

HP ProLiant SL6000 Scalable System

Data sheet

Designed for extreme scale-out deployments by the rack, the new HP ProLiant SL6000 Scalable System delivers right-sized dense server solutions with power-saving and cost-reduction features—enabling you to grow your IT with confidence.

Driven by competitive issues and business growth, scale-out computing is gaining momentum with businesses striving to build economics into their data centers. If you are also looking to achieve improved efficiencies, now is a good time to consider the new HP ProLiant SL6000 Scalable System that can help you break down barriers to scale and achieve IT flexibility.

The HP ProLiant SL6000 Scalable System is designed around extreme scale-out, high-performance computing (HPC), and power- and space-constrained data center environments. It provides a highly efficient and modular power and cooling infrastructure with a suite of pluggable server modules in a standard 19-inch rack. It includes server solutions that enhance power efficiency by sharing power supplies and fans, helping you achieve significant cost savings.

A multi-node solution in a 2U HP ProLiant z6000 Chassis, the ProLiant SL6000 Scalable System is based on industry standards and fits into standard HP and third-party racks. Its flexible hardware design offers you streamlined features that help redefine data center efficiency and reduce acquisition and operational expenses—while increasing server performance and energy efficiency. What's more, simplified management and monitoring of each independent server help reduce the cost and effort needed to manage several servers.

Based on your needs, you can choose from the HP ProLiant SL160z G6, SL165z G7, SL170z G6, and SL2x170z G6 servers. Two independent HP ProLiant SL160z G6 servers, HP ProLiant SL165z G7 servers, or HP ProLiant SL170z G6 servers can go into the 2U HP ProLiant z6000 Chassis. And if you opt for the HP ProLiant SL2x170z G6 server, the chassis can be used for four servers, two per 1U tray.



HP ProLiant SL160z G6 Server



HP ProLiant SL165z G7 Server



HP ProLiant SL170z G6 Server



HP ProLiant SL2x170z G6 Server



Key features

- Energy-efficient 2U power and cooling chassis
- Front serviceable 1U server trays that support up to two x two socket servers, with internal disk drives
- Standard 19-inch racks, with front I/O cabling
- N+1 redundant fans and optional hot-plug redundant power supplies (RPS)

Key benefits

High performance

If you are looking for high levels of efficiency in your data center, from the base design to the distribution of power and cooling, the HP ProLiant SL6000 Scalable System is the right choice:

- It delivers greater compute density over traditional rack servers with support for two servers in a 1U tray
- Flexible modular server configurations enable increased server density that enhances performance per watt and per square foot

Cost-effective compute power

Given the current economic climate, technology is under intense pressure to deliver more value to organizations while reducing capital and operational expenses. The HP ProLiant SL6000 Scalable System delivers concentrated compute power, even in price-conscious environments:

- It reduces acquisition costs, making them significantly lower when compared to traditional rack-mount servers
- Lower power consumption results in reduced operating cost per server
- No initial investment in infrastructure is required—allowing you to take advantage of lower total cost of ownership (TCO)
- Fits into data centers with a standards-based infrastructure, enabling deployment without modifying hot-aisle/cold-aisle layouts and reducing deployment time and cost
- Modular design delivers only the features you need, removing the additional cost of features not required for scale-out

High levels of power efficiency with shared power and thermals

The HP ProLiant SL6000 Scalable System provides a shared power and cooling infrastructure using highly efficient fans and power supplies. The modular server design for improved airflow and cabling helps manage power and cooling at the rack level.

HP Services





When technology works, business works

The challenge of virtually every IT organization is similar: to develop and maintain an agile, efficient server infrastructure that delivers the service levels your business needs. If you are delivering services with increasing volumes of usage, it becomes critical for your business to be able to scale data centers very quickly. HP Services for Scalable Computing (SCI) are designed to support massive scale-out data center requirements.

Benefits from SCI services are tuned for specific needs:

- **Technical account manager:** focal point for personalized escalation management and communication
- **HP SCI parts exchange:** high-volume, continuous parts inventory and replenishment; HP sets up inventory of parts on your site so that repairs can be completed immediately by your own staff
- **HP SCI hardware onsite support:** remote diagnostics and onsite hardware support to meet more demanding response needs to provide a continuous level of uptime
- **HP installation service:** basic installation of HP branded products as well as HP supported products from other vendors
- **Value-added services:** these services can address your specific data center concerns such as capacity, security, asset management, data center design, and data center relocation

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

Technical specifications	HP ProLiant SL160z G6 Server	HP ProLiant SL165z G7 Server	HP ProLiant SL170z G6 Server	HP ProLiant SL2x170z G6 Server
				
