HP ProLiant BL280c G6 Server Blade

Data sheet

The HP ProLiant BL280c G6 Server Blade offers significant power savings for constrained cluster environments while supporting the newest, highest-performing technology to improve data center efficiency.

With the addition of the HP ProLiant BL280c G6 Server Blade, HP BladeSystem continues to expand its portfolio of products specifically designed for high-performance and scale-out data centers. With outstanding price-per-watt performance, the ProLiant BL280c G6 Server Blade helps you reduce overall data center power consumption while maintaining high performance.

The Intel® Xeon® 5600 and 5500 series processors provide significant performance improvements and faster input/output (I/O) throughput. Also, the new low-voltage DDR3 memory is more energy efficient and has better cooling than existing memory options. Through features like these, the ProLiant BL280c G6 Server Blade offers the latest technology for improved power efficiency and performance enhancement.

Key features and benefits

Performance

- Supports up to two standard or low-voltage 6-, 4-, and 2-core Intel Xeon 5600 and 5500 series processors

- Supports up to 192 GB of ECC 1333 MHz DDR3 registered or unbuffered DIMMs, resulting in greater performance per watt for memory-intensive applications

- Supports two peripheral component interconnect (PCI) Express mezzanine expansion slots—x8, Type I and II—for I/O options such as multifunction gigabit NICs, standard NICs, or Fibre Channel, which greatly improves bandwidth and data throughput with additional levels of uptime

- Provides a choice of up to two non-hot plug, small form factor (SFF), high-performance serial attached SCSI (SAS) hard disk drives, lower-cost serial ATA (SATA) drives, or reliable solid-state drives (SSD)

Management

- Leverages HP BladeSystem management programs to improve efficiency by giving you the option to deploy and manage data centers remotely

- Ships with HP ProLiant Onboard Administrator (includes virtual keyboard, video, mouse [KVM], and a graphical remote console at no additional cost) for a complete, high-performance, and out-of-band remote management solution

- Supports HP Integrated-Lights Out (iLO) Advanced for BladeSystem for additional iLO features, power capping, power regulator reporting, scripted multiserver virtual media, and additional enterprise security

- Supports HP Power Regulator, an innovative operating system-independent power management feature that helps you manage server power consumption and system performance to meet critical business needs

- Supports HP Insight Control Environment for HP BladeSystem for comprehensive system health, remote control, operating system deployment, power management, vulnerability scanning, and patch management in an easy-to-install software suite

System enhancement

- Provides an affordable, low-price server blade that significantly reduces the initial investment cost for data centers deploying hundreds of servers at a time

- Enables easy customization with a feature set that makes it simple to customize server nodes that support only one application

- Helps you conserve valuable IT resources and time by centralizing and simplifying management functions with HP ProLiant Onboard Administrator, iLO Advanced for BladeSystem, and Insight Control Environment for BladeSystem

Options

- DDR3 memory provides lower wattage and better cooling for improved energy efficiency.

- HP SFF SSDs provide reliable, power-efficient internal storage options.

- Direct-attach blades are available for additional local storage, data protection, or PCI card expansion.

- I/O expansion is available with optional Fibre Channel, Ethernet networking, and InfiniBand mezzanine cards.

Ideal environments and applications

Large enterprise compute clusters

The HP ProLiant G6 Server Blade is an ideal choice for large scale-out data centers running one application on many servers.

- A sizeable memory footprint provides high-capacity storage for data-intense clusters.

- High performance per watt reduces data center power consumption and maintenance spending.

- Easy-to-deploy servers make it simple for your organization to enhance nodes hosting one application.

- Customizable management applications streamline the work of system administrators.

Ideal applications

The ProLiant BL280c G6 Server Blade is a good choice for:

- Scale-out databases and computer-aided engineering

- High-performance computing (HPC) applications, clustering, and storage area networks

