

# HP ProLiant servers

Family guide





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## HP ProLiant servers: redefining server economics

In today's data centres, server consolidation and cost reduction are top-of-mind concerns. With tough economic conditions and rising IT operations costs, the status quo won't do. If you are in a data centre environment, you need to work aggressively to stop server and storage sprawl, reduce energy expenditures and make better use of your valuable floor space – while responding faster to changing business requirements.

HP Converged Infrastructure solutions and services will help you meet these goals. They break down technology silos to bring all IT resources together into virtualised pools of assets that can be shared by many applications and managed as a service. This architecture goes beyond the current virtualisation of servers, storage systems and network connections. It brings together management tools, policies and processes so resources can be managed in a holistic, integrated manner. It also brings together power and cooling practises so systems and facilities work synergistically to extend the life of your data centre.

The HP ProLiant server portfolio offers key building blocks for your converged infrastructure. It doubles the performance of previous server generations and adds a wide range of innovative features that help you gain more value out of every IT dollar. HP ProLiant servers deliver major advances in energy efficiency, virtualisation and best-in-class management. We combine these innovations with comprehensive financing programmes and service offerings to redefine server economics.

HP ProLiant servers enable consolidation ratios of up to 20:1. This level of consolidation makes it possible for your organisation to reduce power and cooling expenses by 97 per cent, reduce software licences by 95 per cent and reduce the number of physical servers to manage by 95 per cent. With gains like these, your investment in ProLiant technology can pay for itself in as little as three months.



# Achieve a more efficient IT environment with ProLiant. Complete data centre solutions enabled with ProLiant need fewer resources and use less energy. With ProLiant, you can get server economics you cannot ignore.

## Find the server that's right for your needs

HP ProLiant systems are top-selling servers, and every third server sold worldwide is an HP server.\* This high-level market acceptance stems in part from our ongoing commitment to provide a complete industry-standard server infrastructure that delivers confidence and reliability.

Whether it is a departmental server, an enterprise data centre or anything in between, HP can meet your exact needs. You can choose the right levels of performance, availability, expandability and manageability from the world's most comprehensive industry-standard server and options product line.

## HP ProLiant servers

The HP ProLiant family includes:

- **HP ProLiant Modular Line (ML):** Flexible, expandable tower and rack/tower options available for growing businesses in 1- and 2-socket designs, and entry and enterprise-class feature sets
- **HP ProLiant Density Line (DL):** Powerful servers in 1, 2, 4 or 7U configurations as well as multi-node server designs, all optimised for a rack-mounted server environment
- **HP ProLiant Scalable System (SL):** A new server family that enables a shared server infrastructure optimised for extreme scale-out deployments
- **HP ProLiant Blade Servers (BL):** Compact and powerful servers designed for performance, management, density and total cost of ownership (TCO) savings requirements

To explore these products online, visit [www.hp.com/go/proliant](http://www.hp.com/go/proliant)

## HP Integrity servers

In addition to the ProLiant server family, HP also offers the Integrity systems family – one of the most-trusted brands for mission-critical environments requiring the highest reliability, availability and serviceability (RAS) levels. A multi-OS ecosystem running HP-UX 11i, OpenVMS, Microsoft® Windows® Server 2003, Linux and NonStop, the Integrity platform provides a unique combination of mission-critical availability, virtualisation and scalability.

Additionally, you could also choose from the Integrity systems family that includes:

- **HP Integrity NonStop servers:** Enabling the highest levels of availability for 24x7 business solutions
- **HP Integrity servers:** Spanning from entry-class to Superdomes, with unique multi-OS capabilities and leading virtualisation
- **HP Integrity server blades:** Bringing Integrity mission-critical capabilities to an HP BladeSystem c-Class form factor

To learn more about the HP Integrity server family, visit [www.hp.com/go/integrity](http://www.hp.com/go/integrity)

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\* Source: IDC Worldwide Quarterly Server Tracker 2008 Q4, February 2009

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## HP BladeSystem

Are you looking for ways to simplify a growing, multi-server environment? HP BladeSystem is a modular infrastructure consolidated up front to save you more time, energy and money – regardless of what you put inside. In one box, a BladeSystem supports HP ProLiant and Integrity server blades, HP StorageWorks storage blades and a variety of virtual machine, client and workstation solutions. With the essential IT elements built in – compute, network, storage, management and power and cooling – BladeSystem delivers reliable, cost-effective services to your business.

To learn more about HP BladeSystem, visit

[www.hp.com/go/bladeSystem](http://www.hp.com/go/bladeSystem)

### A complete solution from HP

To gain the full value from your investments, you also need expert services across the IT lifecycle, intelligent software, advanced storage devices and system-enhancing options. HP covers this broad spectrum of needs.

- **Services:** How important is it that your service partners provide a single point of ownership and accountability? Do they meet your service needs across your enterprise? From training and basic product support to proactive services for business-critical IT environments and selective outsourcing, our services help you realise the full potential of your technology to meet your business requirements.
- **Remote support:** Are you spending more time solving problems than focusing on your business? HP Insight Remote Support delivers secure remote support for HP servers and storage 24x7. With remote monitoring, automated notification and accurate resolution, you can gain better control of your infrastructure, do more with less and help your business stay up and running.

- **Management software:** Do you need to get more out of every hour, watt and dollar you invest in your HP infrastructure – both physical and virtual? HP Insight software provides one of the most efficient, in-depth ways to understand, manage and optimise your technology infrastructure – in real time and over time.
- **Operating systems:** Do you need broad support for Windows, Linux and UNIX® x86 operating systems? Our extensive OS testing, qualification and certification give you the choice and flexibility to deploy a broad range of Windows, Linux and UNIX x86 operating systems with confidence.
- **Virtualisation:** Would you like to reduce costs, enhance availability and increase agility within your data centre? HP offers end-to-end virtualisation solutions that comprehend industry-leading virtualisation environments such as VMware, Citrix and Windows Hyper-V, tested, certified and supported on our leading ProLiant platforms, and integrated with Insight Control and Insight Dynamics. And HP knows that for high-availability environments, you need to virtualise your storage as well as your servers. Our P4000 family of physical and virtual SANs can make sure your data is as available as your applications.
- **Storage:** Do you need help optimising your storage resources, managing multi-vendor environments and evolving to open architectures? Our virtual SAN and direct-attached storage devices help you keep large amounts of information protected and readily accessible to people when needed.
- **Options:** Do you have everything you need to complete your infrastructure? Our server options – including memory, drives, processors, racks, operating system software and power and cooling features strengthen the foundation of your data centre with high calibre products that are easy to maintain and tailored for ProLiant, Integrity and StorageWorks, giving you confidence in your whole infrastructure.

# HP ProLiant servers – 100 series

Affordable, entry-level rack and tower servers ideal for small to medium businesses, workgroups, remote sites and high-performance computing environments

Entry-level



**HP ProLiant ML110 G5**  
Perfect first server for growing business

**HP ProLiant ML110 G6**  
Perfect first server for growing business

	HP ProLiant ML110 G5	HP ProLiant ML110 G6
<b>Number of processors</b>	1	1
<b>Maximum number of cores</b>	4	4
<b>Processors supported</b>	<p>Quad-Core Intel® Xeon® processors: X3370: 3.00 GHz, 1333 MHz, 95W X3360: 2.83 GHz, 1333 MHz, 95W X3330: 2.66 GHz, 1333 MHz, 95W X3220: 2.40 GHz, 1066 MHz, 95W X3210: 2.13 GHz, 1066 MHz, 95W</p> <p>Dual-Core Intel Core™2 Duo processor: E7400: 2.80 GHz, 1066 MHz, 65W</p> <p>Dual-Core Intel Xeon processors: E3120: 3.16 GHz, 1333 MHz, 65W E3110: 3.00 GHz, 1333 MHz, 65W</p> <p>Dual-Core Intel Pentium® processor: E2160: 1.80 GHz, 800 MHz, 65W</p> <p>Single-Core Intel Celeron® processors: 440: 2.00 GHz, 800 MHz, 35W</p>	<p>Quad-Core Intel® Xeon® processors: X3460: 2.80 GHz, 1333 MHz, 95W X3450: 2.66 GHz, 1333 MHz, 95W X3440: 2.53 GHz, 1333 MHz, 95W X3430: 2.40 GHz, 1333 MHz, 95W</p> <p>Dual-Core Intel Core™i3 processor: i3-540: 3.06 GHz, 1333 MHz, 73W i3-530: 2.93 GHz, 1333 MHz, 73W</p> <p>Dual-Core Intel Pentium® processor: G6950: 2.80 GHz, 1066 MHz, 73W</p> <p>Dual-Core Intel Celeron® processor: G1101: 2.26 GHz, 1066 MHz, 73W</p>
<b>Cache</b>	<p>12 MB L2: Xeon X3370, X3360 8 MB L2: Xeon X3220, X3210 6 MB L2: Xeon X3330, E3120, E3110 3 MB L2: Core2 E7400 1 MB L2: Pentium E2160 512 KB L2: Celeron 440</p>	<p>8 MB: Xeon series 4 MB: Core i3 series 3 MB: Pentium processor 2 MB: Celeron processor</p>
<b>Maximum memory</b>	8 GB	16 GB
<b>Drives supported</b>	<p>Up to 4 non hot plug LFF drives: SAS 3G 15K 450/300/146 GB 6G SAS 15K 600/450/500 GB SATA 3G 7.2K 2 TB/1 TB/500/250/160 GB</p>	<p>Up to 4 non hot plug LFF drives: SAS 3G 15K 450/300/146 GB SATA 3G 7.2K 2 TB/1 TB/500/250/160 GB</p>
<b>Maximum internal storage</b>	2.4 TB SAS; 8.0 TB SATA	2.4 TB SAS; 8.0 TB SATA
<b>Form factor</b>	Tower or 4U rack	Tower or 4U rack
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year; 3-year/1-year/1-year (Asia-Pacific region, except Japan)	1-year/1-year/1-year; 3-year/1-year/1-year (only in Brazil)

For HP related offering section on ML110 G5 and ML110 G6, [click here](#).

# HP ProLiant servers – 100 series (cont'd)

## Entry-level



### HP ProLiant ML115 G5

Perfect first server for growing business

### HP ProLiant ML150 G6

Expandable and affordable for growing businesses

<b>Number of processors</b>	1	1 – 2
<b>Maximum number of cores</b>	4	8
<b>Processors supported</b>	<p>Quad-Core AMD Opteron processors:                      1356: 2.30 GHz, 800 MHz, 75W                      1354: 2.20 GHz, 800 MHz, 75W                      1352: 2.10 GHz, 800 MHz, 75W</p> <p>Dual-Core AMD Athlon processor:                      4450B: 2.30 GHz, 2000 MHz, 45W</p> <p>Single-Core AMD Athlon processor:                      1640B: 2.7 GHz, 2000 MHz, 45W</p>	<p>Quad-Core Intel Xeon processors:                      E5540: 2.53 GHz, 1066 MHz, 80W                      E5530: 2.40 GHz, 1066 MHz, 80W                      E5520: 2.26 GHz, 1066 MHz, 80W                      E5506: 2.13 GHz, 800 MHz, 80W                      E5504: 2.00 GHz, 800 MHz, 80W</p> <p>Dual-Core Intel Xeon processors:                      E5502: 1.86 GHz, 800 MHz, 80W</p>
<b>Cache</b>	<p>2 MB L2: Opteron Series                      1 MB L2: Athlon 4450B                      512 KB L2: Athlon 1640B</p>	<p>8 MB (1 x 8 MB) L3 cache: (E5540, E5530, E5520)                      4 MB (1 x 4 MB) L3 cache: (E5506, E5504, E5502)</p>
<b>Maximum memory</b>	8 GB	<p>48 GB RDIMM                      24 GB UDIMM</p>
<b>Drives supported</b>	<p>Up to 4 non hot plug LFF drives:                      SAS 3G 15K 450/300/146 GB                      6G SAS 15K 600/450/300 GB                      SATA 3G 7.2K 2 TB/1 TB/500/250/160 GB                      SATA 3G 7.2K 2 TB/1 TB/500/250/160 GB</p>	<p>Up to 8 hot plug LFF drives:                      6G SAS 15K 600/450/300 GB                      SAS 6G 7.2K 2 TB/1 TB                      SATA 3G 7.2K 2/1TB/500/250/160 GB</p> <p>Up to 4 Non-hot plug LFF drives:                      6G SAS 15K 600/450/300 GB                      SAS 6G 7.2K 2 TB/1 TB                      SATA 3G 7.2K 2 TB/1 TB/500/250/160 GB</p>
<b>Maximum internal storage</b>	2.4 TB SAS; 8.0 TB SATA	16.0 TB SAS; 16.0 TB SATA
<b>Form factor</b>	Tower or 4U rack	Tower or 5U rack
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year; 3-year/1-year/1-year (Asia-Pacific region, except Japan)	1-year/1-year/1-year; 3-year/1-year/1-year (Brazil, Asia-Pacific, excluding Japan)

For HP related offering section on ML115 G5 and ML150 G6, [click here](#).

