



HP ProLiant servers
Family guide



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Drive greater business growth, lower your costs and mitigate unplanned risks with powerful HP ProLiant servers...the preferred way to run IT.

HP ProLiant servers: Get the most from your IT resources

With the right infrastructure, your information technology should be able to meet any business demand. A powerful, flexible infrastructure enables your business to run smoothly and securely, helps you drive efficiency and increase productivity, and serves your current IT requirements while easily absorbing new emerging technologies.

The top-selling HP ProLiant servers demonstrate our ongoing commitment to provide a complete server infrastructure that supports both your business objectives and your business growth. ProLiant servers are available with an extensive selection of management tools, storage and networking products, and services and support—along with our close collaboration with world-class independent software vendors (ISVs) and systems integrators (SIs).

Choose the levels of performance, availability, expandability and manageability from the world's most comprehensive industry-standard server portfolio, offering you the right technology for your computing needs.

The HP portfolio

What kind of server best suits your needs? What level of high availability and performance do you require? How many users will be supported? What operating system will you be using? Whether it's a departmental server, an enterprise data center or anything in between, HP is committed to meeting your exact needs. This commitment has resulted in more customers choosing HP servers than any other vendor's servers.*

- **HP ProLiant servers**—offer a superior platform for your mainstream 32-bit and emerging 64-bit x86 applications. ProLiant servers are the world's top-selling x86 industry-standard servers.*

- **HP Integrity servers**—the premier choice for your most demanding workloads and applications running on HP-UX, OpenVMS, Microsoft® Windows® and Linux.
- **HP Integrity NonStop servers**—ideal when user service levels are paramount. They deliver the highest levels of availability, fail-safe data integrity and linear scalability for ultimate business continuity.

What can you do to simplify a growing, multi-server environment? How do you integrate all the moving parts and deliver business solutions on time and under budget?

- **HP BladeSystem**—a simple, modular infrastructure that is consolidated up front to save you more time, energy and money—regardless of what you put inside. In one consolidated box, a BladeSystem supports ProLiant and Integrity server blades, StorageWorks storage offerings and a variety of virtual desktop and workstation solutions. With the essential IT elements built-in—compute, network, storage, management and power and cooling—the BladeSystem is a more efficient way to deliver reliable, cost effective services to your business.

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.

- **Services**—How important is it that your service partner provides a single point of ownership and accountability? Are your service needs met across your enterprise? Have you reached the mission-critical reliability you require to meet your business needs? From training and basic product support to selective outsourcing—our services help you realize the full potential of your technology and keep your environment up and running.
- **Management software**—Do you need a single interface to monitor and control your complex IT environment? Our management software allows you to align IT with business needs and automate error-prone processes, which simplifies and enhances your infrastructure.
- **Storage devices**—Do you need help optimizing your storage resources, managing multivendor environments, and evolving to open architectures? Our network and direct-attached storage devices help you keep large amounts of information protected and readily accessible to people when needed.
- **Server options**—Do you have everything you need to meet your infrastructure needs? Our server options—including memory, drives, processors, racks, operating system software, power and cooling—help fine-tune your solution by enhancing system performance and functionality.

* IDC, Q406 Worldwide Quarterly Server Tracker, February 2007.

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

New

Updated



HP ProLiant ML110 G4

Powerfully simple server trusted by small organizations

HP ProLiant ML115

Expandable, affordable server for growing organizations

HP ProLiant DL140 G3

Ideal server for general-purpose solutions and high-performance computing

| | HP ProLiant ML110 G4 | HP ProLiant ML115 | HP ProLiant DL140 G3 |
|---------------------------------|---|--|---|
| Number of processors | 1 | 1 | 1-2 |
| Maximum number of cores | 2 | 2 | 8 |
| Processors supported | <p>Dual-Core Intel® Xeon® processors: 3050: 2.13 GHz, 1066 MHz front side bus (FSB) 3040: 1.86 GHz, 1066 MHz FSB</p> <p>Dual-Core Intel Pentium® D processors: 945: 3.40 GHz, 800 MHz FSB 935: 3.20 GHz, 800 MHz FSB 925: 3.00 GHz, 800 MHz FSB 915: 2.80 GHz, 800 MHz FSB 820: 2.80 GHz, 800 MHz FSB</p> <p>Single-Core Intel Celeron® processor: 352: 3.20 GHz, 533 MHz</p> | <p>Dual-Core AMD Opteron™ processors: Model 1220SE: 2.8 GHz Model 1216: 2.4 GHz Model 1214: 2.2 GHz Model 1210: 1.8 GHz</p> <p>Single-Core AMD™ Athlon™ processors: 3500+: 2.2 GHz</p> | <p>Quad-Core Intel Xeon processors: X5355: 2.66 GHz, 1333 MHz FSB E5345: 2.33 GHz, 1333 MHz FSB E5335: 2.00 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB L5320: 1.86 GHz low voltage (LV), 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB</p> <p>Dual-Core Intel Xeon processors: 5160: 3.00 GHz, 1333 MHz FSB 5150: 2.66 GHz, 1333 MHz FSB 5148: 2.33 GHz LV, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB</p> |
| Cache | 512 KB L2 (Celeron); 2 MB L2 (2 x 1 MB) (Pentium D 800 Series); 4 MB L2 (2 x 2 MB) (Pentium D 900 Series); or 2 MB L2 (1 x 2 MB) (Xeon) | 2 MB L2 (2 x 1 MB) | 8 MB L2 (2 x 4 MB) (5300 Series) or 4 MB L2 (1 x 4 MB) (5100 Series) |
| Maximum memory | 8 GB | 8 GB | 32 GB |
| Drives supported | Up to 4: Non-hot plug LFF SAS 15K 300/146/72 GB Non-hot plug LFF SATA 7.2K 500*/250/160/80 GB | Up to 4: Non-hot plug LFF SAS 15K 300/146/72 GB Non-hot plug LFF SATA 7.2K 500*/250/160/GB | Up to 2: Non-hot plug LFF SATA 7.2K 250/500*/160/80 GB Hot plug LFF SATA 7.2K 750/500/250/160/ 80 GB Hot plug LFF SAS 15K 300/146/72/36 GB |
| Maximum internal storage | 2.0 TB | 2.0 TB | 1.5 TB |
| Form factor | Tower or shelfable | Tower or shelfable | 1U rack |
| Warranty | 1-year/1-year/1-year; 3-year/1-year/1-year (Asia Pacific region only) | 1-year/1-year/1-year; 3-year/1-year/1-year (Asia Pacific region only) | 1-year/1-year/1-year |

HP related offerings

| | HP ProLiant ML110 G4 | HP ProLiant ML115 | HP ProLiant DL140 G3 |
|-----------------|---|---|---|
| Services | 3-year, 9x5, next-business-day response 3-year, 13x5, same-business-day, 4-hour response | 3-year, 9x5, next-business-day response 3-year, 13x5, same-business-day, 4-hour response | 3-year, 9x5, next-business-day response 3-year, 13x5, same-business-day, 4-hour response |
| Storage | 160 GB 1.5 Gb/sec SATA 7.2K RPM NHP 3.5-inch hard disk drive (HDD) DAT 72 USB tape drive | 500 GB 1.5 Gb/sec SATA 7.2K RPM NHP 3.5-inch HDD* DAT 72 USB tape drive | Modular Smart Array 20 DAT 72 USB tape drive |
| Options | 1024 MB Unbuffered Advanced ECC PC2-5300 DDR2 (1 x 1024 MB), Dual Rank Memory T750 Uninterruptible Power System | Smart Array E200 Controller NC110T PCI Express Gigabit Server Adapter | 0x1x8 Server Console Switch 5000 Series Rack |
| Software | Microsoft Windows Small Business Server Lights-Out 100c remote management card | Microsoft Windows Small Business Server Lights-Out 100c remote management card | Microsoft Windows Server 2003 Lights-Out 100i remote management card |

* Factory-integrated only.

