

### Overview

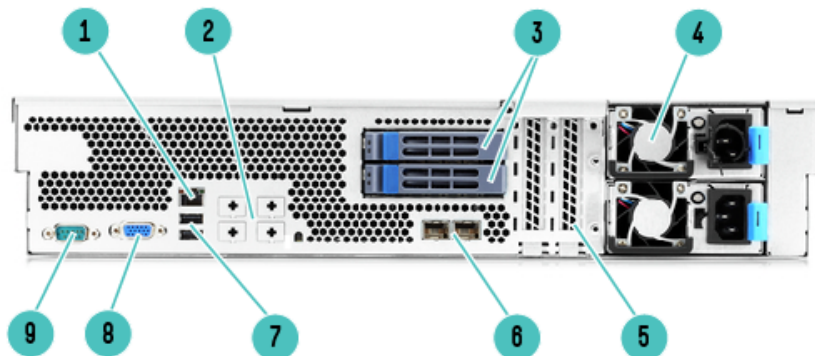
### HPE Cloudline CL2200 G3 1211R Server

The HPE Cloudline CL2200 Server delivers Big Data and Cloud storage functionality for web-scale service providers in a package that uses basic hardware and no frills mechanical designs to lower acquisition costs, the Cloudline CL2200 is a 2U, 2P server featuring the latest Intel® Xeon® E5-2600v3/v4 series processors.



#### Front View

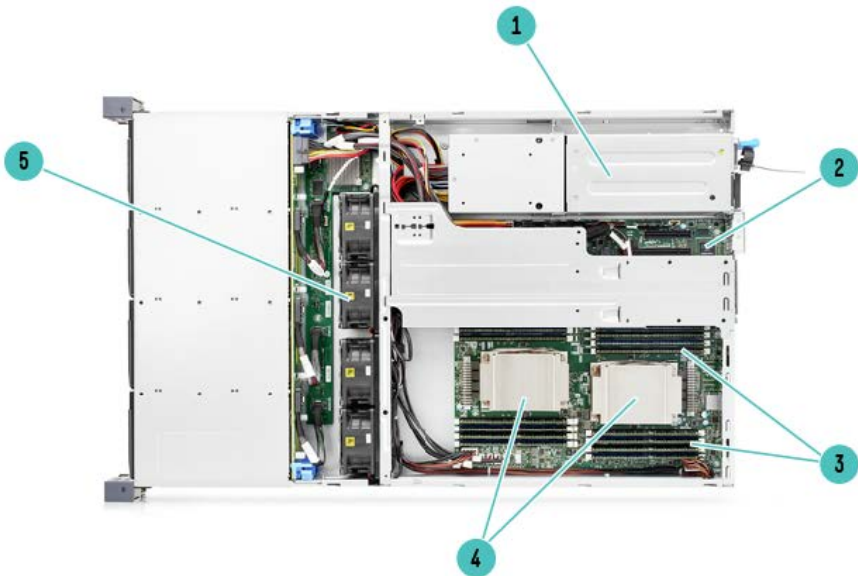
1. (12) LFF Drive Cage Bay
2. Front Control Panel w/ LED Status indicators
3. (12) LFF or SFF (via conversion tray) Drives



#### Rear View

1. (1) BMC Management Port 10/100Base-TX
2. (2, 4 or none) 1GbE LAN ports, depends on the motherboard
3. (2) Hot Plug SFF SSDs
4. (2) 500W or 800W Redundant Power Supply / (1) 650W Fixed Power Supply (not showing)
5. (1) OCP Mezzanine Card, showing 2 Port 10GbE SFP+
6. (2) PCIe Slots HH/HL
7. (2) USB 2.0 Ports
8. (1) VGA Port
9. (1) Serial Port

Overview



Internal View

- 1. (2) Hot Plug Redundant Power Supplies
- 2. (1) BMC
- 3. (16) DDR4 DIMMs populated and showing
- 4. (2) Processors with Heat Sinks
- 5. (4) None hot plug System Fans

