



Do more with a two-processor server than ever before.

HP ProLiant BL620c G7 Server Blade



The HP ProLiant BL620c G7 Server Blade provides an ideal combination of extensive scalability, virtualization, and performance in an economical Intel® Xeon® multiprocessor server. Packed with advanced features, the BL620c G7 allows you to do more with a two-processor server than ever before.

Redefining scalability in a two-processor (2P) architecture, the ProLiant BL620c G7 Server Blade provides a fully balanced server platform supporting the Intel Xeon family E7-2800 processors (E7-2800 series) plus the E7-8867L E7 family low voltage processor. The servers support up to two top-performing Intel Xeon 130-watt processors without configuration restrictions and 32 DIMM slots for up to 1.0 TB of memory. The ProLiant BL620c G7 Server Blade also comes with two hot-plug drive bays plus four 10 Gb FlexFabric ports combined with three mezzanine slots to yield an outstanding 96 Gb of I/O bandwidth. All these features work together to help you expand your business and improve performance significantly. The ProLiant BL620c G7 Server Blade is ideal for larger virtualization/consolidation projects, databases, business processing (like ERP and CRM), decision support, larger consolidation projects, and general 2-socket scale-up applications. It is also perfect for 2P applications requiring scalability, performance, and features greater than typical dual processor (DP) offerings.

Beyond the traditional, dual-core processor

The ProLiant BL620c G7 Server Blade is a unique 2P blade system that is fully balanced to ensure all subsystems are used effectively. Traditional multiprocessor (MP) server blades are typically unbalanced, providing processor performance and density at the expense of proportional memory capacity and bandwidth.

These unbalanced servers fail when faced with high-density virtualization applications and general data-intensive workloads.

Today, you have a better alternative. Unlike other traditional multiprocessor server blades, the ProLiant BL620c G7 Server Blade provides 2-socket performance without compromising on proportional memory capacity and I/O bandwidth. Being one of the most robust 2P virtualization and scale-up servers, it is capable of handling x86 two-socket applications that require superior performance and scalability.

Key features and benefits

Unmatched 2P scalability

Seamlessly scale up to 1.0 TB of registered DDR3 RAM to 1066 MHz in a 2S configuration with the ProLiant BL620c G7 Server Blade. By fully utilizing the design architecture of the Intel Xeon 7500 chipset, you can now expand your business with confidence and also realize ultimate virtualization efficiency. The ProLiant BL620c G7 Server Blade provides up to two Intel Xeon E7-2800/8867L processors without configuration restrictions, each up to 130 watts, to deliver higher computing power for a 2S server blade.

Why RAS?

In a memory-intensive computing environment, RAS is paramount. Multiprocessor servers provide industry-leading RAS capabilities primarily in memory and chipset to protect data transfer points throughout the system. The Intel Xeon E7-2800/8867L series architectures offer considerably more robust RAS features than dual processor technology.

- 32 DIMM slots for up to 1.0 TB of memory for high-threaded and memory-intensive applications, and a variety of data-demanding workloads.
- Up to 133 VMs per server for large virtualization and consolidation projects.
- Two memory controllers, per processor socket, connect to four Intel® Scalable Memory Buffers for optimal memory capacity and bandwidth, as well as overall improved system performance.
- 40 Gb of embedded FlexFabric ports and three I/O expansion slots bring the total I/O bandwidth to an outstanding 96 Gb.
- High-performance integrated Smart Array P410i Controller with RAID 0 and 1 with flash-backed write cache options up to 1 GB.
- Two hot-plug SAS/SATA/SSD drive bays supporting up to 2.0 TB of internal storage for versatile configuration and deployment options.

Redefining server economics

The ProLiant BL620c G7 Server Blade is an industry-leading 2S, full-height blade server that offers excellent value for your money and superior performance in a high-density multiprocessor form factor.