For more information, visit: www.hp.com/go/proliant

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

Updated

Updated



HP ProLiant DL145 G3

Server for compute-intensive environments

HP ProLiant ML150 G3

High value server for small businesses needing power and expandability

| | | |
|---------------------------------|---|--|
| Number of processors | 1–2 | 1–2 |
| Maximum number of cores | 4 | 8 |
| Processors supported | Dual-Core AMD Opteron processors: Model 2220: 2.8 GHz Model 2218: 2.6 GHz Model 2216: 2.4 GHz Model 2216 HE: 2.4 GHz Model 2214 HE: 2.2 GHz Model 2210 HE: 1.8 GHz Model 2210: 1.8 GHz | Quad-Core Intel Xeon processors: E5335: 2.00 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB Dual-Core Intel Xeon processors: 5150: 2.66 GHz, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB 5060: 3.20 GHz, 1066 MHz FSB 5050: 3.00 GHz, 667 MHz FSB |
| Cache | 2 MB L2 per core | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series) or 4 MB L2 (2 x 2 MB) (5000 Series) |
| Maximum memory | 32 GB | 8 GB |
| Drives supported | Up to 2: Non-hot plug LFF SATA 7.2K 500*/250/160/80 GB Hot plug LFF SATA 7.2K 750/500/250/160/80 GB Hot plug LFF SAS 15K 300/146/36 GB | Up to 6: Hot plug LFF SAS 15K 300/146 GB Hot plug LFF SAS 10K 72/36 GB Hot plug LFF SATA 7.2K 750/500/250/160/80 GB |
| Maximum internal storage | 1.5 TB | 4.5 TB |
| Form factor | 1U rack | Tower or 5U rack |
| Warranty | 1-year/1-year/1-year | 1-year/1-year/1-year; 3-year/1-year/1-year (Asia Pacific region only) |

HP related offerings

| | | |
|-----------------|---|---|
| Services | 3-year, 9x5, next-business-day response 3-year, 13x5, same-business-day, 4-hour response | 3-year, 9x5, next-business-day response 3-year, 13x5, same-business-day, 4-hour response |
| Storage | Modular Smart Array 50 ProLiant ML310 G4 Storage Server | 750 GB 1.5 Gb/sec SATA 7.2K RPM 3.5-inch HDD DAT 72 USB tape drive |
| Options | R1500 G2 Uninterruptible Power System 10000 G2 Series Rack | 2 GB FBD PC2-5300 (2 x 1 GB) Memory Kit NC150T PCI 4-Port Gigabit 1000T Combo Switch Adapter |
| Software | Linux SUSE/Red Hat ProLiant Essentials Rapid Deployment Pack | Microsoft Windows Small Business Server Lights-Out 100 remote management card |

* Factory-integrated only.

For more information, visit: www.hp.com/go/proliant

HP ProLiant servers—300 series

Mid-range rack and tower servers with increased expansion to support virtualization, e-mail and database applications

Mid-level



HP ProLiant ML310 G4
Manageable, affordable foundation for small businesses and remote sites

HP ProLiant DL320 G5
Entry compute power with enterprise management for remote or space-constrained installations

HP ProLiant DL320s
Low-cost, high-capacity, storage enhanced with dual core performance

| | HP ProLiant ML310 G4 | HP ProLiant DL320 G5 | HP ProLiant DL320s |
|---------------------------------|---|---|--|
| Number of processors | 1 | 1 | 1 |
| Maximum number of cores | 2 | 2 | 2 |
| Processors supported | Dual-Core Intel Xeon processors: 3060: 2.4 GHz, 1066 MHz FSB 3050: 2.13 GHz, 1066 MHz FSB 3040: 1.86 GHz, 1066 MHz FSB Dual-Core Intel Pentium D processors: 945: 3.40 GHz, 800 MHz FSB 820: 2.80 GHz, 800 MHz FSB Single-Core Intel Celeron D Processor: 352: 3.2 GHz, 533 MHz FSB | Dual-Core Intel Xeon processors: 3060: 2.40 GHz, 1066 MHz FSB 3050: 2.13 GHz, 1066 MHz FSB 3040: 1.86 GHz, 1066 MHz FSB Dual-Core Intel Pentium D processor: 820: 2.8 GHz, 800 MHz FSB Single-Core Intel Pentium 4 processor: 651: 3.4 GHz, 800 MHz FSB Single-Core Intel Celeron D processor: 352: 3.2 GHz, 533 MHz FSB | Dual-Core Intel Xeon processors: 3070: 2.67 GHz, 1066 MHz FSB 3060: 2.4 GHz, 1066 MHz FSB |
| Cache | 512 KB L2 (Celeron D); 2 MB or 4 MB L2 (Pentium D); 4 MB L2 (Xeon 3060 Series); or 2 MB L2 (Xeon 3040, 3050 Series) | 512 KB L2 (Celeron D); 2 MB L2 (Pentium 4); 2 MB L2 (Pentium D); 4 MB L2 (Xeon 3060 Series); or 2 MB L2 (Xeon 3040, 3050 Series) | 4 MB L2 (2 x 2 MB) |
| Maximum memory | 8 GB | 8 GB | 8 GB |
| Drives supported | Up to 4: Hot plug LFF SAS 15K 300/146 GB Hot plug LFF SAS 10K 72/36 GB Hot plug LFF SATA 7.2K 750/500/250/160/80 GB | Up to 2: Non-hot plug LFF SATA 7.2K 750/500*/250/160/80 GB Hot plug LFF SATA 7.2K 750/500/250/160/80 GB Hot plug LFF SAS 15K 300/146/72/36 GB | Up to 14: Hot plug LFF SAS 15K 300/146/72/36 GB Hot plug LFF SATA 7.2K 750/500/250/160/80 GB |
| Maximum internal storage | 3 TB | 1.5 TB | 10.5 TB |
| Form factor | Tower or 5U rack | 1U rack | 2U rack |
| Warranty | 1-year/1-year/1-year 3-year/1-year/1-year (Asia Pacific region only) | 3-year/1-year/1-year | 3-year/1-year/1-year |

HP related offerings

| | HP ProLiant ML310 G4 | HP ProLiant DL320 G5 | HP ProLiant DL320s |
|-----------------|---|--|---|
| Services | 3-year, 9x5, next-business-day response 3-year, 13x5, same-business-day, 4-hour response | 3-year, 9x5, next-business-day response 3-year, 13x5 same-business-day, 4-hour response | 3-year, 9x5, next-business-day response 3-year, 13x5 same-business-day, 4-hour response |
| Storage | 146 GB 3.0 Gb/sec SAS 15K RPM 3.5-inch HDD DAT 72 USB tape drive | Modular Smart Array 20 DAT 72 USB tape drive | 300 GB 3.0 Gb/sec SAS 15K RPM 3.5-inch HDD StorageWorks 1U USB Rack-Mount Kit |
| Options | T1500 Uninterruptible Power System E200 Controller with BBWC and 128 MB upgrade | NC360T PCI Express Dual-port Gigabit Server Adapter 10000 G2 Series Rack | 0x2x16 Server Console Switch with virtual media P400 Controller with BBWC and 256 MB upgrade |
| Software | Microsoft Windows Small Business Server 2003 Integrated Lights-Out Advanced Pack remote management | Microsoft Windows Server 2003 R2 Integrated Lights-Out Advanced Pack remote management | Microsoft Windows Small Business Server 2003 Integrated Lights-Out Advanced Pack remote management |

* Factory-integrated only.

