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Enterprise

HPE ProLiant BL465c Gen8 Server Blade - Product Information Reference

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Abstract

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Revision history

Part number	Publication date	Edition	Summary of changes

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Product description



The ProLiant BL465c Gen8 Server Blade provides a unique blend of core density combined with a broad memory footprint in a half-height form factor that delivers unparalleled price/performance leadership for virtualization, IT infrastructure, database, and High-Performance Computing (HPC) environments. With up to 512 cores in a single enclosure and up to 2048 cores in a single rack, these servers provide very dense deployment for the data center.

What's new

Support for 6G Serial Advanced Technology Attachment (SATA) Solid State drive (SSD).

Standard Models

Subtopics

[New RoHS compliant part numbers](#)

[Standard models](#)

New RoHS compliant part numbers

To find the latest RoHS compliance information, please use the HP PartSurfer ([Click here to visit HP PartSurfer website](#)) and click on one of the linked model numbers. When locating RoHS information in PartSurfer, end user can use the option part number for the components, the sales order number for a system that the component is used in, or the spare part number for a specific part. End user can find the sales order numbers and option part numbers in the Product QuickSpecs.

Standard models

Description	Model Number	Processor(s)	Cache Memory	Memory	Network Controller	Storage Controller	Hard Drive	Internal Storage Drive	Optical Drive	Expansion Slots	Management	Form Factor
Bay												
HP ProLiant BL465c Gen8 6380 1P 16GB- R P220i Server	699045-B21	(1) AMD Opteron 6380 (2.5 GHz/16-core/16MB/115 W) Processor	16MB Level 3 cache	16GB (2 x 8GB) DDR3 1333 MHz Registered Dual In-line Memory Module (RDIMM)s at 1.35v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB Flash Backed Write Cache (FBWC) RAID 0,1	None ship standard Supports up to two (2) HPE small form factor (SFF) hot-plug Serial Attached SCSI (SAS)/SATA/SDD drives	SAS: 2.4TB; SATA: 2.0TB; SAS SSD: 3.2TB; SATA SSD: 3.2TB	None	2 standard - Slot 1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards.	HPE Integrated Lights-Out (iLO) Management Engine (standard) Optional: HPE iLO Scale-Out or HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure
HP ProLiant BL465c Gen8 6344 1P 16GB- R P220i Server	708931-B21	(1) AMD Opteron 6344 (2.6 GHz/12-core/16MB/115 W) Processor	16MB Level 3 cache	16GB (2 x 8GB) DDR3 1333 MHz RDIMMs at 1.35v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB FBWC RAID 0,1	None ship standard Supports up to two (2) HPE SFF hot-plug SAS/SATA/SDD drives	SAS: 2.4TB; SATA: 2.0TB; SAS SSD: 3.2TB; SATA SSD: 3.2TB	None	2 standard - Slot1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards	HPE iLO Management Engine (standard) Optional: HPE iLO Scale-Out or HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure
HPE ProLiant BL465c Gen8 6220 2P 64GB-R P220i Server/S-Buy	696173-S01	(2) AMD Opteron 6220 (3.0 GHz/8-core/16MB/115 W) Processor	16MB Level 3 cache	64GB (8 x 8GB) DDR3 1600 MHz RDIMMs at 1.5v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB FBWC RAID 0,1	None ship standard Supports up to two (2) HPE SFF hot-plug SAS/SATA/SDD drives	SAS: 2.0TB; SATA: 2.0TB; SAS SSD: 1.6TB; SATA SSD: 800GB	None	2 standard - Slot1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards	HPE iLO Management Engine (standard) Optional: HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure

Description	Model Number	Processor(s)	Cache Memory	Memory	Network Controller	Storage Controller	Hard Drive	Internal Storage Drive	Optical Drive	Expansion Slots	Management	Form Factor
Bay												
HPE ProLiant BL465c Gen8 6278 2P 64GB-R P220i Server/S-Buy	696172-S01 Click here to obtain parts list for this model.	(2) AMD Opteron 6278 (2.4 GHz/16-core/16MB/115 W) Processor	16MB Level 3 cache memory	64GB (8 x 8GB) DDR3 1600 MHz RDIMMs at 1.5v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB FBWC RAID 0,1	None ship standard Supports up to two (2) HPE SFF hot-plug SAS/SATA/SDD drives	SAS: 2.0TB; SATA: 2.0TB; SAS SSD: 1.6TB; SATA SSD: 800GB	None	2 standard - Slot1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards	HPE iLO Management Engine (standard) Optional: HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure
HPE ProLiant BL465c Gen8 6320 2P 64GB-R P220i Server/S-Buy	709114-S01 Click here to obtain parts list for this model.	(2) AMD Opteron 6320 (2.8 GHz/8-core/16MB/115 W) Processor	16MB Level 3 cache memory	64GB (8 x 8GB) DDR3 1600 MHz RDIMMs at 1.5v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB FBWC RAID 0,1	None ship standard Supports up to two (2) HPE SFF hot-plug SAS/SATA/SDD drives	SAS: 2.0TB; SATA: 2.0TB; SAS SSD: 1.6TB; SATA SSD: 800GB	None	2 standard - Slot1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards.	HPE iLO Management Engine (standard) Optional: HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure
HPE ProLiant BL465c Gen8 6378 2P 64GB-R P220i Server/S-Buy	709113-S01 Click here to obtain parts list for this model.	(2) AMD Opteron 6378 (2.4 GHz 16-core/16MB/115 W) Processor	16MB Level 3 cache memory	64GB (8 x 8GB) DDR3 1600 MHz RDIMMs at 1.5v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB FBWC RAID 0,1	None ship standard Supports up to two (2) HPE SFF hot-plug SAS/SATA/SDD drives	SAS: 2.0TB; SATA: 2.0TB; SAS SSD: 1.6TB; SATA SSD: 800GB	None	2 standard - Slot1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards.	HPE iLO Management Engine (standard) Optional: HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure

Description	Model Number	Processor(s)	Cache Memory	Memory	Network Controller	Storage Controller	Hard Drive	Internal Storage Drive Bay	Optical Drive	Expansion Slots	Management	Form Factor
HP ProLiant BL465c Gen8 6328 1P 16GB- R P220i Server	699047-B21	(1) AMD Opteron 6328 (3.2 GHz/8-core/16MB/115 W) Processor	16MB Level 3 cache	16GB (2 x 8GB) DDR3 1333 MHz RDIMMs at 1.35v	One (1) HPE FlexFabric 10Gb 2-port 554FLB FlexibleLOM	HPE Smart Array P220i Controller with 512MB FBWC RAID 0,1	None ship standard Supports up to two (2) HPE SFF hot-plug SAS/SATA/SDD drives	SAS: 2.4TB; SATA: 2.0TB; SAS SSD: 3.2TB; SATA SSD: 3.7TB	None	2 standard - Slot1 supports Type A mezzanine Cards. Slot 2 supports Type A and Type B mezzanine cards	HPE iLO Management Engine (standard) Optional: HPE iLO Scale-Out or HPE Insight Control	Up to eight (8) half-height blades supported in the HPE BladeSystem c3000 Enclosure Up to sixteen (16) half-height blades supported in HPE BladeSystem c7000 Enclosure