# HP ProLiant servers – 100 series (cont'd)

Entry-level



## HP ProLiant DL160 G6

Designed for general purpose and compute intensive environments



## HP ProLiant DL160se G6

Designed for general purpose and I/O intensive compute environments

<b>Number of processors</b>	1 – 2	1 – 2
<b>Maximum number of cores</b>	12	8
<b>Processors supported</b>	<p>Six-Core Xeon processors:</p> <p>X5670: 2.93 GHz, 95W            X5660: 2.80 GHz, 95W            X5650: 2.66 GHz, 95W            L5640: 2.26 GHz, 60W</p> <p>Quad-Core Xeon processors:</p> <p>E5640: 2.66 GHz, 80W            E5630: 2.53 GHz, 80W            E5620: 2.40 GHz, 80W            L5630: 2.13 GHz, 40W            X5570: 2.93 GHz, 95W            X5560: 2.80 GHz, 95W            X5550: 2.66 GHz, 95W            E5540: 2.53 GHz, 80W            E5530: 2.40 GHz, 80W            E5520: 2.26 GHz, 80W            L5520: 2.26 GHz, 60W            E5506: 2.13 GHz, 80W            E5504: 2.00 GHz, 80W</p> <p>Dual-Core processor:</p> <p>E5503: 2.0 GHz, DC</p>	<p>E5504: 2.00 GHz, 80W            E5520: 2.26 GHz, 80W            L5520: 2.26 GHz, 60W            E5540: 2.53 GHz, 80W            X5550: 2.67 GHz, 95W            X5570: 2.93 GHz, 95W            E5530: 2.40 GHz, 1066 MHz, 80W            X5560: 2.80 GHz, 1333 MHz, 95W</p>
<b>Cache</b>	<p>12 MB (1 x 12 MB) shared L3 cache            8 MB (1 x 8 MB) shared L3 cache            4 MB (1 x 4 MB) shared L3 cache</p>	<p>8 MB (1 x 8 MB) shared L3 cache (all processors but those listed below)            4 MB (1 x 4 MB) shared L3 cache (E5504)</p>
<b>Maximum memory</b>	<p>192 GB RDIMM            48 GB UDIMM</p>	<p>192 GB RDIMM            24 GB UDIMM</p>
<b>Drives supported</b>	<p>Up to 4:            Hot plug LFF 6G SAS 15K 600/450/300 GB            Hot plug LFF 6G SAS 7.2K 2 TB/1 TB            Non-hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB            Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB            Hot plug LFF SATA 3G 60/120 GB SSD</p> <p>OR</p> <p>Up to 8:            Hot plug SFF SATA 3G 60/120 GB SSD            Hot plug SFF SAS 10K 300/146 GB            Hot plug SFF SAS 15K 72 /146 GB            Hot plug SFF SAS 7.2k 500 GB            Hot plug SFF SATA 7.2k 500/160 GB            Hot plug SFF SATA 5.4K 250/120 GB</p>	<p>Up to 4:            Hot plug LFF 6G SAS 15K 600/450/300 GB            Hot plug LFF 6G SAS 7.2K/2 TB/1 TB            Non-hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB            Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB            Hot plug LFF SATA 3G 60/120 GB SSD</p> <p>OR</p> <p>Up to 8:            Hot plug SFF SATA 3G 60/120 GB SSD            Hot plug SFF 6G SAS 10K 300/146/72/36 GB            Hot plug SFF 6G SAS 15K 72 GB            Hot plug SFF SATA 7.2K 500/160 GB            Hot plug SFF SATA 5.4K 250/120 GB</p>
<b>Maximum internal storage</b>	8.0 TB	8.0 TB
<b>Form factor</b>	1U rack	1U rack
<b>Warranty (parts/labour/onsite)</b>	3-year parts	3-year parts

For HP related offering section on DL160 G6 and DL160se G6, [click here](#).



# HP ProLiant servers – 100 series (cont'd)

Entry-level



## HP ProLiant DL165 G7

Designed for low cost memory and compute intensive environments

## HP ProLiant DL180 G6

Flexible and reliable value server for growing businesses needing expandability

<b>Number of processors</b>	1 – 2	1 – 2
<b>Maximum number of cores</b>	24	12
<b>Processors supported</b>	<p>AMD Opteron 6100 Series processors:</p> <p>6128: 2.0 GHz, 12 MB L3 Cache, 80W</p> <p>6128HE: 2.0 GHz, 12 MB L3 Cache, 65W</p> <p>6134: 2.3 GHz, 12 MB L3 Cache, 80W</p> <p>6136: 2.4 GHz, 12 MB L3 Cache, 80W</p> <p>6164HE: 1.7 GHz, 12 MB L3 Cache, 65W</p> <p>6172: 2.1 GHz, 12 MB L3 Cache, 80W</p> <p>6174: 2.2 GHz, 12 MB L3 Cache, 80W</p>	<p>Six-Core Xeon processors:</p> <p>X5670: 2.93 GHz, 1333 MHz, 95W</p> <p>X5660: 2.80 GHz, 1333 MHz, 95W</p> <p>X5650: 2.66 GHz, 1333 MHz, 95W</p> <p>L5640: 2.26 GHz, 1333 MHz, 60W</p> <p>Quad-Core Xeon processors:</p> <p>E5640: 2.66 GHz, 1066 MHz, 80W</p> <p>E5630: 2.53 GHz, 1066 MHz, 80W</p> <p>E5620: 2.40 GHz, 1066 MHz, 80W</p> <p>E5540: 2.53 GHz, 1066 MHz, 80W</p> <p>E5520: 2.26 GHz, 1066 MHz, 80W</p> <p>E5520: 2.26 GHz, 1066 MHz, 80W</p> <p>E5504: 2.00 GHz, 800 MHz, 80W</p> <p>L5630: 2.13 GHz, 1066 MHz, 40W</p> <p>L5520: 2.26 GHz, 1066 MHz, 60W</p> <p>Dual-Core processor:</p> <p>E5503: 2.00 GHz, 800 MHz, 80W</p>
<b>Cache</b>	12 MB shared L3 Cache	12 MB (1 x 12 MB) L3 cache 8 MB (1 x 8 MB ) L3 cache 4 MB (1 x 4 MB) L3 cache: (E5504)
<b>Maximum memory</b>	192 GB RDIMM 24 GB UDIMM	192 GB RDIMM 48 GB UDIMM
<b>Drives supported</b>	<p>Up to 4:</p> <p>Hot plug LFF 6G SAS 15K 600/450/300 GB</p> <p>Hot plug LFF SAS 7.2K 2 TB/1 TB/750 GB</p> <p>Non-hot plug LFF SATA 7.2K 2 TB/1 TB /500/250/160 GB</p> <p>Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB</p> <p>Hot plug LFF SATA 3G 60/120 GB SSD</p> <p>OR</p> <p>Up to 8:</p> <p>Hot plug SFF 6G SAS 10K 300/146 GB</p> <p>Hot plug SFF 6G SAS 15K 146/72 GB</p>	<p>Up to 14:</p> <p>Hot plug LFF SATA 7.2K 2 TB/1 TB/750/500/250/160 GB</p> <p>Hot plug LFF SAS 15K 600/450/300/146 GB</p> <p>Hot plug LFF SAS 7.2K 2 TB/1 TB/750 GB</p> <p>Hot plug LFF SATA 3G 60/120 GB SSD</p> <p>OR</p> <p>Up to 25:</p> <p>Hot plug SFF 6G SAS 10K 300/146 GB</p> <p>Hot plug SFF 6G SAS 15K 146/72 GB</p> <p>Hot plug SFF 6G SAS 7.2 K 500 GB</p> <p>Hot plug SFF SATA 7.2K 500/160 GB</p> <p>Hot plug SFF SATA 5.4K 250/120 GB</p> <p>Hot plug SFF SATA 3G 60/120 GB SSD</p> <p>OR</p> <p>SATA Midline SSD</p>
<b>Maximum internal storage</b>	8.0 TB	28 TB
<b>Form factor</b>	1U rack	2U rack
<b>Warranty (parts/labour/onsite)</b>	3-year parts	3-year parts

For HP related offering section on DL165 G7 and DL180 G6, [click here](#).

# HP related offerings

## HP ProLiant servers – 100 series

	<b>HP ProLiant ML110 G5</b> Perfect first server for growing business	<b>HP ProLiant ML115 G5</b> Perfect first server for growing business
<b>Services</b>		
Recommend Related	3-year, 9x5, next-business-day response 3-year, 13x5 same-day, 4-hour response	3-year, 9x5, next-business-day response 3-year, 13x5 same-day, 4-hour response
<b>Storage</b>		
	DAT 320 internal USB/SAS tape drive LTO Ultrium 448/920 internal SAS tape drive Disk Backup D2D2502i/2504i RDX 320/500/750 Internal disk backup system HP SC44Ge SAS Host Bus Adapter	DAT 320 internal USB/SAS tape drive LTO Ultrium 448/920 internal SAS tape drive Disk Backup D2D2502i/2504i RDX 320/500/750 Internal disk backup system HP SC44Ge SAS Host Bus Adapter
<b>Options</b>		
	2 GB Unbuffered PC2-6400 ECC Memory	2 GB Unbuffered PC2-6400 ECC Memory
<b>Software</b>		
	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, NetWare, VMware, Citrix	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, VMware, Citrix

	<b>HP ProLiant ML110 G6</b> Perfect first server for growing business	<b>HP ProLiant ML150 G6</b> Expandable and affordable for growing businesses
<b>Services</b>		
Recommend Related	3-year, 9x5, next-business-day response 3-year, 13x5 same-day, 4-hour response	3-year, 9x5, next-business-day response 3-year, 13x5 same-day, 4-hour response
<b>Storage</b>		
	DAT 320 internal USB/SAS tape drive LTO Ultrium 448/920 internal SAS tape drive Disk Backup D2D2502i/2504i RDX 320/500/750 Internal disk backup system Smart Array P212 Controller	DAT 320 internal USB/SAS tape drive LTO Ultrium 448/920 internal SAS tape drive Disk Backup D2D2502i/2504i RDX 320/500/750 Internal disk backup system Smart Array P212 Controller
<b>Options</b>		
	Lights-Out 100 Advanced Pack Trusted Platform Module (TPM) 1.2 Module Support	750W Hot Plug Redundant Power Supply kit Lights-Out 100 Advanced Trusted Platform Module (TPM) 1.2 Module Support
<b>Software</b>		
	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, VMware, Citrix

# HP related offerings

## HP ProLiant servers – 100 series

### HP ProLiant DL160 G6

Designed for general purpose and compute intensive environments

### HP ProLiant DL160se G6

Designed for general purpose and I/O intensive compute environments

Services		
Recommend Related	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7 same-day, 4-hour response	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-day, 4-hour response
Storage	50/60/70 Modular Smart Array LTO-2 Ultrium 448 SAS tape drive Smart Array P212 Controller	50/60/70 Modular Smart Array LTO-2 Ultrium 448 SAS tape drive Smart Array P212 controller
Options	Hot plug HDD backplane for third and fourth drive support HP High Efficiency 750W Power Supply Kit	Hot plug HDD backplane for third and fourth drive support HP High Efficiency 750W Power Supply Kit
Software	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris, VMware, Citrix	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris, VMware, Citrix

