

# HP ProLiant DL380p Gen8 Server



THE no compromise data center standard



## Are technology advances holding you back from making the right investments?

In the face of explosive data growth, the need for efficient data management is on a constant rise. Data centers are being forced to continually adopt new technologies in order to handle this exponential growth of data. How then do you channelize growth and allow your data center to move and be on par with time and technology? Do you hold back investments for a later time? Do you strain your IT budget by making investments that will have to be quickly replaced? The answer is quite simple. You could invest in servers that are efficient and flexible enough to handle today's computing requirements, while safeguarding the future growth of your data center.

HP ProLiant DL380p Gen8 Server is engineered to protect your server investment and extend the life of your data center with reliability, accessibility, and serviceability. This versatile rack-optimized server balances efficiency and performance, and makes management simple and effective. It is future-proof, with the HP-exclusive Flexible LAN-On-Motherboard (FlexibleLOM), giving you a choice of 1 GB or 10 GB Network interface controllers (NICs), thus allowing easy upgradability for future NIC capacities as they become available during the Gen8 lifecycle. This adaptability allows your server to be future-ready, today. The HP ProLiant DL380p Gen8 Server:

- Increases performance with greater processor core count, memory capacities, and internal storage capacities
- Improves manageability with next-generation embedded HP Smart Array P420i technology
- Enhances serviceability with improved PCIe riser solutions, smart socket guides, and elegant cabling
- Enables flexible network solutions with FlexibleLOM NICs
- Provides embedded provisioning tools, active health monitoring, and system maintenance capabilities built using industry-leading HP Integrated Lights-Out (iLO) Management Engine

Whether you are an enterprise-class data center, or a small or medium sized business looking to expand in the future, the HP ProLiant DL380p Gen8 Server provides configuration flexibility that can cater to your growing server needs with efficiency.

## Key features and benefits

<b>Intel® Xeon® E5-2600 series with dual QuickPath Interconnect (QPI)</b>	Up to 80 percent more performance <sup>1</sup>
<b>4 Channels per DIMM and 24 memory DIMM slots</b>	2x the memory capacity over G7 with 768 GB max memory
<b>Up to 25 small form factor (SFF) or 12 large form factor (LFF) hard drives</b>	Up to two times the internal storage capacity <sup>2</sup>
<b>Flexible Network options (FlexibleLOM)</b>	Flexibility of choice with 4x1G or 2x10G Ethernet; or 2x10G FlexFabric
<b>Up to 6 PCIe Gen3 slots</b>	200 percent more I/O capacities with PCIe-Gen3 <sup>3</sup>
<b>HP SmartStorage Solution</b>	Up to 200 percent more performance with HP SmartDrives, HP Smart Array <sup>4</sup>
<b>iLO Management Engine</b>	4th generation iLO manageability
<b>Active Health</b>	Always-on diagnostics, 5x faster root cause diagnostics <sup>5</sup>

## Helps increase performance, durability, and storage capacity

- Offers higher performance, better power efficiency, and more adaptability with the built-in Intel Xeon E5-2600 processor family, including Intel QuickPath, Integrated Memory Controller, Turbo Boost, Intelligent Power Technologies, and Trusted Execution Technology.
- Creates greater memory bandwidth, DIMM count, and new memory health programs with less downtime with HP SmartMemory; new memory slots allow up to 768 GB of maximum memory and 128 GB at maximum speeds of 1,600 MHz.
- Provides complete data protection with embedded HP Smart Array P420i RAID controller, transportable Flash Back Write Cache (FBWC), and RAID 6 options.
- Renders quicker access to data and increases storage bandwidth for cutting-edge storage performance with up to 25 serial-attached SCSI (SAS) drives and new embedded Smart Array RAID controllers.
- Communicates with HP Intelligent power distribution unit (PDU) with high-efficiency HP Platinum Plus common-slot power supplies (460 W, 750 W, or 1200 W) to enable redundant supplies to be plugged into redundant power PDUs.
- Qualifies ENERGY STAR® ProLiant DL380p Gen8 Server configurations.
- Enables ambidextrous cable management arm option with cabling flexibility and management for quick access to the server.
- Installs quickly with new universal tool-free sliding rails. Quick release levers allow fast server access.