HP ProLiant BL465c Gen8 10Gb FlexibleLOM Configure-to-order Blade Server

634975- NA B21

[Click here to obtain parts list for this model.](#)

Product features

Feature	Description
Processor ¹	Sixteen-Core Processors: - AMD Opteron 6380 (2.5 GHz/ 16-core/16MB/115 W) Processor - AMD Opteron 6378 (2.4 GHz 16-core/16MB/115 W) Processor - AMD Opteron 6376 (2.3 GHz 16-core/16MB/115 W) Processor - Low Power AMD Opteron 6366HE (1.8 GHz/16-core/16MB/85 W) Processor Twelve-Core Processors: - AMD Opteron 6348 (2.8 GHz/12-core/16MB/115 W) Processor - AMD Opteron 6344 (2.6 GHz/ 12-core/ 16MB/115 W) Processor - AMD Opteron 6238 (2.6 GHz/12-core/16MB/115 W) Processor - AMD Opteron 6234 (2.4 GHz/12-core/16MB/115 W) Processor Eight-Core Processors - AMD Opteron 6328 (3.2 GHz/8-core/16MB/115 W) Processor - AMD Opteron 6320 (2.8 GHz/8-core/16MB/115 W) Processor Quad-core processors: - AMD Opteron 6308 (3.5 GHz/4-core/16MB/115 W) Processor
Chipset ²	AMD SR5690 and SP5100
Cache memory	16MB Level 3 cache memory
Upgradeability	Upgradeable to two (2) processors
On system management chipset	- HP iLO (Firmware: HP iLO 4) - HPE Agentless Management - HPE Active Health System - HPE Intelligent Provisioning

Feature	Description
Memory protection	- Advanced ECC - Online spare mode
Memory type ³	Type - HP SmartMemory - DDR3 Load-Reduced Dual In-line Memory Module (LRDIMM) or RDIMM Standard (Pre-configured models) 16GB (2 x 8GB) DDR3 1333 MHz RDIMMs at 1.35 V Maximum (LRDIMM) 512GB (16 x 32GB) at 1333 MHz 512GB (16 x 32GB) at 1333 MHz 256GB (16 x 16GB) up to 1600 MHz
HPE Virtual Connect	- HPE Virtual Connect is an interconnect option for BladeSystem c-Class that simplifies server connectivity to data and storage networks, and reduces costs. - Unique HPE Flex-10 technology makes maximum use of network bandwidths, provide dynamic tuning and enable extreme flexibility to meet individual server and infrastructure requirements by allocating up to 4 network connections per server port. - Virtual Connect FlexFabric modules extend those capabilities to allocate one function per port to storage connections.
Network controller ⁴	One (1) FlexibleLOM connector for one dual-port FlexibleLOM - FlexibleLOM options include 10Gb FlexFabric, 20Gb FlexFabric, 10Gb Flex-10, and 10Gb Ethernet. - FlexFabric capabilities require the use of an HPE Virtual Connect FlexFabric module. - The server supports one FlexibleLOMs - For Pre-configured Model configurations, FlexibleLOM is already included. - All FlexibleLOMs are dual port: one port is routed to interconnect module bay 1 and the other to bay 2. - FlexibleLOMs are not compatible with prior generation c-Class server blades Standard iLO Network Controller: - One (1) 10/100 Mb/s port for the HPE iLO 4 On System Management Chipset - One (1) 10/100 Mb/s port for the HPE iLO 4 to Onboard Administrator link. The Onboard Administrator (with 10/100/1000 Mb/s) to BladeSystem link is 1 Gb/s.
HPE Insight management software	- HPE Insight Control - HPE Matrix Operating Environment - HPE iLO Scale-Out - HPE iLO Advanced
HPE OneView	- The HPE OneView architecture combines server, storage, and networking with control of datacenter environments into a single, integrated management platform. - Architected to deliver lifecycle management for the complete Converged Infrastructure, it facilitates collaboration, removes friction, collapses cycle times, eliminates error-prone work, and accelerates time to value. - HPE OneView v1.0 combines management of servers and virtual connect with open integration to automate and customize existing tools and processes. - With OneView, you'll work smarter-with greater visibility and control-and fully capitalize on the benefits of a Converged Infrastructure.
High Performance Clusters	- HPE Cluster Platforms - HPE HPC Interconnects - HPE Insight Cluster Management Utility

Feature	Description
Storage Software	Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than HPE storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities. Storage software that gets the job done: • Data Protection and Recovery Software: Whether you're a large enterprise or a smaller business, HPE data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity • Data Archive and Migration Software: The Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage. • Storage Resource Management Software (SRM): The Hewlett Packard Enterprise SRM reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments • Data Replication Software: Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting. • Storage Device Management Software: Maximize your investment in HPE storage and networking with software that enables hardware- specific configuration, performance tuning and connectivity management. • HPE StoreVirtual VSA: With HPE StoreVirtual VSA you can use the power of virtualization to turn a set of heterogeneous and disconnected physical disk drives in your servers and storage devices into a single pool of logical storage capacity.
Factory Express Portfolio for Servers and Storage	• HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. You can choose how their factory solutions are built, tested, integrated, shipped and deployed. • Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging.
Expansion Blade Support	Supports one (1) optional storage, tape, or PCI expansion blade.
HPE Insight Online	HPE Insight Online is a new addition to the HPE Support Center for one stop, secure access to product and HPE support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HPE Insight Remote Support.
HPE Server Read Only Memory (ROM)	HPE ROM is now digitally signed using HPE's Corporate Signing Service. This signature is verified before the flash process starts, reducing accidental programming and preventing malicious efforts to corrupt system ROM. HPE ROM provides for essential initialization and validation of hardware components before control is passed to the customer-installed Operating System (OS). The ROM also provides the capability of booting from various fixed media (Hard Disk Drive (HDD), CD-ROM) and removable media (USB), to continue operation to the OS. Additionally, these configuration or hardware errors are logged to the Integrated Management Log (IML) to assist in diagnosis. HPE's ProLiant ROM is used to configure the following: • Processor and chipset status registers • System memory, memory map, and memory initialization • System hardware configuration (integrated PCI devices and optional PCIe cards). • Customer-specific BIOS configuration using the HPE ROM-Based Setup Utility (RBSU).
Storage Controller	All Models • One (1) HPE Smart Array P220i Controller with 512MB FBWC, (RAID 0 and 1) • Upgradeable firmware with recovery ROM. • The HPE Smart Array P220i supports two (2) SFF hot plug drive bays. • The HPE Smart Array P220i supports 6G SAS and 3G SATA data transfer rates. • Available Options: Smart Array Advanced Pack Software for enhanced performance, reliability, availability, and security of system data
Graphics	Integrated Matrox G200 video standard: • 1280 x 1024 (32 b/p) • 1920 x 1200 (16 b/p) HPE iLO 4 On System Management Memory: • 16MB Flash • 256MB DDR 3 with ECC (112MB after ECC and video)