### HP ProLiant DL165 G7

Designed for low cost memory and compute intensive environments

### HP ProLiant DL180 G6

Flexible and reliable value server for growing businesses needing expandability

Services		
Recommend Related	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7 same-day, 4-hour response	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7 same-day, 4-hour response
Storage	50/60/70 Modular Smart Array LTO-2 Ultrium 448 SAS tape drive Smart Array P212 controller	50/60/70 Modular Smart Array LTO-3 Ultrium 920 SAS tape drive Smart Array P410 Controller
Options	Rear SD Card Reader iLO Advanced Pack TPM Module	HP 750W CS HE Gold Power Supply HP 460W CS HE Gold Power Supply 8 GB Dual-Rank PC3-8500R Memory
Software	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris, VMware, Citrix	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris, VMware, Citrix Automated support: Insight Remote Support

# HP ProLiant servers – 300 series

Midrange rack and tower servers with increased expansion to support virtualisation, e-mail and database applications

## Midrange



### HP ProLiant ML310 G5p

Engineered to meet the needs of corporate small sites



### HP ProLiant DL320 G6

Entry compute power with enterprise management for remote or space-constrained installations

<b>Number of processors</b>	1	1
<b>Maximum number of cores</b>	4	4
<b>Processors supported</b>	<p>Quad-Core Intel Xeon processors:</p> <p>X3370: 3.0 GHz, 1333 MHz, 95W</p> <p>X3360: 2.83 GHz, 1333 MHz, 95W</p> <p>X3330: 2.66 GHz, 1333 MHz, 95W</p> <p>X3220: 2.40 GHz, 1066 MHz, 95W</p> <p>Quad-Core Intel Core2 Quad processor:</p> <p>Q9400: 2.66 GHz, 1333 MHz, 95W</p> <p>Dual-Core Intel Xeon processors:</p> <p>E3120: 3.16 GHz, 1333 MHz, 65W</p> <p>E3110: 3.00 GHz, 1333 MHz, 65W</p> <p>Dual-Core Intel Core2 Duo processor:</p> <p>E8400: 3.00 GHz, 1333 MHz, 65W</p> <p>E6400: 2.13 GHz, 1066 MHz, 65W</p> <p>Dual-Core Intel Pentium processor:</p> <p>E2160: 1.80 GHz, 800 MHz, 65W</p> <p>Single-Core Intel Celeron processor:</p> <p>440: 2.00 GHz, 800 MHz, 35W</p>	<p>Quad-Core Intel Xeon processors:</p> <p>E5540: 2.53 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2</p> <p>E5520: 2.26 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2</p> <p>E5506: 2.13 GHz, 4 MB L3 Cache, 80W, DDR3-800</p> <p>E5504: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800</p> <p>L5520: 2.26 GHz, 8 MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2</p> <p>L5506: 2.13 GHz, 4 MB L3 Cache, 60W, DDR3-800</p> <p>Dual-Core processors:</p> <p>E5502: 1.86 GHz, 4 MB L3 Cache, 80W, DDR3-800</p>
<b>Cache</b>	<p>12 MB L2: Xeon X3370, X3360</p> <p>8 MB L2: Xeon X3220, E3110</p> <p>6 MB L2: X3330, E3120, Q9400, E8400</p> <p>2 MB L2: E6400</p> <p>1 MB L2: Pentium E2160</p> <p>512 KB L2: Celeron 440</p>	4 MB (1 x 4 MB)
<b>Maximum memory</b>	8 GB	8 GB
<b>Drives supported</b>	<p>Up to 4:</p> <p>Hot plug LFF 6G SAS 15K 600/450/300/146 GB</p> <p>Hot plug LFF 6G SAS 7.2K 2 TB/1 TB/750 GB</p> <p>Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB</p> <p>Hot plug LFF SATA 3G 60/120 GB SSD</p>	<p>Up to 4:</p> <p>Hot plug LFF 6G SAS 15K 600/450/300 GB</p> <p>Hot plug LFF 6G SAS 7.2K 2 TB/1 TB</p> <p>Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB</p>
<b>Maximum internal storage</b>	8.0 TB	8.0 TB
<b>Form factor</b>	Tower or 5U rack	1U rack
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year; 3-year/1-year/1-year (Asia-Pacific region only)	3-year/3-year/3-year

For HP related offering section on ML310 G5p and DL320 G6, [click here](#).

# HP ProLiant servers – 300 series (cont'd)

Midrange



## HP ProLiant ML330 G6

Performance and manageability to scale your business

<b>Number of processors</b>	1 – 2
<b>Maximum number of cores</b>	12
<b>Processors supported</b>	<p><b>Intel Xeon processor DP family:</b>            Six-Core processors:            X5650: 2.66 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4</p> <p>Quad-Core processors:            E5640: 2.66 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2            E5630: 2.53 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2            E5620: 2.40 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2            E5540: 2.53 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2            E5530: 2.40 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2            E5520: 2.26 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2            E5507: 2.26 GHz, 4 MB L3 Cache, 80W, DDR3-800            E5506: 2.13 GHz, 4 MB L3 Cache, 80W, DDR3-800            E5504: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800</p> <p>Dual-Core            E5503: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800            E5502: 1.86 GHz, 4 MB L3 Cache, 80W, DDR3-800</p> <p><b>Intel Xeon processor W3500 UP family:</b>            Quad-Core processors:            W3540: 2.93 GHz, 8 MB L3 Cache, 130W, DDR3-1066, HT, Turbo 1/1/1/2            W3520: 2.66 GHz, 8 MB L3 Cache, 130W, DDR3-1066, HT, Turbo 1/1/1/2</p> <p>Dual-Core processors:            W3505: 2.53 GHz, 4 MB L3 Cache, 130W, DDR3-1066            W3503: 2.40 GHz, 4 MB L3 Cache, 130W, DDR3-1066</p>
<b>Cache</b>	12 MB L3 cache (For processors X5600/E5600 series) 8 MB L3 cache (all processors supported but those listed above and below) 4 MB L3 cache: E5506, E5504, E5502, W3505, W3503
<b>Maximum memory</b>	192 GB RDIMM 48 GB UDIMM
<b>Drives supported</b>	Up to 8: Non-hot plug LFF SAS 15K: 600/450/300/146 GB Non-hot plug LFF SATA 7.2K 2 TB/1 TB/750/500/250/160 GB Hot plug LFF SAS 15K 600/450/300/146 GB Hot plug LFF SAS 7.2K 2 TB/1 TB/750 GB Hot plug LFF SATA 7.2K 2 TB/1 TB/750/500/250/160 GB Hot plug LFF SATA 3G 60/120 GB SSD
<b>Maximum internal storage</b>	16.0 TB
<b>Form factor</b>	5U Tower
<b>Warranty (parts/labour/onsite)</b>	3-year/1-year/1-year

For HP related offering section on ML330 G6, [click here](#).

# HP ProLiant servers – 300 series (cont'd)

Midrange



## HP ProLiant ML350 G6

Adaptable, reliable mainstay for your business

<b>Number of processors</b>	1 – 2
<b>Maximum number of cores</b>	12
<b>Processors supported</b>	<p><b>Intel Xeon processor DP family:</b></p> <p>Six-Core processors:  X5670: 2.93 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4  X5660: 2.80 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4  X5650: 2.66 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4</p> <p>Quad-Core Xeon processors:  E5640: 2.66 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2  E5630: 2.53 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2  E5620: 2.40 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2  X5570: 2.93 GHz, 1333 MHz, 95W  X5560: 2.80 GHz, 1333 MHz, 95W  X5550: 2.66 GHz, 1333 MHz, 95W  E5540: 2.53 GHz, 1066 MHz, 80W  E5530: 2.40 GHz, 1066 MHz, 80W  E5520: 2.26 GHz, 1066 MHz, 80W  L5630: 2.13 GHz, 12 MB L3 Cache, 40W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2  L5520: 2.26 GHz, 1066 MHz, 60W  L5506: 2.13 GHz, 800 MHz, 60W  E5507: 2.26 GHz, 4 MB L3 Cache, 80W, DDR3-800  E5506: 2.13 GHz, 800 MHz, 80W  E5504: 2.00 GHz, 800 MHz, 80W</p> <p>Dual-Core Xeon processor:  E5503: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800  E5502: 1.86 GHz, 800 MHz, 80W</p>
<b>Cache</b>	12 MB L3 cache (For processors X5600/E5600 series, L5630) 8 MB (1 x 8 MB) L3 cache: (all processors but those listed above and below) 4 MB (1 x 4 MB) L3 cache: E5506, L5506, E5507, E5504, E5503, E5502
<b>Maximum memory</b>	192 GB RDIMM 48 GB UDIMM
<b>Drives supported</b>	Up to 8: Hot plug LFF SAS 7.2K 2 TB/1 TB Hot plug LFF SAS 15K 600/450/300/146 GB Hot plug LFF SATA 7.2K 2 TB/1 TB/750/500/250/160 GB Hot plug LFF SATA 60/120 GB SSD  Up to 16: Hot plug SFF SAS 10K 300/146 GB Hot Plug SFF SAS 7.2K 500 GB Hot plug SFF SAS 15K 146/72 GB Hot plug SFF SATA 7.2K 500/160 GB Hot plug SFF SATA 5.4K 250/120 GB Hot plug SFF SATA 60/120 GB SSD
<b>Maximum internal storage</b>	16.0 TB
<b>Form factor</b>	Tower or 5U rack
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year

For HP related offering section on ML350 G6, [click here](#).

# HP ProLiant servers – 300 series (cont'd)

## Midrange



### HP ProLiant DL360 G6

Most reliable compute power in an 1U space, HP Integrated Lights-Out (iLO) management processor and fault tolerance for space-constrained installations

### HP ProLiant DL360 G7

Most reliable compute power in an 1U Space with ProLiant iLO3 remote management and fault tolerance for space-constrained installations

<b>Number of processors</b>	1 – 2	1 – 2
<b>Maximum number of cores</b>	12	12
<b>Processors supported</b>	<p>Six-Core Xeon processors:</p> <p>X5670: 2.93 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>X5660: 2.80 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>X5650: 2.66 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>Quad-Core Xeon processors:</p> <p>X5570: 2.93 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3</p> <p>X5560: 2.80 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3</p> <p>X5550: 2.66 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3</p> <p>E5540: 2.53 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2</p> <p>E5530: 2.40 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2</p> <p>L5520: 2.26 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2</p> <p>L5520: 2.26 GHz, 1066 MHz, 60W, Turbo: 1/1/2/2</p> <p>L5530: 2.40 GHz, 1066 MHz, 60W, Turbo: 1/1/2/2</p> <p>L5506: 2.13 GHz, 800 MHz, 60W, Turbo: N/A</p> <p>E5506: 2.13 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>E5504: 2.00 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>Dual-Core Xeon processor:</p> <p>E5502: 1.86 GHz, 800 MHz, 80W, Turbo: N/A</p>	<p>Six-Core Xeon processors:</p> <p>X5670: 2.93 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>X5660: 2.80 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>X5650: 2.66 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>L5640: 2.26 GHz, 1066 MHz, 60W, HT Turbo: 2/2/3/3/4/4</p> <p>Quad-Core Xeon processors:</p> <p>E5640: 2.66 GHz, 1066 MHz, 80W, HT Turbo: 1/1/2/2</p> <p>E5630: 2.53 GHz, 1066 MHz, 80W, HT Turbo: 1/1/2/2</p> <p>E5620: 2.40 GHz, 1066 MHz, 80W, HT Turbo: 1/1/2/2</p> <p>E5506: 2.13 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>L5630: 2.13 GHz, 1066 MHz, 40W, HT Turbo 1/1/2/2</p> <p>Dual-Core Processor:</p> <p>E5503: 2.00 GHz, 800 MHz, 80W, Turbo: N/A</p>
<b>Cache</b>	<p>12 MB (1 x 12 MB) L3 cache: (all 6 core processors)</p> <p>8 MB (1 x 8 MB) L3 cache: (all processors supported but those listed below)</p> <p>E5506, L5506, E5504, E5502</p>	<p>12 MB (1 x 12 MB) L3 cache: (all processor models except for those identified below)</p> <p>4 MB (1 x 4 MB) L3 cache: (For processors E5506/E5503)</p>
<b>Maximum memory</b>	<p>192 GB RDIMM (12 x 16 GB for Registered Memory Configurations)</p> <p>24 GB UDIMM (12 x 2 GB for Unbuffered Memory Configurations)</p>	<p>192 GB RDIMM (12 x 16 GB for Registered Memory Configurations)</p> <p>48 GB UDIMM (12 x 4 GB for Unbuffered Memory Configurations)</p>
<b>Drives supported</b>	<p>Up to 8:</p> <p>Hot plug SFF 6G SAS 10K 300/146 GB</p> <p>Hot plug SFF 6G SAS 15K 146/72 GB</p> <p>Hot plug SFF 6G SAS 7.2K 500 GB</p> <p>Hot plug SFF SATA 7.2K 500/160 GB</p> <p>Hot plug SFF SATA 5.4K 250/120 GB</p> <p>Hot Plug SFF SATA 3G 120/60 GB SSD</p>	<p>Up to 8:</p> <p>Hot Plug SFF SAS 6G 10K 300/146 GB</p> <p>Hot Plug SFF SAS 6G 15K 146/72 GB</p> <p>Hot Plug SFF SAS 7.2K 500 GB</p> <p>Hot Plug SFF SATA 7.2K 500/160 GB</p> <p>Hot Plug SFF SATA 5.4K 250 GB</p> <p>Hot Plug SFF SATA 3G 120/60 GB SSD</p>
<b>Maximum internal storage</b>	4.0 TB	4.0 TB
<b>Form factor</b>	1U rack	1U Rack
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year	3-year/3-year/3-year

For HP related offering section on DL360 G6 and DL360 G7, [click here](#).