## Enables improved application, storage, and I/O performance

- Supports RDIMM, UDIMM, and LRDIMM with up to 768 GB capacity and 128 GB capacity at 1,600 MHz. HP SmartMemory delivers up to 2x more memory capacity over previous generations.<sup>6</sup>
- Reduces data loss with long-term data retention with FBWC standard. New embedded HP Smart Array P420i RAID controller and support for HP SmartStorage, including PCIe 3.0, HP SmartDrives, and HP FBWC with capacity up to 2 GB. Choice of up to 25 2.5-inch SFF or 12 3.5-inch LFF SAS, Serial ATA (SATA), and Solid State (SS) drives with optical media.
- Converges the ability to customize server networking today and meet future needs with FlexibleLOM. Currently, provides choice of bandwidth between 1G and 10G, with the ability to upgrade to 20G and 40G when the technology becomes available. Fabric (Ethernet, FCoE, or InfiniBand) supports Wake-On-LAN (WOL) and offers a shared iLO port for ease of use.

<sup>1</sup> "Intel® NDA Benchmark," Intel, July 2011.

<sup>2</sup> Additional internal storage capacities over G7 (total LFF Storage Capacity = 36 TB SAS, 36 TB SATA, 4.8 TB SSD) (Supporting SSD/SAS/SATA in SFF/LFF)

<sup>3</sup> More I/O bandwidth to the processor resulting in lower latency as compared with G7 version (Gen8 = 40 lanes/processor, G7 = 24 lanes/processor)

<sup>4</sup> HP Gen8 Smart Arrays bring significant enhancement, starting with a 2x increase in performance (final results awaited)

<sup>5</sup> "HP internal lab testing," HP, 2011

<sup>6</sup> As compared to G7 version that has up to 384G 12 DIMM x 32G 4R, whilst Gen8 has 786G 24 DIMM x 32G 2R.

## HP ProLiant DL380p Gen8 Server unique options

Part description	SKU
HP 380/385 Gen8 8-SFF Cage/Backplane Kit (Additional 8 SFF Hard Drive Cage, allowing for up to 16 SFF Drive Bays)	662883-B21
HP DL380/385GN 3 slot PCIe Riser Kit (Additional PCIe Gen3 Riser Card [quantity 1x16, 1x8, 1x4] for up to 6 total PCIe slots)	653206-B21
HP DL380GN 2 slot x16 Riser Kit (Additional PCIe Gen3 Riser Card [quantity 2x16] for up to 5 total PCIe slots)	653208-B21
x16 PCIe slot Aux Power Cable for graphics support up to 150 W	669777-B21
HP DL380p Gen8 Double Wide Graphics Riser Cage Kit (to support nVidia Q6000 graphics card)	662885-B21
HP DL380p NEBS Conversion Cage Kit (to meet NEBS/ETSI certified environments)	707865-B21

## Technical specifications

<b>Processor</b>	Intel Xeon E5-2600 Series (up to 8 cores, up to 3.3 GHz)
<b>Chipset</b>	Intel C6XX
<b>Memory</b>	(24) DDR3, RDIMM, up to 1,600 MHz, ECC, Online Spare
<b>Max memory</b>	768 GB (24 DIMMs x 32G 2R)
<b>Internal storage</b>	SATA, SAS, SSD (8 or 25) 2.5" hot plug bays/(8 or 12) 3.5" hot plug bays Smart Array P420i controller Optional: +8 SFF for 8 SFF Model
<b>Max internal storage</b>	25 TB SAS (SFF); 36 TB SATA (LFF)
<b>Networking</b>	<b>(1) FlexibleLOM</b> Choice of: 4x1G, 2x10G Ethernet, or 2x10G FlexFabric
<b>I/O slots</b>	<b>(6) PCIe 3.0:</b> Riser 1 (1) x16 FL/FH; (1) x8 HL/FH; (1) x4 (PCIe 2.0) HL/FH; Riser 2 (1) x16 FL/FH; (1) x8 HL/FH; (1) x8 HL/FH; or (1) x16 FL/FH; (1) x16 HL/FH
<b>Ports</b>	Front: (2) USB; Rear: (4) USB, video (1600 x 1200), network; Internal: (1) USB, (1) SD Card
<b>Power supplies</b>	460, 750, 1200 W (92 or 94%)
<b>Integrated management</b>	HP iLO Management Engine
<b>Additional features</b>	Support for two nVidia Q4000 or one nVidia Q6000 GPU
<b>Form factor</b>	2P/2U Rack
<b>QuickSpecs URL</b>	<a href="http://h18000.www1.hp.com/products/quickspecs/14212_div/14212_div.html">http://h18000.www1.hp.com/products/quickspecs/14212_div/14212_div.html</a>