Feature	Description
Form Factor	HPE ProLiant BL465c Gen8 is a half-height server blade that plugs into the HPE BladeSystem c3000 and c7000 enclosures.
Maximum internal storage ⁷	- Hot Plug SFF SAS 2.4TB (2 x 1.2TB) - Hot Plug SFF SATA 2.0TB (2 x 1.0TB) - Hot Plug SFF SAS SSD 3.2TB (2 x 1.6GB) - Hot Plug SFF SATA SSD 3.2TB (2 x 1.6TB)
Expansion slots	Two (2) I/O expansion mezzanine slots: - x8 PCIe 2.0 Type A (supports Type A mezzanine cards) (expansion slot 1)⁸ - x16 PCIe 2.0 Type B (supports Type A and Type B mezzanine cards) (expansion slot 2)⁹ Mezzanine card options include : - Dual-port 10Gb FlexFabric, 10Gb Flex-10, 10 GbE options, and quad-port 1Gb Ethernet server adapter mezzanine options for additional network ports. - Dual-port 8Gb Fibre Channel HBA for SAN connectivity. - QDR and FDR InfiniBand for low latency and high bandwidth server interconnectivity. - I/O accelerator mezzanine options for high transaction rate local storage. - Smart Array SAS RAID controller mezzanine options for external direct attach and shared SAS storage.
Interface ¹⁰	- Micro SDHC slot: One (1) internal Micro Secure Digital High Capacity (Micro SDHC) card slot - USB 2.0 port: One (1) internal USB 2.0 connector for USB flash media drive keys
Enclosures	Hewlett Packard Enterprise offers two different c-Class server blade enclosures to meet your individual needs: - The HPE BladeSystem c7000 rack enclosure is 10U high and holds up to sixteen (16) ProLiant BL465c Gen8 servers plugged vertically. - The HPE BladeSystem c3000 rack enclosure is 6U high and holds up to eight (8) HPE ProLiant BL465c Gen8 servers plugged horizontally. - Server blades, storage blades, interconnect modules, power supplies, fans, and redundant Onboard Administrator modules are all designed to fit into the c3000 and c7000 enclosures.
Security	- Power-on password - Administrator's password - Keyboard password (QuickLock) - HPE iLO 4 On System Management Chipset with: - SSL encryption - Secure Shell version 2 - Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface - AES and RC4 encryption of video - External USB port enable/disable - Network server mode - Serial interface control - Trusted Platform Module (TPM) 1.2 option - AES
Availability	- Memory - Mezzanine options and I/O - Storage - Processor/Chipset - Server Blade Enclosure Infrastructure
Compatible SAN	- HPE ProLiant BL465c Gen8 server blades are optimized for HPE MSA, EVA and XP. - HPE ProLiant BL465c Gen8 server blades are compatible with select 3rd party SANs.
Fibre Channel Support	Up to two (2) optional Fibre Channel mezzanine HBAs are supported on the HPE ProLiant BL465c Gen8
Other features	- Security - High availability - HP Server ROM service



NOTE

1. Processor wattage references reflect Thermal Design Power (TDP). [Click here for more information on TDP and Average CPU Power \(ACP\).](#)
2. [Click here for more information regarding AMD chipsets.](#)
3. HP memory from previous generation servers are not qualified or warranted with this server. HP SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen8. [Click here for additional information on the HP SmartMemory.](#)

LRDIMM, RDIMM and Unbuffered Dual In-line Memory Module (UDIMM) are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen8 servers support RDIMM, UDIMM and LRDIMM.

UDIMM max Dual In-line Memory Module (DIMM) population is 16.

Depending on the memory configuration and processor model, the memory speed may run at 1600 MHz, 1333 MHz, or 1066 MHz.

4. Supports Fibre Channel over Ethernet (FCoE), Flex-10, TCP/IP offload engine, hardware-based accelerated iSCSI, iSCSI boot, and autosensing 10Gb/1Gb Ethernet.

Each port is autosensing 1Gb/10Gb, and can interoperate with 1Gb HP BladeSystem c-Class interconnect components. Both ports will operate at the same speed.

FlexFabric capabilities require the use of an HP Virtual Connect FlexFabric module. FCoE is supported with the HP 10GbE Pass-Thru Module, HP 6120XG Blade Switch with the CEE license installed, HP Cisco B22HP Fabric Extender and HP Cisco B22HP Fabric Extender with 16 FET for BladeSystem c-Class.

5. FlexibleLOMs are not compatible with prior generation c-Class server blades
6. The ProLiant BL465c Gen8 server includes the new HP SFF hot plug SmartDrive carrier for enhanced management and reduced maintenance errors. HP drives from previous generation servers are not compatible with the ProLiant BL465c Gen8 drive bays.
The mixing of standard SAS drives with SAS SSD drives is supported within the server, but limits the RAID configuration to two separate RAID 0 volumes. Mixing of other drives types is not supported.
7. This expansion slot supports dual-port mezzanine cards: one port is routed to interconnect module bay 3 and the other to bay 4.
8. This expansion slot supports dual-port and quad-port mezzanine cards. For dual-port cards, one port is routed to interconnect module bay 5 and the other to bay 6. For quad-port cards, one port is routed to interconnect module bay 5, one to bay 6, one to bay 7, and one to bay 8.
9. The above options are for integrated hypervisor virtualization environments needing a low cost boot solution with the highest performance and reliability.

Technical Specifications

Feature	Description
HP Smart Array P220i Controller	
Disk drive interface	6 Gb/s SAS
Server Interface	x4 PCI Express host interface
Cache memory	512MB FBWC standard
Logical drives supported	64 (with included 512MB cache)
Host memory addressing	64-bit, supporting servers memory space greater than 4GB
RAID support	RAID 1 (mirroring) and RAID 0 (striping)
Other	Upgradeable firmware with recovery ROM Online drive flash (with SAS drives)
HP FlexFabric 10Gb 2-port 554FLB FlexibleLOM	
Type	Integrated dual-port KR 10Gb FlexibleLOM with FlexFabric (Flex-10, FCoE, hardware-based iSCSI, iSCSI boot, TCP/IP offload engine, and autosensing 1Gb/10Gb Ethernet capability)
Network processor	Emulex BE3
Data transfer method	x8 PCI Express 2.0
Network transfer rate ¹	Two ports, each at 20 Gb/s full duplex; 40 Gb/s aggregate full duplex theoretical bandwidth
IEEE compliance	• 802.1p • 802.1q • 802.1qau • 802.3ad • 802.3ae • 802.3ap (10GBase-KX4) • 802.3x
Standard features	• ProLiant Teaming including Network Fault Tolerance, Transmit Load Balancing, and Switch-Assisted Load Balancing. • 9K Jumbo frames (4K Jumbo frames when in FCoE mode). • Microsoft Windows Receive Side Scaling (RSS). • Hardware-based accelerated iSCSI. • iSCSI boot. • Flex-10 capability. • FCoE. • TCP/IP offload engine (stateless TCP/IP). • Autosensing 1Gb/10Gb Ethernet.