**What's New**      New updated part numbers

## Standard Features

### Processor

**NOTE:** For more information regarding Intel Xeon processors, please see the following <http://www.intel.com/xeon>

**NOTE:** Up to 2 processors supported. Mixing different processor models is not supported.

Intel® Xeon® processor E5-2600 v4 product family

Model	CPU frequency	Cores	L3 Cache	TDP	QPI	DDR4 Maximum Speed
E5-2698v4	2.2GHz	20	50MB	135W	9.6GT/s	2400 MHz
E5-2695v4	2.1GHz	18	45MB	120W	9.6GT/s	2400 MHz
E5-2690v4	2.6GHz	14	35MB	135W	9.6GT/s	2400 MHz
E5-2683v4	2.1GHz	16	40MB	120W	9.6GT/s	2400 MHz
E5-2680v4	2.4GHz	14	35MB	120W	9.6GT/s	2400 MHz
E5-2660v4	2.0GHz	14	35MB	105W	9.6GT/s	2400 MHz
E5-2650v4	2.2GHz	12	30MB	105W	9.6GT/s	2400 MHz
E5-2640v4	2.4GHz	10	25MB	90W	8.0GT/s	2133 MHz
E5-2630v4	2.2GHz	10	25MB	85W	8.0GT/s	2133 MHz
E5-2620v4	2.1GHz	8	20MB	85W	8.0GT/s	2133 MHz
E5-2609v4	1.7GHz	8	20MB	85W	6.4GT/s	1866 MHz
E5-2603v4	1.7GHz	6	15MB	85W	6.4GT/s	1866 MHz

Intel® Xeon® processor E5-2600 v3 product family

Model	CPU frequency	Cores	L3 Cache	TDP	QPI	DDR4 Maximum Speed
E5-2680v3	2.5GHz	12	30MB	120W	9.6GT/s	2133 MHz
E5-2670v3	2.3GHz	12	30MB	120W	9.6GT/s	2133 MHz
E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133 MHz
E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133 MHz
E5-2640v3	2.6GHz	8	20MB	90W	8.0GT/s	1866 MHz
E5-2630v3	2.4Ghz	8	20MB	85W	8.0GT/s	1866 MHz
E5-2630Lv3	1.8GHz	8	20MB	55W	8.0GT/s	1866 MHz
E5-2623v3	3GHz	4	10MB	105W	8.0GT/s	1866 MHz
E5-2620v3	2.4GHz	6	15MB	85W	8.0GT/s	1866 MHz
E5-2603v3	1.6GHz	6	15MB	85W	6.4GT/s	1600 MHz

### Chipset

Intel® C610 Series Chipset

**NOTE:** For more information regarding Intel chipsets, please see the following URL: <http://www.intel.com/products/server/chipsets/>

### Upgradeability

Upgradeable to 2 processors (40 Cores)  
 Up to 16 DIMM slots available for higher Memory capacity  
 OCP Mezzanine connector for 10 Gigabit networking options  
 12 LFF or SFF (via conversion tray) Drive Cage Bay  
 Redundant Power Supply

### On System

iBMC ASPEED AST2400 with KVM Support

## Standard Features

### Management Processor

#### Memory

Industry Standard DDR4 Registered (RDIMM)

DIMM Slots Available 16 (8 DIMM slots per processor, 4 channels per processor, 2 DIMMs per channel)

Maximum Capacity 512GB (16 x 32GB RDIMM) 4GB/8GB/16GB/32GB DDR4 up to 2400MT/s

#### Memory Protection

Advanced ECC

Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

Online spare

Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

#### Expansion Slots depending on model

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
Slot6	PCIe 3.0	x8	x8	internal	CPU 0,
OCP Mezz	PCIe 3.0	x8	x8	OCP	CPU 0, depends on the motherboard
Slot1	PCIe 3.0	x8	x8	HH/HL	CPU 0
Slot2	PCIe 3.0	x16	x16	HH/HL	CPU 1

**NOTE:** Bus Width data indicates the number of physical electrical lanes running to the connector.

#### Internal Storage Devices depending on model

Optical Drive None

Hard Drives None ship standard

Drive Bays Front 12 LFF/SFF (via conversion tray)  
Rear 2 SFF

#### Maximum Internal Storage

Hot Plug LFF SATA	96 TB	12 x 8 TB
Hot Plug SFF SATA	14 TB	14 x 1 TB
Hot Plug SFF SAS	16.8 TB	14 x 1.2 TB
Hot Plug LFF / SFF SATA	98 TB	12 x 8 TB + 2 x 1 TB
Hot Plug SFF SATA SSD	13.44 TB	14 x 960 GB

#### Power Supply One of the following depending on model

HPE CL 650W Platinum at 220V, Gold at 110V, Fixed PSU

HPE CL 500W Platinum HVDC-PSU, Redundant

HPE CL 800W Platinum HVDC-PSU, Redundant

#### System Fans

4 Fans, none hot-swap

#### Interfaces

Serial	1
Video	1
Network ports	None, 2x 1GbE, 4x 1GbE ports - depending on model
OCP NIC ports	2x SFP+ ports (for OCP NIC Mezzanine card) - depending on model

## Standard Features

IPMI management port	dedicated 10/100M LAN port and shared 1GbE/10GbE LAN port
USB 2.0 Ports	Up to 2 total: 2 rear