Technical specifications

HP ProLiant BL620c G7 Server Blade

Processor	
Number of processors	• One or two, up to 130 watts each
Maximum number of cores	• Up to ten per processor
Processors supported	• Intel Xeon E7-2800/8867L
Low-wattage processors	• Intel Xeon E7-8867L
Cache	• Up to 30 MB L3 per processor
Processor speed	• Up to 2.26 GHz
Memory	
Memory type	• DDR3 Registered DIMM (RDIMM)
Memory slots	• 32 DDR3 RDIMM slots
Low voltage DIMM support	• 8 GB, 16 GB, and 32 GB
Standard memory	• 32 GB (4x8 GB DIMMs)
Maximum memory	• 1.0 TB (32x32 GB DIMMs)

It provides:

- Up to 2x to 4x of memory capacity and enhanced performance compared to competing 2P Intel Xeon E7 family-based server blades¹ with over twice the number of RAS features.²
- Up to 2.7x to 10.7x of memory capacity, 20x embedded Ethernet bandwidth and 150 percent onboard I/O slots than traditional 2P Intel Xeon 5500/5600 series processor server blades.³
- Up to 2 ten-core processors provide more performance as 4 four-core previous generation Intel Xeon 7400 series processors. This brings down the number of sockets by half—reducing licensing costs of software based on the number of sockets.
- 2S Intel Xeon E7-2800 processors offer the same performance as their matching more expensive E7-4800 series counterparts.

Advanced networking technology

With four embedded HP 10 Gb NC553i FlexFabric Converged Network Adapters (CNAs), the ProLiant BL620c G7 Server Blade delivers improved performance and cost savings of converged network connectivity. It helps to:

- Sustain sufficient bandwidth for network-intensive applications.
- Streamline, simplify, and increase network and storage traffic with Fibre Channel over Ethernet (FCoE), hardware-based iSCSI acceleration and iSCSI boot, stateless TCP/IP offloading, and 1 Gb/10 Gb Ethernet autonegotiating.
- Connect to network and storage, with up to 16 connections, without the need for add-in mezzanine cards.
- Divide and fine-tune network and storage bandwidth to match application requirements.

¹ Compared to competitive Intel Xeon E7 family server blades that support a maximum of 256 GB to 512 GB of memory in a single-wide, full-height form factor.

² Compared to the HP ProLiant BL680c G5 Server Blade.

³ Based on dual-processor servers with 96 Gb to 384 GB of memory, two embedded 1 Gb Ethernet adapters, and two I/O expansion slots.

Technical specifications (Contd.)

HP ProLiant BL620c G7 Server Blade

Advanced memory protection	<ul style="list-style-type: none"> • HP Memory Quarantine (based on Intel MCA Recovery) • Double Device Data Correction (DDDC) • Single Device Data Correction (SDDC) • Demand and Patrol Scrubbing • Intra-socket Memory Mirroring • Memory Failover 	<ul style="list-style-type: none"> • Rank Sparring (Online Spare) • Failed DIMM Isolation • DIMM Address/Control Bus Parity Protection • Data Bus ECC protection • Advanced ECC • Intel SMI Clock Fail Over • Intel SMI Packet Retry
Networking and I/O		
Integrated network adapter	• Four HP embedded 10 Gb NC553i FlexFabric Converged Network Adapter ports connected to a redundant I/O fabric	
I/O expansion slots	• Three PCIe Gen2 connected to three redundant I/O fabrics	
Standard/maximum I/O bandwidth	• 40 Gb/96 Gb	
Networking options	• Multiple, redundant port 10 Gb FlexFabric, 10GbE Flex-10, 10 Gb and 1 Gb Ethernet, and 4X QDR (40 Gb) InfiniBand	
Storage		
Storage type	<ul style="list-style-type: none"> • Hot-plug SFF SAS • Hot-plug SFF SATA • Hot-plug SFF SSD 	
Maximum internal storage	• Two hot-plug SAS/SATA/SSD bays supporting up to 2.0 TB	
Integrated storage controller	• 6 Gb Smart Array P410i Controller with RAID 0 and 1 with optional FBWC options to 1 GB	
Storage options	<ul style="list-style-type: none"> • 4 Gb and 8 Gb Fibre Channel mezzanine adapters (Brocade, Emulex, and QLogic options) • Smart Array Controller mezzanines options with BBWC or FBWC to 1 GB for connection to external direct-attached or shared storage • I/O accelerator cards for high-performance I/O • HP Storage Ultrium Tape Blades for an integrated direct-attached data protection solution • Optional HP Storage Ultrium Tape Blades • Optional D2200sb PCIe Storage Blades for direct-attached and shared storage within the c-Class enclosures • Compatible with HP Storage MSA, EVA, and select third-party SANs 	
Flash media	<ul style="list-style-type: none"> • Internal USB 2.0 port • Internal microSDHC slot 	
Deployment		
Form factor	<ul style="list-style-type: none"> • Full-height, single, wide server blade • Eight server blades per c7000 10U enclosure • Four server blades per c3000 6U enclosure 	
System management	<ul style="list-style-type: none"> • HP Integrated Lights-Out 3 • HP Insight Foundation • BladeSystem enclosure Onboard Administrator (OA) with KVM (optional redundant OA) • HP Insight Control (optional) • HP Insight Dynamics for ProLiant (optional) 	
Other		
Power and fans	<ul style="list-style-type: none"> • True N+N redundant hot-plug, high-efficiency, enclosure-based power supplies • Redundant hot-plug HP Active Cool fans • HP Thermal Logic Technology/Sea of Sensors • HP Dynamic Power Saver Mode • HP Power Regulator • Parallel Redundant Scalable Enclosure Cooling (PARSEC) design 	<ul style="list-style-type: none"> • Power workload balancing • Enclosure-based HP Dynamic Power Capping • Enclosure-based common power supply form factor • Lower power Intel Model 7510 Scalable Memory Buffer • Intel intelligent power technology, lower partial active and lower idle power • Low voltage DDR3 RDIMMs (LVDIMM)
RAS	• Nearly forty system-wide reliability, availability, and serviceability features	
Security	<ul style="list-style-type: none"> • Trusted Platform Module 1.2 option • Intel AES-NI • Power-on password • Administrator password • iLO 3 with 12 customizable user accounts • SSL encryption SSH v2 • AES and Triple Data Encryption Standard on browser • CLP and XML scripting interface • AES and RC4 encryption of video 	<ul style="list-style-type: none"> • Global disable setting • Keyboard password • External USB port enable/disable • Network server mode • Serial interface control • Onboard Administrator user accounts with defined user privilege levels • Onboard Administrator Lightweight Directory Access Protocol authentication for user accounts
Warranty	• 3-year parts/3-year labor/3-year onsite	