NOTE

1. Each port is autosensing 1Gb/10Gb, and can interoperate with 1Gb HP BladeSystem c-Class interconnect components. Both ports will operate at the same speed.

Each port on the 554FLB adapter transmits from the server at 20 Gb/s (theoretical) full duplex.

Physical Specifications

Feature	Description
Dimensions (H x W x D)	18.07 x 5.54 x 51.76 cm (7.11 x 2.18 x 20.37 in)
Weight	- Maximum ¹: 6.33 kg (14.00 lb) - Minimum ²: 4.75 kg (10.50 lb)



NOTE

1: All processors, sixteen (16) DIMMs, hard drives, mezzanine cards, and two flash cache batteries installed.

2: One processor and two (2) DIMMs installed.

Environmental Specifications

Feature	Description
System inlet temperature	Operating: 10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1,000 ft) above sea level to a maximum of 3,050 m (10,000 ft), no direct sustained sunlight. - Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. - System performance may be reduced if operating with a fan fault or above 30°C (86°F). Non-operating: -30° to 60°C (-22° to 140°F) - Maximum rate of change is 20°C/hr (36°F/hr).
Relative humidity	Operating: 10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing Non-operating: 5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing
Altitude	Operating: 3,050 m (10,000 ft) - Maximum allowable altitude change rate is 457 m/min (1,500 ft/min). Non-operating: 9,144 m (30,000 ft) - Maximum allowable altitude change rate is 457 m/min (1,500 ft/min).



NOTE

For acoustic noise and power specifications, please see the HP BladeSystem c-Class Enclosures QuickSpecs:

[Click here to view HP BladeSystem c3000 Enclosure QuickSpecs .](#)

[Click here to view HP BladeSystem c7000 Enclosure QuickSpecs .](#)

Safety Certifications

Feature	Description
Industry standard compliance	• ACPI 2.0 • Microsoft Logo certifications • USB 2.0 Support • IPMI 2.0 • Secure Digital 2.0 • TPM 1.2 support • IEEE (specific IEEE standards dependent on Ethernet adapter card(s) installed) • AES • 3DES • SNMP • PCIe 2.0

Spare Parts

Subtopics

[New model specific parts list](#)

[Server Blade Components](#)

New model specific parts list

IMPORTANT: To obtain current part number information for a specific product model, use the Standard Models page for this product family.

- The product Standard Models page now links the model SKU numbers to the spare parts list for each model found on the HP PartSurfer web site. (To report missing or incorrect parts information in PartSurfer, please use the "Contact us" and "Missing or incorrect data" links within the PartSurfer web site utility.)
- To look up RoHS-compliant information in PartSurfer, use the component's option part number or the sales order number for a system in which the component is used (available in the QuickSpecs or Standard Models page).

Server Blade Components

Item	Description	Spare Part Number	Customer Self Repair
Mechanical components			
1	Access panel	686063-001	Mandatory ³
2	Drive blank	670033-001	Mandatory ³
3	Front panel/drive cage assembly	683820-001	Mandatory ³
4	DIMM baffle	686062-001	Mandatory ³
5	Heatsink blank	683819-001	Mandatory ³
6	Mezzanine assembly	683822-001	Mandatory ³

Item	Description	Spare Part Number	Customer Self Repair
7	Hardware and plastics kit ¹	697743-001	Mandatory ³
7a	Enclosure connector cover		
7b	Mezzanine assembly retainer assembly		
7c	Mezzanine assembly guide pins (2)		
7d	T-15 system board screws (2)		
7e	Serial label pull tab		
System components			
8	Processors		
8a	2.5 GHz, AMD Opteron Model 6380 ^{1,2}	705217-001	Optional ⁴
8b	2.4 GHz, AMD Opteron Model 6378 ^{1,2}	705218-001	Optional ⁴
8c	2.3 GHz, AMD Opteron Model 6376 ^{1,2}	705219-001	Optional ⁴
8d	1.8 GHz, AMD Opteron Model 6366 HE ^{1,2}	705225-001	Optional ⁴
8e	2.8 GHz, AMD Opteron Model 6348 ^{1,2}	705220-001	Optional ⁴
8f	2.6 GHz, AMD Opteron Model 6344 ^{1,2}	705221-001	Optional ⁴
8g	3.2 GHz, AMD Opteron Model 6328 ^{1,2}	705222-001	Optional ⁴
8h	2.8 GHz, AMD Opteron Model 6320 ^{1,2}	705223-001	Optional ⁴
8i	3.5 GHz, AMD Opteron Model 6308 ^{1,2}	705224-001	Optional ⁴
8j	2.4 GHz, AMD Opteron Model 6278 ^{1,2}	689494-001	Optional ⁴
8k	2.3 GHz, AMD Opteron Model 6276 ^{1,2}	662834-001	Optional ⁴
8l	2.2 GHz, AMD Opteron Model 6274 ^{1,2}	662835-001	Optional ⁴
8m	2.1 GHz, AMD Opteron Model 6272 ^{1,2}	662836-001	Optional ⁴
8n	1.6 GHz, AMD Opteron Model 6262 HE ^{1,2}	662841-001	Optional ⁴
8o	2.6 GHz, AMD Opteron Model 6238 ^{1,2}	662837-001	Optional ⁴
8p	2.4 GHz, AMD Opteron Model 6234 ^{1,2}	662838-001	Optional ⁴
8q	3.0 GHz, AMD Opteron Model 6220 ^{1,2}	662839-001	Optional ⁴
8r	2.6 GHz, AMD Opteron Model 6212 ^{1,2}	662840-001	Optional ⁴

Item	Description	Spare Part Number	Customer Self Repair
8s	3.3 GHz, AMD Opteron Model 6204 ^{1,2}	672234-001	Optional ⁴
9	Heatsink		
9a	Processor 1 heatsink	672721-001	Optional ⁴
9b	Processor 2 heatsink ¹	672720-001	Optional ⁴
10	Hard drives, SFF		
10a	72GB, SAS, 15,000-rpm, 6G	953949-001	Mandatory ³
10b	146GB, SAS, 15,000-rpm, 6G ¹	653950-001	Mandatory ³
10c	300GB, SAS, 15,000-rpm, 6G ¹	653960-001	Mandatory ³
10d	300GB, SAS, 10,000-rpm, 6G ¹	653955-001	Mandatory ³
10e	450GB, SAS, 10,000-rpm, 6G ¹	653956-001	Mandatory ³
10f	500GB, SAS, 7,200-rpm, 6G ¹	653953-001	Mandatory ³
10g	600GB, SAS, 10,000-rpm, 6G ¹	653957-001	Mandatory ³
10h	900GB, SAS, 10,000-rpm, 6G ¹	653971-001	Mandatory ³
10i	1TB, SAS, 7,200-rpm, 6G ¹	653954-001	Mandatory ³
10j	500GB, SATA, 7,200-rpm, 6G ¹	656107-001	Mandatory ³
10k	1TB, SATA, 7,200-rpm, 6G ¹	656108-001	Mandatory ³
11	SSD, SFF ¹		
11a	200GB, SAS, SLC, 6G	653961-001	Mandatory ³
11b	200GB, SAS, MLC, 6G	658580-001	Mandatory ³
11c	400GB, SAS, SLC, 6G	653962-001	Mandatory ³
11d	400GB, SAS, MLC, 6G	653963-001	Mandatory ³
11e	800GB, SAS, MLC, 6G	653964-001	Mandatory ³
11f	100GB, SATA, MLC, 3G	653965-001	Mandatory ³
11g	200GB, SATA, MLC, 3G	653966-001	Mandatory ³
11h	400GB, SATA, MLC, 3G	653967-001	Mandatory ³
Boards			
12	DIMMs		
12a	32GB, PC3L-10600L	687466-001	Mandatory ³
12b	16GB, PC3-12800R ¹	688963-001	Mandatory ³
12c	16GB, PC3L-10600R ¹	687464-001	Mandatory ³
12d	16GB, PC3U-10600R ¹	687463-001	Mandatory ³
12e	8GB, PC3-12800R ¹	687462-001	Mandatory ³
12f	8GB, PC3L-10600R ¹	687461-001	Mandatory ³
12g	8GB, PC3U-10600R ¹	687460-001	Mandatory ³
12h	4GB, PC3-12800R ¹	687459-001	Mandatory ³

