



# The all-new HP ProLiant BL420c Gen8 Server Blade

Breakthrough server blade economics for essential enterprise workloads

## Enterprise-level management, high availability, and cost-optimized performance for enterprise and SMB environments

The all-new HP ProLiant BL420c Gen8 Server Blade is the latest entry-level, dual-socket, half-height offering in our server blade portfolio. This Gen8 server blade provides better performance and scalability than the earlier versions giving you high availability, improved flexibility, and increased memory for essential enterprise-level workloads.

The ProLiant BL420c Gen8 server blade offers flexible networking options through the HP Flexible Lan-On-Motherboard (FlexibleLOM) and has enhanced I/O expansion slots that provide up to 400 percent the bandwidth of the BL280c G6.<sup>1</sup> It also features two choices of HP Smart Array controllers—the HP Dynamic Smart Array B320i with SAS license key for SAS RAID 0/1 support, and the Smart Array P220i/512 MB FBWC—delivering the performance and versatility that is needed in an enterprise data center.

The server blade comes with the Intel® Xeon® E5-2400 series processors, and delivers up to 1600 MHz speeds with 12 DIMMs supporting up to 384 GB of memory. Compared to its entry-level predecessor, HP ProLiant BL280c G6 Server Blade, the Gen8 server blade includes the HP Integrated Lights-out (iLO 4) Management Engine as part of the new, embedded HP ProActive Insight architecture for faster deployment, better management, an Always-On Active Health System, and instant uptime tools. All these features, coupled with the overall cost-effectiveness of the server, make it suitable for small and medium businesses as well.

## Key features and benefits

The ProLiant BL420c Gen8 server blade offers better performance, efficiency, and reliability, and is built for versatile work environments. Its key features and benefits include:

- **Enhanced performance:** Offers excellent CPU performance and power thanks to its Intel Xeon E5-2400 processor family. You also get enhanced I/O mezzanine bandwidth with x16 PCI Express (PCIe) 3.0.
- **Increased memory:** Provides increased memory capacity that goes up to 384 GB, and speeds up to 1600 MHz.
- **Better storage:** Allows better RAID performance and support for 6G Serial Attached SCSI (SAS) and Serial ATA (SATA).
- **Improved serviceability:** Enables better serviceability because of the new HP SmartDrive technology; offers features such as icon-based status display and Do Not Remove LED.
- **Superior management:** Provides improved management capabilities through the HP iLO 4, which enables a lifecycle approach to deploying and managing the server, and automatically regulates power consumption and server performance.

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<sup>1</sup>The ProLiant BL420c Gen8 server mezzanine expansion slots utilize PCIe 3.0 which operates at 1 GB/s raw bandwidth per lane per direction, compared to the ProLiant BL280c G6, utilizing PCIe 2.0, which operates at half the rate at 500 MB/s. That is double the bandwidth per lane for the ProLiant BL420c Gen8 server. Furthermore, the BL420c Gen8 mezzanine expansion slots supports 16 lanes and 8 lanes, whereas the ProLiant BL280c G6 only supports 8 lanes. This translates to a 200 percent increase in bandwidth from the PCIe technology and another 200 percent with the double PCIe lanes going to one of the mezzanines, equating to the 400 percent figure. The total bandwidth for x16 PCIe 3.0 is ~32 GB/s whereas the total bandwidth for x8 PCIe 2.x is ~8 GB/s. For further details, reference the **PCI Special Interest Group FAQ**

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## A quick comparison with the previous version