### Operating Systems Test for CL Servers with E5-2600v3

Cent OS  
Red Hat Enterprise Linux (RHEL)

### Operating Systems Test for CL Servers with E5-2600v4

RHEL 7.0 (latest version)  
CentOS 7.0 (latest version)  
Windows Server 2012 R2 (Datacenter, Standard, Essentials, Foundation, HyperV, Storage)  
VMware ESXi 5.5.0 U2d  
VMware ESXi 6.0 U1

### Industry Standard Compliance

ACPI 2.0b Complaint  
PCIe 3.0 Complaint  
PXE Support  
WOL Support  
USB 2.0 Support

### Graphics

Integrated PCIe VGA/2D Controller via ASPEED 2400 BMC, 1600 x 1200 @ 60Hz (32 bpp)

### Form Factor

2U Rack form factor  
3.43 (8.7cm) Height x 17.58" (44.6 cm) Width x 28" (71.1 cm) Length

### Security

Power-on password  
Administrator's password  
UEFI

### Warranty

This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise Services. The Limited Warranty Period for a Hewlett Packard Enterprise hardware Product is a specified, fixed period commencing on the date of purchase. Your HPE Limited Warranty may include a parts only warranty service. Under the terms of parts only service, Hewlett Packard Enterprise will provide replacement parts free of charge. If Hewlett Packard Enterprise carries out the repair, labor and logistics costs are at your expense.

**NOTE:** CL1100/CL2100/CL2200 based on E5-2600v3 have the following Warranty

Hardware support is available for 1 year from date of purchase.

Support for software and initial setup is available for 90 days from date of purchase.

**NOTE:** Server Warranty includes 1-Year five (5) day Parts response time, 0-Years Labor, 0-Years Onsite support.

**NOTE:** CL2100/CL2200 based on E5-2600v4 have the following Warranty

Hardware support is available for 3 year from date of purchase.

Support for software and initial setup is available for 90 days from date of purchase.

**NOTE:** Server Warranty includes 3-Years Parts, 0-Years Labor, 0-Years Onsite support.

Enhancements to warranty services are available through HPE Services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the HPE Cloudline Servers and Options Global Limited Warranty and Technical Support for details.

## Standard Features

**NOTE:** Addition information regarding worldwide limited warranty and technical support is available at [http://www.hp.com/support/cloudline\\_warranty\\_en](http://www.hp.com/support/cloudline_warranty_en)

Response time: Response times are based on local standard business days and working hours. Unless otherwise stated, all responses are measured from the time the customer calls until Hewlett Packard Enterprise has either established a mutually acceptable time for support to be performed, or Hewlett Packard Enterprise has begun to provide support or remote diagnostics. Response time is based on commercially reasonable effort. In some countries and under certain supplier constraints, response time may vary. If your location is outside the customary service zone, response time may be longer or there may be an additional charge. Contact your local Hewlett Packard Enterprise service organization for response time availability in your area.

Warranty

**HPE Support Services** HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

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**Protect your business beyond warranty with HPE Support Services** HPE Support Services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.

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**Standard Support recommendation** Connect to Hewlett Packard Enterprise for faster problem resolution. Cloudline Support Services provides hardware onsite response. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions.

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**Parts and Materials** Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

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## Configuration Information - Factory Integrated Models for E5-2600v4

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models will be populated with sufficient hard drive blanks
4. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

### Step 1: Base Configuration (choose one of the following configurable models)

Chassis	HPE CL2200 G3 12G 1211R 12 LFF Redundant PSU Configure-to-order Server	HPE CL2200 G3 12G 1211R 12 LFF+2 SFF Redundant PSU Configure-to-order Server	HPE CL2200 G3 12G 1211R 12 LFF Fix PSU Configure-to-order Server	HPE CL2200 G3 12G 1211R 12 LFF+2 SFF Fix PSU Configure-to-order Server
SKU Number	855423-B21	855422-B21	855425-B21	855424-B21
Processor	2 (optional) up to 135W			
DIMM Slots	16 DIMM slots for RDIMM DDR4 Memory			
Storage Controller	HPE CL LSI-9300-16i SAS HBA Card (standard) HPE CL LSI 9361-16i Raid Card (optional)			
PCIe	(1) PCIe x16 Gen3 slot for 1x HHHHL add-on card (1) PCIe x8 Gen3 slot for 1x HHHHL add-on card (1) PCIe x8 Gen3 slot through PCIe slot riser for 1x FHHL internal add-on card (1) PCIe x8 Gen3 OCP NIC Mezzanine slot for OCP NIC card (optional)			
Drive Cage	12LFF Hot Plug	12LFF Hot Plug + 2SFF Hot Plug	12LFF Hot Plug	12LFF Hot Plug + 2SFF Hot Plug
Network Controller	HPE CL2200 1211RG – 1 x OCP mezzanine slot HPE CL2200 1211RI – 2 x GbE ports HPE CL2200 1211RJ – 2 x GbE ports + 1 x OCP mezzanine slot			
Fans	4 non-hot swap fans			
Management	ASPEED 2400, IPMI v2.0 compliant, on board "KVM over IP" support			
Power Supply	2 Redundant hot plug power supplies		Fixed power supply	
USB	2 USB 2.0 Ports; 2 rear			

### Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

<b>HPE Motherboard</b>	HPE CL2200 1211RG OCP 2x16 1x8 Motherboard	857685-B21
	HPE CL2200 1211RI 2GbE 2x16 1x8 Motherboard	857687-B21
	HPE CL2200 1211RJ OCP 2GbE 2x16 1x8 Motherboard	857689-B21

#### HPE Processors

**NOTE: Select up to two (2) Processors, Processor one and two have a different heatsinks**

#### Segmented Optimized - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) FIO Processor Kit	847808-L21
HPE CL G3 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit	857635-L21
HPE CL G3 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit	857670-L21

#### Advanced - E5-2600v4 series Processors



## Configuration Information - Factory Integrated Models for E5-2600v4

HPE CL G3 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) FIO Processor Kit	847786-L21
HPE CL G3 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit	847792-L21
HPE CL G3 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) FIO Processor Kit	847798-L21
HPE CL G3 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit	847810-L21

### Standard - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit	847812-L21
HPE CL G3 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit	847822-L21
HPE CL G3 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit	848499-L21

### Basic - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit	857634-L21
HPE CL G3 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit	847824-L21

**NOTE:** If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.

**NOTE:** Up to 2 processors supported. Mixing different processor models is not supported.

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

### HPE Heatsink

**NOTE:** Each processor needs a dedicated heatsink

HPE CL2200 G3 Processor 1 Heat Sink Kit	857145-B21
HPE CL2200 G3 Processor 2 Heat Sink Kit	857683-B21

### HPE Memory DDR4-2400

**NOTE:** The following memory is supported by the E5-2600v4 series Processors.

HPE CL 8GB (1x8GB) Single Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory Kit	857542-B21
HPE CL 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory Kit	851005-B21
HPE CL 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory Kit	851007-B21

**NOTE:** Select one or more memory. A minimum of two memory kits are required if server is configured with two processors.

**NOTE:** If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors, all DIMM slots are available.

**NOTE:** Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz or 1866MHz.

### HPE Power Supplies

HPE CL 650W Gold Fixed Power Supply Unit (855424-B21 and 855425-B21)	Included
HPE CL 500W Platinum HVDC Red. Power Supply Unit	864450-B21
HPE CL 800W Platinum HVDC Red. Power Supply Unit	864453-B21

**NOTE:** Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

## Step 3: Choose Additional Options

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

### HPE Storage Controllers SAS Array Controllers 12Gb/s - HHHL

## Configuration Information - Factory Integrated Models for E5-2600v4

HPE CL LSI MegaRAID SAS 9341-8i Card	859910-B21
HPE CL LSI MegaRAID SAS 9361-16i Adapter	857141-B21
HPE CL LSI MegaRAID SAS 9361-16i W Cache CVM02 Adapter	857143-B21
<b>SAS Host Bus Adapters 12Gb/s - FHHL</b>	
HPE CL LSI-9300-16i SAS Host Bus Adapter	847568-B21

### HPE Processors

**NOTE: Second processor needs a heatsink**

#### Segmented Optimized - E5-2600v4 series Processors

HPE CL Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) Processor Kit	847808-B21
HPE CL Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Processor Kit	857635-B21
HPE CL Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit	857670-B21

#### Advanced - E5-2600v4 series Processors

HPE CL Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) Processor Kit	847786-B21
HPE CL Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit	847792-B21
HPE CL Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit	847798-B21
HPE CL Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit	847810-B21

#### Standard - E5-2600v4 series Processors

HPE CL Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) Processor Kit	847812-B21
HPE CL Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit	847822-B21
HPE CL Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit	848499-B21

#### Basic - E5-2600v4 series Processors

HPE CL Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit	857634-B21
HPE CL Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit	847824-B21

### HPE Heatsink

**NOTE: Each processor needs a dedicated heatsink**

HPE CL2200 G3 Processor 2 Heat Sink Kit	857683-B21
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### HPE Memory DDR4-2400

