



HP ProLiant DL160 G6 Server

Data sheet

Simple, flexible, manageable: ideal for memory-intensive, Web 2.0 and high-performance computing environments

Today, the demands of high-performance computing (HPC) call for a server infrastructure with larger memory and enhanced processing power without compromising on reliability. In addition, the infrastructure must be ready to tackle the increasing load of Web 2.0 applications like cloud hosting. To run at optimum efficiency on a tight budget – now that is a tall order.

The HP ProLiant DL160 G6 Server fits the bill. It is a high-performance, economical, ultra-dense rack server node for memory-intensive HPC environments. Designed for quality, performance and flexible deployments that meet the needs of HPC, small and medium business (SMB), and corporate scale-out deployments, the ProLiant DL160 G6 Server is your answer to achieving high efficiency, high density and high computing at an affordable price.

Now benefit from up to 192 GB of memory with 16 GB DIMMs designed to hit the largest memory footprints, or use decreased cost and lower-density memory to achieve larger memory footprints than before. Achieve large, inexpensive memory configurations with 18 available DIMM slots.

The ProLiant DL160 G6 Server has the appropriate flexibility and scalability to meet the needs of a variety of computing tasks. Moreover, the 1U form factor allows better utilisation of server rack and data centre space, making it suitable for SMBs, growing businesses, Web 2.0 customers and large data centres.

Say good-bye to power wastage and reclaim lost data centre power. The HP ProLiant series meets energy-saving yardsticks as defined by Climate Savers Computing Gold, 80 PLUS Gold.¹

Key features and benefits

Improved performance

The ProLiant DL160 G6 Server is an economical 2P server that cuts out unnecessary options, making it ideal for budget-constrained and scale-out environments and enabling cost-enhanced memory solutions.

- **Increased memory:** If you run a memory-intensive business, enhanced memory is your foremost requirement. With the ProLiant DL160 G6 Server, you get up to a 192 GB DDR3 system maximum memory footprint.
- **SAS/SATA technology:** Capitalise on the SAS/SATA technology that comes with HP Smart Array controllers. They use 6-gigabit-per-second (Gb/s) SAS technology. With SAS technology, Smart Array controllers provide higher throughput, increased performance and enhanced reliability.
- **Intel® QuickPath Interconnect (QPI) architecture:** The QPI architecture integrates a memory controller into each microprocessor and connects processors and other components with a new high-speed interconnect. This provides high-speed connections between microprocessors and external memory, and between microprocessors and the I/O hub. In cases where a processor needs to access the dedicated memory of another processor, it can do so through a high-speed Intel QPI that links all the processors.
- **Intel Hyper-Threading Technology:** This technology enhances performance, improves business productivity and provides faster response times. With the CPU made to act like multiple CPUs, a number of transactions can be processed simultaneously, which means faster response times and thus better customer experience.

¹ <http://h10010.www1.hp.com/wwpc/th/en/sm/WF05a/15351-15351-3328412-3328421-3328421-3896024.html>



Watch the demo of the HP ProLiant DL160 G6 Server by the HP product marketing manager.



High degree of reliability

Intense competition and an ever-changing business landscape mean that you need a data centre that you can rely on. Drawing strength from the latest industry-standard technologies, the ProLiant DL160 G6 Server offers enhanced throughput and dependability at a low cost. It also offers:

- **Latest six-core Intel Xeon® processors:** The new embedded six-core Intel Xeon processors help you address the growing computing and data needs of many business-critical applications, while enabling virtualisation.
- **Increased bandwidth:** Standard industry-leading PC3-10600 DDR3 registered and unregistered DIMMs with up to 192 GB of memory provide increased bandwidth for high uptime and memory-intensive performance.
- **Miscellaneous features:** The embedded HP NC362i Dual Port 1 Gb NIC features load-balancing, jumbo frame, failover and sideband support.
- **Increased storage:** Scalable internal bays meet your storage needs with up to four large form factor 3.5-inch non-hot plug SATA or hot plug SATA/SAS, or eight 2.5-inch small form factor hot plug SATA/SAS hard drive bays.
- **Customised platform:** Build to order your platform with options based on your unique performance needs, including processors, memory, hard drives and HP Care Pack services.

