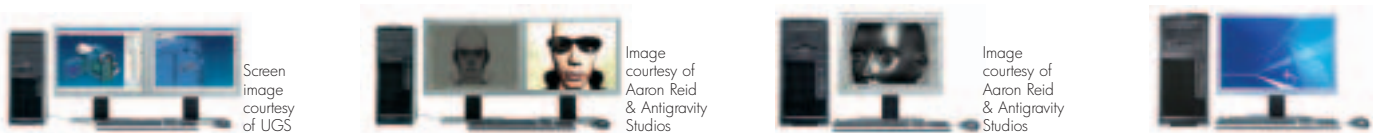
The only tower in the industry that converts to a desktop!

**Choice of stable, manageable and secure desktop solutions for high productivity and low ownership costs**

- Answers high demands with the latest Intel technologies, PCI-Express I/O and graphics, SATA HDDs and DDR memory
- Choice of chassis designs to suit your environment
- Offers a host of expansion slots, toll-free access and servicing, plus preloaded HP Local Recovery Solution for security
- A long, stable lifecycle, global configurations, common image and simple network management make it easy to own

<b>Processors</b>	Intel Celeron D or Pentium 4; Intel 915GV chipset	Intel Celeron D or Pentium 4 (up to 560) with Hyper-Threading Technology; Intel 915G chipset		
<b>Operating system</b>	Microsoft Windows XP Professional Windows XP Home Or Linux			
<b>Memory (max.)</b>	4-GB DDR2 SDRAM	4-GB DDR SDRAM (400-MHz) non-ECC	3-GB DDR SDRAM (400-MHz) non-ECC	4-GB DDR SDRAM (400-MHz) non-ECC
<b>Hard drive</b>	40-GB to 160-GB SATA/100 hard drive			
<b>Graphics</b>	Intel Graphics Media Accelerator 900			
<b>Expansion</b>	2 low-profile/full-height PCI (small form factor/microtower); 1 PCIe x1; 8 USB	2 PCI; 1 PCIe x1; 1 PCIe x16; 2 optional PCI; 3 slots; 8 USB	1 full-height PCI; 1 slot + Multibay; 8 USB	2 PCI; 1 PCIe x1; 1 PCIe x16; 2 optional PCI; 6 slots; 8 USB
<b>Services</b>	<b>Warranty:</b> 3-year parts, labour and on-site response; <b>rec. HP Care Pack:</b> 4-hour, 13 x 5, on-site response			

## HP personal workstations



**HP xw4200 Workstation**

**Affordable uni-processor workstation with the latest technology**

- Latest Intel Pentium 4 processors and 925X Express chipset enable DDR2 533-MHz ECC memory – reduced power consumption and increased throughput
- Versatile chassis supports 4 internal HDDs, 8 USB ports, 6 bays / 7 slots, plus 4 legacy PCI, 1 PCIe x16 (graphics) and 2 PCIe x1v (I/O) slots
- PCI-E (x16) graphics provides four times peak and two times uni-directional bandwidth of AGP for visual accuracy and clarity

**HP xw6200 Workstation**

**Small size, big performance – the latest dual-processor technology in a space-saving design**

- Intel E7255 chipset for Xeon processors supports dual-processing, 800-MHz bus and a dual-channel DDR2 memory for massively increased performance
- One of the smallest dual-processor designs in the industry – rack-mountable minitower offers award-winning, tool-less access and servicing
- Supports up to eight monitors simultaneously

**HP xw8200 Workstation**

**High-performance, most expandable dual-processing workstation with the latest technology**

- Latest technology delivering excellent performance and exceptional storage capability for large models and storage-intensive projects
- Rack-mountable, convertible minitower supports up to 5 internal HDD, 3 optical disks, plus 2 PCIe, 3 PCI-X and 2 PCI slots
- Easy transition to 64-bit computing – Intel EM64T expands addressable memory space to 256 TB

**HP xw9300 Workstation**

**Ultimate performance and expandability**

- Dual AMD Opteron 200 series processors for high-performance, plus complete software compatibility with Intel-based platforms
- Features AMD Opteron Direct Connect Architecture for optimised memory and I/O performance, throughput and expandability
- First workstation available based on NVIDIA nForce Professional chipset featuring dual PCIe x16 graphics