For more information, visit: www.hp.com/go/proliant

HP ProLiant servers—300 series

Mid-range rack and tower servers with increased expansion to support virtualization, e-mail and database applications

Mid-level

Updated



HP ProLiant ML350 G5

Ideal for expanding businesses, dedicated work groups and remote office implementations

Updated



HP ProLiant DL360 G5

Reliable compute power, iLO and fault tolerance for space-constrained installations



HP ProLiant DL365

Reliable compute power, iLO and fault tolerance for space-constrained installations

| | | | |
|---------------------------------|--|---|---|
| Number of processors | 1–2 | 1–2 | 1–2 |
| Maximum number of cores | 8 | 8 | 4 |
| Processors supported | Quad-Core Intel Xeon processors: X5355: 2.66 GHz, 1333 MHz FSB E5345: 2.33 GHz, 1333 MHz FSB E5335: 2.00 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB Dual-Core Intel Xeon processors: 5160: 3.00 GHz, 1333 MHz FSB 5150: 2.66 GHz, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB 5080: 3.73 GHz, 1066 MHz FSB 5060: 3.20 GHz, 1066 MHz FSB 5050: 3.00 GHz, 667 MHz FSB | Quad-Core Intel Xeon processors: X5355: 2.66 GHz, 1333 MHz FSB E5345: 2.33 GHz, 1333 MHz FSB E5335: 2.00 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB L5320: 1.86 GHz LV, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB Dual-Core Intel Xeon processors: 5160: 3.00 GHz, 1333 MHz FSB 5150: 2.66 GHz, 1333 MHz FSB 5148: 2.66 GHz, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB | Dual-Core AMD Opteron processors: Model 2220: 2.8 GHz Model 2218: 2.6 GHz Model 2218 HE: 2.6 GHz Model 2216: 2.4 GHz Model 2216 HE: 2.4 GHz Model 2214 HE: 2.2 GHz Model 2210: 1.8 GHz Model 2210 HE: 1.8 GHz |
| Cache | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series); or 4 MB L2 (2 x 2 MB) (5000 Series) | 8 MB L2 (2 x 4 MB) (5300 Series); or 4 MB L2 (1 x 4 MB) (5100 Series) | 2 MB L2 (2 x 1 MB) |
| Maximum memory | 32 MB | 32 GB | 32 GB |
| Drives supported | Up to 8 (SFF): Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SATA 5.4K 120/60 GB Up to 6 (LFF): Hot plug LFF SAS 15K 300/146/72/36 GB Hot plug LFF SATA 7.2K 750/500/250/160/ 80 GB | Up to 6: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB 876 GB | Up to 6: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB 876 GB |
| Maximum internal storage | 4.5 TB | 1U rack | 1U rack |
| Form factor | Tower or 5U rack | 3-year/3-year/3-year | 3-year/3-year/3-year |
| Warranty | 3-year/3-year/3-year | | |

HP related offerings

| | | | |
|-----------------|--|---|--|
| Services | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair |
| Storage | 500 GB 1.5 Gb/sec SATA 7.2K RPM 3.5-inch HDD Smart Array 6402 with Modular Smart Array 30 | Smart Array P800 with Modular Smart Array 50 DAT 72 USB tape drive | Smart Array P800 with Modular Smart Array 50 DAT 72 USB tape drive |
| Options | 2 GB FBD PC2-5300 (2 x 1 GB) Memory Kit T1500 Uninterruptible Power Supply | TFT7600 Monitor 10000 G2 Series Rack | NC373T PCI Express Multifunction Gigabit R3000 Uninterruptible Power System |
| Software | Microsoft Windows Small Business Server 2003 Integrated Lights-Out Advanced Pack remote management | Insight Control Environment ProLiant Essentials Server Migration Pack— Physical to ProLiant Edition | Insight Control Environment ProLiant Essentials Server Migration Pack Physical to ProLiant Edition |

* Factory-integrated only.

For more information, visit: www.hp.com/go/proliant

HP ProLiant servers—300 series

Mid-range rack and tower servers with increased expansion to support virtualization, e-mail and database applications

Mid-level

Updated



HP ProLiant ML370 G5
Powerful server for ongoing access and uptime needs



HP ProLiant DL380 G5
Performance and density for demanding applications



HP ProLiant DL385 G2
Performance and density for demanding applications

| | HP ProLiant ML370 G5 | HP ProLiant DL380 G5 | HP ProLiant DL385 G2 |
|---------------------------------|--|---|--|
| Number of processors | 1–2 | 1–2 | 1–2 |
| Maximum number of cores | 8 | 8 | 4 |
| Processors supported | <p>Quad-Core Intel Xeon processors: X5355: 2.66 GHz, 1333 MHz FSB E5345: 2.33 GHz, 1333 MHz FSB E5335: 2.0 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB</p> <p>Dual-Core Intel Xeon processors: 5160: 3.00 GHz, 1333 MHz FSB 5150: 2.66 GHz, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB 5080: 3.73 GHz, 1066 MHz FSB 5060: 3.20 GHz, 1066 MHz FSB 5050: 3.00 GHz, 667 MHz FSB</p> | <p>Quad-Core Intel Xeon processors: X5355: 2.66 GHz, 1333 MHz FSB E5345: 2.33 GHz, 1333 MHz FSB E5335: 2.0 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB L5320: 1.86 GHz LV, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB</p> <p>Dual-Core Intel Xeon processors: 5160: 3.00 GHz, 1333 MHz FSB 5150: 2.67 GHz, 1333 MHz FSB 5148: 2.66 GHz LV, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB 5080: 3.73 GHz, 1066 MHz FSB 5060: 3.20 GHz, 1066 MHz FSB 5050: 3.00 GHz, 667 MHz FSB</p> | <p>Dual-Core AMD Opteron processors: Model 2220: 2.8 GHz Model 2218: 2.6 GHz Model 2218 HE: 2.6 GHz Model 2216: 2.4 GHz Model 2216 HE: 2.4 GHz Model 2214: 2.2 GHz Model 2212: 2.0 GHz Model 2210: 1.8 GHz Model 2210 HE: 1.8 GHz</p> |
| Cache | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series); or 4 MB L2 (2 x 2 MB) (5000 Series) | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series); or 4 MB L2 (2 x 2 MB) (5000 Series) | 2 MB L2 (2 x 1 MB) |
| Maximum memory | 64 GB | 32 GB | 32 GB |
| Drives supported | Up to 8 (16 with optional second SAS drive cage): Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 8: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 8: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB |
| Maximum internal storage | 1.168 TB (2.336 TB with optional second SAS drive cage) | 1.168 TB | 1.168 TB |
| Form factor | Tower or 5U rack | 2U rack | 2U rack |
| Warranty | 3-year/3-year/3-year | 3-year/3-year/3-year | 3-year/3-year/3-year |

HP related offerings

| | HP ProLiant ML370 G5 | HP ProLiant DL380 G5 | HP ProLiant DL385 G2 |
|-----------------|--|--|---|
| Services | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair |
| Storage | Modular Smart Array 50 Ultrium 448 tape drive | Smart Array P800 with Modular Smart Array 50 ProLiant DL380 G5 Storage Server | Smart Array 6402 with Modular Smart Array 30 Modular Smart Array 1000 |
| Options | T1500 Uninterruptible Power System NC380T PCI Express Dual-port Multifunction Gigabit Server Adapter | NC364T PCI Express Quad-port Gigabit Server Adapter 2x1x16 IP Console Switch with Virtual Media PCI Express | 8 GB Registered PC2-5300 (2 x 4 GB) Dual Rank Memory TFT7600 Monitor |
| Software | Insight Control Environment Integrated Lights-Out Advanced Pack remote management | Insight Control Environment ProLiant Essentials Server Migration Pack— Physical to ProLiant Edition | Insight Control Environment Integrated Lights-Out Advanced Pack remote management |

HP ProLiant servers—500 series

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

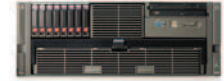
High-end



HP ProLiant ML570 G4
Four-socket high-performance server for demanding computing needs



HP ProLiant DL580 G4
Enterprise-strength, performance and scalability in a rack-optimized package