Energy-efficiency leadership

Striking a balance between enhanced productivity and rising energy costs can be challenging. It may seem like it is a choice between paying soaring power bills, increasing profits or rising prices. A better option is to choose energy-efficient products. The HP ProLiant series reduces power consumption without compromising performance. ProLiant servers satisfy the energy-saving criteria defined by Climate

Savers Computing Gold, 80 PLUS Gold. Further, they can:

- **Reclaim lost data centre power:** Use the HP Power Advisor and select the right-sized power supply. This helps IT administrators reclaim lost data centre power. Less over-subscription means more capacity opportunity.
- **Prevent power wastage:** ProLiant G6 systems can tell when power is being wasted and compensate for it. Smart sensors throughout the server allow intelligent actions to preserve, protect and enhance performance and power savings.
- **Support registered and unregistered memory:** Systems are no longer burdened with the extra wastage consumed by fully buffered memory.

Data security

Customer and business information stored on corporate databases is a critical business asset, but is vulnerable to hackers and other catastrophic mishaps. In response, the ProLiant DL160 G6 Server offers an optional feature called Trusted Platform Module, which encrypts the hard drive and prevents unauthorised access from another operating system. It also prevents offline viewing of the files that make up the operating system itself.

Similar to a smart card, the ProLiant server:

- Protects secrets (data)
- Performs cryptographic functions
 - RSA, SHA-1 and RNG
- Can create, store and manage keys
 - Provides a unique endorsement key
 - Provides a unique storage root key
- Performs digital signature operations
- Holds platform measurements (hashes)

[Click here to view the demo and get an overview of the HP ProLiant DL160 G6 Server](#)



Ease of use/simple deployment

The ProLiant DL160 G6 Server's easy-access chassis and internal component labels facilitate fast and simple maintenance, in-rack serviceability and expansion.

- **Simple:** The ProLiant server comes with an easy set-up CD that enables quick installation and deployment.

HP ProLiant DL160 G6 Server



Processor and memory	
Processor type	Intel Xeon 5500 and 5600 processor series
Available processors	Six-Core Intel Xeon Processor X5690 (3.46 GHz, 130 W) Six-Core Intel Xeon Processor X5680 (3.33 GHz, 130 W) Six-Core Intel Xeon Processor X5675 (3.06 GHz, 95 W) Six-Core Intel Xeon Processor X5670 (2.93 GHz, 95 W), Six-Core Intel Xeon Processor X5660 (2.80 GHz, 95 W), Six-Core Intel Xeon Processor X5650 (2.66 GHz, 95 W) Six-Core Intel Xeon Processor E5649 (2.53 GHz, 80 W) Six-Core Intel Xeon Processor E5645 (2.40 GHz, 80 W) Six-Core Intel Xeon Processor L5640 (2.26 GHz, 60 W) Quad-Core Intel Xeon Processor X5687 (3.60 GHz, 130 W) Quad-Core Intel Xeon Processor X5672 (3.20 GHz, 95 W) Quad-Core Intel Xeon Processor E5640 (2.66 GHz, 80 W), Quad-Core Intel Xeon Processor E5630 (2.53 GHz, 80 W), Quad-Core Intel Xeon Processor E5620 (2.40 GHz, 80 W) Quad-Core Intel Xeon Processor E5607 (2.26 GHz, 80 W) Quad-Core Intel Xeon Processor E5606 (2.13 GHz, 80 W) Quad-Core Intel Xeon Processor E5603 (1.60 GHz, 80 W) Quad-Core Intel Xeon Processor L5630 (2.13 GHz, 40 W), Intel Xeon Processor (2.13 GHz, 80 W) Dual Core Intel Xeon Processor E5503 (2.00 GHz, DC)
Processor core	6, 4 or 2
Processor cache	4 MB, 8 MB or 12 MB Level 3 Cache
Maximum processor speed	3.6 GHz
Multi-processor	2
Maximum front side bus speed	NA
Memory type	PC3-10600R (DDR3-1067) Registered Memory PC3-10600E (DDR3-1067) Unbuffered Memory
Standard memory	4 GB (1 x 4 GB), 8 GB (2 x 4 GB) or 12 GB (3 x 4 GB), depending on model
Maximum memory	192 GB
Memory slots	18
Advanced memory protection	Advanced ECC
Storage type	Hot plug 2.5-inch SAS Hot plug 2.5-inch SATA Hot plug Midline Solid State Drives Hot plug 3.5-inch SAS, Hot plug 3.5-inch SATA, Non-hot plug 3.5-inch SATA
Maximum number of hard drives	8
Removable media bays	1
Expansion slot	2
Storage controller	HP Smart Array B110i SATA RAID Controller (standard) and Smart Array Controller (optional)
Deployment	
Form factor	Rack
Rack height	1U
Networking	Embedded HP NC362i Integrated Dual Port Gigabit Server Adapter
Remote management	HP Lights-Out 100i
Redundant power supply	1 built-in power supply with N+1 fans
Warranty	3-year parts

