

HP ProLiant SL6500 Scalable System

Family data sheet



Driven by business growth, scale-out computing is gaining momentum with businesses striving to build economics into their data centers. The all-new HP ProLiant SL6500 Scalable System is designed for such scale-out deployments. The SL6500 system comes with a highly flexible s6500 chassis, which allows you to reduce overall IT cost and enhance power efficiency by adopting a shared power and cooling architecture.

The SL6500 system is apt for service providers. It offers a highly efficient power and cooling infrastructure with a suite of pluggable server modules in a standard 19-inch rack with front I/O cabling. The SL6500 system provides a shared power and cooling infrastructure using efficient fans and power supplies. The modular server design and efficient cabling allows you to manage energy at the rack level—helping you achieve significant cost savings in the long run. Such a unique cooling design with no midplane or I/O connectors facilitates unrestricted airflow for improved functioning of the server.

Benefit from a highly flexible s6500 4U chassis

The all new s6500 4U chassis can accommodate up to eight half-width servers, which gives you the ability to mix and match server nodes, and also allows for single node serviceability (SNS)—making it an extremely flexible chassis. In other words, this means that you can add or remove compute capacity based on your business needs.

The highly efficient multi-node chassis with shared power and cooling components, including energy efficient fans and optional hot-plug redundant PSU helps reduce power consumption to a large extent when compared to previous generation servers. You can also choose a “right-sized” power supply for a particular system configuration and operate higher up in the efficiency curve. HP Common Slot Platinum Power Supplies, a key element of the HP Thermal Logic technology, offers high-efficiency power options in three outputs: 460 W, 750 W, and 1200 W.

This flexibility allows users to right-size a power supply for specific server configurations or workloads, and helps reduce power wastage, increase energy savings, and do away with trapped power capacity within your data center. What’s more, simplified management and remote monitoring for each server makes the SL6500 system an ideal choice.

Built on our long history of successful hyper-scale deployments, the HP ProLiant SL6500 Scalable System gives you the agility and flexibility that can help you transform the economics of your data center. Based on your needs, you can choose between the HP ProLiant SL390s G7 server and the HP ProLiant SL170s G6 server.



The s6500 chassis also supports mixing and matching of half-width trays. The following table shows how the chassis can be configured with various combinations. Both Integrated Lights-Out 3 (iLO 3) and Lights-Out (LO100i) based servers can be installed in the same chassis as well as different size half-width trays.

Tray mixing support plan for half-width configurations

1U 1/2W	1U 1/2 W
1U 1/2 W	1U 1/2 W
1U 1/2W	2U 1/2W
1U 1/2W	
2U 1/2W	2U 1/2W
2U 1/2W	1U 1/2 W
	1U 1/2 W

HP ProLiant SL390s G7 server

The SL390s G7 consists of two server trays—a 1U half-width and a 2U half-width tray. Both trays use the same system board that goes into the HP ProLiant s6500 chassis. The SL390s G7 comes with up to two Intel® Xeon® 5600 series processors and support for 12 DDR3 DIMM sockets, two 1 Gb Ethernet ports, one 10 Gb Ethernet port (SFP+), and optional on board InfiniBand port (QSFP).

With an option to mix and match trays, the HP ProLiant SL390s G7 server gives you the scope to create a combination of trays that is most suitable to your business needs.

The SL390s G7 offers two different trays, a 1U half-width tray and a 2U half-width tray. The 1U tray is designed for compute density, while the 2U tray is designed to support a graphics processing unit (GPU). The SL390s G7 2U half-width tray supports the HP M1060, HP M2050, and HP M2070. GPUs help address the need for increased performance in high performance computing (HPC) sectors such as oil and gas, life sciences, and financial services. The GPUs make the HP ProLiant SL6500 Scalable System a complete portfolio of tightly integrated, highly manageable GPU-enabled servers for a wide range of computing applications.

Key features and benefits

Performance

Get superior compute density over traditional rack servers with features such as:

- One 10 Gb Ethernet port (SFP+) and optional QDR InfiniBand port (QSFP)
- Support for two 1 Gb Ethernet ports
- One x16 PCIe Gen 2 slot on 1U server tray
- One x8 PCIe Gen 2, three x16 PCIe Gen 2 slots on 2U server tray
- Up to 192 GB registered memory DIMMS (up to 48 GB unbuffered)
- 12 DDR3 DIMM slots to support both registered and unregistered DIMMs
- Up to two Intel Xeon 5600 Series processors

Density

Now get GPU-enabled servers with the HP M2050 graphics card in the new SL390s G7 server.

- 1U half-width tray offers compute density giving you twice the number of servers per U
- 2U half-width tray offers balanced GPU density with HP M1060, HP M2050, or HP M2070 to provide up to 3 GPUs (up to 225 watt each), in a space equivalent to a 1U server
- Up to eight 1U half-width trays or four 2U half-width trays or a combination of each to fit in a single s6500 chassis

Management

Simplified server management makes a data center more efficient and user friendly.

- Remote management and control with iLO 3 help conserve valuable IT resources
- Server configuration and deployment is simplified with tools like SmartStart, Rapid Deployment Pack, PXE, and ROM-based Setup Utility
- HP Insight Control is essential server management software that helps deploy servers quickly, proactively manage the health of virtual or physical servers, streamline power consumption, and enable complete remote control
- Front I/O cabling, along with the SNS features, simplifies serviceability of individual servers

Efficiency

Shared power and cooling is one of the key benefits of the SL6500 system.