HP ProLiant DL585 G2
Powerful server for high-performance 32-bit and future 64-bit needs

| | | | |
|---------------------------------|--|--|--|
| Number of processors | 1–4 | 1–4 | 1–4 |
| Maximum number of cores | 8 | 8 | 8 |
| Processors supported | Dual-Core Intel Xeon processors: 7140M: 3.40 GHz, 800 MHz FSB 7130M: 3.20 GHz, 800 MHz FSB 7120M: 3.00 GHz, 800 MHz FSB 7110M: 2.60 GHz, 800 MHz FSB 7041: 3.00 GHz, 800 MHz FSB 7030: 2.80 GHz, 800 MHz FSB | Dual-Core Intel Xeon processors: 7140M: 3.40 GHz, 800 MHz FSB 7130M: 3.20 GHz, 800 MHz FSB 7120M: 3.00 GHz, 800 MHz FSB 7110M: 2.60 GHz, 800 MHz FSB 7041: 3.00 GHz, 800 MHz FSB 7030: 2.80 GHz, 800 MHz FSB | Dual-Core AMD Opteron processors: Model 8220SE: 2.8 GHz Model 8218: 2.6 GHz Model 8216: 2.4 GHz Model 8214: 2.2 GHz Model 8212: 2.0 GHz |
| Cache | Up to 16 MB L3 (7100M Series) or Up to 4 MB L2 (7000 Series) | Up to 16 MB L3 (7100M Series) or Up to 4 MB L2 (7000 Series) | 1 MB L2 per core |
| Maximum memory | 64 GB | 64 GB | 128 GB |
| Drives supported | Up to 18: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 8: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 8: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB |
| Maximum internal storage | 2.628 TB | 1.168 TB | 1.168 TB |
| Form factor | Tower or 6U rack | 4U rack | 4U rack |
| Warranty | 3-year/3-year/3-year | 3-year/3-year/3-year | 3-year/3-year/3-year |

HP related offerings

| | | | |
|-----------------|---|---|--|
| Services | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair | 3-year, 24x7, same-business-day, 4-hour response 3-year, 24x7, 6-hour call-to-repair |
| Storage | Modular Smart Array 50 Ultra160 448 tape drive | Smart Array P800 with Modular Smart Array 50 Ultra160 448 tape drive | Smart Array 6402 with Modular Smart Array 30 Modular Smart Array 1000 |
| Options | 8 GB (2 x 4 GB 2-rank) PC2-3200 Registered Memory Kit T1500 Uninterruptible Power System | NC510C PCIe 10 Gigabit Server Adapter R5500 Uninterruptible Power System | TFT 7600 Monitor 4x1x16 IP Console Switch with Virtual Media |
| Software | VMware Infrastructure 3 ProLiant Essentials Server Migration Pack— Physical to ProLiant Edition | Integrated Lights-Out Advanced Pack remote management Serviceguard for Linux | ProLiant Essentials Virtual Machine Management Pack Integrated Lights-Out Advanced Pack remote management |

HP BladeSystem c-Class server blades

Time-smart, energy-thrifty, change-ready and cost-savvy infrastructures delivering well-balanced architecture for the next-generation data center

c-Class

Updated



HP ProLiant BL460c

Uncompromising energy efficiency and density with enterprise-class features for high performance and reliability

Updated



HP ProLiant BL465c

Uncompromising performance and expandability, industry-leading management tools, and the latest technologies for dense compute environments

| | | |
|---------------------------------|--|--|
| Number of processors | 1–2 | 1–2 |
| Maximum number of cores | 8 | 4 |
| Processors supported | <p>Quad-Core Intel Xeon processors:</p> <p>X5355: 2.66 GHz, 1333 MHz FSB</p> <p>E5345: 2.33 GHz, 1333 MHz FSB</p> <p>E5335: 2.00 GHz, 1333 MHz FSB</p> <p>E5320: 1.86 GHz, 1066 MHz FSB</p> <p>L5320: 1.86 GHz LV, 1066 MHz FSB</p> <p>E5310: 1.60 GHz, 1066 MHz FSB</p> <p>Dual-Core Intel Xeon processors:</p> <p>5160: 3.00 GHz, 1333 MHz FSB</p> <p>5150: 2.66 GHz, 1333 MHz FSB</p> <p>5140: 2.33 GHz, 1333 MHz FSB</p> <p>5130: 2.00 GHz, 1333 MHz FSB</p> <p>5120: 1.86 GHz, 1066 MHz FSB</p> <p>5110: 1.60 GHz, 1066 MHz FSB</p> <p>5063: 3.20 GHz MV, 1066 MHz FSB</p> <p>5050: 3.00 GHz, 667 MHz FSB</p> | <p>Dual-Core AMD Opteron processors:</p> <p>Model 2220: 2.8 GHz</p> <p>Model 2218: 2.6 GHz</p> <p>Model 2218 HE: 2.6 GHz</p> <p>Model 2216: 2.4 GHz</p> <p>Model 2216 HE: 2.4 GHz</p> <p>Model 2214 HE: 2.2 GHz</p> <p>Model 2212 HE: 2.0 GHz</p> <p>Model 2210: 1.8 GHz</p> <p>Model 2210 HE: 1.8 GHz</p> <p>Model 2210 EE: 1.8 GHz</p> |
| Cache | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series); or 4 MB L2 (2 x 2 MB) (5000 Series) | 1 MB L2 per core |
| Maximum memory | 32 GB | 32 GB |
| Drives supported | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB |
| Maximum internal storage | 292 GB | 292 GB |
| Form factor | 10U enclosure (16 blade servers per enclosure) | 10U enclosure (16 blade servers per enclosure) |
| Warranty | 3-year/3-year/3-year | 3-year/3-year/3-year |

HP related offerings

| | | |
|-----------------|--|--|
| Services | 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 | SB40c storage blade Modular Smart Array 1500 | Enterprise Virtual Array 4000 XP10000 Disk Array |
| Options | 8 GB PC2-5300 FB DIMM Memory Kit (2 x 4 GB) 4 Gb Virtual Connect Fibre Channel Module for BladeSystem c-Class | NC325m PCI Express Quad-port Gigabit Server Adapter QLogic- or Emulex-based Fibre Channel Mezzanine |
| Software | Integrated Lights-Out Select Pack remote management Insight Control Data Center Edition | Integrated Lights-Out Select Pack remote management Insight Control Linux Edition |

HP BladeSystem c-Class server blades

Time-smart, energy-thrifty, change-ready and cost-savvy infrastructures delivering a well-balanced architecture for the next-generation data center

c-Class

Updated



HP ProLiant BL480c
2P multi-core server blade with unmatched combination of performance and expansion

Updated



HP ProLiant BL685c
No-compromise performance and expansion in the densest 4P server blade available

NEW



HP Integrity BL860c
Robust value and virtualization of Integrity systems coupled with the efficiency of blades

| | | | |
|---------------------------------|--|--|---|
| Number of processors | 1–2 | 2 or 4 | 1–2 |
| Maximum number of cores | 8 | 8 | 4 |
| Processors supported | <p>Quad-Core Intel Xeon processors:</p> <p>X5355: 2.66 GHz, 1333 MHz FSB E5345: 2.33 GHz, 1333 MHz FSB E5335: 2.00 GHz, 1333 MHz FSB E5320: 1.86 GHz, 1066 MHz FSB L5320: 1.86 GHz LV, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB</p> <p>Dual-Core Intel Xeon processors:</p> <p>5160: 3.00 GHz, 1333 MHz FSB 5150: 2.66 GHz, 1333 MHz FSB 5148: 2.33 GHz LV, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB 5080: 3.73 GHz, 1066 MHz FSB 5063: 3.20 GHz MV, 1066 MHz FSB 5060: 3.20 GHz, 1066 MHz FSB 5050: 3.00 GHz, 667 MHz FSB</p> | <p>Dual-Core AMD Opteron processors:</p> <p>Model 8220: 2.8 GHz Model 8218: 2.6 GHz Model 8218 HE: 2.6 GHz¹ Model 8216: 2.4 GHz Model 8214: 2.2 GHz</p> | <p>Dual-Core Intel Itanium® 2 processors:</p> <p>9040: 1.6 GHz, 533 MHz FSB 9015: 1.4 GHz, 400 MHz FSB</p> <p>Single-Core Intel Itanium 2 processors:</p> <p>9010: 1.6 GHz, 533 MHz FSB</p> |
| Cache | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series); or 4 MB L2 (2 x 2 MB) (5000 Series) | 1 MB L2 per core | 18 MB L3 cache (1.6 GHz dual-core) |
| Maximum memory | 48 GB | 64 GB | 48 GB |
| Drives supported | Up to 4: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB |
| Maximum internal storage | 584 GB | 292 GB | 292 GB |
| Form factor | 10U enclosure (8 blade servers per enclosure) | 10U enclosure (8 blade servers per enclosure) | 10U enclosure (8 blade servers per enclosure) |
| Warranty | 3-year/3-year/3-year | 3-year/3-year/3-year | 3-year/3-year/3-year |