<b>Processors</b>	Intel Pentium 4 2.8, 3.0, 3.2, 3.4, 3.6- and 3.8-GHz with 1-MB cache, EM64T <sup>3</sup> and Hyper-Threading Technology; Intel 925X Express chipset	1 or 2 Intel Xeon 2.8-, 3.0-, 3.2-, 3.4- and 3.6-GHz with 1-MB L2 cache, EMT64 and Hyper-Threading Technology; Intel E7255 chipset	1 or 2 AMD Opteron 200 series with AMD64 Technology and Hypertransport; NVIDIA nForce 4 Professional chipset with AMD-8131 Hypertransport PCI-X tunnel
<b>Operating system</b>	Microsoft Windows XP Professional Or Linux Red Hat Enterprise WS		
<b>Memory</b>	Up to 4-GB DDR2 SDRAM ECC	Up to 8-GB DDR2 SDRAM ECC	Up to 16-GB DDR2 SDRAM ECC
<b>Graphics</b>	Entry 2D, PCIe; professional 2D, PCI or PCIe; entry, mid-range or high-end 3D, PCIe	Professional 2D dual and quad, PCI; professional 2D, PCIe; entry, mid-range or high-end 3D, PCIe	Professional 2D, PCIe; entry, mid-range or high-end 3D, PCIe
<b>Expansion</b>	1 PCIe x16, 2 PCIe x1, 4 legacy PCI; 6 bays	1 PCIe x16, 1 PCIe x1, 4 legacy PCI	1 PCIe x16, 1-PCE x1, 1 133-MHz PCI-X, 2 100-MHz PCI-X, 2 full-length PCI; 8 USB 2.0
<b>Services</b>	<b>Warranty:</b> 3-year limited parts, labour and on-site service, including backlight; <b>rec. HP Care Pack:</b> 3-year, 4-hour, 13 x 5 response		

## HP PA-RISC workstations



**HP b2600 Workstation**

**Stable, single-processor workstation offering a robust feature set and reliability at exceptional value**

- The most affordable, proven and stable PA-RISC workstation from HP
- Accelerates memory-intensive tasks with a 500 MHz PA-8600 processor and up to 4-GB RAM memory
- Enables universal access to all types of data across diverse, cross-functional teams

**HP c3700/50 Workstation**

**Optimum combination of 3D graphics performance, expandability and memory in a single-processor workstation**

- 750-MHz PA8700 or 875-MHz PA-8700+ processor and four-way set-associative cache help you complete complex designs faster with outstanding performance
- 8-GB SDRAM delivers the largest capacity of any uni-processor workstation
- Binary compatibility with future PA-RISC processors

**HP c8000 Workstation**

**Ultimate performance 2- or 4-processor workstation with leadership graphics, low noise levels and large memory in a tool-less chassis**

- Extreme processing power – PA-8800 dual-core processor modules provide unprecedented 2-way capability at a 1-way price and 4-way performance at a 2-way price
- HP zx1 chipset enables greater-than-clock-rate scaling for applications demanding high-end performance without exception
- Supports 32-GB ECC SDRAM for larger workloads, and binary-compatible with HP-UX – no need to upgrade your application infrastructure

**HP j6750 Workstation**

**High-performance, dual-processor workstation delivering high capacity and expandability for the toughest designs and simulations**

- Achieve faster, more complex designs with up to two processors 875-MHz PA-8700+ processors
- Space-efficient, rack-mountable design offers 16-GB SDRAM capacity for maximum application performance
- 64-bit x 64-bit operating system and microprocessor, with binary compatibility with future PA-RISC processors