**NOTE: The following memory is supported by the E5-2600v4 series Processors.**

HPE CL 8GB (1x8GB) Single Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory Kit	857542-B21
HPE CL 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory Kit	851005-B21
HPE CL 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory Kit	851007-B21

**NOTE: Select one or more memory. A minimum of two memory kits are required if server is configured with two processors.**

**NOTE: If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors, all DIMM slots are available.**

**NOTE: Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz or 1866MHz.**

### HPE Drives

#### Hot Plug SFF (2.5-inch) HDD – 12Gb/s

HPE CL 300GB 12G SAS 15K rpm SFF (2.5-inch) Enterprise Hard Drive	853372-B21
HPE CL 600GB 12G SAS 15K rpm SFF (2.5-inch) Enterprise Hard Drive	848509-B21
HPE CL 1.2TB 12G SAS 10k rpm SFF (2.5-inch) Enterprise Hard Drive	848505-B21

#### Hot Plug LFF (3.5-inch) HDD – 6Gb/s

## Configuration Information - Factory Integrated Models for E5-2600v4

	HPE CL 2TB 6G SATA 7.2K rpm LFF (3.5-inch) HGST Midline Hard Drive	847804-B21
	HPE CL 4TB 6G SATA 7.2K rpm LFF (3.5-inch) Hitachi Midline Hard Drive	851211-B21
	HPE CL 6TB 6G SATA 7.2K rpm LFF (3.5-inch) Seagate Midline Hard Drive	847820-B21
	HPE CL 8TB 6G SATA 7.2K rpm LFF (3.5-inch) 512e Seagate Midline Hard Drive	848539-B21
	<b>Hot Plug SFF (2.5-inch) HDD – 6Gb/s</b>	
	HPE CL 500GB 6G SATA 7.2K rpm SFF (2.5-inch) Seagate Midline Hard Drive	851205-B21
	HPE CL 1TB 6G SATA 7.2K rpm SFF (2.5-inch) Seagate Enterprise Hard Drive	848503-B21
	HPE CL 300GB 6G SAS 15K rpm SFF (2.5-inch) Enterprise Hard Drive	859902-B21
	<b>Hot Plug SFF (2.5-inch) SSD – 6Gb/s</b>	
	HPE CL 120GB 6G SATA Value Endurance SFF 2.5-in Enterprise Value Toshiba SSD Kit	858308-B21
	HPE CL 240GB 6G SATA Value Endurance SFF 2.5-in Enterprise Value Toshiba SSD Kit	858317-B21
	HPE CL 480GB 6G SATA Value Endurance SFF 2.5-in Enterprise Value Toshiba SSD Kit	858323-B21
	HPE CL 800GB 6G SATA Value Endurance SFF 2.5-in Enterprise Value Toshiba SSD Kit	858328-B21
	HPE CL 960GB 6G SATA Value Endurance SFF 2.5-in Enterprise Value Toshiba SSD Kit	847845-B21
<b>HPE M.2 Drives</b>	HPE CL M2PS Dual M.2 (NGFF) SSD to SATA Adapter	857157-B21
	HPE CL 256GB M.2-2280 SATA MLC-Micron SSD	858319-B21
	HPE CL 256GB M.2-2280 SATA MLC-SanDisk SSD	858321-B21
	<b>NOTE: A minimum of one SSD to SATA Adapter (857157-B21) is required for M.2 devices</b>	
<b>HPE Networking</b>	10 Gigabit Ethernet OCP mezzanine Adapters	
	HPE CL Ethernet Intel X520-DA2 10Gb Dual-Port SFP+ OCP Mezzanine Card	851279-B21
	10 Gigabit Ethernet Adapters	
	HPE CL Ethernet Intel X540-T2 10Gb Dual Port RJ45 PCIe Adapter	859906-B21
	HPE CL Ethernet Intel X520-DA2 10Gb Dual Port SFP+ PCIe Adapter	859908-B21
<b>HPE Rail Kits</b>	HPE CL 2200 Rail Kit	854231-B21
<b>HPE Power Supplies</b>	HPE CL 500W Platinum HVDC Red. Power Supply Unit	864450-B21
	HPE CL 800W Platinum HVDC Red. Power Supply Unit	864453-B21

## Configuration Information - Factory Integrated Models for E5-2600v3

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models will be populated with sufficient hard drive blanks
4. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