HP related offerings

| | | | |
|-----------------|---|---|---|
| Services | 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 | Proactive 24 Service* Critical Service* |
| Storage | Enterprise Virtual Array 6000 XP12000 Disk Array | Enterprise Virtual Array 8000 XP12000 Disk Array | Enterprise Virtual Array 4000 Modular Smart Array 1500 |
| Options | 8 GB PC2-5300 FBD Memory Kit (2 x 4 GB) NC373m PCI Express Dual-port Multifunction Gigabit Server Adapter | Brocade 4 Gb SAN Switch 1/10 Gb Virtual Connect Ethernet Module for BladeSystem c-Class | 4 GB Fibre Channel adapters 4X Infiniband adapters |
| Software | Integrated Lights-Out Select Pack remote management Insight Control Linux Edition | Serviceguard for Linux Insight Control Data Center Edition | Virtual Server Environment OnlineJFS |

*All blades within a single HP BladeSystem enclosure must be at the same service level.

For more information, visit: www.hp.com/go/bladeSystem

HP BladeSystem p-Class server blades

Fine-tuned to simplify scale-out servers by reducing costs for cable infrastructure, saving physical data center space and delivering a common infrastructure for servers, network and SAN connectivity

p-Class



HP ProLiant BL20p G4
Blade server for front-end and mid-tier computing

HP ProLiant BL25p G2
Blade server running 32-bit applications with migration path to 64-bit

| | | |
|---------------------------------|--|--|
| Number of processors | 1–2 | 1–2 |
| Maximum number of cores | 8 | 4 |
| Processors supported | Quad-Core Intel Xeon Processors: E5320: 1.86 GHz, 1066 MHz FSB E5310: 1.60 GHz, 1066 MHz FSB Dual-Core Intel Xeon processors: 5160: 3.00 GHz, 1333 MHz FSB 5150: 2.66 GHz, 1333 MHz FSB 5148: 2.33 GHz LV, 1333 MHz FSB 5140: 2.33 GHz, 1333 MHz FSB 5130: 2.00 GHz, 1333 MHz FSB 5120: 1.86 GHz, 1066 MHz FSB 5110: 1.60 GHz, 1066 MHz FSB 5080: 3.73 GHz, 1066 MHz FSB 5060: 3.20 GHz, 1066 MHz FSB 5050: 3.00 GHz, 667 MHz FSB | Dual-Core AMD Opteron processors: Model 2218: 2.6 GHz Model 2216: 2.4 GHz Model 2216 HE: 2.4 GHz Model 2214 HE: 2.2 GHz Model 2212 HE: 2.0 GHz Model 2210: 1.8 GHz Model 2210 HE: 1.8 GHz |
| Cache | 8 MB L2 (2 x 4 MB) (5300 Series); 4 MB L2 (1 x 4 MB) (5100 Series); or 4 MB L2 (2 x 2 MB) (5000 Series) | 1 MB L2 per core |
| Maximum memory | 32 GB | 32 GB |
| Drives supported | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB |
| Maximum internal storage | 292 GB | 292 GB |
| Form factor | 6U enclosure (8 server blades per enclosure) | 6U enclosure (8 server blades per enclosure) |
| Warranty | 3-year/3-year/3-year | 3-year/3-year/3-year |

HP related offerings

| | | |
|-----------------|--|--|
| Services | 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 | Enterprise Virtual Array 6000 XP10000 Disk Array | Enterprise Virtual Array 4000 XP10000 Disk Array |
| Options | 1 GB PC2-5300 FB DIMM Memory Kit (2 x 512 KB) GbE2 Ethernet Blade Switch | NC374m PCI Express Dual-port Multifunction Gigabit Server Adapter QLogic- or Emulex-based Fibre Channel Mezzanine |
| Software | Integrated Lights-Out Select Pack remote management Insight Control Linux Edition | Integrated Lights-Out Advanced Pack remote management Insight Control Data Center Edition |

* Factory-integrated only.

For more information, visit: www.hp.com/go/bladeSystem

HP BladeSystem p-Class server blades

Fine-tuned to simplify scale-out servers by reducing costs for cable infrastructure, saving physical data center space and delivering a common infrastructure for servers, network and SAN connectivity

p-Class



HP ProLiant BL35p
Manageability, improved compute density and breakthrough power efficiency



HP ProLiant BL45p G2
Blade server for back-end computing, virtualization and server consolidation



HP Integrity BL60p
HP-UX and Itanium 2 server blade with a unified manageability interface

| | | | |
|---------------------------------|---|---|--|
| Number of processors | 1–2 | 2 or 4 | 1–2 |
| Maximum number of cores | 4 | 8 | 4 |
| Processors supported | Dual-Core AMD Opteron processors: Model 280: 2.4 GHz Model 275: 2.2 GHz Model 270: 2.0 GHz Model 265: 1.8 GHz | Dual-Core AMD Opteron processors: Model 8218: 2.6 GHz Model 8216: 2.4 GHz Model 8214: 2.2 GHz Model 8212: 2.0 GHz | Intel Itanium 2 processors: 1.60 GHz, 400 MHz FSB |
| Cache | 1 MB L2 per core | 1 MB L2 per core | 3 MB L3 |
| Maximum memory | 16 GB | 64 GB | 8 GB |
| Drives supported | Up to 2: Non-hot plug SFF SAS 10K 146/72/36 GB Non-hot plug SFF ATA 5.4K 60 GB | Up to 2: Hot plug SFF SAS 10K 146/72/36 GB Hot plug SFF SAS 15K 72/36 GB Hot plug SFF SATA 5.4K 120/60 GB | Up to 2: Hot plug Ultra320 SCSI 10K 146 GB Hot plug Ultra320 SCSI 15K 300/72/36 GB |
| Maximum internal storage | 292 GB | 292 GB | 600 GB |
| Form factor | 6U enclosure (16 blade servers per enclosure) | 6U enclosure (4 blade servers per enclosure) | 6U enclosure (8 blade servers per enclosure) |
| Warranty | 3-year/3-year/3-year | 3-year/3-year/3-year | 3-year/3-year/3-year |

HP related offerings

| | | | |
|-----------------|--|---|---|
| Services | 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 | 3-year, 24x7, same-business-day, 4-hour response 3-year, Support Plus 24 |
| Storage | Enterprise Virtual Array 4000 XP10000 Disk Array | Enterprise Virtual Array 8000 XP12000 Disk Array | Enterprise Virtual Array 8000 XP12000 Disk Array |
| Options | 8 GB PC2700 DDR DIMM Memory Kit (2 x 4 GB) Dual NC370i Multifunction Gigabit Server Adapter | NC320m PCI Express Dual-port Gigabit Server Adapter Cisco Gigabit Ethernet Switch Module | 4 GB PC2100 DDR DIMM Memory Kit (2 x 2 GB) 10000 G2 Series Rack |
| Software | Integrated Lights-Out Advanced Pack remote management Insight Control Data Center Edition | Integrated Lights-Out 2 Standard Blade Edition Insight Control Data Center Edition | HP-UX, HP Integrity VM Virtual Server Environment |