Item	Description	Spare Part Number	Customer Self Repair
12i	4GB, PC3L-10600R ¹	687458-001	Mandatory ³
12j	4GB, PC3U-10600R ¹	687457-001	Mandatory ³
13	Controller		
13a	HP Smart Array P220i Controller with 512MB FBWC	659331-001	Mandatory ³
13b	NAND flash module for the HP Smart Array P220i Controller	686066-001	Mandatory ³
13c	Capacitor pack with 61-cm (24-in) cable	686065-001	Mandatory ³
13d	Capacitor pack cable, 61-cm (24-in) ¹	660092-001	Mandatory ³
14	HP Smart Array P220i Pass Through board	686067-001	Optional ⁴
15	System board with base pan		
15a	System board assembly (supports 6200-series processors)	683821-001	Optional ⁴
15b	System board assembly (supports 6200/6300-series processors)	706568-001	Optional ⁴
16	Trusted Platform Module	505836-001	No ⁵
17	FlexibleLOMs		
17a	HP Ethernet 10Gb 2-port 560FLB FlexibleLOM	656243-001	Mandatory ³
17b	HP Flex-10 10Gb 2-port 530FLB FlexibleLOM ¹	657132-001	Mandatory ³
17c	HP FlexFabric 10Gb 2-port 554FLB FlexibleLOM ¹	649940-001	Mandatory ³
18	Ethernet Mezzanine ¹		
18a	HP Flex-10 10Gb 2-port 530M adapter	657131-001	Mandatory ³
18b	HP Flex-10 10Gb 2-port 552M adapter	675484-001	Mandatory ³
18c	HP FlexFabric 10Gb 2-port 554M adapter	649870-001	Mandatory ³
18d	HP Ethernet 1Gb 4P 366M adapter	616010-001	Mandatory ³
19	Fibre channel mezzanine ¹		
19a	HP LPe1205A-HP 8Gb Fibre Channel Host Bus adapter for BladeSystem c-Class	662538-001	Mandatory ³
19b	HP QMH2572 8Gb Fibre Channel Host Bus adapter	656452-001	Mandatory ³
20	InfiniBand mezzanine ¹		
20a	HP QDR/EN InfiniBand 10Gb Dual Port 544M adapter	656087-001	Mandatory ³
20b	HP FDR/EN InfiniBand 10/40Gb Dual Port 544M adapter	656088-001	Mandatory ³

Item	Description	Spare Part Number	Customer Self Repair
Miscellaneous			
21	System battery ¹	234556-001	Optional ⁴
22	Server blade release lever kit ¹	688895-001	Optional ⁴
22a	Server blade release lever assembly		
22b	Server blade release lever bracket		
22c	T-10 screws (2)		
Cables			
23	HP c-Class Blade SUV cable ¹	416003-001	Mandatory ³
24	Hard drive cable ¹	685775-001	Mandatory ³



NOTE

1. Not shown.
2. Do not mix processors with different speeds or cache sizes.
3. **Mandatory** - Parts for which your self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.
4. **Optional** - Parts for which your self repair is optional. These parts are also designed for customer self repair. If, however, you require that HP replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.
5. **No** - Some HP parts are not designed for your self repair. In order to satisfy the customer warranty, HP requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

Option Parts

Subtopics

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New model specific parts list

IMPORTANT: To obtain current part number information for a specific product model, use the Standard Models page for this product family.

- The product Standard Models page now links the model SKU numbers to the spare parts list for each model found on the HPE PartSurfer web site. (To report missing or incorrect parts information in PartSurfer, please use the "Contact us" and "Missing or incorrect data" links within the PartSurfer web site utility. [Click here to access HPE PartSurfer web site.](#))
- To look up RoHS-compliant information in PartSurfer, use the component's option part number or the sales order number for a system in which the component is used (available in the QuickSpecs or Standard Models page).

HPE Processor

Part Description	Option Part Number
Sixteen-core processors	
HPE BL465c Gen8 AMD Opteron 6380 (2.5 GHz/16-core/16MB/115 W) FIO processor kit	699048-L21
HPE BL465c Gen8 AMD Opteron 6378 (2.4 GHz/16-core/16MB/115 W) FIO processor kit	699049-L21
HPE BL465c Gen8 AMD Opteron 6376 (2.3 GHz/16-core/16MB/115 W) FIO processor kit	699050-L21
HPE BL465c Gen8 AMD Opteron 6366HE (1.8 GHz/16-core/16MB/85 W) FIO processor kit	699056-L21
HPE BL465c Gen8 AMD Opteron 6380 (2.5 GHz/16-core/16MB/115 W) processor kit	699048-B21
HPE BL465c Gen8 AMD Opteron 6378 (2.4 GHz/16-core/16MB/115 W) processor kit	699049-B21
HPE BL465c Gen8 AMD Opteron 6376 (2.3 GHz/16-core/16MB/115 W) processor kit	699050-B21
HPE BL465c Gen8 AMD Opteron 6366HE (1.8 GHz/16-core/16MB/85 W) processor kit	699056-B21
HPE BL465c Gen8 AMD Opteron 6380 (2.5 GHz/16-core/16MB/115 W) Processor Kit	699048-B21
Twelve-core processors	
HPE BL465c Gen8 AMD Opteron 6348 (2.8 GHz/12-core/16MB/115 W) FIO processor kit	699051-L21
HPE BL465c Gen8 AMD Opteron 6344 (2.6 GHz/12-core/16MB/115 W) FIO processor kit	699052-L21
HPE BL465c Gen8 AMD Opteron 6348 (2.8 GHz/12-core/16MB/115 W) processor kit	699051-B21
HPE BL465c Gen8 AMD Opteron 6344 (2.6 GHz/12-core/16MB/115 W) processor kit	699052-B21
Eight-core processors	
HPE BL465c Gen8 AMD Opteron 6328 (3.2 GHz/8-core/16MB/115 W) FIO processor kit	699053-L21
HPE BL465c Gen8 AMD Opteron 6320 (2.8 GHz/8-core/16MB/115 W) FIO processor kit	699054-L21
HPE BL465c Gen8 AMD Opteron 6328 (3.2 GHz/8-core/16MB/115 W) processor kit	699053-B21
HPE BL465c Gen8 AMD Opteron 6320 (2.8 GHz/8-core/16MB/115 W) processor kit	699054-B21