- Memory-intensive databases, such as financial services storage programs

- Large analytical applications in engineering or science-based industries

- Electronic design automation systems

Technical specifications

HP ProLiant BL280c G6 Server Blade

Processor and memory	
Processors supported	**Six-core Intel Xeon processors** Model X5675: 3.06 GHz, 12 MB L3 cache, 95 W Model X5670: 2.93 GHz, 12 MB L3 cache, 95 W Model X5660: 2.80 GHz, 12 MB L3 cache, 95 W Model X5650: 2.66 GHz, 12 MB L3 cache, 95 W Model E5649: 2.53 GHz, 12 MB L3 cache, 80 W Model E5645: 2.40 GHz, 12 MB L3 cache, 80 W Model L5640: 2.26 GHz, 12 MB L3 cache, 60 W **Quad-core Intel Xeon processors** Model X5672: 3.20 GHz, 12 MB L3 cache, 95 W Model E5640: 2.66 GHz, 12 MB L3 cache, 80 W Model E5630: 2.53 GHz, 12 MB L3 cache, 80 W Model E5620: 2.40 GHz, 12 MB L3 cache, 95 W Model L5630: 2.13 GHz, 12 MB L3 cache, 40 W Model X5570: 2.93 GHz, 8 MB L3 cache, 95 W Model X5560: 2.80 GHz, 8 MB L3 cache, 95 W Model X5550: 2.66 GHz, 8 MB L3 cache, 95 W Model E5540: 2.53 GHz, 8 MB L3 cache, 80 W Model E5530: 2.40 GHz, 8 MB L3 cache, 80 W Model E5520: 2.26 GHz, 8 MB L3 cache, 80 W Model E5506: 2.13 GHz, 4 MB L3 cache, 80 W Model E5504: 2.00 GHz, 4 MB L3 cache, 80 W Model L5530: 2.40 GHz, 8 MB L3 cache, 60 W Model L5520: 2.26 GHz, 8 MB L3 cache, 60 W Model L5506: 2.13 GHz, 4 MB L3 cache, 60 W **Dual-core Intel Xeon processors** Model E5503: 2.00 GHz, 4 MB L3 cache, 80 W Model E5502: 1.86 GHz, 4 MB L3 cache, 80 W
Low-wattage processor offerings	Yes
Processor core	6, 4, and 2 core
Processor cache	12, 8, and 4 MB
Maximum processor speed	3.20 GHz
Multiprocessor	2
Processors per 42U enclosure	128
Servers supported (maximum)	16
Memory type	PC3-10600 (DDR-133) DDR3 registered and unbuffered DIMMs
Standard memory	6, 4, or 2 GB
Maximum memory	192 GB
Memory slots	12 DIMM slots
Advanced memory protection	Advanced ECC
Storage type	Non-hot plug SAS Non-hot plug SATA Non-hot plug SATA SSD
Maximum number of hard drives	Up to 2 Note: Serial attached small form factor non-hot plug SAS, SATA, or SSD drives
Removable media bays	16
Expansion slot	Up to 2 mezzanine expansion slots. Choices: 1 Gb, 10 Gb and Flex-10/FlexFabric FCoE capable 10 Gb Ethernet adapters, iSCSI adapters, 4 Gb and 8 Gb Fibre Channel adapters, and 4 x QDR (40 Gb/s) InfiniBand adapters
Storage controller	HP Embedded SATA RAID Controller
Deployment	
Form factor	Blade
Rack height	1U
Networking	1 HP Embedded NC362i Integrated Dual Port Gigabit Server Adapter and 1 additional 10/100 network adapter dedicated to iLO 2 management
Remote management	HP ProLiant Onboard Administrator
Redundant power supply	Enclosure-based power
Warranty	3-year parts

HP Factory Express

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping to speed deployment. For more information, visit: **www.hp.com/go/factoryexpress**

Customer technical training

We offer a variety of training courses on storage software, networking, archiving, and disk storage systems. Our classes are available in many delivery modalities—from traditional instructor-led courses at one of our 80 training centers worldwide to online and/or onsite training. For more information, visit: **www.hp.com/learn/storage**

Financial Services

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HP Technology Services

HP Technology Services provides a broad spectrum of services to small and medium businesses and enterprise customers that encompass performance and availability services such as automated remote system monitoring and diagnosis; proactive mission-critical services; and support solutions for design, assessment, and deployment of the entire IT infrastructure—including HP and multivendor environments. For more information on these services, contact your HP sales representative or visit: **www.hp.com/hps/support**

HP Services

When technology works, business works.
The challenge of virtually every IT organization 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 portfolio of HP Care Pack services to help design, deploy, manage, and support your blade environment with easy-to-buy, easy-to-use support packages.

Minimum recommended HP Care Pack offerings:
• 3-year, 4-hour response, and 24x7 onsite hardware support
• BladeSystem Infrastructure plus Enhanced Network installation and startup services

Enhanced service-level HP Care Pack offerings:
• **3-year Support Plus 24:** integrated 24x7 hardware and software support
• **Proactive Select:** Access experienced technical consultants, purchase service credits, and obtain expertise when needed

HP Care Pack services can help you:
• Reduce deployment time and manage server blade solutions smoothly and efficiently
• Increase uptime and performance of server availability to your business
• Automatically monitor, detect, and diagnose quickly to save time, money, and resources

For more information, visit: **www.hp.com/services/bladesystem**

To reduce overall data center power consumption, maintain high performance, and effectively manage workloads, visit: **www.hp.com/servers/BL280c**

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