- The s6500 chassis uses shared power and cooling architecture for improved power efficiencies
- Right-sized power supplies for different workloads help reduce power wastage and increase energy savings

HP ProLiant SL390s G7 server

HP ProLiant SL170s G6 server



	HP ProLiant SL390s G7 1U half-width server	HP ProLiant SL390s G7 2U half-width server	HP ProLiant SL170s G6 server
Processor chipset	2P Intel Xeon 5500 and 5600; Intel 5520 chipset	2P Intel Xeon 5500 and 5600; Intel 5520 chipset	2P Intel Xeon 5500 and 5600; Intel 5520 chipset
Maximum memory	12 DDR3 DIMM sockets 192GB	12 DDR3 DIMM sockets 192GB	16 DDR3 DIMM sockets 192GB
Storage	Embedded HP Smart Array B110i SATA RAID controller 2 LFF SATA/SAS or 4 SFF SATA/SAS	Embedded HP Smart Array B110i SATA RAID controller 4 SFF SATA/SAS and 2 SFF SATA/SAS	Embedded HP Smart Array B110i SATA RAID controller 2 LFF SATA/SAS or 4 SFF SATA/SAS
Networking	Dual-port 1 GbE NIC 10 GbE SFP+ (via ConnectX2)	Dual-port 1 GbE NIC 10 GbE SFP+ (via ConnectX2)	Dual-port 1 GbE NIC
Optional I/O expansion	1 x16 LP PCIe G2	1 x8 LP PCIe G2 3 x16 PCIe G2 for up to 3 GPUs	1 x16 LP PCIe G2
Management	iLO 3 Standards-based DCMI 1.0 and IPMI 2.0	iLO 3 Standards-based DCMI 1.0 and IPMI 2.0	LO100i
Density	8 servers in 4U ½ W, 1U, SNS	4 servers in 4U ½ W, 2U, SNS	8 servers in 4U ½ W, 1U, SNS
Additional features	High efficiency shared power supplies, (>94%) at 50% plus load Shared fan topology Hot plug redundant power supply	High efficiency shared power supplies, (>94%) at 50% plus load Shared fan topology Hot plug redundant power supply	High efficiency shared power supplies, (>94%) at 50% plus load Shared fan topology Hot plug redundant power supply
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
Ideal applications	HPC Highly managed nodes Virtualization scale-out	Balanced GPU HPC	HPC Web services Virtualization scale-out Dedicated hosting
Product URL	www.hp.com/servers/sl390s-g7	www.hp.com/servers/sl390s-g7	www.hp.com/servers/sl170s-g6
Ideal environment	Oil and gas, finance, entertainment, scientific, government, virtualization hosting, and education sectors		Web farms, Internet service providers (ISPs), and applications

LP = low profile, W = width

HP ProLiant SL170s G6 server

The SL170s G6 is a 1U half-width tray, which goes into the flexible s6500 chassis. The SL170s G6 has support for 16 DDR3 DIMM sockets, one PCIe Gen 2 slot, and up to two Intel Xeon 5600 series processors. Also, the front I/O cabling design enables easy serviceability.

The SL170s G6 is ideal for Web, hosting service providers, and HPC environments that require large amounts of memory and I/O expansion.

Key features and benefits

Scalability

The SL170s G6 offers ample headroom for business growth.

- Up to 192 GB of memory, with support for 16 DDR3 DIMM sockets
- Up to two Intel Xeon 5600 series processors, of which, one drive bay supports two 3.5-inch (LFF), four 2.5-inch (SFF), or four 2.5-inch (SSD) drives

Efficiency

Shared power and cooling is one of the key benefits of the SL6500 system.

- The s6500 chassis uses shared power and cooling architecture for improved power efficiencies
- Right-sized power supplies for different workloads help reduce power wastage and increase energy savings

Deployment

Ease of deployment is an essential benefit of the SL170s G6.

- Setup CD for easy and rapid deployments
- Front I/O cabling, flexible and modular design facilitates hassle-free serviceability
- Smart Array controller provides new levels of reliability for HP servers by supporting the latest Small Computer System Interface technology and advanced RAID capabilities

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative or visit: www.hp.com/go/hpfinancialservices

Visit the following links to learn more about HP High Efficiency Power Supplies and HP iLO Advanced.

www.hp.com/go/proliant/powersupply

<http://www.hp.com/go/iLO>

HP Services

When technology works, business works

HP Technology Services—consultants and support experts to solve complex infrastructure problems. We help keep your business running, no matter what. Boost availability and avoid downtime, trust our expertise to help optimize your HP solution.

Recommended Services

3-year HP Hardware Support Onsite Service, 4-hour response, 13x5

Delivers increased equipment availability and productivity with rapid remote support and onsite response for your HP server and storage hardware.

3-year HP Hardware Support Onsite Service, 4-hour response, 24x7

Provides you with rapid remote support and, if required, an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices, and networking options to bring new hardware into operation in a timely and professional manner.

Related Services

3-year HP Hardware Support Onsite Call-to-Repair (CTR) Service, 6- or 24-hour

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

To learn how the new HP ProLiant SL6500 Scalable System can provide an ideal combination of performance and energy efficiency, along with the flexibility to adjust compute capacity, visit: www.hp.com/servers/sl390s-g7 and www.hp.com/servers/sl170s-g6

Share with colleagues



Get connected

www.hp.com/go/getconnected

Current HP driver, support, and security alerts delivered directly to your desktop

© Copyright 2010 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Xeon are trademarks of Intel Corporation in the U.S. and other countries.

4AA3-1282ENW, Created September 2010