HP ProLiant servers

Supported options

| | Entry-level | | | | | Mid-range | | | | | | | | |
|--------------------------|-------------|-------|----------|----------|----------|-----------|----------|--------|----------|----------|-------|----------|----------|----------|
| | ML110 G4 | ML115 | DL140 G3 | DL145 G3 | ML150 G3 | ML310 G4 | DL320 G5 | DL320s | ML350 G5 | DL360 G5 | DL365 | ML370 G5 | DL380 G5 | DL385 G2 |
| HP Hard Drives | | | | | | | | | | | | | | |
| Large Form Factor SAS | • | • | • | • | • | • | • | • | • | | | | | |
| Large Form Factor SATA | • | • | • | • | • | • | • | • | • | | | | | |
| Small Form Factor SAS | | | | | | | | | • | • | • | • | • | • |
| Small Form Factor SATA | | | | | | | | | • | • | • | • | • | • |
| SCSI | • | | | | | | | | | | | | | • |
| HP Memory | | | | | | | | | | | | | | |
| PC3200 | | | | • | | | | | | | | | | |
| PC2-4200 DDR2 | | | | | | | • | | | | | | | |
| PC2-5300 DDR2 | • | | | • | | | | | | | • | | | • |
| PC2-5300 DDR2 FBDIMM | • | | • | | • | | | • | • | • | | • | • | |
| PC2-5300 DDR2 Unbuffered | • | • | | | | • | • | | | | | | | |
| HP Controllers | | | | | | | | | | | | | | |
| 8-Port SAS HBA | • | | • | | • | • | • | | | | | | | |
| E200/E200i | • | • | • | • | • | • | • | | • | • | • | • | • | • |
| E500 | | | | | | • | • | | • | • | • | • | • | • |
| P400/400i | | | | • | | • | • | • | • | • | • | • | • | • |
| P600 | | | | | | | | | • | • | • | • | • | • |
| P800 | | | | | | | • | • | • | • | • | • | • | • |
| Processors | | | | | | | | | | | | | | |
| Intel® Celeron | • | | | | | | • | | | | | | | |
| Intel® Celeron D | | | | | | • | • | | | | | | | |
| Intel® Pentium 4 | | | | | | | • | | | | | | | |
| Intel Pentium D | • | | | | | • | • | | | | | | | |
| Intel Xeon | • | | • | | • | • | • | • | • | • | | • | • | |
| AMD Opteron | | • | | • | | | | | | | • | | | • |

For additional details on supported options, please visit the server QuickSpecs at www.hp.com/go/quickspecs

- Supported for this product

HP ProLiant and BladeSystem servers

Supported options

| | High-end | | | p-Class | | | | | c-Class | | | | |
|--|----------|----------|----------|----------|----------|-------|----------|-------|---------|--------|--------|--------|--------|
| | ML570 G4 | DL580 G4 | DL585 G2 | BL20p G4 | BL25p G2 | BL35p | BL45p G2 | BL60p | BL460c | BL465c | BL480c | BL685c | BL860c |
| HP Hard Drives | | | | | | | | | | | | | |
| Large Form Factor SATA | • | • | • | | | | | | | | | | |
| Small Form Factor SAS | • | • | • | • | • | | • | | • | • | • | • | • |
| Small Form Factor SATA | | | | • | • | | • | | • | • | • | • | |
| Small Form Factor PATA | | | | | | • | | | | | | | |
| SCSI | | | • | | | | | • | | | | | |
| HP Memory | | | | | | | | | | | | | |
| PC2700 | | | | | | • | | | | | | | |
| PC3200 | | | | | | • | | | | | | | |
| PC2-3200 DDR2 | • | • | | | | | | | | | | | |
| PC2-4200 DDR2 | | | | | | | | | | | | | • |
| PC2-5300 DDR2 | | | • | | • | | • | | | • | | • | |
| PC2-5300 DDR2 FBDIMM | | | | • | | | | | • | | • | | |
| HP Controllers | | | | | | | | | | | | | |
| E200/E200i | | • | | • | • | | • | | • | • | | • | |
| E500 | • | • | • | | | | | | | | | | |
| P400/400i | • | • | • | | | | | | | | • | | |
| P600 | • | | | | | | | | | | | | |
| P800 | • | • | • | | | | | | | | | | |
| LSI 1068 SAS RAID | | | | | | | | | | | | | • |
| BBWC | | • | • | • | • | | • | | • | • | • | • | |
| Processors | | | | | | | | | | | | | |
| Intel Xeon | • | • | | • | | | | | • | | • | | |
| AMD Opteron | | | • | | • | • | • | | | • | | • | |
| Itanium 2 | | | | | | | | • | | | | | • |
| HP Mezzanine Cards | | | | | | | | | | | | | |
| Fibre Channel HBA | | | | • | • | • | • | | • | • | • | • | • |
| Dual-port Gigabit Ethernet Adapter | | | | • | • | | • | | • | • | • | • | |
| Quad-port Gigabit Ethernet Adapter | | | | | | | | | • | • | • | • | |
| Dual-port Multifunction Gigabit Ethernet Adapter | | | | • | • | • | • | | • | • | • | • | |

For additional details on supported options, please visit the server QuickSpecs at www.hp.com/go/quickspecs

• Supported for this product

HP related offerings

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 and third-party software

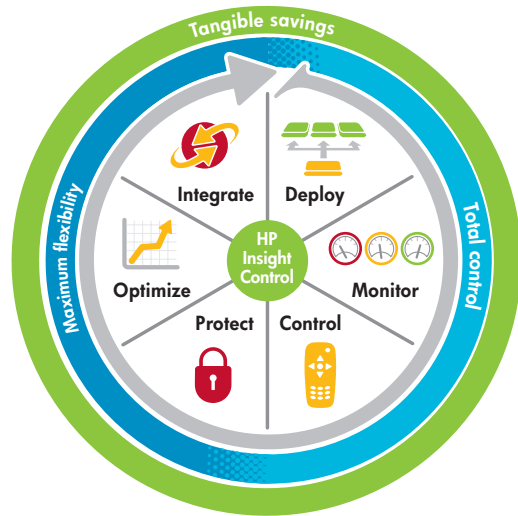
HP and other leading vendors provide software that allows you to align IT with business needs and automate error-prone processes, which simplifies and enhances your infrastructure.

Insight Control

HP Insight Control represents the total value of the ProLiant and BladeSystem management portfolio and is what allows our customers to transform their server hardware into best-run server infrastructure. Insight Control brings together HP Systems Insight Manager and HP ProLiant Essentials software, and delivers them in simple, integrated suites:

- **Insight Control Environment**—Targeted for ML/DL servers, this suite covers all of the management bases including server health and performance monitoring, OS independent remote control, and unattended deployment and inventory management.
- **Insight Control Data Center Edition**—The companion software package to Insight Control Environment, this suite is designed for BladeSystem environments and includes management capabilities such as unified server health and performance monitoring, rapid deployment, proactive performance monitoring, vulnerability scanning and patch management, and remote control capabilities.
- **Insight Control Linux Edition**—Built on HP Control Tower management platform, this suite provides the essential tools for deploying and managing Linux-scale out environments, enabling customers to easily deploy and manage BladeSystem servers.

With Insight Control you have all you need to deploy, monitor, and control server infrastructure remotely. Insight Control represents a key component of the HP Unified Infrastructure Management strategy, delivering consistent management across ProLiant, Integrity and StorageWorks platforms.



| | | |
|-----------|--|---|
| Deploy | Reduce time and errors associated with the deployment of server infrastructure through fully automated server deployment. Deploy, migrate and manage physical and virtual environments in a matter of minutes. | <ul style="list-style-type: none"> • Rapid Deployment Pack • Server Migration Pack • Intelligent Lights-Out Advanced Pack |
| Monitor | Receive proactive alerts from systems with defective hardware or performance bottlenecks before they result in unplanned downtime or reduced productivity. | <ul style="list-style-type: none"> • Systems Insight Manager • Intelligent Lights-Out Advanced Pack • Intelligent Lights-Out Select Pack |
| Control | Take control of remote servers from a central location—control power settings, update software and interact with OS remotely, correct server problems and improve system recovery times. | <ul style="list-style-type: none"> • Lights-Out 100/100i remote management card • Intelligent Lights-Out Advanced or Select Pack |
| Protect | Proactively scan systems for security vulnerabilities and apply patches before they attack your environment, resulting in increased uptime and enhanced productivity. | <ul style="list-style-type: none"> • Vulnerability and Patch Management |
| Optimize | Increase server utilization through virtualization; measure power consumption and regulate power usage through processor power stepping which increases use of existing facilities. | <ul style="list-style-type: none"> • Insight Power Manager • Virtual Machine Manager |
| Integrate | Simplify the installation and integration of software with a single installer, delivering faster time to solution and streamlined deployment and maintenance of software licenses. | <ul style="list-style-type: none"> • Microsoft Operations Manager • CA Unicenter • Tivoli Enterprise |