Processor chipset	2P Intel® Xeon® 5500 and 5600; Intel 5520 Chipset	2P AMD Opteron 6100	2P Intel Xeon 5500 and 5600; Intel 5520 Chipset	2P Intel Xeon 5500 and 5600; Intel 5520 Chipset
Memory	18 DDR3 DIMM sockets	24 DDR3 DIMM sockets	16 DDR3 DIMM sockets	16 DDR3 DIMM sockets
Storage	Embedded HP Smart Array B110i SATA RAID Controller Up to 2 LFF or 4 SFF hard drives using a quick-release carrier	Embedded HP Smart Array B110i SATA RAID Controller Up to 2 LFF or 4 SFF hard drives using a quick-release carrier	Embedded HP Smart Array B110i SATA RAID Controller Up to 6 LFF or 8 SFF hard drives using a quick-release carrier	Embedded HP Smart Array B110i SATA RAID Controller Up to 2 LFF or 4 SFF hard drives using a quick-release carrier (per tray, each node gets half the drives)
Networking	Embedded Dual-Port 1GbE NICs	Two embedded Dual-Port 1GbE NICs (4 NICs total)	Embedded Dual-Port 1GbE NICs	Embedded Dual-Port 1GbE NICs
Optional I/O expansion	1 x16 LP PCIe Gen 2 slot 1 x4 internal LP PCIe Gen 2	1 x16 LP PCIe Gen 2 slot 1 x4 internal LP PCIe Gen 2	1 x16 LP PCIe Gen 2 slot	1 x16 LP PCIe Gen 2 slot
Management	LO100 Standards-based DCMI and IPMI Basic functionality, node-level power on/off	LO100 Standards-based DCMI and IPMI Basic functionality, node-level power on/off	LO100 Standards-based DCMI and IPMI Basic functionality, node-level power on/off	LO100 Standards-based DCMI and IPMI Basic functionality, node-level power on/off
Additional features	High efficiency (> 90%) @ 50%+ load Hot-plug, N+1 PSU (optional)	High efficiency (> 90%) @ 50%+ load Hot-plug, N+1 PSU (optional)	High efficiency (> 90%) @ 50%+ load Hot-plug, N+1 PSU (optional)	High efficiency (> 90%) @ 50%+ load Hot-plug, N+1 PSU (optional)
Density	2 server nodes in 2U chassis 1 EATX node in 1U tray	2 server nodes in 2U chassis 1 EATX node in 1U tray	2 server nodes in 2U chassis 1 half-EATX node in 1U tray	4 server nodes in 2U chassis 2 half-EATX nodes in 1U tray
Warranty (parts/labor/onsite)	1-year parts/1-year labor/1-year onsite	1-year parts/1-year labor/1-year onsite	1-year parts/1-year labor/1-year onsite	1-year parts/1-year labor/1-year onsite

PSU = power supply unit
EATX = extended ATX

Servers to choose from

The HP ProLiant SL family of servers has been built for scale-out in the data center and comes in a new form factor for superior performance and power efficiency. You can choose from the following according to your needs.

Products	HP ProLiant SL160z G6 Server	HP ProLiant SL165z G7 Server	HP ProLiant SL170z G6 Server	HP ProLiant SL2x170z G6 Server
Description	Increased expansion with 18 DIMM slots and up to 2 PCIe slots	Improved expansion with twelve-core AMD processors and 24 DIMM slots	Greater storage capacity with up to 6 LFF SATA or SAS hard drives	Compute density with two servers per tray (1U)
Ideal applications	HPC database tier Web memory-cache	HPC database tier Web memory-cache	Web search Web database	HPC compute-intensive Web front end
Product	www.hp.com/servers/sl160z	www.hp.com/servers/sl165z-g7	www.hp.com/servers/sl170z	www.hp.com/servers/sl2x170z

You can also choose the right-sized power supply for your configuration and operate higher up the efficiency curve. Right-sized ProLiant power supplies meet your exact needs and help you reclaim lost data center power. Reduced over-subscription means you pay only for the power you need. The HP Power Advisor can help you select the right-sized power supply. In addition, HP ProLiant G6 servers come with a sea of sensors that can track thermal activity across the server and automatically adjust components such as cooling fans to increase efficiency.

- The high-efficiency multi-node chassis with shared power and cooling components, including energy-efficient fans and optional hot-plug redundant PSU reduces power consumption
- Choice of power supply (460 W, 750 W, or 1200 W AC configurations) meets your unique power requirements—enabling you to lower power consumption without affecting performance
- The common power slot design helps reduce power wastage by allowing you to choose the power supply that best matches your specific workload
- Unique cooling design with no midplane or I/O connectors facilitates unrestricted airflow

Outstanding flexibility

Built on our long history of successful scale-out deployments, the HP ProLiant SL6000 Scalable System gives you a high level of agility that can help you transform the economics of your data center.

- Highly flexible modular design with a variety of server trays makes it configurable for different application requirements
- Works with existing data center infrastructure and facilitates simplified deployment
- Front-pluggable server trays enable easy serviceability
- 10U bulk rail kit makes deployment and serviceability simple

- Front I/O cabling provides easy access
- 2U rail kit supports third-party racks
- SNMP agents for more comprehensive management solutions

Ideal environment

The HP ProLiant SL6000 Scalable System gives you the flexibility to customize it to meet your exact requirements. Web and cloud providers, high-performance computing data centers, and enterprise customers can rely on it to enable business growth and gain competitive advantage.

Typical usage

- **Scale-out:** Web farms, Internet service providers (ISPs), and application service providers (ASPs)
- **Web 2.0:** social networking, shared content, and blogs
- **High-performance computing:** oil and gas, financial, entertainment, scientific, government, and education

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www.hp.com/go/hpfinancialservices

For more information

To find out more about the HP ProLiant SL6000 Scalable System, contact your local HP representative, or visit:

- www.hp.com/servers/sl160z
- www.hp.com/servers/sl165z-g7
- www.hp.com/servers/sl170z
- www.hp.com/servers/sl2x170z

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