	HP ProLiant BL420c Gen8 Server Blade (Built on HP ProActive Insight architecture)	HP ProLiant BL280c G6 Server Blade
<b>Compute</b>	Intel Xeon E5-2400, 4/6/8 cores   PCIe Gen3 (2)	Intel Xeon 5500/5600, 2/4/6 cores   PCIe Gen2 (2)
HP Smart Socket Guide	✓	✗
<b>Memory</b>	(12) DDR3, up to 1600 MHz (384 GB max)	(12) DDR3, up to 1333 MHz (192 GB max)
HP Smart Memory	✓	✗
<b>Storage</b>	HP Smart Array P220i Controller w/512 MB FBWC  (OR)  HP Dynamic Smart Array B320i w/FBWC and SAS RAID options  2 SFF 2.0 TB max (HDD/SSD)	HP Smart Array P410i controller 2 SFF 2.0 TB max (HDD/SSD)
HP Smart Drive Carrier	✓	✗
FBWC	✓	✗
<b>Networking</b>	Option of: 2x10Gb FlexFabric, 2x10GbE Flex-10, 2x10GbE, or 2x1GbE	2x1GbE
FlexibleLOM	✓	✗
FlexFabric	✓	✓ (only offered as mezzanine option)
<b>Embedded management</b>	HP iLO 4 Management Engine	HP iLO 3 Management Engine
Intelligent Provisioning	✓	✗
Active Health System	✓	✗
Agentless Management	✓	✗
<b>Cloud-based management</b>	HP Insight Management 7	HP Insight Management 6
HP Insight Control (agentless)	✓	✗
HP Insight Online	✓	✗
<b>Power and cooling</b>	Enclosure based (94% Platinum)	Enclosure based
3D Sea of Sensors	✓	✗

## Technical specifications

HP ProLiant BL420c Gen8 Server Blade	
<b>Drive description</b>	Up to two hot plug SAS, SATA, SAS SSD, or SATA SSD HP Smart Drives
<b>Supported drives</b>	Hot plug 2.5-inch SAS Hot plug 2.5-inch SATA Hot plug SFF 2.5-inch SSD
<b>Processor and memory</b>	
<b>Processor cache</b> (Depending on processor selected)	20 MB L3 15 MB L3 10 MB L3
<b>Processor family</b>	Intel Xeon E5-2400 processor family
<b>Processor number</b>	1 or 2
<b>Processor core available</b>	8, 6, or 4
<b>Processor speed</b>	Up to 2.4 GHz
<b>Memory and storage</b>	
<b>Memory slots</b>	12 DIMM slots
<b>Memory max</b>	384 GB
<b>Memory type</b>	LRDIMM, RDIMM, and UDIMM Smart Memory with low voltage options
<b>Memory protection features</b>	Advanced ECC Memory lock step mode Online spare
<b>Network controller</b> (Supports one of the following for pre-configured models)	(1) 10 Gb 554 FLB FlexFabric Adapter; 2 ports (1) 10 Gb 361 FLB Ethernet Adapter; 2 ports
<b>Storage controllers</b> (Supports one of the following for pre-configured models)	1 HP Dynamic Smart Array B320i with SAS license key for SAS RAID 0/1 support 1 Smart Array P220i/512 MB FBWC
<b>Expansion slots</b>	Two (2) PCIe 3.0 (1x8; 1x16); maximum
<b>Deployment and manageability</b>	
<b>Management</b>	HP iLO 4 Management Engine, HP Insight Control
<b>Form factor chassis</b>	Half-height blade server
<b>System fans features</b>	Enclosure-based fans
<b>Full configuration form factor</b>	8 (c3000); 16 (c7000)
<b>Warranty (parts-labor-onsite)</b>	Three-year parts, three-year labor, three-year onsite

## Ideal for

The ProLiant BL420c Gen8 server blade delivers exemplary performance, whether it is for single applications and small deployments, or critical enterprise workloads. Cost-effective, scalable, and adaptable, the server blade is designed for large cost-sensitive enterprise data centers, mainstream or midsized data centers and departments, as well as small workplaces and branch offices.

## Why choose HP?

HP ProLiant Gen8 servers can increase compute capacity per watt of energy and resolve unplanned downtime issues faster through self-monitoring, self-diagnosing, and proactive support. Further, the use of a single iLO version on all our ProLiant Gen8 servers makes them consistent, simpler, and easier to manage.

## 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, visit [hp.com/go/hpfinancialservices](http://hp.com/go/hpfinancialservices).

Get improved performance and reliability for your critical enterprise environment.

Learn more on how the HP ProLiant BL420c Gen8 Server Blade can help you make the most of your investment. Visit [hp.com/serversbl420c-gen8](http://hp.com/serversbl420c-gen8).

View the **demo** and read our **blog** for more insights.

## HP Services

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

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, and basic software problem diagnosis, as well as fault isolation and resolution if available to HP. In case the issue is with HP or a 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 Proactive Care or 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, which provides access to the information, tools, and experts to support HP business products.

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

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