# HP ProLiant servers – 300 series (cont'd)

## Midrange



### HP ProLiant DL370 G6

New 4U rack server optimised for virtualisation and consolidation environments, well-suited for deployment in growing businesses, remote office sites or data centres



### HP ProLiant ML370 G6

Redesigned tower expandable server optimised for virtualisation and consolidation environments, well-suited for deployment in growing businesses, remote office sites or data centres

<b>Number of processors</b>	1 – 2	1 – 2
<b>Maximum number of cores</b>	8	8
<b>Processors supported</b>	<p>Quad-Core Intel Xeon processors:</p> <p>W5580: 3.20 GHz, 1333 MHz, 130W, Turbo: 1/1/1/2                      X5570: 2.93 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      X5560: 2.80 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      X5550: 2.66 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      E5540: 2.53 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      E5530: 2.40 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      L5520: 2.26 GHz, 1066 MHz, 60W, Turbo: 1/1/2/2                      E5520: 2.26 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      E5506: 2.13 GHz, 800 MHz, 80W, Turbo: N/A                      E5504: 2.00 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>Dual-Core Intel Xeon processor:                      E5502: 1.86 GHz, 800 MHz, 80W, Turbo: N/A</p>	<p>Quad-Core Intel Xeon processors:</p> <p>W5580: 3.20 GHz, 1333 MHz, 130W, Turbo: 1/1/1/2                      X5570: 2.93 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      X5560: 2.80 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      X5550: 2.66 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      E5540: 2.53 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      E5530: 2.40 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      L5520: 2.26 GHz, 1066 MHz, 60W, Turbo: 1/1/2/2                      E5520: 2.26 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      E5506: 2.13 GHz, 800 MHz, 80W, Turbo: N/A                      E5504: 2.00 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>Dual-Core Intel Xeon processor:                      E5502: 1.86 GHz, 800 MHz, 80W, Turbo: N/A</p>
<b>Cache</b>	8 MB (1 x 8 MB) L3 cache: (all processors but those listed below) 4 MB (1 x 4 MB) L3 cache: (E5506, E5504, E5502)	8 MB (1 x 8 MB) L3 cache: (all processors but those listed below) 4 MB (1 x 4 MB) L3 cache: (E5506, E5504, E5502)
<b>Maximum memory</b>	192 GB RDIMM (12 x 16 GB) for Registered Memory configurations 48 GB UDIMM (12 x 4 GB) for Unbuffered Memory Configurations)	192 GB RDIMM (12 x 16 GB) for Registered Memory configurations 48 GB UDIMM (12 x 4 GB) for Unbuffered Memory Configurations)
<b>Drives supported</b>	<p>Up to 14:                      Hot plug LFF 6G SAS 7.2K 2 TB/1 TB                      Hot plug LFF 6G SAS 15K 600/450/300 GB                      Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB                      Hot plug LFF SATA 3G 60/120 GB SSD</p> <p>Up to 24:                      Hot plug SFF 6G SAS 10K 300/146 GB                      Hot plug SFF 6G SAS 15K 146/72 GB                      Hot plug SFF SATA 5.4K 250/120 GB; 7.2K 500/160 GB                      Hot plug SFF SATA 3G 60/120 GB SSD</p>	<p>Up to 14:                      Hot plug LFF 6G SAS 7.2K 2 TB/1 TB                      Hot plug LFF 6G SAS 15K 600/450/300 GB                      Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB                      Hot plug LFF SATA 3G 60/120 GB SSD</p> <p>Up to 24:                      Hot plug SFF 6G SAS 10K 300/146 GB                      Hot plug SFF 6G SAS 15K 146/72 GB                      Hot plug SFF SATA 5.4K 250/120 GB; 7.2K 500/160 GB                      Hot plug SFF SATA 3G 60/120 GB SSD</p>
<b>Maximum internal storage</b>	28.0 TB	28.0 TB
<b>Form factor</b>	4U rack	Tower
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year	3-year/3-year/3-year

For HP related offering section on DL370 G6 and ML370 G6, [click here](#).



# HP ProLiant servers – 300 series (cont'd)

## Midrange



### HP ProLiant DL380 G6

Affordable server with robust features for growing businesses and remote sites



### HP ProLiant DL380 G7

Affordable server with robust features for growing businesses and remote sites

<b>Number of processors</b>	1 – 2	1 – 2
<b>Maximum number of cores</b>	12	12
<b>Processors supported</b>	<p>Six- Core Xeon processors:</p> <p>X5670: 2.93 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3                      X5660: 2.80 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3                      X5650: 2.66 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3</p> <p>Quad-Core Xeon processors:</p> <p>X5570: 2.93 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      X5560: 2.80 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      X5550: 2.66 GHz, 1333 MHz, 95W, Turbo: 2/2/3/3                      E5540: 2.53 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      L5530: 2.40 GHz, 1066 MHz, 60W, Turbo: 1/1/1/2/2                      E5530: 2.40 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      L5520: 2.26 GHz, 1066 MHz, 60W, Turbo: 1/1/2/2                      E5520: 2.26 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      L5506: 2.13 GHz, 800 MHz, 60W, Turbo: N/A                      E5506: 2.13 GHz, 800 MHz, 80W, Turbo: N/A                      E5504: 2.00 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>Dual-Core Xeon processor:</p> <p>E5502: 1.86 GHz, 800 MHz, 80W, Turbo: N/A</p>	<p>Six-Core Xeon Processors:</p> <p>X5680: 3.33 GHz, 1333 MHz, 130W, HT Turbo: 1/1/1/1/2/2                      X5670: 2.93 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3                      X5660: 2.80 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3                      X5650: 2.66 GHz, 1333 MHz, 95W, HT Turbo: 2/2/2/2/3/3                      L5640: 2.26 GHz, 1333 MHz, 60W, HT Turbo: 2/2/3/3/4/4</p> <p>Quad-Core Xeon processors:</p> <p>X5677: 3.46 GHz, 1333 MHz, 130W, HT Turbo: NA/NA/1/1/2/2                      E5640: 2.66 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      E5630: 2.53 GHz, 1066 MHz, 80W, Turbo: 1/1/2/2                      E5620: 2.40 GHz, 1066 MHz, 60W, Turbo: 1/1/2/2                      L5630: 2.13 GHz, 1066 MHz, 40W, Turbo: 1/1/2/2                      E5506: 2.13 GHz, 800 MHz, 80W, Turbo: N/A</p> <p>Dual-Core Xeon processor:</p> <p>E5503: 2.00 GHz, 800 MHz, 80W, Turbo: N/A</p>
<b>Cache</b>	<p>12 MB (1 x 12 MB) L3 cache: (all 6 core processors)                      8 MB (1 x 8 MB) L3 cache: (all Quad-core processors but those listed below)                      4 MB (1 x 4 MB) L3 cache: E5506, L5506, E5504, E5502</p>	<p>12 MB (1 x 12 MB) L3 cache: (all processor models except for those identified below)                      4 MB (1 x 4 MB) L3 cache: (For processors E5506/E5503)</p>
<b>Maximum memory</b>	<p>192 GB RDIMM                      24 GB UDIMM (12x 2 GB for Unbuffered Memory Configurations)</p>	<p>192 GB RDIMM                      48 GB UDIMM</p>
<b>Drives supported</b>	<p>Up to 8 (16 with optional second SAS drive cage*):                      Hot plug SFF 6G SAS 10K 300/146 GB                      Hot plug SFF 6G SAS 15K 146/72 GB                      Hot plug SFF SATA 7.2K 500/160 GB                      Hot plug SFF SATA 5.4K 250/120 GB</p> <p>Up to 6:                      Hot plug LFF 6G SAS 15K 600/450/300 GB                      Hot plug LFF 6G SAS 7.2K 2 TB/1 TB/750 GB                      Hot plug LFF SATA 7.2K 2 TB/1 TB/500/250/160 GB</p> <p>Hot plug LFF SATA 3G 60/120 GB SSD</p>	<p>Up to 8 (16 with optional second SAS drive cage*):                      Hot plug SFF 6G SAS 10K 300/146 GB                      Hot Plug SFF 3G SAS 10K 300/146 GB                      Hot plug SFF 6G SAS 15K 146/72 GB                      Hot Plug SFF 3G SAS 15K 146/72 GB                      Hot Plug SFF 6G SAS 7.2K 500 GB                      Hot Plug SFF SATA 3G 7.2K 500/160 GB                      Hot Plug SFF SATA 3G 5.4K 250/120 GB                      Hot Plug SFF SATA 3G 120/60 GB SSD</p> <p>Up to 6:                      Hot plug LFF SAS 6G 15K 600/450/300 GB                      Hot plug LFF SAS 3G 15K 450/300/146 GB                      Hot Plug LFF SAS 6G 7.2K 2 TB/1 TB                      Hot plug LFF SAS 3G 7.2K 1TB                      Hot plug LFF SATA 3G 7.2K 2 TB/1 TB/500/ 250/160 GB</p> <p>Hot plug LFF SATA 3G 120/60 GB SSD</p>
<b>Maximum internal storage</b>	<p>4.0 TB (8.0 TB with optional second SAS drive cage*)                      12 TB (with LFF optional drive cage)</p>	<p>4.0 TB SFF (8.0 TB with optional second SAS drive cage*)                      12 TB (with LFF optional drive cage)</p>
<b>Form factor</b>	2U rack	2U rack
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year	3-year/3-year/3-year

For HP related offering section on DL380 G6 and DL380 G7, [click here](#).

\* Second drive cage requires a storage controller

# HP ProLiant servers – 300 series (cont'd)

## Midrange



### HP ProLiant DL385 G6

Designed with virtualisation in mind, yet flexible to support any business need

<b>Number of processors</b>	1 – 2
<b>Maximum number of cores</b>	12
<b>Processors supported</b>	Six-Core AMD Opteron processors: 2435: 2.6 GHz, 75W 2431: 2.4 GHz, 75W 2427: 2.2 GHz, 75W 2425HE: 2.1 GHz, 55W
<b>Cache</b>	6 MB L3 cache
<b>Maximum memory</b>	128 GB
<b>Drives supported</b>	Up to 8 (16 with optional second SAS drive cage*): Hot plug SFF 6G SAS 10K 300/146 GB Hot plug SFF 3G SAS 10K 300/146 GB Hot plug SFF 6G SAS 15K 146/72 GB Hot plug SFF 6G SAS 7.2K 500 GB Hot plug SFF SATA 3G 7.2K 500/160 GB Hot plug SFF SATA 3G 5.4K 250/120 GB  Hot plug SFF SATA 3G 120/60 GB SSD  Up to 6: Hot plug LFF 6G SAS 15K 600/450/300 GB Hot plug LFF 3G SAS 7.2K 2 TB/1 TB Hot plug LFF SATA 6G 7.2K 2 TB/1 TB/750/500/250/160 GB Hot plug LFF SATA 1.5G 5.4 K 120 GB  Hot plug LFF SATA 3G 120/60 GB SSD
<b>Maximum internal storage</b>	4.0 TB SFF (8.0 TB with optional second SAS drive cage*) 12 TB (with LFF optional drive cage)
<b>Form factor</b>	2U rack
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year

For HP related offering section on DL385 G6, [click here](#).