Other related software

| | |
|---|--|
| VMware Infrastructure 3 | HP offers VMware Infrastructure 3 and related software that can be ordered with ProLiant and BladeSystem servers. HP support, implementation services, integration with ProLiant Essentials, solutions tools, and a broad range of certified HP servers and storage make an HP VMware solution an excellent choice for virtualization. |
| HP-UX Integrity Virtual Machines | You can create partitions to the granularity of the hardware (CPU, I/O card) with each partition running its own version of an operating system. You can create partitions at a granularity below that of the hardware component with all applications running in one instance of an operating system. |
| HP Virtual Server Environment | Virtual servers are created that can automatically grow and shrink based on the service-level objectives (SLOs) set for each application they host. Through tight integration with partitioning, high availability and utility pricing, HP VSE allows you to maintain service levels in the event of downtime and to pay for spare capacity on an as-needed basis. |
| HP Serviceguard for Linux | High availability clustering software that enables efficient, continuous access to critical applications, information and services. |
| Microsoft Windows Small Business Server | HP offers Microsoft Windows Small Business Server (SBS) pre-installed, integrated and fine-tuned for HP ProLiant servers. SBS is a complete and affordable network solution that simplifies daily business IT operations and management for small businesses with up to 75 workstations. |
| Microsoft Windows Server 2003 R2 | HP offers Microsoft Windows Server 2003 R2 pre-installed, integrated and fine-tuned for HP ProLiant servers. Windows Server 2003 is an integrated, server infrastructure solution designed to help IT professionals deliver new capabilities and support, while simplifying and enhancing their IT infrastructure so they can do more with less. |
| SUSE Linux Enterprise Server | Offers built-in application security virtualization and integrated systems management across all ProLiant and BladeSystem Servers |
| Red Hat Enterprise Linux | HP offers customers more flexibility whether implementing a new Red Hat Enterprise Linux infrastructure or expanding an existing Red Hat Enterprise Linux environment on ProLiant servers. |

HP related offerings

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 options

Server options—including memory, drives, processors, racks, operating system software, power and cooling—help fine-tune your solution by enhancing system performance and functionality.

| BladeSystem networking | |
|---|---|
| 4 Gb Virtual Connect Fibre Channel Module for BladeSystem c-Class | Offering high-performance connectivity to the data center, this module offers integrated switching including high-performance 4 Gb/sec auto-negotiating ports, and compatibility with your favorite brand of SAN switch |
| 1/10 Gb Virtual Connect Ethernet Module for BladeSystem c-Class | Offering high-performance connectivity to the data center, this module offers integrated switching including high-performance 1G and 10G uplinks to the data center switch, port aggregation, failover, VLAN tagging and stacking |
| NC325m PCI Express Quad-port Gigabit Server Adapter | A mezzanine card that adds four additional gigabit Ethernet ports, providing the highest port density available for BladeSystem c-Class servers in a single adapter |
| Dual NC370i Multifunction Gigabit Server Adapter | A cost-effective networking adapter that supports accelerated iSCSI for Microsoft Windows environments |
| NC373m PCI Express Dual-port Multifunction Gigabit Server Adapter | A BladeSystem c-Class mezzanine card that supports TOE, RDMA and accelerated iSCSI for Microsoft Windows environments |
| NC374m PCI Express Dual-port Multifunction Gigabit Server Adapter | A BladeSystem p-Class, cost-effective networking adapter supporting TOE for Microsoft Windows environments |
| GbE2 Ethernet Blade Switch | Provides 16 internal downlinks, five uplinks and two internal cross-connects for superior efficiency in a low-cost, standards-based, manageable blade switch |
| Cisco Gigabit Ethernet Switch Module | Provides seamless integration into the HP BladeSystem enclosure and delivers 100% compatibility and consistency with well-established Cisco technology standards. |
| Brocade 4 Gb SAN Switch | An easy-to-manage embedded Fibre Channel switch solution with 4 Gbps performance to customers deploying a small SAN or expanding their current SAN |
| QLogic QMH2462 Fibre Channel Host Bus Adapter | Two 4 Gb Fibre Channel ports for fast and reliable SAN connectivity providing customers improved data availability, capacity and management cost savings from consolidating disk resources |
| Emulex LPe 1105 Fibre Channel Host Bus Adapter | High-performance, scalable, Fibre Channel SAN connectivity that provides reliable 4 Gb/sec connectivity, enabling high-availability to scalable storage in order to meet the needs of the most demanding applications and environments |
| ML/DL networking | |
| NC110T PCI Express Gigabit Server Adapter | A low-cost Gigabit Ethernet NIC featuring excellent performance at a very modest price |
| NC150T PCI 4-Port Gigabit 1000T Combo Switch Adapter | A cost-effective Gigabit Ethernet switch and network adapter integrated on a single PCI card providing four external switched ports to client devices, ideal for small and medium organizations, as well as small, remote offices |
| NC364T PCI Express Quad-port Gigabit Server Adapter | A quad-port adapter that 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 4000 Mbps. |
| NC373T PCI Express Multifunction Gigabit Server Adapter | A high-performance adapter for twisted-pair environments that supports TCP Offload on Windows and accelerated iSCSI, all on a single card; supports both standard and low-profile slots |
| NC380T PCI Express Dual-port Multifunction Gigabit Server Adapter | 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 |
| NC510C PCIe 10 Gigabit Server Adapter | An eight-lane PCI Express 10 Gigabit Ethernet CX4 (10GBASE-CX4 copper) network solution offering the highest bandwidth available in a ProLiant Ethernet adapter |
| Rack and rack accessories | |
| TFT7600 Rack Keyboard Monitor | Eases deployment of software updates by allowing connection of a USB drive directly at the console; designed for rack-mount use and ideal for data centers, corporate computer rooms and even SMB installations where local access to servers is needed at the rack |
| 5000 Series Rack | Ideal rack solution for small and medium-size organizations with limited IT budgets |
| 10000 G2 Series Rack | Enterprise-class rack solution combines unparalleled structural integrity, cooling and cable management and can be used for all HP rack-mounted server and storage products. |

HP related offerings

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 options—continued

Server options—including memory, drives, processors, racks, operating system software, power and cooling—help fine-tune your solution by enhancing system performance and functionality.

| Consoles and console switches | |
|--|--|
| Server console switches | Integrates KVM and serial devices into a single management console for all of your servers, network devices and infrastructure; requires 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 | Provides local and remote access to a variety of data center devices; requires no software to be installed on target servers; allows administrators to access KVM functions remotely for day-to-day management or map a drive on their workstation to target servers to perform application, OS, firmware upgrades and installations |
| Power supplies | |
| T750 Uninterruptible Power Supply | Ideal tower UPS for small and medium businesses and desktop/workstation environments providing protection from power outages for equipment with power requirements of 500 watts and less |
| T1500 Uninterruptible Power Supply | 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 | A rack power supply 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 that offers up to 2,700 watts of true power |
| R5500 Uninterruptible Power Supply | The highest density rack power supply in a 3U, rack-mount design that offers up to 5,000 VA and 4,500 watts of true power |