### Step 1: Base Configuration (choose one of the following configurable models)

Chassis	HPE CL2200 G3 1211R 12 LFF Configure-to-order Server	HPE CL2200 G3 1211R 12 LFF+2 SFF Configure-to-order Server	HPE CL2200 G3 1211R 12 LFF Fix PSU Configure-to-order Server	HPE CL2200 G3 1211R 12 LFF+2 SFF Fix PSU Configure-to-order Server
SKU Number	807596-B21	807595-B21	831078-B21	831077-B21
Processor	2 (optional)			
DIMM Slots	16 DIMM slots for RDIMM DDR4 Memory			
Storage Controller	HPE CL LSI-2308 SAS HBA MEZZ Card (standard) HPE CL LSI 9271-8i Card (optional)			
PCIe	2 HH/HL PCIe 3.0 slots 1 FH/HL internal add-on-card with optional PCIe Riser 1 HBA Mezzanine Card slot 1 OCP Mezzanine Card Slot (optional)			
Drive Cage	12LFF Hot Plug	12LFF Hot Plug + 2SFF Hot Plug	12LFF Hot Plug	12LFF Hot Plug + 2SFF Hot Plug
Network Controller	HPE CL 2200 1211RB 4x GbE ports (no OCP mezzanine slot) HPE CL 2200 1211RD 2x GbE ports + 1x OCP mezzanine slot			
Fans	4 non-hot swap fans			
Management	ASPEED 2400, KVM Support			
Power Supply	2 Redundant hot plug power supplies		Fixed power supply	
USB	2 USB 2.0 Ports; 2 rear			

### Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

<b>HPE Motherboard</b>	HPE CL 2200 1211RB 4GbE + 2x16 + 2x8 Motherboard	807855-B21
	HPE CL 2200 1211RD OCP + 2GbE + 2x16 + 1x8 Motherboard	807857-B21

#### HPE Processors

##### Advanced - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit	858569-L21
HPE CL G3 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit	847796-L21
HPE CL G3 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit	858572-L21
HPE CL G3 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit	857751-L21

##### Standard - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	857771-L21
HPE CL G3 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit	857739-L21
HPE CL G3 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit	857783-L21

## Configuration Information - Factory Integrated Models for E5-2600v3

HPE CL G3 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit 847806-L21

### Advanced - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit 857783-L21

### Basic - E5-2600v3 series Processors

HPE CL2200 G3 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Kit 807811-L21

### Low Power - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit 857777-L21

**NOTE:** If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.

**NOTE:** Up to 2 processors supported. Mixing different processor models is not supported.

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

## HPE Memory

### DDR4-2133

**NOTE:** The following memory is supported by the E5-2600v3 series Processors.

HPE CL 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit 855148-B21

HPE CL 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 847830-B21

HPE CL 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit 847832-B21

HPE CL 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 847826-B21

HPE CL 32GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 847828-B21

**NOTE:** Select one or more memory. A minimum of two memory kits are required if server is configured with two processors.

**NOTE:** If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors, all DIMM slots are available.

**NOTE:** Depending on the memory configuration and processor model, the memory speed may run at 2133MHz, 1866MHz, or 1600MHz.

## HPE Power Supplies

HPE CL 650W Gold Fixed Power Supply Unit (831077-B21 and 831078-B21) Included

HPE CL 500W Platinum HVDC Red. Power Supply Unit 864450-B21

HPE CL 800W Platinum HVDC Red. Power Supply Unit 864453-B21

**NOTE:** Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

## HPE Riser Card

HPE CL PCIe Riser 807851-B21

**NOTE:** Gives you one (1) add. internal PCIe x16 FH/HL slot, CPU 2 is needed

## Step 3: Choose Additional Options

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

### HPE Storage Controllers SAS Array Controllers 6Gb/s

HPE CL LSI 9271-8i MegaRaid PCIe Card 847733-B21

HPE CL LSI 9271-8i MegaRaid PCIe Card with Cache Vault CVM01 Card 847778-B21

HPE CL LSI 9271-8i MegaRaid PCIe Card with BBU09 Card 847780-B21

## Configuration Information - Factory Integrated Models for E5-2600v3

### SAS Host Bus Adapters 6Gb/s Mezzanine

HPE CL LSI-2308 SAS Host Bus Adaptor Mezzanine Card	807844-B21
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### HPE Processors

#### Advanced - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit	858569-B21
HPE CL G3 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit	847796-B21
HPE CL G3 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	858572-B21
HPE CL G3 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	857751-B21

#### Standard - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit	857771-B21
HPE CL G3 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit	857739-B21
HPE CL G3 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit	857783-B21
HPE CL G3 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit	847806-B21

#### Basic - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	857783-B21
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#### Low Power - E5-2600v3 series Processors

HPE CL G3 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit	857777-B21
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### HPE Memory DDR4-2133

Registered DIMMs (RDIMMs) for E5-2600v3 Series

HPE CL 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	855148-B21
HPE CL 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	847830-B21
HPE CL 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	847832-B21
HPE CL 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	847826-B21
HPE CL 32GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	847828-B21