\* Second drive cage requires a storage controller or SAS expander card

# HP ProLiant servers – 300 series (cont'd)

## Midrange



### HP ProLiant DL385 G7

Designed with virtualisation in mind, yet flexible to support any business need

<b>Number of processors</b>	1 – 2
<b>Maximum number of cores</b>	24
<b>Processors supported</b>	<p>Twelve-Core AMD Opteron processors:</p> <p>6176SE: 2.3 GHz, 105W                      6174: 2.2 GHz, 80W                      6172: 2.1 GHz, 80W</p> <p>Eight-Core AMD Opteron processors:</p> <p>6136: 2.4 GHz, 80W                      6134: 2.3 GHz, 80W                      6128: 2.0 GHz, 80W</p>
<b>Cache</b>	12 MB L3 cache
<b>Maximum memory</b>	256 GB
<b>Drives supported</b>	<p>Up to 8 (16 with optional second SAS drive cage*):</p> <p>Hot plug SFF 6G SAS 10K 300/146 GB                      Hot plug SFF 3G SAS 10K 300/146 GB                      Hot plug SFF 6G SAS 15K 146/72 GB                      Hot plug SFF 3G SAS 15K 146/72 GB                      Hot plug SFF SAS 6G 7.2K 500 GB                      Hot plug SFF SATA 3G 7.2K 500/160 GB                      Hot plug SFF SATA 3G 5.4K 250/120 GB</p> <p>Hot plug SFF SATA 3G 120/60 GB SSD</p> <p>Up to 6:</p> <p>Hot plug LFF SAS 6G 15K 600/450/300 GB                      Hot plug LFF SAS 3G 15K 450/300 GB                      Hot plug LFF SAS 3G 7.2K 1 TB/750 GB                      Hot plug LFF SATA 3G 7.2K 2 TB/ 1TB/750/500/250/160 GB                      Hot plug LFF SATA 3G 5.4K 250 GB</p> <p>Hot plug LFF SATA 3G 120/60 GB SSD</p>
<b>Maximum internal storage</b>	<p>4 TB SFF (8 TB with optional second SAS drive cage*)                      12 TB (with LFF optional drive cage)</p>
<b>Form factor</b>	2U Rack
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year

For HP related offering section on DL385 G7, [click here](#).

\* Second drive cage requires a storage controller or SAS expander card

# HP related offerings

## HP ProLiant servers – 300 series

### HP ProLiant ML310 G5p

Engineered to meet the needs of corporate small sites

### HP ProLiant DL320 G6

Entry compute power with enterprise management for remote or space-constrained installations

Services		
Recommend Related	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-business-day, 4-hour response	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-business-day, 4-hour response
Storage	50/60/70 Modular Smart Array LTO-2 Ultrium 448 SAS internal tape drive Smart Array P212 Controller P4000 SAN and Virtual SAN Appliance	60/70 Modular Smart Array LTO-2 Ultrium 448 SAS Tape Drive Smart Array P212 Controller P4000 SAN and Virtual SAN Appliance
Options	T1500 Uninterruptible Power System E200 Controller with battery-backed write cache (BBWC) and 128 MB upgrade	NC360T PCI Express Dual-port Gigabit Server Adapter Modular Power Distribution Unit
Software	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Citrix Automated support: Insight Remote Support Virtual storage software: P4000 Virtual SAN Appliance	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Citrix Automated support: Insight Remote Support Virtual storage software: P4000 Virtual SAN Appliance

### HP ProLiant ML330 G6

Performance and manageability to scale your business

### HP ProLiant ML350 G6

Adaptable, reliable mainstay for your business

Services		
Recommend Related	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-business-day, 4-hour response	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-business-day, 4-hour response
Storage	Modular Smart Array 20 HP Smart Array P410/512M Controller P4000 SAN and Virtual SAN Appliance	50/60/70 Modular Smart Array LTO-3 Ultrium 920 SAS internal tape drive Smart Array P410i Controller (standard) P4000 SAN and Virtual SAN Appliance
Options	ML330 G6 Processor Option kit ML330 G6 750W Redundant Power supply Kit	4 GB Quad-Rank PC3-8500R Memory NC382T PCI Express Dual-port Multifunction Gigabit Server Adapter
Software	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Citrix Automated support: Insight Remote Support Virtual storage software: P4000 Virtual SAN Appliance	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Citrix Automated support: Insight Remote Support Virtual storage software: P4000 Virtual SAN Appliance

# HP related offerings

## HP ProLiant servers – 300 series

### HP ProLiant DL360 G6

Most reliable compute power in an 1U space, HP iLO management processor and fault tolerance for space-constrained installations

### HP ProLiant DL360 G7

Most reliable compute power in an 1U Space with ProLiant iLO3 remote management and fault tolerance for space-constrained installations

Services		
Recommend Related	3-year, 24x7, same-business-day, 4-hour response 3-year Support Plus 24	3-year, 24x7, same-business-day, 4-hour response 3-year Support Plus 24 only
Storage	Smart Array P410i Controller (standard) 50/60/70/2000 Modular Smart Array DAT 160 USB tape drive P4000 SAN and Virtual SAN Appliance	Smart Array P410i Controller (standard) 60/70/2000 Modular Smart Array DAT 320 USB Tape Drive P4000 SAN and Virtual SAN Appliance
Options	TFT7600 Monitor 10000 G2 Series Rack	10000 G2 Series Rack
Software	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, Solaris, VMware, Citrix Automated support: Insight Remote Support	Management: HP Insight Control w/iLO 3 Operating systems: Windows, Linux, Oracle Solaris, VMware, Citrix Automated support: HP Integrated Lights-Out 3

### HP ProLiant DL370 G6

New 4U rack server enhanced for virtualisation and consolidation environments, well-suited for deployment in growing businesses, remote office sites or data centres

### HP ProLiant ML370 G6

Redesigned 4U tower expandable server enhanced for virtualisation and consolidation environments, well-suited for deployment in growing businesses, remote office sites or data centres

Services		
Recommend Related	3-year, 24x7, same-business-day, 4-hour response 3-year Support Plus 24	3-year, 24x7, same-business-day, 4-hour response 3-year Support Plus 24
Storage	50/60/70/2000 Modular Smart Array LTO-4 Ultrium 1760 SAS internal tape drive Smart Array P410i Controller (standard) P4000 SAN and Virtual SAN Appliance	50/60/70/2000 Modular Smart Array LTO-4 Ultrium 1760 SAS internal tape drive Smart Array P410i Controller (standard) P4000 SAN and Virtual SAN Appliance
Options	T1500 Uninterruptible Power System HP NC375T PCI Express Quad Port Gigabit Server Adapter	T1500 Uninterruptible Power System HP NC375T PCI Express Quad Port Gigabit Server Adapter
Software	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Solaris Automated support: Insight Remote Support Virtual storage software: P4000 Virtual SAN Appliance	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Solaris Automated support: Insight Remote Support Virtual storage software: P4000 Virtual SAN Appliance

# HP related offerings

## HP ProLiant servers – 300 series

### HP ProLiant DL380 G6

Affordable server with robust features for growing businesses and remote sites

### HP ProLiant DL380 G7

Affordable server with robust features for growing businesses and remote sites

Services		
Recommend Related	3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6 or 24 hour call-to-repair	3-year, 24x7, same-business-day, 4-hour response 3-year Support Plus 24
Storage		
	50/60/70/2000 Modular Smart Array RDX Backup System Smart Array P410i Controller (standard) P4000 SAN and Virtual SAN Appliance	60/70/2000 Modular Smart Array RDX Backup System Smart Array P410i Controller (standard) P4000 SAN and Virtual SAN Appliance
Options		
	NC364T PCI Express Quad-port Gigabit Server Adapter 2x1x16 IP Console Switch with Virtual Media PCI Express	NC364T PCI Express Quad-port Gigabit Server Adapter 2x1x16 IP Console Switch with Virtual Media PCI Express
Software		
	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, Solaris, VMware, Citrix Automated support: Insight Remote Support	Management: HP Insight Control w/iLO 3 Operating systems: Windows, Linux, Oracle Solaris, VMware, Citrix Automated support: HP Integrated Lights-Out 3

### HP ProLiant DL385 G6

Designed with virtualisation in mind, yet flexible to support any business need

### HP ProLiant DL385 G7

Designed with virtualisation in mind, yet flexible to support any business need

Services		
Recommend Related	3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6 or 24 hour call-to-repair	3-year, 24x7, same-business-day, 4-hour response 3-year Support Plus 24
Storage		
	50/60/70 Modular Smart Array LTO-3 Ultrium 920 SAS tape drive RDX Backup System	60/70 Modular Smart Array LTO-3 Ultrium 920 SAS tape drive RDX Backup system
Options		
	8 GB Registered PC2-5300 Memory TFT7600 Monitor	8 GB 2Rx4 PC3-10600R Memory HP Trusted Platform Module
Software		
	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Solaris Automated support: Insight Remote Support	Management: HP Insight Control w/iLO 3 Operating Systems: Windows, Linux, Oracle, VMware, Citrix Automated support: HP Integrated Lights-Out for ProLiant

# HP ProLiant servers – 500 series

High-end rack and tower servers that help consolidate business-critical application environments while reducing complexity and cost

High-end



## HP ProLiant DL580 G5

Featuring Intel six-core processors for even more performance and scalability

## HP ProLiant DL585 G6

Featuring AMD six-core processors for more performance and scalability

<b>Number of processors</b>	1 – 4	2 or 4
<b>Maximum number of cores</b>	24	24
<b>Processors supported</b>	<p>6-Core Processors Intel Xeon processors:</p> <p>X7460: 2.67 GHz, 16 MB cache, 130W</p> <p>L7455: 2.13 GHz, 12 MB cache, 65W</p> <p>E7450: 2.40 GHz, 12 MB cache, 90W</p> <p>Quad-Core Intel Xeon processors:</p> <p>E7440: 2.40 GHz, 16 MB cache, 90W</p> <p>E7430: 2.13 GHz, 12 MB cache, 90W</p> <p>E7420: 2.13 GHz, 8 MB cache, 90W</p> <p>X7350: 2.93 GHz, 2x4M cache, 130W</p> <p>E7340: 2.40 GHz, 2x4M cache, 80W</p> <p>E7330: 2.40 GHz, 2x3M cache, 80W</p> <p>E7320: 2.13 GHz, 2x2M cache, 80W</p> <p>E7310: 1.60 GHz, 2x2M cache, 80W</p> <p>L7345: 1.86 GHz, 2x4M cache, 50W</p> <p>Dual-Core Intel Xeon processor:</p> <p>E7220: 2.93 GHz, 2x4M cache, 80W</p>	<p>Six-Core AMD Opteron processors:</p> <p>8439SE: 2.80 GHz, 105W ACP</p> <p>8435: 2.6 GHz, 75W ACP</p> <p>8431: 2.4 GHz, 75W ACP</p> <p>8425HE: 2.10 GHz, 55W ACP</p>
<b>Cache</b>	Up to 16 MB	6 MB shared L3 cache
<b>Maximum memory</b>	256 GB	256 GB
<b>Drives supported</b>	<p>Up to 16:</p> <p>Hot plug SFF 6G SAS 10K 300/146 GB</p> <p>Hot plug SFF 6G SAS 15K 146/72 GB</p> <p>Hot plug SFF 6G SAS 7.2K 500 GB</p> <p>Hot plug SFF SATA 7.2K 500/160 GB</p> <p>Hot plug SFF SATA 5.4K 250/120 GB</p> <p>Hot plug SFF SATA SSD 120/60 GB</p>	<p>Up to 8:</p> <p>Hot plug 6G SFF SAS 10K 300/146 GB</p> <p>Hot plug 6G SFF SAS 15K 146/72 GB</p> <p>Hot plug 6G SFF SAS 7.2K 500 GB</p> <p>Hot plug SFF SATA 7.2K 500/160 GB</p> <p>Hot plug SFF SATA 5.4K 250/120 GB</p> <p>Hot plug SFF SATA SSD 120/60 GB</p>
<b>Maximum internal storage</b>	8 TB	4 TB
<b>Form factor</b>	4U rack	4U rack
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year	3-year/3-year/3-year
<b>HP related offerings</b>		
<b>Services</b>		
Recommend Related	3-year, 24x7, 6 or 24 hour call-to-repair Proactive Select	3-year, 24x7, 6 or 24 hour call-to-repair Proactive Select
<b>Storage</b>		
	50/60/70/2000 Modular Smart Array LTO-4 Ultrium 1760 SAS tape drive Smart Array P410 Controller P4000 SAN and Virtual SAN Appliance	50/60/70/2000 Modular Smart Array LTO-4 Ultrium 1760 SAS tape drive Smart Array P410 Controller P4000 SAN and Virtual SAN Appliance
<b>Options</b>		
	TFT7600 Monitor 4x1x16 IP Console Switch with Virtual Media	TFT7600 Monitor 4x1x16 IP Console Switch with Virtual Media
<b>Software</b>		
	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Solaris Automated support: Insight Remote Support	Management: Insight Control w/iLO Advanced Operating systems: Windows, Linux, VMware, Solaris Automated support: Insight Remote Support