Part Description	Option Part Number
Quad-core processors	
HPE BL465c Gen8 AMD Opteron 6308 (3.5 GHz/4-core/16MB/115 W) FIO processor kit	699055-L21
HPE BL465c Gen8 AMD Opteron 6308 (3.5 GHz/4-core/16MB/115 W) processor kit	699055-B21



NOTE

The BL465c Gen8 supports one or two processors. All configure-to-order processor kits (i.e. xxxxxx-L21) contain one (1) processor. If two processors are desired, select one xxxxx-L21 and one xxxxxx-B21. All processors within the server must be identical. The letters "HE" following the model number denotes lower wattage. The processor model as well as the memory configuration determines the maximum speed memory can operate. Please see the "Memory" section later in this document.

HPE Memory

Part Description	Option Part Number
HPE SmartMemory	
Registered DIMM (RDIMMs)	
HPE 4GB (1 x 4GB) Single Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647871-B21
HPE 4GB (1 x 4GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647873-B21
HPE 8GB (1 x 8GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	695793-B21
HPE 8GB (1 x 8GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647877-B21
HPE 8GB (1 x 8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	647879-B21
HPE 16GB (1 x 16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 Low Voltage Memory Kit	647883-B21
HPE 16GB (1 x 16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit	672633-B21
Load Reduced DIMM LRDIMM	
HPE 32GB (1 x 32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) Load Reduced CAS-9 Low Voltage Memory Kit	647885-B21



NOTE

Depending on the memory configuration and processor model, 1600-MHz and 1333-MHz memory may operate at a lower speed.

HPE Networking

Part Description	Option Part Number
FlexibleLOM adapters	
10/20Gb FlexibleLOM adapters	
HPE FlexFabric 20Gb 2-port 630FLB FIO adapter	700066-B21
HP FlexFabric 10Gb 2-port 554FLB FIO adapter	684212-B21
HPE Ethernet 10Gb 2-port 560FLB FIO adapter	684214-B21
HP Flex-10 10Gb 2-port 530FLB FIO adapter	684211-B21
HPE BL e-Class Special Enclosure	700742-B21
HPE FlexFabric 20Gb 2-port 630FLB adapter	700065-B21
HPE Flex-10 10Gb 2-port 530FLB adapter	656590-B21
HPE FlexFabric 10Gb 2-port 554FLB adapter	647586-B21
HPE Ethernet 10Gb 2-port 560FLB adapter	655639-B21
10/20Gb Ethernet mezzanine	
HPE FlexFabric 20Gb 2-port 630M adapter	700076-B21
HP Flex-10 10Gb 2-port 530M adapter	631884-B21
HPE FlexFabric 10Gb 2-port 534M adapter	700748-B21
HP Flex-10 10Gb 2-port 552M adapter	674764-B21
HP FlexFabric 10Gb 2-port 554M adapter	647590-B21
HPE Ethernet 10Gb 2-port 560M adapter	665246-B21
1Gb Ethernet mezzanine	
HPE Ethernet 1Gb 4-port 366M adapter	615729-B21

HPE Fibre Channel

Part Description	Option Part Number
HPE LPe1205A 8Gb Fibre channel host bus adapter for bladeSystem c-class	659818-B21
HPE QMH2572 8Gb Fibre channel host bus adapter for bladeSystem c-class	651281-B21
HPE QMH2672 16Gb Fibre channel host bus adapter	710608-B21

HPE Hard Drives

Part Description	Option Part Number
6G SATA Value Endurance (VE) Hot Plug SFF (2.5-in) enterprise boot SSD	
HP 120GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	717965-B21
HP 80GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	734360-B21
6G SATA VE Hot Plug SFF (2.5-in) enterprise boot SSD	

Part Description	Option Part Number
HP 800GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	717973-B21
HP 600GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	739898-B21
HP 480GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	717971-B21
HP 300GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	739888-B21
HP 240GB 6G SATA VE SFF 2.5-in SC enterprise boot 3 yr warrenty SSD	717969-B21
6G SATA Hot Plug with SmartDrive SFF (2.5-in) Midline (MDL) drives	
HPE 1TB SATA 6G MDL 7.2K SFF (2.5-in) SC 1 yr warrenty Digitally Signed (DS) firmware HDD	655710-B21
HPE 500GB 6G SATA 7.2K rpm SFF (2.5-in) SC MDL 1 yr warrenty hard drive	655708-B21
6G SATA (2.5-in) 512e SC HDD	
HPE 1TB SATA 6G MDL 7.2K SFF (2.5-in) SC 1 yr warrenty 512e Digitally Signed (DS) firmware HDD	765453-B21
HPE 2TB SATA 6G MDL 7.2K SFF (2.5-in) SC 1 yr warrenty 512e DS firmware HDD	765455-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5-in) SC 3 yr warrenty 512e HDD	748387-B21
HPE 1TB SAS 12G MDL 7.2K SFF (2.5-in) SC 1 yr warrenty 512e DS firmware HDD	765464-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5-in) SC 3 yr warrenty 512e HDD	791034-B21
HPE 2TB SAS 12G MDL 7.2K SFF (2.5-in) SC 1 yr warrenty 512e HDD	765466-B21
6G SATA 2.5-in Write Intensive (WI)-PLP SC SSD	
HPE 1.2TB SATA 6G WI SFF (2.5-in) SC 3 yr warrenty SSD	804677-B21
HPE 800GB SATA 6G WI SFF (2.5-in) SC 3 yr warrenty SSD	804671-B21
HPE 400GB SATA 6G WI SFF (2.5-in) SC 3 yr warrenty SSD	804665-B21
HPE 200GB SATA 6G WI SFF (2.5-in) SC 3 yr warrenty SSD	804639-B21
6G SATA 2.5-in Mixed Use (MU)-PLP SC SSD	
HPE 1.6TB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	804631-B21
HPE 800GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	804625-B21
HPE 480GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	832414-B21
HPE 200GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	804613-B21
6G SATA 2.5-in Read Intensive(RI)-PLP SC SSD	
HPE 1.6TB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	804605-B21
HPE 800GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	804599-B21
HPE 480GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	804593-B21
HPE 240GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	804587-B21
HPE 120GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	804581-B21
HPE 80GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	804575-B21
6G SATA VE SFF (2.5-in) SC Enterprise Value (EV)M1 SSD	