- **Manageable:** The ProLiant server's rack-optimised 1U form factor facilitates fast deployment and efficient management of large-scale cluster and grid solutions. Inclusion of SNMP agents further aids comprehensive management.
- **Flexible:** Its easy-access chassis and internal component labels give you the flexibility to expand your data centre as and when the need arises.

Support

Enjoy dependable support from HP when you purchase the ProLiant DL160 G6 Server.

- **After-sales support:** Our global server support network assists you with set-up and installation, and provides reliable after-sales support when you need it from a single point of contact.
- **Midrange technical computing:** We offer a broad range of pre-configured, factory-integrated and tested cluster packages that are ideal for mid-range technical computing.

Ideal environment

If your business operation centres on memory-intensive applications – like file and print, networking HPC and Web 2.0 applications – the ProLiant DL160 G6 Server provides support for all of these.

High-performance computing

- Greater server performance with Intel's latest six-core technology and 12 MB Level 3 cache per processor; embedded HP NC362i Dual Port 1 Gb NIC with sideband support for management needs
- Up to a 192 GB DDR3 system maximum memory footprint for memory-intense applications and 3D models

SMB and midmarket

- Better server performance at prices that meet SMB budget needs
- Ideal for infrastructure, file/print and Web serving – in a high-density package
- Support of next-generation Smart Array controllers for your entire RAID and caching read/write needs

Web 2.0 customers

- Four 3.5-inch HDDs for up to 8 TB of storage in 1U, or eight 2.5-inch HDDs for super-fast SAS and RAID local storage sets
- Two PCI Express 2.0 slots for increased I/O performance
- High-efficiency power supplies and the latest Intel Xeon low-power processors that help to increase performance in a watt-sensitive scale-out environment
- 18 DDR3 DIMM slots that allow economical, robust memory footprints

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programmes to help you cost-effectively acquire, manage and ultimately retire your HP solutions. For more information, visit:

www.hp.com/go/hpfinancialservices

HP Services

When technology works, business works.

The challenge of virtually every IT organisation is similar: to develop and maintain an agile, efficient server infrastructure that delivers the service levels your business needs.

HP Technology Services offers a comprehensive range of HP Care Pack services to help design, deploy, manage and support your IT environment, enabling cost-effective upgrades to standard warranty with easy-to-buy, easy-to-use support packages.

Minimum recommended HP Care Pack options

- 3-year, next-business-day response, onsite 9-hour x 5-day coverage, hardware support
- Hardware installation only

Enhanced service-level Care Pack options

- 3-year, same-business-day, 4-hour response, onsite 13-hour x 5-day coverage, hardware support
- Hardware installation plus operating system installation and start-up

Benefits from HP Care Pack Services:

- Reduce deployment time and manage ProLiant server solutions smoothly and efficiently
- Increase server uptime, performance and availability for your business
- Detect, diagnose and repair problems quickly, saving time, money and resources

For more information, visit:

www.hp.com/services/proliantservices or
www.hp.com/go/proliant/carepack

To understand how the HP ProLiant DL160 G6 Server can be easily deployed to virtualise your environment and achieve greater power efficiency, visit: www.hp.com/servers/dl160-g6



Get connected

www.hp.com/go/getconnected

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

© Copyright 2009–2011 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.

4AA2-4862EEW, Created March 2009; Updated March 2011, Rev. 2