<b>Processors</b>	PA-RISC 8600 500-MHz with 1.5-MB on-chip cache	PA-RISC 8700 750-/75-MHz with 2.25-MB total cache; instruction 0.75 MB; data 1.50 MB	1 or 2 dual-core PA-8800 processors, 900-MHz or 1.0-GHz 2-way standard; 4-way optional; 1.5 L1 cache; 32-MB L2 cache or L2 cache less	PA-RISC 8700+ 875-MHz with 2.25-MB total cache; instruction 0.75 MB; data 1.50 MB
<b>Operating system</b>	HP-UX 10.20 ACE9912, HP-UX 11.0, 11i TCOEi and MTOEii	HP-UX 11.0, 11i TCOEii and MTOEiii	HP-UX 11i TCOE, HP-UX 11i MTOEiii	HP-UX 11.0, 11i TCOEi and MTOEii
<b>Memory</b>	Up to 4-GB 120-MHz ECC SDRAM (1.9 GB/s)	Up to 8-GB 120-MHz ECC SDRAM (1.9 GB/s)	Up to 32-GB PC2 100 ECC DDR-266	Up to 16-GB 120-MHz ECC SDRAM (1.9 GB/s)
<b>Graphics</b>	Choice of HP fx5 pro or HP fx6	Choice of HP Fire GL-UX, HP fx10 pro, HP fx5 pro or HP fx6 pro	Choice of HP Fire GL-UX, HP fx10 pro, HP fx5 pro or HP fx6 pro	Choice of HP Fire GL-UX, HP fx10 pro or HP fx6 pro
<b>Expansion</b>	4 x PCI slots	6 x PCI slots	1 AGP-8X Pro slot; 6 x PCI slots	3 x PCI 4X slots
<b>Services</b>	<b>Warranty:</b> 1-year parts and labour			

**HP Remote Graphics Software**

**Faster time to creation, increased resource utilisation and maximum RoIT with remote access to high-end workstations:**

- Remotely access 2D and 3D graphics workstations
- Access applications on different platforms such as Windows, Linux and HP-UX
- Perform multi-user remote collaborations
- Software-only solution allows deployment without physical changes to the compute environment

## HP Thin Clients



**HP Compaq t5300 Thin Client**

**Low-cost, legacy-free platform for essential computing needs at the most competitive price**

- Supports Microsoft Windows CE.Net
- 533-MHz processing speed
- 32-MB Flash memory

**HP Compaq t5510 Thin Client**

**Delivers upgraded features and legacy support for mainstream corporate use**

- Supports Microsoft Windows CE.Net
- 800-MHz processing speed
- 32-MB Flash memory

**HP Compaq t5515 Thin Client**

**The first thin client with the security, reliability and freedom of Linux, and a choice of memory**

- Supports Linux operating system and optional Mozilla browser
- 800-MHz processing speed
- Up to 32-MB Flash memory

**HP Compaq t5710 Thin Client**

**Provides powerful performance and greatest flexibility for dynamic enterprise environments**

- Supports Microsoft Windows XPe
- Up to 1.1-GHz processing speed
- Up to 512-MB Flash memory

<b>Operating system</b>	Windows CE.Net v4.20	Linux kernel 2.4	Windows XPe	
<b>Browser</b>	Internet Explorer 6.0	Mozilla (optional)	Internet Explorer 6.0	
<b>Processor</b>	Transmeta Crusoe 533-MHz	Transmeta Crusoe 800-MHz	Transmeta 8600 800-MHz or 1.1-GHz	
<b>Memory / Flash (ROM)</b>	64-MB DRAM / 32 MB	128-MB DDR SDRAM / 32 MB	64-MB or 128-MB DDR SDRAM / 32 MB or 128 MB / 256 MB or 512 MB	
<b>Graphics</b>	ATI Rage XC with 8-MB memory	ATI Radeon 7000-M with 16-MB memory		
<b>Expansion</b>	4 USB 1.1, RJ-45	4 USB 1.1 or 2.0, 1 serial, 1 parallel, 1 PS/2, 1 optional PCI slot	4 USB 1.1 or 2.0, 1 serial, 1 parallel, 1 PS/2, 1 optional PCI slot	4 USB 2.0, 1 serial, 1 parallel, 1 PS/2, 1 PCI slot
<b>Services</b>	<b>Warranty:</b> Change to 3-year parts and labour (no on-site response) <b>rec. HP Care Pack:</b> 3-year, next-business-day exchange			

# HP mobility solutions

## HP Compaq notebook family



**HP Compaq nc4200 Business Notebook**

**Power-packed ultraportable with exceptional battery life and connectivity**

- All-day mobility – thin and light with over 8 hours' battery
- High performance and productivity – latest full-speed Intel Pentium M and Celeron M processors and full-size keyboard
- Secure and scalable – additional port functionality, HP ProtectTools, Mobile Data Protection System and more