Part Description	Option Part Number
HPE 120GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	764923-B21
HPE 240GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	764925-B21
HPE 480GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	764927-B21
HPE 800GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	764929-B21
6G SATA VE Hot Plug SFF (2.5-in) SC EV G1 SSD	
HP 1.6TB 6G SATA VE SFF 2.5-in SC EV 3 yr warrenty SSD	757339-B21
HP 480GB 6G SATA VE SFF 2.5-in SC EV 3 yr warrenty SSD	756657-B21
HP 240GB 6G SATA VE SFF 2.5-in SC EV 3 yr warrenty SSD	756636-B21
HP 120GB 6G SATA VE SFF 2.5-in SC EV 3 yr warrenty SSD	756621-B21
6G SATA LE Hot Plug SFF (2.5-in) SC EL G1 SSD	
HP 960GB 6G SATA Light Endurance SFF 2.5-in SC enterprise light 3 yr warrenty G1 SSD	756601-B21
6G SATA 2.5-in SFF RI-3 SC SSD	
HPE 3.84TB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	816929-B21
HPE 1.92TB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	816919-B21
HPE 960GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	816909-B21
HPE 480GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	816899-B21
HPE 240GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	816889-B21
HPE 120GB SATA 6G RI SFF (2.5-in) SC 3 yr warrenty SSD	816879-B21
6G SATA 2.5-in SFF MU-3 SC SSD	
HPE 1.92TB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	817011-B21
HPE 960GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	816995-B21
HPE 480GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	816985-B21
HPE 240GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	816975-B21
HPE 120GB SATA 6G MU SFF (2.5-in) SC 3 yr warrenty SSD	816965-B21
12G SAS SFF (2.5-in) RI-3 SC SSD	
HPE 3.84TB SAS 12G RI SFF (2.5-in) SC 3 yr warrenty SSD	816576-B21
HPE 1.92TB SAS 12G RI SFF (2.5-in) SC 3 yr warrenty SSD	816572-B21
HPE 960GB SAS 12G RI SFF (2.5-in) SC 3 yr warrenty SSD	816568-B21
HPE 480GB SAS 12G RI SFF (2.5-in) SC 3 yr warrenty SSD	816562-B21
12G SAS SFF (2.5-in) MU-3 SC SSD	
HPE 3.2TB SAS 12G MU SFF (2.5-in) SC 3 yr warrenty SSD	822567-B21
HPE 1.6TB SAS 12G MU SFF (2.5-in) SC 3 yr warrenty SSD	822563-B21
HPE 800GB SAS 12G MU SFF (2.5-in) SC 3 yr warrenty SSD	822559-B21
HPE 400GB SAS 12G MU SFF (2.5-in) SC 3 yr warrenty SSD	822555-B21
SAS Hot Plug with SmartDrive SFF (2.5-in) enterprise drives	

Part Description	Option Part Number
HP 1.2TB 6G SAS 10K rpm SFF (2.5-in) SC Dual Port Enterprise 3 yr warrenty hard drive	718162-B21
HP 900GB 6G SAS 10K rpm SFF (2.5-in) SC Enterprise 3 yr warrenty hard drive	652589-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-in) SC Enterprise 3 yr warrenty hard drive	652583-B21
HP 450GB 6G SAS 10K rpm SFF (2.5-in) SC Enterprise 3 yr warrenty hard drive	652572-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-in) SC Enterprise 3 yr warrenty hard drive	652564-B21
HP 300GB 6G SAS 15K rpm SFF (2.5-in) SC Enterprise 3 yr warrenty hard drive	652611-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-in) SC Enterprise 3 yr warrenty hard drive	652605-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5 in) SC 3 yr warrenty HDD	759212-B21
HPE 450GB SAS 12G Enterprise 15K SFF (2.5 in) SC 3 yr warrenty HDD	759210-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5 in) SC 3 yr warrenty HDD	759208-B21
SAS Hot Plug SmartDrive SFF (2.5-in) MDL drives	
HPE 1TB 6G SAS 7.2K rpm SFF (2.5-in) SC MDL 1 yr warrenty hard drive	652749-B21
HPE 500GB 6G SAS 7.2K rpm SFF (2.5-in) SC MDL 1 yr warrenty hard drive	652745-B21
12G SAS WI SFF (2.5-in) SC 3 yr warrenty H2 SSD	
HPE 200GB SAS 12G WI SFF (2.5-in) SC 3 yr warrenty SSD	802578-B21
HPE 400GB SAS 12G WI SFF (2.5-in) SC 3 yr warrenty SSD	802582-B21
HPE 800GB SAS 12G WI SFF (2.5-in) SC 3 yr warrenty SSD	802586-B21
HPE 1.92TB SAS 12G RI SFF (2.5-in) SC 3 yr warrenty SSD	802891-B21
6G SATA ME Hot Plug SFF (2.5-in) Enterprise Mainstream (EM)SSD	
HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC EM 3 yr warrenty SSD	691868-B21
HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC EM 3 yr warrenty SSD	691866-B21
HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC EM 3 yr warrenty SSD	691864-B21
HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC EM 3 yr warrenty SSD	691862-B21
6G SATA RI (2.5-in) SC G2 SSD	
HP 240GB 6G SATA RI SFF 2.5-in SC 3 yr warrenty SSD	789135-B21
HP 480GB 6G SATA RI SFF 2.5-in SC 3 yr warrenty SSD	789145-B21
12G SAS SFF (2.5-in) SC ENT HDD	
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5-in) SC 3 yr warrenty SSD	781518-B21
HPE 900GB SAS 12G Enterprise 10K SFF (2.5-in) SC 3 yr warrenty SSD	785069-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5-in) SC 3 yr warrenty SSD	781516-B21

Part Description	Option Part Number
HPE 300GB SAS 12G Enterprise 10K SFF (2.5-in) SC 3 yr warrenty SSD	785067-B21
12G SAS ME SFF (2.5-in) SC EM H2 SSD	
HPE 200GB SAS 12G WI SFF (2.5-in) SC 3 yr warrenty SSD	779164-B21
HPE 400GB SAS 12G WI SFF (2.5-in) SC 3 yr warrenty SSD	779168-B21
HPE 800GB SAS 12G WI SFF (2.5-in) SC 3 yr warrenty SSD	779172-B21
12G SAS VE SFF (2.5-in) SC EV SSD	
HP 1.6TB 12G SAS VE SFF 2.5-in SC EV 3 yr warrenty SSD	762263-B21
HPE 800GB SAS 12G RI SFF (2.5in) SC 3 yr warrenty SSD	762261-B21