#### Hot Plug LFF (3.5-inch) HDD – 6Gb/s

HPE CL 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Midline Hard Drive	863420-B21
HPE CL 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Midline Hard Drive	863422-B21
HPE CL 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Midline Hard Drive	847804-B21
HPE CL 4TB 6G SATA 7.2K rpm LFF (3.5-inch) Hitachi Midline Hard Drive	851211-B21
HPE CL 6TB 6G SATA 7.2K rpm LFF (3.5-inch) Seagate Midline Hard Drive	847820-B21

#### Hot Plug SFF (2.5-inch) HDD – 6Gb/s

HPE CL 128GB 6G SATA 7.2K rpm LFF (2.5-inch) Seagate Enterprise Hard Drive Kit	859904-B21
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#### Hot Plug SFF (2.5-inch) SSD – 6Gb/s

HPE CL 240GB 6G SATA Value Endurance SFF (2.5in) Enterprise Value Intel Solid State Drive Kit	858314-B21
HPE CL 800GB 6G SATA Value Endurance SFF (2.5in) Enterprise Value Intel Solid State Drive Kit	858327-B21
HPE CL 960GB 6G SATA Value Endurance SFF (2.5in) Enterprise Value Samsung Solid State Drive	858331-B21

### HPE Networking

10 Gigabit Ethernet OCP mezzanine Adapters	
HPE CL Ethernet 10Gb 2-port SFP+ OCP Mezzanine Adapter	851279-B21

Configuration Information - Factory Integrated Models for E5-2600v3

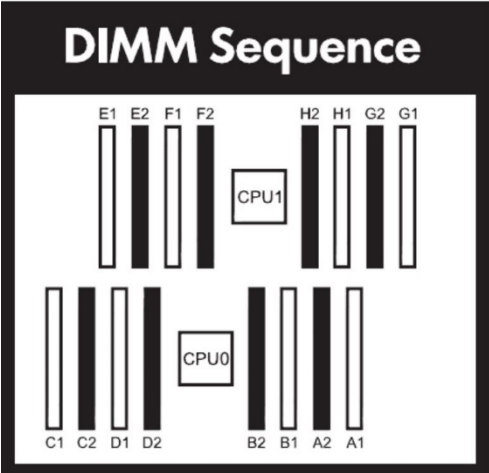
	10 Gigabit Ethernet Adapters	
	HPE CL Ethernet Intel X540-T2 10Gb Dual Port RJ45 PCIe Card	859906-B21
	HPE CL Ethernet Intel X520-DA2 10Gb Dual Port SFP+ PCIe Card	847339-B21
<b>HPE Riser Card</b>	HPE CL PCIe Riser	807851-B21
<b>HPE Rail Kits</b>	HPE CL 2200 Rail Kit	854231-B21
<b>HPE Power Supplies</b>	HPE CL 500W Platinum HVDC Red. Power Supply Unit	864450-B21
	HPE CL 800W Platinum HVDC Red. Power Supply Unit	864453-B21

Memory

Memory Subsystem Architecture

Memory Population guidelines

Each Intel® Xeon® E5-2600v3/v4 family processor socket contains four memory channels per installed processor with two DIMM per channel for a total of eight (8) DIMMs or a grand total of sixteen (16) DIMMs for the server.



General Memory Population Rules and Guidelines

Install DIMMs only if the corresponding processor is installed.

If only one processor is installed in a two processor system, only half of the DIMM slots are available.

To maximize performance, it is recommended to balance the total memory capacity between all installed processors and load the channels similarly whenever possible.

When two processors are installed, balance the DIMMs across the two processors.

Quad rank RDIMMs are not supported in CL 2200 G3 Servers

DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed. The maximum memory speed is a function of the memory type, memory configuration, and processor model.

The maximum memory capacity is a function of the memory type and number of installed processors.

DIMM slot and configuration diagram

Channel #	CPU 0		CPU 1	
	Slot #	Population Order	Slot #	Population Order
Channel 3	C1	5	G1	6
	C2	13	G2	14
Channel 4	D1	7	H1	8
	D2	15	H2	16
Channel 2	B1	3	F1	4
	B2	11	F2	12
Channel 1	A1	1	E1	2
	A2	9	E2	10

Memory Bandwidth and Capacity

[DIMM Type]	Registered Dimms (RDIMMs)			
DIMM Rank	Single Rank		Dual Rank	
DIMM Capacity	4GB	8GB	16GB	32GB
Voltage	Standard Voltage 1.2V			
16 slot servers	16			
MAXIMUM CAPACITY (GB)	64	128	256	512