**HP Compaq nc6120 Business Notebook**

**Thin and light – the perfect balance of mobility, affordability and connectivity**

- 14- or 15-inch screen, with the latest Intel Centrino™ mobile technology
- Starts at 2.6 kg, 30.3 mm thin and offers over 8 hours' battery life
- Includes additional ports, the new Mobile Data Protection System, integrated wireless technologies and more

**HP Compaq nc6220 Business Notebook**

**Thin and light notebook with enhanced security and mobility features**

- Work on the move easier and for longer – starts at just 2.13 kg and 26.5 mm thin, and offers all-day battery life
- HP ProtectTools enhanced security features, including integrated smart card reader
- Best-in-class quality and reliability – scratch- and dent-resistant unit comes with HP Mobile Data Protection System installed

**HP Compaq nc8230 Business Notebook**

**High performance in a sleek, widescreen design with exceptional security and battery life**

- Advanced performance – crisp 15.4-inch wide screen, latest Intel Pentium M and Centrino technologies, plus ATI Mobility Radeon X600 graphics
- 28 mm thin with over 8 hours' battery life
- Truly scalable desktop solution with best-in-class quality and reliability, and HP ProtectTools security features

**HP Compaq nw8240 Mobile Workstation**

**Highly portable widescreen workstation with outstanding graphics and performance**

- Advanced performance – crisp 15.4 in. wide screen, Intel Pentium M with Centrino technology, plus ATI Mobility FireGL V5000 graphics
- 28 mm thin and weighs just 2.8 kg (with optical), with over 8 hours' battery life for all-day mobility
- HP ProtectTools security features – including smart card reader and HP Mobile Data Protection

<b>Processors</b>	Intel Centrino Mobile Technology			
	Intel Pentium M 7xx series, 2-MB L2 cache, 533-MHz FSB or Intel Celeron M 370, 1-MB L2 cache, 400-MHz FSB	Intel Pentium M 7xx series, 2-MB L2 cache, 533-MHz FSB or Intel Celeron M 3xx series, 1-MB L2 cache, 400-MHz FSB	Intel Pentium M 7xx series, 2-MB L2 cache, 533-MHz FSB	Intel Pentium M 7xx series with 2-MB L2 cache, 533-MHz FSB
<b>Operating system</b>	Microsoft Windows XP Professional Windows XP Home (selected countries only)			Windows XP Home or Professional
<b>Display</b>	12.1-in. XGA	14.1- or 15-in. XGA or 15-in. SXGA+	14.1-in. XGA	15.4-in. WXGA/WXGA+ 15.4-in. WSXGA+/WUXGA
<b>Weight</b>	1.8 kg	2.6/2.7 kg (dep. on screen)	2.26 kg (with optical)	2.8 kg (with optical)
<b>Graphics</b>	Intel Media Graphics Accelerator 900			
<b>Memory</b>	DDR II SDRAM, 400 or 533 MHz, 256, 512 or 1024 MB; 2 SODIMM slots; upgradeable to 2048 MB max.			
<b>USB ports</b>	3 USB 2.0	4 USB 2.0	3 USB 2.0	
<b>Communications Services</b>	NetXtreme Gigabit Ethernet PCIe Controller, WLAN, integrated Bluetooth <sup>®</sup>			
	<b>Warranty:</b> 3-year parts and labour	<b>Warranty:</b> 1-year parts and labour (global SKUs 3-year)	<b>Warranty:</b> 3-year parts and labour	
	Optional HP Care Pack Services available			

## HP iPAQ Pocket PCs



**HP iPAQ rz1710 Pocket PC**

**Innovative functionality at great value**

- Essential features, applications and expansion at an attractive price
- Integrated Personal Information Manager software for efficient data management

**HP iPAQ hx2110 Pocket PC**

**Full-featured model delivering outstanding expansion capabilities**

- High-performance Intel processors, 128-MB memory and integrated CF and SD slots
- Bluetooth™-enabled for simple synchronisation, file sharing and printing between devices