## HP ProLiant servers – 700 series

High-end rack servers that help consolidate business-critical application environments while reducing complexity and cost

High-end



### HP ProLiant DL785 G6 Server series

An ideal server for enterprise-class database, consolidation and virtualisation environments

<b>Number of processors</b>	4 or 8
<b>Maximum number of cores</b>	48
<b>Processors supported</b>	6-core AMD Opteron processors: 8439 SE: 2.8 GHz, 105W ACP 8431: 2.4 GHz, 75W ACP 8425 HE: 2.1 GHz, 55W ACP
<b>Cache</b>	6 MB L3
<b>Maximum memory</b>	512 GB
<b>Drives supported</b>	16 (8 (standard) + 8 (optional) SFF SAS drive bays: Hot plug SFF 6G SAS 7.2K 500 GB Hot-plug SFF 6G SAS 10K 300/146 GB Hot-plug SFF 6G SAS 15K 146/72 GB Hot plug SFF SATA SSD 120/60 GB
<b>Maximum internal storage</b>	4.8 TB
<b>Form factor</b>	7U rack-mount
<b>Warranty (parts/labour/onsite)</b>	3-year/3-year/3-year

### HP related offerings

<b>Services</b>	
Recommend Related	3-years Proactive 24 3-years Critical service
<b>Storage</b>	
	Embedded RAID support with optional BBWC, RAID 0/1 support 1 removable Slimline DVD/CD-RW Drive P4000 SAN
<b>Options</b>	
	HP Smart SAS Expander Card Higher-efficiency power supply unit
<b>Software</b>	
	Management: HP Insight Control w/iLO Advanced Operating systems: Windows, Linux, Solaris Automated support: Insight Remote Support



## HP ProLiant servers – 1000 series

Multi-node series is designed to improve efficiency and increase density without additional infrastructure expense. It provides multi-node flexibility with 4-in-1 efficiency.

### Multi-node



#### HP ProLiant DL170h G6

Multi-node flexibility with 4-in-1 efficiency

<b>Number of processors</b>	1 – 2 per node														
<b>Maximum number of cores</b>	4 – 6 per processor														
<b>Processors supported</b>	<table border="0"> <tr> <td>E5504: 2.00 GHz, 80W</td> <td>L5506: 2.13 GHz, 60W</td> </tr> <tr> <td>E5506: 2.13 GHz, 80W</td> <td>X5550: 2.67 GHz, 95W</td> </tr> <tr> <td>E5520: 2.26 GHz, 80W</td> <td>X5560: 2.80 GHz, 95W</td> </tr> <tr> <td>E5530: 2.40 GHz, 80W</td> <td>X5570: 2.93 GHz, 95W</td> </tr> <tr> <td>L5520: 2.26 GHz, 60W</td> <td>X5670: 2.93 GHz, 95W</td> </tr> <tr> <td>L5530: 2.4 GHz, 60W</td> <td>E5640: 2.66 GHz, 80W</td> </tr> <tr> <td>E5540: 2.53 GHz, 80W</td> <td>L5630: 2.13 GHz, 40W</td> </tr> </table>	E5504: 2.00 GHz, 80W	L5506: 2.13 GHz, 60W	E5506: 2.13 GHz, 80W	X5550: 2.67 GHz, 95W	E5520: 2.26 GHz, 80W	X5560: 2.80 GHz, 95W	E5530: 2.40 GHz, 80W	X5570: 2.93 GHz, 95W	L5520: 2.26 GHz, 60W	X5670: 2.93 GHz, 95W	L5530: 2.4 GHz, 60W	E5640: 2.66 GHz, 80W	E5540: 2.53 GHz, 80W	L5630: 2.13 GHz, 40W
E5504: 2.00 GHz, 80W	L5506: 2.13 GHz, 60W														
E5506: 2.13 GHz, 80W	X5550: 2.67 GHz, 95W														
E5520: 2.26 GHz, 80W	X5560: 2.80 GHz, 95W														
E5530: 2.40 GHz, 80W	X5570: 2.93 GHz, 95W														
L5520: 2.26 GHz, 60W	X5670: 2.93 GHz, 95W														
L5530: 2.4 GHz, 60W	E5640: 2.66 GHz, 80W														
E5540: 2.53 GHz, 80W	L5630: 2.13 GHz, 40W														
<b>Cache</b>	12 MB (1 x 12 MB) shared L3 cache (all 5600 processor models) 8 MB (1 x 8 MB) shared L3 cache (all 5500 series processors but those listed below) 4 MB (1 x 4 MB) shared L3 cache: L5506, E5504 and E5506														
<b>Maximum memory</b>	192 GB RDIMM 48 GB UDIMM														
<b>Drives supported</b>	Up to 8 LFF: Hot plug LFF 6G SAS 15K 600/450/300 GB Hot plug LFF 6G SAS 7.2K 2 TB/1 TB/750 GB Hot plug LFF SATA 7.2K 2 TB/1 TB/ 750/500/250/160 GB Hot plug SFF SAS 7.2K 500 GB Hot plug LFF SATA 3G 60/120 GB SSD OR Up to 16: Hot plug SFF SAS 10K 300/146 GB Hot plug SFF SAS 15K 146/72 GB Hot plug SFF SATA 7.2K 500/160 GB Hot plug SFF SATA 3G 120/60 GB SSD														
<b>Maximum internal storage</b>	16.0 TB														
<b>Form factor</b>	2U rack														
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year														
<b>HP related offerings</b>															
<b>Services</b>															
Recommend Related	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7 same-day, 4-hour response														
<b>Storage</b>															
	50/60/70 Modular Smart Array Smart Array P212 Controller P4000 SAN and Virtual SAN Appliance														
<b>Options</b>															
	Dedicated Management Port HP 1200W CS Platinum Power Supply**														
<b>Software</b>															
	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris														

\*\* Must also order power supply backplane kit.

# HP ProLiant servers – 1000 series (cont'd)

## Multi-node



### HP ProLiant DL4x170h G6

Pre-configured 4-node model

### HP ProLiant DL2x170h G6

Performance and manageability to scale your business

<b>Number of processors</b>	1 – 2 per node	1 – 2 per node
<b>Maximum number of cores</b>	4 – 6 per processor	4 per processor
<b>Processors supported</b>	E5504: 2.00 GHz, 80W	E5504: 2.00 GHz, 80W
<b>Cache</b>	4 MB (1 x 4 MB) shared L3 cache	4 MB (1 x 4 MB) shared L3 cache
<b>Maximum memory</b>	48 GB UDIMM	48 GB UDIMM
<b>Drives supported</b>	Up to 8 LFF: Hot plug LFF 6G SAS 15K 600/450/300/146 GB Hot plug LFF 6G SAS 7.2K 2 TB/1 TB Hot plug LFF SATA 7.2K 2 TB/1 TB/750/500/250/160 GB Hot plug LFF SATA 60/120 GB SSD	Up to 8 LFF: Hot plug LFF 6G SAS 15K 600/450/300/146 GB Hot plug LFF 6G SAS 7.2K 2 TB/1 TB Hot plug LFF SATA 7.2K 2 TB/1 TB/750/500/250/160 GB Hot plug LFF SATA 3G 60/120 GB SSD
<b>Maximum internal storage</b>	16.0 TB	16.0 TB
<b>Form factor</b>	2U rack	2U rack
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year	1-year/1-year/1-year
<b>HP related offerings</b>		
<b>Services</b>		
Recommend Related	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-day, 4-hour response	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-day, 4-hour response
<b>Storage</b>		
	50/60/70 Modular Smart Array Smart Array P212 Controller* P4000 SAN and Virtual SAN Appliance	50/60/70 Modular Smart Array Smart Array P410 Controller* P4000 SAN and Virtual SAN Appliance
<b>Options</b>		
	Dedicated Management Port HP 1200W CS HE Silver Power Supply	Dedicated Management Port HP 1200W CS HE Silver Power Supply
<b>Software</b>		
	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris

\* Must also order LFF SAS Cable Kit

# HP ProLiant servers – 6000 series

Enhanced for scale-out customers with an innovative shared infrastructure to greatly reduce costs and increase power efficiency

## Multi-node



### HP ProLiant SL160z G6

Enhanced for applications needing large amounts of memory and I/O expansion



### HP ProLiant SL170z G6

Enhanced for applications needing large internal storage

<b>Number of processors</b>	1 – 2	1 – 2
<b>Maximum number of cores</b>	8	8
<b>Processors supported</b>	Quad-Core Intel Xeon processors: X5570: 2.93 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3 X5550: 2.66 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3 E5540: 2.53 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2 E5520: 2.26 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2 E5504: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800 L5520: 2.26 GHz, 8 MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2 L5506: 2.13 GHz, 4 MB L3 Cache, 60W, DDR3-800  Dual-Core Intel Xeon processors: E5502: 1.86 GHz, 4 MB L3 Cache, 80W, DDR3-800	Quad-Core Intel Xeon processors: X5570: 2.93 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3 X5550: 2.66 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3 E5540: 2.53 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2 E5520: (2.26 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2 L5520: 2.26 GHz, 8 MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2 L5506: 2.13 GHz, 4 MB L3 Cache, 60W, DDR3-800 E5504: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800  Dual-Core Intel Xeon processors: E5502: (1.86 GHz, 4 MB L3 Cache, 80W, DDR3-800)
<b>Cache</b>	8 MB (1 x 8 MB) L3 (all processor models except those identified below) 4 MB (1 x 4 MB) L3 (for processors L5506, E5504, E5502)	8 MB (1 x 8 MB) L3 (all processor models except those identified below) 4 MB (1 x 4 MB) L3 (for processors L5506, E5504, E5502)
<b>Maximum memory</b>	144 GB	128 GB
<b>Drives supported</b>	Up to 2: Non-hot plug LFF SATA 7.2K 160/500 GB, 1 TB/2 TB	Up to 6: Non-hot plug LFF SATA 7.2K 160/500 GB, 1 TB/2 TB LFF SAS 15K 600/300 GB
<b>Maximum internal storage</b>	4 TB	12 TB
<b>Form factor</b>	1U server tray	1U server tray
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year	1-year/1-year/1-year
<b>HP related offerings</b>		
<b>Services</b>		
Recommend Related	3-year, 9x5, next business day 3-year, 13x5, same business day, 4-hour response	3-year, 13x5, same-business-day, 4-hour response 3-year, 24x7, same-day, 4-hour response
<b>Storage</b>		
	1 – 2 non-hot plug SATA hard drive bays	50/60/70 Modular Smart Array LTO-3 Ultrium 920 SAS tape drive Smart Array P410 Controller P4000 SAN and Virtual SAN Appliance
<b>Options</b>		
	HP 1200W CS Platinum Power Supply New Low Power Processors 10U bulk rail kit	HP 1200W CS Platinum Power Supply 8 GB Dual-Rank PC3-8500R Memory
<b>Software</b>		
	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris	Management: Lights-Out 100 Advanced Operating systems: Windows, Linux, Solaris Automated Support: Insight Remote Support