### Entry models

1 Intel Xeon Processor (80 W)  
4G DDR3 RDIMM Memory  
FlexibleLOM: 4x1G Ethernet  
3 PCIe slots  
8 SFF HD Bays  
1 x 460 W Power Supply (92% Efficient)  
Fixed Rail Kit

### Base models

1 or 2 Intel Xeon Processor (95 W)  
16G DDR3 RDIMM Memory  
FlexibleLOM: 4x1G Ethernet  
3 PCIe slots  
8 SFF HD Bays  
1 x 460 W Power Supply (94% Efficient)  
Rail Kit/CMA standard

### Performance models

2 Intel Xeon Processor (95 W)  
32G DDR3 RDIMM Memory  
FlexibleLOM: 4x1G Ethernet or 2x10G Ethernet  
6 PCIe slots  
8 SFF HD Bays  
2 x 750 W Power Supply (94% Efficient)  
Rail Kit/CMA standard  
HP Insight Control

### For more information

Discover server efficiency with technology that is designed to integrate with the demands of the future. Be future-ready today and tomorrow, visit [hp.com/servers/DL380p-gen8](http://hp.com/servers/DL380p-gen8)

## Removes tedious, time-consuming tasks with intuitive, configurable management system

- Takes strengths from products like HP SmartStart, HP Smart Update Manager, and HP ProLiant Support Packs on Intelligent Provisioning and enhances them with the latest ease-of-use features as well as places them, where they can be used instantly on the system board.
- Starts working the moment a power cord and an Ethernet cable are connected to the server. Agentless hardware monitoring and alerting capabilities are built into the server with HP Agentless Management (runs on iLO 4 chipset).
- Provides 24x7 continuous health monitoring with HP Active Health System that logs 100 percent configuration changes, and helps quicken analysis of problems with HP Service and Support.<sup>7</sup>

## Redefines server experience

- Automated Energy Optimization improves the server's ability to analyze and respond to "3D sea of sensors" data within the server, as well as self-identify location and inventory through HP Insight Control for maximum workload optimization across the entire data center.
- Precise control of server fans to direct cooling and reduce unnecessary fan power with the first 3D array of temperature sensors that is part of the HP-unique Thermal Discovery.
- Dynamic Workload Acceleration delivers smarter data protection for ever-increasing drive capacities, real-time workload-aware analysis to optimize and adapt storage performance and 6x faster solid state performance versus previous generation.
- User-inspired design features—HP SmartDrive carriers, smart socket guide, "Snap and Go" rails, flat cabling design, and easy tool-less access—anticipate your needs and help eliminate common issues that result in downtime of all customer serviceable components.

## HP Services

**HP Technology Services** offers a set of consultancy, deployment, and support solutions designed to meet the lifecycle needs of your IT environments.

**HP Care Pack Services** for industry-standard servers include support for qualified options at no additional cost.

**HP Foundation Care services** delivers scalable support packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HP Collaborative Support. This service offers a single point of contact for server problem diagnosis, hardware problem resolution, basic software problem diagnosis, fault isolation, and resolution if available to HP. In case the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

If you are running business-critical environments, HP offers **HP Proactive Care** or **HP Critical Advantage**. These services help you deliver high levels of application availability through proactive service management.

All service options include HP Insight Remote Support for secure remote monitoring, diagnosis, and problem resolution. Also included is the HP Support Center that provides access to information, tools, and experts to support HP business products.

For more information, visit [hp.com/go/services](http://hp.com/go/services).

<sup>7</sup> "HP internal lab testing," HP, 2011.

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