HPE Insight Software

Part Description	Option Part Number
HPE Insight control	
HPE Insight control including 1 yr 24x7 Technical Support and Updates(TSU) 1-server LTU	C6N27A
HPE Insight Control including 1yr 24x7 Support proLiant ML/DL/BL-bundle single server FIO LTU	C6N36A
HP Insight control server provisioning media kit	BD883A
HPE Insight management media kit	C6N31A
HPE iLO Advanced License HPE iLO advanced for ProLiant BladeSystem	
HPE iLO Advanced for BladeSystem including 1 yr 24x7 Support 1-server LTU	512488-B21
HPE iLO Advanced for BladeSystem including 1 yr 24x7 Support 8-server LTU	512489-B21
HPE iLO	
HPE iLO scale out	
HPE iLO Scale-Out 3 yr 24x7 TSU flexible quantity LTU	BD776A
HPE iLO Scale-Out 1 yr 24x7 TSU flexible quantity LTU	BD778A
HPE iLO Scale-Out including 3 yr 24x7 TSU flexible quantity LTU	BD776AAE
HPE iLO Scale-Out including 1 yr 24x7 TSU flexible quantity LTU	BD778AAE
HPE iLO Scale-Out including 3 yr 24x7 TSU tracking LTU	BD777A
HPE iLO Scale-Out including 1 yr 24x7 TSU tracking LTU	BD779A

Converged Infrastructure Management Software

Part Description	Option Part Number
HPE OneView	
HPE OneView with iLO advanced	
HPE OneView including 3 yr 24x7 support physical 1-server LTU	E5Y34A
HPE OneView including 3 yr 24x7 support flexible quantity E-LTU	E5Y35AAE
HPE OneView Physical Media Kit LTU	E5Y37A
HPE OneView w/o iLO including 3 yr 24x7 support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3 yr 24x7 support flexible quantity E-LTU	P8B26AAE
HPE OneView w/o iLO including 3 yr 24x7 support 1-server FIO LTU	P8B31A
HPE OneView for Blade Server including 3 yr 24x7 Support FIO bundle physical 1-server LTU	F6Q89A

Cloud Management Softwar

Part Description	Option Part Number
Helion software	
HPE Helion OpenStack	
HPE Helion OpenStack 5 yr 9x5 support RTU	P9A13A
HPE Helion OpenStack 5 yr 9x5 support E-RTU	P9A13AAE
HPE Helion OpenStack 5 yr 24x7 support RTU	P9A14A
HPE Helion OpenStack 5 yr 24x7 support E-RTU	P9A14AAE
HPE Helion platform	
HPE Helion Platform 5 yr 9x5 support RTU	P9A15A
HPE Helion Platform 5 yr 9x5 support E-RTU	P9A15AAE
HPE Helion Platform 5 yr 24x7 support RTU	P9A16A
HPE Helion Platform 5 yr 24x7 support E-RTU	P9A16AAE
HPE Helion Dev Plat	
HPE Helion Development Platform 5 yr 9x5 support RTU	P9A17A
HPE Helion Development Platform 5 yr 9x5 support E-RTU	P9A17AAE
HPE Helion Development Platform 5 yr 24x7 support RTU	P9A18A
HPE Helion Development Platform 5 yr 24x7 support E-RTU	P9A18AAE

Clusters

Part Description	Option Part Number
HPE Insight Cluster Management Utility 1 yr 24x7 flexible LTU	QL803B
HPE Insight Cluster Management Utility 3 yr 24x7 flexible LTU	BD476A
HPE Insight Cluster Management Utility Media	BD477A

HPE I/O Accelerator Options

Part Description	Option Part Number
HPE 1.2TB RI Mezzanine PCIe workload accelerator for bladeSystem c-Class	794603-B21
HPE 1.6TB RI Mezzanine PCIe workload accelerator for bladeSystem c-Class	794605-B21

HPE Security

Part Description	Option Part Number
HPE TPM Option	488069-B21

HPE Storage Controllers

Part Description	Option Part Number
HPE Smart Array P731m controller	
HP Smart Array P731m/2GB FBWC 6Gb 4-ports Ext Mezzanine SAS controller	698535-B21
HP Smart Array P731m/512 FBWC 6Gb 4-ports Ext Mezzanine SAS controller	698536-B21
HPE Smart Array P721m controller	
HP Smart Array P721m/2GB FBWC 6Gb 4-ports Ext Mezzanine SAS controller	650072-B21
HP Smart Array P721m/512 FBWC 6Gb 4-ports Ext Mezzanine SAS controller	655636-B21

HPE Secure Encryption

Part Description	Option Part Number
HP Secure Encryption per Server entitlement	C9A82AAE

HPE InfiniBand Mezzanines

Part Description	Option Part Number
HP Infiniband QDR/Ethernet 10Gb 2-port 544M adapter	644160-B21
HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544M adapter	644161-B22
HP InfiniBand FDR 2-port 545M adapter	702213-B21

HPE Storage Blades

Part Description	Option Part Number
HPE D2220sb Configure-to-order storage blade	QW918A

HPE Ultrium Tape Blades

Part Description	Option Part Number
HP StoreEver LTO-5 Ultrium SB3000c tape blade	BS580B
HPE D2220sb Build-to-order storage blade	QW917A

HPE Expansion Blade

Part Description	Option Part Number
HPE BLc PCI Expansion blade	448018-B21

HPE Flash Media Kits for USB Drives

Part Description	Option Part Number
HPE EM flash media kits for memory cards	
HPE 8GB USB EM flash media drive key kit	737953-B21
HPE 8GB microSD EM flash media kit	726116-B21
HPE 32GB microSD mainstream flash media kit	700139-B21

Operational Services

Part Description	Option Part Number
HPE 3 yr Proactive Care Call to Repair 24x7 with DMR ProLiant BL4xxc Service	U3B23E
HPE 3 yr Proactive Care 24x7 ProLiant BL4xxc Service	U3B14E
HPE 3 yr Proactive Care 24x7 with DMR ProLiant BL4xxc Service	U3B17E
HPE 3 yr Proactive Care Call to Repair ProLiant BL4xxc Service	U3B20E
HPE Install c-Class Server Blade Service	UE493E
HPE Hardware Installation during Non Standard Hours c-Class Server Blade Service	UG869E

Software Compatibility

Subtopics

OS Compatibility

OS Compatibility

Feature	Description
OS and virtualization software support ¹	• Microsoft Windows Server • Red Hat Enterprise Linux (RHEL) • SUSE Linux Enterprise Server (SLES) • Canonical Ubuntu • Oracle Solaris • VMware • Citrix XenServer

1. For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for server, visit our Support Matrix or the driver download page. [click here to access the OS Support Matrix](#).

Useful Links

Descriptions	Direct Links
Alerts	Click here to view "Alerts, Security Bulletin, Advisory, Notice and other documents of HPE ProLiant BL465c Gen8 Server Blade".
Drivers and Softwares	Click here to view "Drivers and Softwares, Firmware, Driver, BIOS, Application, Utility, OS, Software document of HPE ProLiant BL465c Gen8 Server Blade".
Knowledge Articles	Click here to view "Knowledge Articles, Troubleshooting, FAQ, How To, Informational document of HPE ProLiant BL465c Gen8 Server Blade".
Manuals	Click here to view "Manuals, Guides, Release Notes, Troubleshooting articles and other related document of HPE ProLiant BL465c Gen8 Server Blade".
Videos	Click here to access "Videos of Remove/Replace, Setup/Installation, Troubleshooting, Management/Operations of HPE ProLiant BL465c Gen8 Server Blade".