HP ProLiant BL420c Gen8 Server Blade

Breakthrough server blade economics for enterprise workloads

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

The 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.[1] It also features two choices of HP Smart Array Controllers—the HP Dynamic Smart Array B320i with serial attached SCSI (SAS) license key for SAS RAID 0/1 support, and the HP Smart Array P220i/512 MB flash-backed write cache (FBWC)—delivering the performance and versatility that is needed in an enterprise data center.

[1] 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 support 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."

The server blade comes with the Intel® Xeon® E5-2400 v2 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 HP 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 v2 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 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.

Technical specifications

	HP ProLiant BL420c Gen8 Server Blade
Drive description	Up to two hot plug SAS, SATA, SAS SSD, or SATA SSD HP Smart Drives
Supported drives	Hot plug SFF 2.5-inch SAS Hot plug SFF 2.5-inch SATA Hot plug SFF 2.5-inch SSD
Processor and memory	
Processor cache (Depending on processor selected)	25 MB L3 20 MB L3 15 MB L3 10 MB L3
Processor family	Intel Xeon E5-2400 processor family and Intel Xeon E5-2400 v2 processor family
Processor number	1 or 2
Processor core available	10, 8, 6, or 4
Processor speed	Up to 2.5 GHz
Memory and storage	
Memory slots	12 DIMM slots
Memory max	384 GB
Memory type	LRDIMM, RDIMM, and UDIMM Smart Memory with low voltage options
Memory protection features	Advanced error checking and correcting (ECC) Memory lock step mode Online spare
Network controller (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
Storage controllers (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
Expansion slots	Two (2) PCIe 3.0 (1x8; 1x16); maximum
Deployment and manageability	
Management	HP iLO 4 Management Engine, HP Insight Control
Form factor chassis	Half-height blade server
System fans features	Enclosure-based fans
Full configuration form factor	8 (c3000); 16 (c7000)
Warranty (parts-labor-onsite)	Three-year parts, three-year labor, three-year onsite

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment. hp.com/go/hpfinancialservices

HP Factory Express

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Customer Technical Training

Gain the skills you need with HP ExpertOne training and certification from HP. With HP ProLiant training, you can accelerate your technology transition, improve operational performance, and get the highest return on your HP investment. Our training is available when and where you need it, through flexible delivery options and a global training capability. hp.com/learn/proliant

View the demo and read our blog for more insights.

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 Services

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

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, 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 can 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, which provides access to the information, tools, and experts to support HP business products.

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

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