# HP ProLiant servers – 6000 series (cont'd)

## Multi-node



### HP ProLiant SL2x170z G6

Enhanced for applications needing high-density compute

<b>Number of processors</b>	1 – 2
<b>Maximum number of cores</b>	8
<b>Processors supported</b>	<p>Intel Xeon Quad-Core processors:</p> <p>X5570: 2.93 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3</p> <p>X5550: 2.66 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3</p> <p>E5540: 2.53 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2</p> <p>E5520: 2.26 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2</p> <p>L5520: 2.26 GHz, 8 MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2</p> <p>L5506: 2.13 GHz, 4 MB L3 Cache, 60W, DDR3-800</p> <p>E5504: 2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800</p> <p>Intel Xeon Dual-Core processor:</p> <p>E5502: 1.86 GHz, 4 MB L3 Cache, 80W, DDR3-800</p>
<b>Cache</b>	<p>8 MB (1 x 8 MB) L3 (all processor models except those identified below)</p> <p>4 MB (1 x 4 MB) L3 (for processors L5506, E5504, E5502)</p>
<b>Maximum memory</b>	128 GB
<b>Drives supported</b>	<p>Up to 2:</p> <p>Non-hot plug LFF SATA 7.2K 160/500 GB, 1 TB/2 TB</p> <p>LFF SAS 15K 600/300 GB</p>
<b>Maximum internal storage</b>	4 TB
<b>Form factor</b>	1U server tray
<b>Warranty (parts/labour/onsite)</b>	1-year/1-year/1-year
<b>HP related offerings</b>	
<b>Services</b>	
Recommend Related	<p>3-year, 9x5, next business day</p> <p>3-year, 13x5, same business day, 4-hour response</p>
<b>Storage</b>	
	1 – 2 non-hot plug SATA hard drive bays
<b>Options</b>	
	<p>HP 1200W CS Platinum Power Supply</p> <p>Low Power Processors</p> <p>10U bulk rail kit</p>
<b>Software</b>	
	<p>Management: Lights-Out 100 Advanced</p> <p>Operating systems: Windows, Linux, Solaris</p>

# HP ProLiant servers

## Supported options

	Entry-level								Midrange										High-end		Multi-node											
	ML110 G5	ML110 G6	ML115 G5	ML150 G6	DL160 G6	DL160se G6	DL165 G6	DL165 G7	DL180 G6	ML310 G5p	DL320 G6	ML 330 G6	ML350 G6	DL360 G6	DL360 G7	DL370 G6	ML370 G6	DL380 G6	DL380 G7	DL385 G6	DL385 G7	DL580 G5	DL585 G6	DL785 G6	DL170h G6	DL4x170h G6	DL2x170h G6	SL 160z G6	SL170z G6	SL2x170z G6		
<b>HP hard drives</b>																																
Large form factor SAS	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•				•	•	•	•	•	•	
Large form factor SATA	•		•	•	•	•	•	•	•	•	•	•				•	•	•	•	•	•	•				•	•	•	•	•	•	
Small form factor SAS			•	•	•	•		•	•		•		•	•	•	•	•	•	•	•	•	•	•	•				•	•	•		
Small form factor SATA			•	•	•	•			•		•		•	•	•	•	•	•	•	•	•	•	•			•			•	•	•	
Solid State Drives (SSD)														•	•						•											
<b>HP memory</b>																																
DDR3 Registered (RDIMMs)	•		•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•				•	•	•	•	•	•	
DDR3 Unbuffered (UDIMMs)	•		•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•				•	•	•	•	•	•	
PC2-5300 registered																				•	•			•								
PC2-5300 fully buffered																							•									
PC2-6400 registered								•												•				•	•							
PC2-6400 unbuffered							•		•												•											
<b>HP controllers</b>																																
8-Port SAS HBA																							•									
E200/E200i																				•	•	•										
E500																						•		•								
P212	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
P400/400i							•		•											•		•						•	•			
P410	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
P410i							•		•		•	•	•	•	•	•	•	•	•	•	•	•										
P411	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
P600									•												•		•						•	•		
P800			•		•				•				•	•		•	•	•		•		•	•	•	•	•	•	•	•	•		
P812					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
256 MB cache	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
512 MB with BBWC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
512 MB with FBWC																						•										
1 GB with FBWC																						•										
Battery Kit	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Smart Array Advanced Pack (SAAP)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
BBWC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
<b>Processors</b>																																
Intel Celeron	•									•																						
Intel Core2 Duo										•																						
Intel Pentium										•																						
Intel Xeon	•			•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
AMD Opteron			•		•		•													•	•		•									

For additional details on supported options, please visit the server QuickSpecs at [www.hp.com/go/quickspecs](http://www.hp.com/go/quickspecs)

- Supported for this product
- \* Standard UDIMMs must be replaced with RDIMMs

# HP related offerings

Manage your ProLiant environment with HP Insight software to unlock your infrastructure’s potential. HP Insight Control with iLO Advanced offers essential infrastructure management software, giving you total control of your server infrastructure – onsite or remote. Providing advanced infrastructure management, HP Insight Dynamics suite for ProLiant servers helps you continuously analyse and optimise your converged infrastructure.

**For online readers only:** To learn more about the software in the chart below, hover your mouse over the software name to display a URL you can visit for additional information.

## Infrastructure management software

	Entry-level								Midrange								High-end		Multi-node														
	ML110 G5	ML110 G6	ML115 G5	ML150 G6	DL160 G6	DL160se G6	DL165 G6	DL165 G7	DL180 G6	ML310 G5p	DL320 G6	ML 330 G6	ML350 G6	DL360 G6	DL360 G7	DL370 G6	ML370 G6	DL380 G6	DL380 G7	DL385 G6	DL385 G7	DL580 G5	DL585 G6	DL785 G6	DL170h G6	DL4x170h G6	DL2x170h G6	SL 160z G6	SL170z G6	SL2x170z G6			
<b>Essential infrastructure management software</b>																																	
Insight Foundation Suite for ProLiant (SmartStart, Firmware Maintenance CD and Management DVD)										•	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
Insight Control, including: Insight Control for Microsoft System Center Insight Control for VMware vCenter										•	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
Insight Control for Linux					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Systems Insight Manager (SIM)					•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					
Integrated Lights-Out (iLO) Advanced										•	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
Lights-Out 100 Advanced	•		•	•	•	•	•	•																	•	•	•	•	•	•	•		
Insight Remote Support				•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
Integration with HP Software										•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
<b>Advanced infrastructure management software</b>																																	
Insight Dynamics for ProLiant										•	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
Insight Capacity Advisor Consolidation software	•		•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							•	•	•

For the latest enterprise management integration support, visit [www.hp.com/servers/integration](http://www.hp.com/servers/integration)

• Supported for this product

# HP related offerings (cont'd)

## Operating systems and virtual environments

Purchase your entire operating environment from HP. HP resells and provides full-service and support for Microsoft Windows operating systems, Red Hat Linux subscriptions, Novell SUSE Linux subscriptions, Citrix XenServer, Microsoft Hyper-V and VMware hypervisors. Learn more online at [www.hp.com/go/ossupport](http://www.hp.com/go/ossupport)

	Entry-level									Midrange									High-end			Multi-node								
	ML110 G5	ML110 G6	ML115 G5	ML150 G6	DL160 G6	DL160se G6	DL165 G6	DL165 G7	DL180 G6	ML310 G5p	DL320 G6	ML 330 G6	ML350 G6	DL360 G6	DL360 G7	DL370 G6	ML370 G6	DL380 G6	DL380 G7	DL385 G6	DL385 G7	DL580 G5	DL585 G6	DL785 G6	DL170h G6	DL4x170h G6	DL2x170h G6	SL 160z G6	SL170z G6	SL2x170z G6
<b>Operating environments</b>																														
Microsoft Windows Server 2003 R2	<b>Supported on all servers</b>																													
Microsoft Windows Server 2008 R2	<b>Supported on all servers</b>																													
Novell SUSE Linux Enterprise Server (SLES)	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					•	•	•
Red Hat Enterprise Linux (RHEL)	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							
Novell Open Enterprise Server	•		•	•					•		•	•	•	•	•	•	•	•	•	•	•	•	•							
NetWare	•								•		•	•	•	•	•	•	•	•	•	•	•	•	•							
Solaris 10					•	•	•	•					•		•	•	•		•		•	•	•	•	•	•	•	•	•	•
P4000 Virtual SAN Appliance	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VMware ESX 4.0	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VMware ESXi 4.0											•	•	•	•	•	•	•	•	•	•	•	•	•	•						
HP Integrated Citrix XenServer							•	•	•		•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

For the latest OS support information, visit [www.hp.com/go/ossupport](http://www.hp.com/go/ossupport)

Please refer to each product's quick specs for the most up-to-date hardware and operating system support details/matrix.

• Supported for this product

## HP related solutions

To gain the full value from your investments, you also need expert services across the IT lifecycle, advanced storage devices and system-enhancing options.

### HP options

Complete your data centre with HP Server options – including memory, drives, processors, racks, operating system software and power and cooling. Strengthen the foundation of your data centre with high calibre products that are easy to maintain and tailored for ProLiant, Integrity and StorageWorks, giving you confidence in your whole infrastructure.

#### ML/DL networking

NC112T PCI Express Gigabit Server Adapter	This low-cost Gigabit Ethernet NIC features excellent performance at a very modest price.
NC360T PCI Express Dual-port Gigabit Server Adapter	Here is a high-performance, dual-port adaptor that supports a four-lane (x4) PCI Express bus as well as both standard and low-profile slots. The two Gigabit ports allow you to save valuable I/O slots for other uses.
NC364T PCI Express Quad-port Gigabit Server Adapter	This quad-port adaptor provides the highest port density for standard and low-profile I/O slots on ProLiant servers. Compatible with x4, x8 and x16 PCI Express slots, the NC364T has a theoretical maximum transfer rate of 4,000 Mbps.
NC373T PCI Express Multifunction Gigabit Server Adapter	This high-performance adaptor for twisted-pair environments supports TCP Offload on Windows and accelerated iSCSI, all on a single card. It supports both standard and low-profile slots.
NC375T PCI Express Quad-port Gigabit Server Adapter	This quad-port adaptor helps achieve performance scalability for consolidated server environments at an optimum price.
NC382T PCI Express Dual-port Multifunction Gigabit Server Adapter	Here is a PCI Express card that provides two ports supporting TCP Offload on Windows and accelerated iSCSI, improving server efficiency and providing access to storage devices over the IP protocol.
NC550SFP Dual Port 10GbE Server Adapter	This dual port, 8-lane, PCI Express gen2, 10 Gigabit Ethernet network solution offers the best combination of high speed and low latency available in a ProLiant Ethernet adaptor. The NC550SFP ships with two SFP+ cages and is suitable for connecting to a Direct Attach Cable (DAC) or SR fiber optic modules.

#### Rack and rack accessories

TFT7600 Rack Keyboard Monitor	Ease deployment of software updates by allowing connection of a USB drive directly at the console. This monitor is designed for rack-mount use and ideal for data centres, corporate computer rooms and even small and medium business installations where local access to servers is needed at the rack.
100 Series Rack	The 100 Series is an ideal rack solution for small- and medium-size organisations with limited IT budgets.
10000 G2 Series Rack	This enterprise-class rack solution combines unparalleled structural integrity, cooling and cable management. It can be used for all HP rack-mounted server and storage products.
MCS G2	New bi-directional cooling technology makes it possible to simultaneously cool two racks with a single MCS G2 unit. Cool up to 17.5 kW per rack when cooling two racks or up to 35 kW when cooling a single rack.

#### Consoles and console switches

Server Console Switches	Integrate keyboard-video-mouse (KVM) and serial devices into a single management console for all of your servers, network devices and infrastructure. These switches require no software to be installed on target servers, providing a true KVM solution for local system management of up to 256 servers.
IP Console Switches with Virtual Media	Provide local and remote system access and management to a variety of data centre devices. These switches require no software to be installed on target servers. Administrators can access KVM functions remotely for day-to-day management. Virtual media support allows for a drive to be mapped on a workstation to target servers to perform application, OS and firmware upgrades and installations, reducing operational costs and improving efficiency.

#### Uninterruptible power supplies (UPS)

T750 Uninterruptible Power Supply	This is an ideal tower UPS for small and medium businesses and desktop/workstation environments. It provides protection from power outages for equipment with power requirements of 500 watts and less.
T1500 Uninterruptible Power Supply	Here is a tower UPS that provides power protection for your computer equipment against damage due to fluctuating and inconsistent power with a true power rating of up to 1,500 VA and 900 watts.
R1500 Uninterruptible Power Supply	This rack power supply is ideal for space-constrained rack environments with up to 1,500 VA and 1,340 watts of power packed in just a 2U rack space.
R3000 Uninterruptible Power Supply	A high-power-density rack power supply in a 2U, rack-mount design offers up to 2,700 watts of true power.
R5500 Uninterruptible Power Supply	Offering the highest density rack power supply in a 3U, rack-mount design, the R5500 UPS provides up to 5,000 VA and 4,500 watts of true power.