Memory Speed by Processor Model  
E5-2600v4

Processor Models	Supported Memory Speeds
E5-2603v4, E5-2609v4	1866MHz



Memory

Memory Speed by  
Processor Model  
E5-2600v3

E5-2620v4, E5-2630v4, E5-2640v4	2133MHz
E5-2650v4, E5-2660v4, E5-2680v4, E5-2683v4, E5-2690v4, E5-2695v4, E5-2698v4	2400MHz
Processor Models	Supported Memory Speeds
E5-2603v3	1600MHz
E5-2620v3, E5-2623v3, E5-2630Lv3, E5-2630v3, E5- 2640v3	1866MHz
E5-2650v3, E5-2660v3, E5-2670v3, E5-2680v3	2133MHz

**NOTE:** Capacity references are rounded to the common gigabyte (GB) values.

- 2GB = 2,048MB
- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB

Technical Specifications

Front View



Rear View



12x LFF/SFF Hot Pluggable Hard Drive Bays + Rear 2 SFF Hot Pluggable Hard drive Bays

## Technical Specifications

<b>System Unit</b>	Dimensions (H x W x D)	17.58" x 28" x 3.43" (44.6 cm x 71.1 cm x 8.7 cm)	
	Weight (approximate)	Maximum:	25.04 kg)
		(all hard drives, power supplies, and processors installed)	
		Minimum:	16.52 kg)
		(one hard drive, power supply, and processor installed)	
	Input Requirements	Rated Line Voltage	For 500W/800W Power Supply: AC input: 100~127V / 200~240V DC input: 240V
			For 650W Power Supply: AC input: 100~127V / 200~240V
		Rated Input Current	For 500W Power Supply: 100-127V~6.5A 200-240V~3.3A or 240V—3.7A
			For 800W Power Supply: 100-127V~11A 200-240V~5.5A or 240V—6.3A
			For 650W Power Supply: 100~127V 8.6A 200~240V 4.3A
		Rated Input Frequency	50/60Hz
		Rated Input Power	For 500W Power Supply: AC input: 645W DC input: 628W For 800W Power Supply: AC input:1080W DC input:1210W For 650W Power Supply: 730W at 110Vac 722W at 220Vac
	BTU Rating	Maximum	For 500W Power Supply: 1895.64 BTU/hour at 110Vac 1854.43 BTU/hour at 220Vac
			For 800W Power Supply: 3033.03 BTU/hour at 110Vac 2967.09 BTU/hour at 220Vac
			For 650W Power Supply: 2494.07 BTU/hour at 110Vac 2466.36 BTU/hour at 220Vac
	System Inlet Temperature	Standard Operating Support	10° to 35°C (50° to 95°F)
	Relative Humidity	Operating	50% to 80% relative humidity (Rh)
		Non-operating (non-condensing)	50% to 90% relative humidity (Rh)
	Altitude	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Technical Specifications

	Acoustic Noise	Levels	NA
		<b>NOTE:</b> Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.	
HPE Embedded Network Adapter	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 1588, IEEE 802.1AS IEEE 802.3az	
	Data Transfer Method	PCI Express v2.0, 5.0 GT/s, x2	
	Controller	Intel Powerville i350AM or none	
Environment friendly Products and Approach	Ports depending on model	None, 2x 1GbE or 4x 1GbE	
	Connecter	RJ-45	
	End-of-life Management and Recycling	Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <a href="http://www.hpe.com/recycle">http://www.hpe.com/recycle</a> . To recycle your product, please go to: <a href="http://www.hpe.com/recycle">http://www.hpe.com/recycle</a> or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.	
		The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site at: <a href="http://www.hpe.com/recycle">http://www.hpe.com/recycle</a> . These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.	

## Summary of Changes

Date	Version History	Action	Description of Change
6-Jun-2016	From version 7 to 8	Updated	Updates throughout the QuickSpecs new part numbers
31-Mar-2016	From version 6 to 7	Changed	Update throughout the section of configuration information for v3 and v4 processors
16-Feb-2016	From version 5 to 6	Updated	Update Callouts and Images and info throughout the QuickSpecs
15-Jan-2016	From version 4 to 5	Changed	Changed the formatting and correct the errors throughout the document.
16-Oct-2015	From version 3 to 4	Update	Update the Configuration Information Section
17-Aug-2015	From version 2 to 3	Update	Updates throughout the QuickSpecs
29-May-2015	From version 1 to 2	Changed	Updates throughout the QuickSpecs
30-Mar-2015	Version 1	Created	Create HPE Cloudline G3 2200 Server



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**Hewlett Packard  
Enterprise**

For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less

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