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 P400 | This 8-port SAS controller is a performance controller supporting PCI Express and is ideal for RAID 5 or RAID 6 (ADG) implementations with four drives or more. |
| Smart Array P800 | Our highest performing 16-port Serial Attached SCSI PCI Express controller offers internal and external connections with expander support, combined with support for more than 100 hard drives to give you unparalleled deployment flexibility. |
| Smart Array E200 | An affordable, entry-level controller utilizing PCI Express provides RAID 0, 1 and 1+0 support standard with an upgrade path to RAID 5 by adding battery-backed write cache. |
| Smart Array 6402 | A high-performance Ultra320, PCI-X controller provides improved performance, including Double Data Rate (DDR) battery-backed write cache architecture and a new RAID engine; array provides flexibility and reliable data protection for workgroup and departmental servers. |
| Hard drives | |
| HP SATA 3.5-inch and 2.5-inch hard disk drives | HP 1.5-Gb/sec SATA drives provide the lowest cost-per-gigabyte storage solution for server and storage boxes. They are ideal for less critical, low-duty cycle applications. Available capacities include: 750 GB, 500 GB, 250 GB, 160 GB and 80 GB 7.2K RPM 3.5-inch and 60 GB 5.4K RPM 2.5-inch. |
| HP SAS 3.5-inch and 2.5-inch hard disk drives | HP 3.0-Gb/sec SAS drives provide a best-price-for-performance solution for server and storage boxes. These drives are ideal for critical, high-duty cycle applications. Available capacities include: 300 GB, 146 GB, 72 GB, 36 GB 15K RPM 3.5-inch and 146 GB, 72 GB and 36 GB 10K RPM 2.5-inch. |
| Storage servers | |
| ProLiant ML310 G4 Storage Server | An entry-level, 5U tower file server with fixed storage capacities utilizing SATA or SAS drives. |
| ProLiant DL380 G5 Storage Server | A file server solution that provides high levels of performance, scalability and flexibility in easily expandable appliance models as well as a SAN gateway model. |

HP related offerings

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 storage—continued

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

| Tape drives | |
|-------------------------------|--|
| DAT 72 USB tape drive | Combines the reliability and cost-effectiveness of DAT with the universal plug-and-play capabilities of the USB 2.0 interface to provide an ideal backup solution for small servers and workstations. |
| Ultrium 448 tape drive | A tape backup solution that provides both small and medium-size customers with an excellent mix of features and value for their entry-level and mid-range server needs. |
| Storage array systems | |
| Modular Smart Array 20 | A SATA disk drive storage enclosure that delivers industry-leading availability, storage density, and upgradeability to meet customers' demanding and growing storage needs. The MSA 20 delivers the 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 30 | The MSA 30 is ideal for data center, departmental and workgroup server users who need a flexible, universal storage enclosure that utilizes a common storage building block for their current and future data center. It is intended for use with servers delivering business-critical data and applications with requirements for high availability, performance, excellent serviceability and large storage capacity. |
| Modular Smart Array 50 | The MSA 50 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 MSA 50 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 1000 | A 2 Gb Fibre Channel storage system for the entry-level to mid-range storage area network (SAN), provides customers with a low-cost, scalable, high-performance storage consolidation system with investment protection. |
| Modular Smart Array 1500 | A Fibre Channel storage area network (SAN) 2U controller shelf connects to HP StorageWorks Serial ATA (SATA) and/or SCSI disk enclosures, providing customers with a flexible, low-cost, high-capacity storage solution. |
| Modular Smart Array 1510i | An iSCSI interface-based 2U controller unit connects to both HP StorageWorks Serial ATA (SATA) and/or SCSI disk enclosures, providing a flexible, low-cost, high-capacity storage solution. |
| Storage blades | |
| SB40c storage blade | A half-height c-Class direct-attach storage blade features Smart Array performance and manageability and support for up to six hot plug small form factor Serial Attached SCSI or Serial ATA hard disk drives. |
| Virtual array systems | |
| Enterprise Virtual Array 4000 | An enhanced virtual array storage solution for customers in the mid-range business-critical market, with proven performance that reduces the time, space and cost concerns of traditional storage. The EVA4000 can support any combination of existing high-performance drives and the new 400 GB or 500 GB low cost FATA drives. The EVA4000 can support up to a maximum capacity of 28 TB (with the 500 GB FATA drives) with any VRAID type supported. |
| Enterprise Virtual Array 6000 | An enhanced virtual array storage solution for customers in the mid-range business critical-market, with proven performance that reduces the time, space and cost concerns of traditional storage. The EVA6000 can support up to a maximum capacity of 56 TB (with the 500 GB FATA drives) with any VRAID type supported. |
| Enterprise Virtual Array 8000 | An enhanced virtual array storage solution for customers in the mid-range business-critical market, with proven performance that reduces the time, space and cost concerns of traditional storage. The EVA8000 can support up to a maximum capacity of 84 TB in a single cabinet and up to 120 TB with an expansion cabinet today (with the 500 GB FATA drives) with any VRAID type supported. |
| Disk array systems | |
| XP10000 disk array systems | An entry-level high-end storage system that delivers boot-once scalability and heterogeneous connectivity in a compact footprint, increasing business agility and decreasing the stress of running applications where downtime is not an option. It scales from 0 to 240 disk drives for over 69 TB of internal capacity, to 16 PB of external capacity, 32 GB of cache—all while online with no interruptions to applications and without requiring a forklift upgrade. |
| XP12000 | An enterprise-class storage system that delivers state-of-the-art reliability and availability for mission-critical applications where downtime is not an option. It scales from 9 to 1,152 disk drives for over 332 TB of internal capacity, 32 PB of external capacity, 256 GB of cache—all while online with no interruptions to applications and without requiring a forklift upgrade. |

HP Services

To capitalize fully on your HP ProLiant server capabilities requires a service partner who has a thorough understanding of the technology and systems environment. HP Services, an industry leader in the provisioning of multi-vendor support solutions, provides a range of support services designed to meet the varying needs of business. Whether an SMB or large global corporation, HP has a ProLiant server support offering to help you speed deployment and increase system uptime. For a complete list or for more information, visit: www.hp.com/services/proliantservices.

Benefits of HP Service support include:

- Access to extensive technical expertise, business processes and technology
- Fast problem resolution
- Shortened deployment time and risk mitigation
- Improved service quality

Delivering nearly continuous care and support expertise with committed response designed to meet your IT and business needs.

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| 3-year, 9x5, next-business-day, excluding holidays | Extends your hardware warranty coverage for quick and convenient hardware problem resolution |
| 3-year, 13x5, same-business-day, 4-hour response coverage | Extends your hardware warranty coverage with prompt same-day service for key servers and increases equipment availability and productivity |
| 3-year, 24x7, same-business-day, 4-hour response | Extends your hardware warranty coverage with prompt same-day service for key servers and increases availability and productivity with around-the-clock access to technical expertise and support |
| 3-year, 24x7, 6-hour call-to-repair | Decreases hardware downtime with committed 6-hour call to repair for hardware problem resolution |
| 3-year, Support Plus 24 | Increases performance and availability with integrated 24x7 hardware and software support for complex interoperability problem resolution |
| 3-year, Proactive 24 | Mission Critical Support portfolio is an integrated hardware and software support solution designed to help you improve operational and management effectiveness of your IT environment. |
| 3-year, Critical service | Mission Critical Support portfolio delivers 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. |

HP Financial Services: the smartest way to invest in IT

HP makes it easy on the balance sheet to put the power of the HP portfolio to work for you through HP Financial Services. We offer a complete array of leasing and financial lifecycle management services in over 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. For more information on our Financial Services, visit:

www.hp.com/go/hpfinancialservices

HP Factory Express: get more from your IT investment

While your ProLiant solution is in the HP factory, consider having HP do the labor-intensive tasks such as software image loading, asset tagging, rack integration, and any needed server customization, configuration or integration. Factory Express delivers your ProLiant solution ready to go—right out of the box—with a portfolio of predefined and pre-priced factory-based solutions and deployment services that support ProLiant servers and infrastructure. For more information on Factory Express, visit:

www.hp.com/go/factoryexpress

The right partner

If you have the right infrastructure, anything is possible. When evaluating how to grow your business and deciding what data center you need that will respond to business change quickly and confidently, look to HP. Cost per square foot or meter an issue...need to shrink the footprint of the servers you deploy? We have a full server portfolio available. Power and cooling draining your budget? We deliver tools and solutions to help you regulate and monitor how power is used across the infrastructure. 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 portfolio of hardware and software partners to bring the right solution to you at the right time. HP...the right partner to help your business succeed.

To learn more

For more information on how ProLiant servers and infrastructure can help you lay the foundation of an Adaptive Enterprise, please contact your HP representative, authorized HP reseller, or visit:

www.hp.com/go/proliant

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