#### Power distribution units (PDUs)

Modular PDUs	Available in a variety of capacities and consisting of a core unit and extension strips that can be mounted anywhere in the rack, these PDUs are perfect for many applications. Core-only units are great for BladeSystems.
Monitored PDUs	Available in several sizes, these PDUs monitor power usage inside a rack and provide warnings locally when near capacity to prevent overloads.



# HP related offerings

To gain the full value from your investments, you also need expert services across the IT lifecycle, advanced storage devices and system-enhancing options.

## HP storage

Network and direct-attached storage devices help you keep large amounts of information protected and readily accessible to people when needed.

### Controllers

Smart Array P812	Providing the greatest flexibility in connectivity options with 24 total ports to span across internal and external drives the HP Smart Array P812 supports up to 108 drives and ships standard with 1G FBWC and Smart Array Advanced Pack (SAAP).
Smart Array P411	The HP Smart Array P411 controller is an external connect card that delivers mission-critical reliability in an easy-to-use RAID solution.
Smart Array P410	The HP Smart Array P410 delivers basic RAID functionality with an upgrade path to RAID 6, 6+0. It provides uncompromising reliability, scalability and a rich set of features that can meet your specific storage needs.
Smart Array P212	The HP Smart Array P212 provides the use of basic RAID functionality and the option to upgrade with the 256 MB BBWC for RAID 5, 5+0. Additional upgrade path to RAID 6 (ADG), 6+0 and other enhancement features are also available through a software licence key for the SAAP.

### Hard drives

HP Midline and Entry SATA 3.5-inch and 2.5-inch hard disk drives	HP Midline and Entry SATA drives provide the best price advantage for non-mission-critical server or storage applications with low workloads of 40 per cent or less. Available capacities include: 2 TB, 1 TB, 500 GB, 250 GB and 160 GB 3G 7.2K RPM 3.5-inch drives and 500 GB, 160 GB 3G 7.2K and 250 GB 3G, 120 GB 1.5G 5.4K RPM 2.5-inch drives.
HP Midline and Enterprise SAS 3.5-inch and 2.5-inch hard disk drives	Enterprise SAS drives are ideal for critical, high-duty cycle applications. Available capacities include: 600 GB, 450 GB, 300 GB, 146 GB, 15K RPM 3.5-inch drives, 300 and 146 GB, 10K RPM 2.5-inch drives and 146 and 72 GB 15K RPM 2.5-inch drives. Midline SAS drives provide redundant paths to your drives for non-mission-critical server or storage applications with I/O workloads of 40 per cent or less. Available capacities include 1 TB and 2 TB 7.2K 3.5-inch drives.

### Host bus adapters (HBAs)

Midline solid state drives	Ideal for high I/O performance, low latency applications in constrained write workload environments. Available capacities include 60 GB and 120 GB in both SFF and LFF hot plug carriers.
SC44Ge SAS HBA	The HP SC44Ge has eight channels with two connectors (one internal/one external) and is the recommended SAS HBA for connecting HP SAS tape products to HP ProLiant servers.
SC11Xe SCSI HBA	The HP SC11Xe is an Ultra320 PCI Express SCSI HBA that is ideal for connecting HP SCSI tape products to HP ProLiant servers.
U320e SCSI HBA	The HP U320e is a dual-channel PCI Express SCSI HBA that is ideal for connecting HP MSL Tape Libraries to HP ProLiant servers.

### InfiniBand host channel adapters (HCAs)

4X QDR InfiniBand HCAs	40 Gbps high performance adaptor supported on PCI Express Gen2 on ProLiant G6 servers and mezzanine adapters for BladeSystem server blades
4X DDR InfiniBand HCAs	20 Gbps high performance adaptor supported on PCI Express on ProLiant servers, and mezzanine adaptor for BladeSystem server blades

### Tape drives

DAT 72 USB tape drive	Combining the reliability and cost-effectiveness of DAT with the universal plug-and-play capabilities of the USB 2.0 interface, this tape drive provides an ideal backup solution for small servers and workstations.
Ultrium 448 tape drive	This tape backup solution provides an excellent mix of features and value for entry-level and midrange server needs in small and medium-size businesses.

### Storage array systems (SAS)

Modular Smart Array 20	Here's a SATA disk drive storage enclosure that delivers industry-leading availability, storage density and upgradeability to meet demanding and growing storage needs. The MSA20 provides an ideal mix of low cost and high capacity, for minimum I/O workloads such as reference data, archival and disk-to-disk backup.
Modular Smart Array 50	The MSA50 is ideal for corporate infrastructure applications, including domain controllers, file/print, e-mail, small databases, application servers, Web hosting, messaging and Citrix terminal services. In SMB locations, the MSA50 is ideal for any environment that can benefit from high availability features such as hot plug fans, power supplies and drives but requires a cost-sensitive solution.
Modular Smart Array 60	The MSA60 is ideal for the growing storage needs of small and midrange businesses. It supports up to 12 TB per enclosure or up to 96 TB (eight enclosures) capacity supporting 3.5-inch SAS, SATA or SAS Midline drives in a 2U form factor. Configuration and setup are easy with HP Array Configuration Utility (ACU). Enclosures can be cascaded in a 1+3 configuration, allowing a maximum of 48 drives in an 8U configuration behind each of the two external ports on the HP Smart Array P800 or the HP Smart Array E500 controller for a total of 96 drives in eight enclosures.
Modular Smart Array 70	The MSA70 is ideal for the growing storage needs of small and midrange businesses. It supports up to 3.6 TB per enclosure or up to 14.4 TB (four enclosures) capacity supporting 2.5-inch SAS or SATA drives in a 2U form factor. Configuration and setup are easy with HP Array Configuration Utility (ACU). Enclosures can be cascaded in a 1+1 configuration, allowing a maximum of 50 drives in a 4U configuration behind each of the two external ports on the HP Smart Array P800 or the HP Smart Array E500 controller for a total of 100 drives in four enclosures.

### Shared storage

Shared storage	When deploying a large number of servers or implementing a server consolidation project, it is the perfect time to look at storage consolidation. An HP SAN, using either HP EVA or XP disk arrays, can increase storage utilisation significantly. The HP EVA is one of the easiest-to-manage arrays in the industry and gives the midrange marketplace leading performance, capacity and availability storage solutions. The XP disk arrays combine a completely redundant hardware platform with unique data replication capabilities that are integrated with clustering solutions for complete business continuity in mission-critical environments. SMB customers and enterprise customers with remote offices are a perfect fit for the P4000 family. Network RAID and other features facilitate data availability and ease of use.
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## HP Care Pack services

To fully capitalise on the capabilities of your HP ProLiant servers, you need a service partner who thoroughly understands server technology and how it behaves in a multi-vendor environment. HP Services and HP Authorized Channel Partners have this unique insight into ProLiant servers, and we offer a range of HP Care Pack services designed to help you get the most from your ProLiant technology.

### Benefits of HP Care Pack services support include:

- Improved server availability with single-source support
- Reduced complexity of services and support
- Accelerated ProLiant server implementation
- Predictable support costs and service levels with standardised

3-year, 9x5, next-business-day, excluding holidays	Extend your hardware warranty coverage for quick and convenient hardware problem resolution.
3-year, 13x5, same-business-day, 4-hour response coverage	Extend your hardware warranty coverage with prompt same-day service for key servers and increase equipment availability and productivity.
3-year, 24x7, same-business-day, 4-hour response	Extend your hardware warranty coverage with prompt same-day service for key servers and increase availability and productivity with around-the-clock access to technical expertise and support.
3-year, 24x7, either 24-hour or 6-hour call-to-repair	Decrease hardware downtime with committed 24-hour or 6-hour call-to-repair for hardware problem resolution.
3-year, Support Plus 24	Increase performance and availability with integrated 24x7 hardware and software support for complex interoperability problem resolution.
Proactive Select	Gain access to HP best-in-class technical consultants. Purchase service credits and obtain expertise when needed.
3-year, Proactive 24	Leverage this mission-critical support product line for an integrated hardware and software support solution designed to help you improve the operational and management effectiveness of your IT environment.
3-year, Critical service	Look to this mission-critical support portfolio for a comprehensive support solution for businesses that cannot tolerate downtime without significant business impact. It combines proactive and reactive services to help you meet your availability, performance and security objectives.
Software Care Pack Services for Operating Systems	With HP software services you receive full enterprise one-stop support coverage for your operating systems, virtualisation software, host operating systems, virtual OS environments and your HP hardware. Specifically for VMware, Citrix and Linux, software services are also included with your original equipment manufacturer (OEM) purchase.

Note: 4-year and 5-year HP Care Pack options are also available, offering cost-effective, longer-term support solutions.

## HP Technology Services

When technology works, business works. Competitive, IT organisations need an environment that is right for today and ready to evolve as your business needs change. HP Technology Services meets this challenge with services designed to lower your IT costs, increase availability, reduce the complexity of multi-vendor services and accelerate system implementation.

- Get fast problem diagnosis and remote system monitoring utilising Insight Remote Support. It delivers enhanced operational simplicity and cost efficiency 24x7 with automated, secure remote event monitoring, notification and dispatch for hardware and operating systems.
- A key to business success is an agile IT infrastructure that adapts to changing needs while keeping the business running smoothly. Maintaining predictable service levels is one of the benefits of comprehensive support services by HP. We cover the entire IT solution lifecycle, to help you design, deploy, integrate and manage an agile IT infrastructure – including convenient pre-packaged HP Care Pack Services options and custom support solutions.

- Break down costly technology silos with our consulting and integration services that enable you to enhance the performance of your server solution, improve energy efficiency, virtualise and access, share and synchronise applications and data across your existing heterogeneous environment.
- Dream of having more time to focus more on your core competencies and less on day-to-day IT services? Our outsourcing services and global IT expertise can make this dream a reality.
- To speed product implementation, consider our factory-direct capabilities. Our plug-and-play solutions are integrated, tested and shipped in a fully configured rack. Included are pre-delivery site reviews, factory installation and configuration, onsite installation and product orientation.
- In today's fast-paced business environment, your employees need to quickly assimilate new IT skills. HP can help you achieve this goal with a variety of training services, including instructor-led courses, customised onsite training and innovative remotely assisted courses.

Capitalise on your IT environment capabilities with a service partner who thoroughly understands server, storage and network technology in a multi-vendor environment. Working in partnership with HP Authorized Channel Partners, we have the expertise and skill you need. Whether your company is a medium-size organisation or a large global corporation, HP Technology Services can help.

To learn more, visit [www.hp.com/services/proliant](http://www.hp.com/services/proliant)

## HP Financial Services

HP makes it easy on the balance sheet to put the power of the HP product line to work for you through HP Financial Services. We offer a complete array of leasing and financial lifecycle management services in more than 50 countries around the world. We can help you transition from existing equipment to the latest technology, acquire a new solution cost-effectively and manage that solution throughout its lifecycle. Our goal is to help you increase the return on your IT investment, reduce risk and get the most from your HP solution.

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## The right partner

HP knows that when you have the right infrastructure, anything is possible. Look to HP when evaluating how to grow your business and deciding what data centre you need to respond to business changes quickly and confidently.

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### **Do you need to shrink the footprint of the servers you deploy?**

We have a full server range available for this.

### **Are power and cooling draining your budget?**

We deliver tools and solutions to help you regulate and monitor how power is used across the infrastructure.


### **Do you want the broadest range of technology choice from best-in-class IT providers?**

Our partners deliver technology that works best with HP products.

We have the top-selling x86 servers, exceptional management capabilities and a robust range of hardware and software partners to bring the right solution to you at the right time. Ultimately, HP is the right partner to help your business succeed.

Learn more on how HP ProLiant servers and infrastructure can help you confidently lay the foundation for your converged infrastructure, also to explore more detailed information online, including the latest version of this guide, visit us at [www.hp.com/go/proliant](http://www.hp.com/go/proliant)



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