**HP iPAQ rx3715 Mobile Media Companion**

**Enjoy digital music, photos and videos**

- Capture, share and print – includes HP Photosmart digital camera and HP Image Zone software
- Stores 4 hours of music / 1 hour WMV video on a single SD card

**HP iPAQ hx2410 Pocket PC**

**Optimal configuration of performance, enhanced security, connectivity and expandability**

- Integrated Wi-Fi 802.11b for high-speed wireless access
- Bluetooth™-enabled, with robust security and authentication features

**HP iPAQ hx2750 Pocket PC**

**The right mix of performance, expandability and secure wireless capabilities**

- High-performance Intel processors, 256-MB memory, CF and SD slots, plus Docking Station
- Robust security – including biometric fingerprint reader

**HP iPAQ hx4700 Pocket PC**

**Versatile, high-end functionality in a sophisticated design**

- VGA colour display with portrait and landscape modes
- High-speed wireless access, touchpad navigation and dual-slot expansion

**HP iPAQ h6340 Pocket PC**

**Ultimate mobility and voice/data connectivity**

- 3-way wireless capabilities – Bluetooth™, WLAN, GSM/GPRS
- Includes removable thumb keyboard and bright, 3.5" colour screen

<b>Processors</b>	Samsung S3C2410 203-MHz	Intel PXA270 Processor 312-MHz	Samsung S3C 2440	Intel PXA270 Processor 520-MHz	Intel PXA270 Processor 624-MHz	Intel PXA270 Processor 624-MHz	Texas Instruments OMAP™ 1510
<b>Operating system</b>	Microsoft® Windows Mobile® 2003 Second Edition software for Pocket PC (Phone Edition on h6340); Pocket versions of Microsoft software are included (Outlook, Word, Excel and Internet Explorer for Pocket PC)						
<b>Connectivity</b>	Optional WLAN	Integrated Bluetooth™ and serial IR	Integrated WLAN 02.11b, Bluetooth™ IrDA and USB	Integrated WLAN 802.11b, Bluetooth™ and serial IR	Integrated WLAN 802.11b, Bluetooth™ 1.2, IrDA (FIR), USB and serial	Integrated quad-band GSM/GPRS, WLAN 802.11b, Bluetooth™, IrDA and USB	Integrated quad-band GSM/GPRS, WLAN 802.11b, Bluetooth™, IrDA and USB
<b>Expansion</b>	SD slot (4-bit SDIO and SD/MMC)	CF Type II and SDIO slot (SD/MMC standard, SDIO ready)	SD slot (SD/MMC and 4-bit SDIO)	CF Type II and SDIO slot (SD/MMC standard, SDIO ready)	SD slot (1-bit and 4-bit SDSDIO/MMC); CF Type II	SD slot (SD/MMC standard, SDIO ready)	SD slot (SD/MMC standard, SDIO ready)
<b>Memory, std.</b>	25-MB SDRAM	128 MB (64-MB ROM, 64-MB SDRAM)	152 MB	128 MB (64-MB ROM, 64-MB SDRAM)	256 MB (128-MB ROM, 128-MB SDRAM)	128-MB ROM and 64-MB SDRAM	64-MB SDRAM, 64-MB Flash ROM
<b>Display</b>	3.5 in. colour TFT	3.5 in. colour TFT; supports portrait and landscape modes				4.0 in. colour TFT; supports portrait and landscape modes	3.5 in. colour TFT
<b>Weight</b>	120 g	164.4 g	158.1 g	164.4 g	186.7 g		190 g
<b>Services</b>	<b>Warranty:</b> 1-year parts and labour (no on-site) in most regions; <b>rec. HP Care Pack:</b> 3-year advanced unit exchange			<b>Warranty:</b> 2-year parts and labour (no on-site) in most regions; <b>rec. HP Care Pack</b> (except h6340): 3-year advanced unit exchange			

<sup>1</sup> Small form factor or microtower.  
<sup>2</sup> CMT: Convertible minitower; SFF: Small form factor; USDT: Ultra-slim desktop.  
<sup>3</sup> For xw4200 model, EM64T is available only on Pentium 4 processors of 3.4-GHz frequency or higher.