For additional technical specifications, please visit: http://h18000.www1.hp.com/products/quickspecs/13747_div/13747_div.pdf.

Why choose the ProLiant BL620c G7 Server Blade?

The expansion needs of your business will determine your server choice. It is recommended that you consider what you need in order to:

- Increase the scalability performance of your compute-intensive workloads
- Realize your virtualization roadmap
- Get the right price/performance ratio
- Enable efficient remote manageability

The ProLiant BL620c G7 Server Blade can help you achieve all of these goals. With advanced features and extensive scalability in a two-socket server blade, it is an appropriate choice for organizations looking to make the most of their investment.

The HP iLO 3 is a standard component of the ProLiant BL620c G7 Server Blade that facilitates remote server manageability. It includes an intelligent microprocessor, secure memory, and a dedicated network interface. In addition to providing world-class remote management functionality, iLO 3 is also responsible for managing the health of your server.

For more information about HP iLO 3 for ProLiant servers, visit hp.com/go/insightcontrol.

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, contact your local HP representative or visit hp.com/go/hpfinancialservices.

Learn more

Expand business with ease with HP ProLiant BL620c G7 Server Blade; it offers you unmatched scalability and reliability. To learn how industry-leading blade servers can redefine your server economics and enhance performance, visit hp.com/servers/bl620c-g7.

HP Services

HP Technology Services has a robust portfolio of packaged lifecycle support solutions that enable you to optimize ProLiant support for better business outcomes.

Optimized care: Delivers optimum performance and continuous availability of crucial ProLiant systems through deployments and proactive management practices.

- HP Installation and Startup for HP BladeSystem c-Class Infrastructure plus HP Enhanced Network
- 3-Year HP Critical Advantage

Standard care: Maintains high level of server availability along with expert help to cut the cost and complexity of implementing and supporting ProLiant servers.

- HP Installation and Startup for HP BladeSystem c-Class Infrastructure plus HP Enhanced Network
- 3-Year HP 6-hour Call-to-Repair Hardware Support
- 3-Year HP 24x7 Software Support for Insight Control

Basic care: Delivers minimum recommended support service level with expert advice, implementation, and support.

- HP Installation and Startup for HP BladeSystem c-Class Infrastructure
- 3-Year HP 24x7 4-hour Response, Hardware Support
- 3-Year HP 24x7 Software Support for Insight Control

All come with Insight Remote Support, available at no additional cost, delivering remote monitoring, diagnosis, and problem resolution.

Only HP brings together deep expertise, proactive and business critical support, and a strong partner network.

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

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