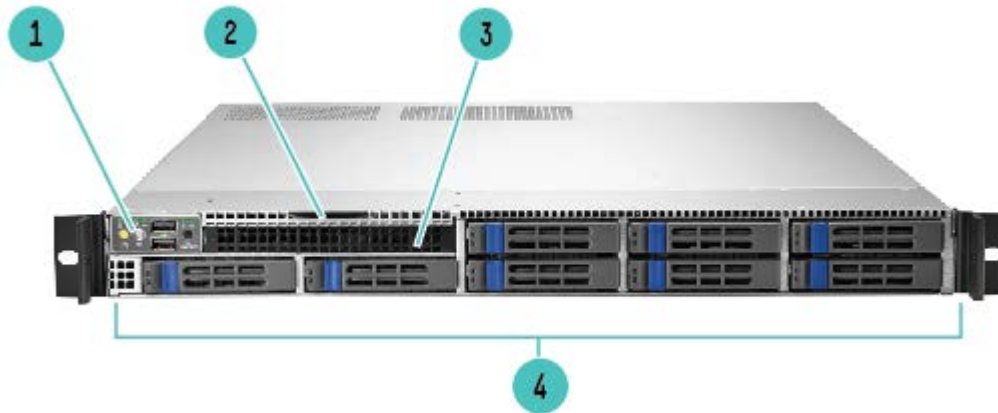


Overview

HPE Cloudline CL2100 G3 Server

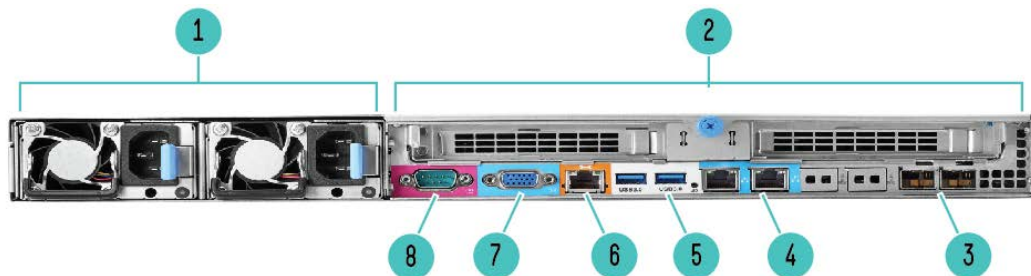
The HPE Cloudline CL2100 G3 is a 2P 1U value server for Cloud Service Providers that Features the latest Intel Xeon E5-2600 v4 processors, choice of SFF or LFF hard drives. Without any extras, this server is ideal for web front end applications to meet the needs and workloads of Service Providers. The HPE Cloudline CL2100 G3 offers both redundant power supply model (HPE Cloudline CL2100 G3 806r Server) and fixed power supply models (HPE Cloudline CL2100 G3 407s/807s Server) to support all types of demanding power supply requirements in today's data center.

HPE Cloudline CL2100 G3 806r Server



Front View – 8SFF Redundant PSU

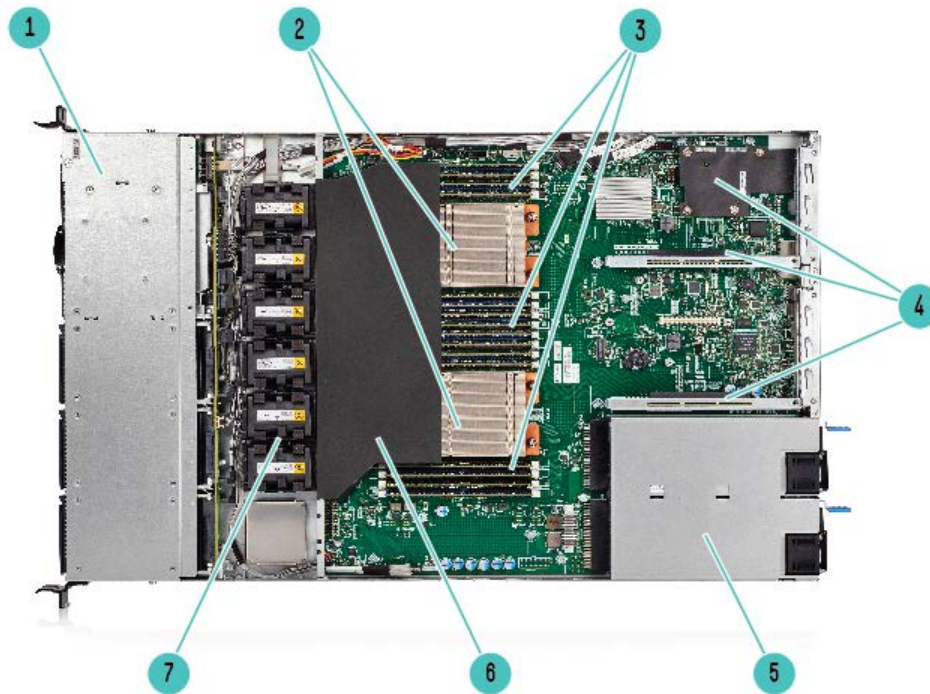
1. Front Control Panel Module (2 x USB 2.0, Buttons for Power, reset, and UID / BMC reset)
2. Asset Tag and HDD Sequence Label
3. (1) Internal SFF SSD Drive Cage Bay
4. (8) SFF hot plug SAS/SATA Drive Cage Bay



Rear View

1. (2) 550W/ 800W Platinum Hot Plug Power Supply
2. (2) PCIe Slot
3. (1) OCP Mezz Card with Optional SFP + ports
4. (2) 1GbE LAN ports
5. (2) USB 3.0 Ports
6. (1) Dedicated BMC Port
7. (1) VGA port
8. (1) Serial Port

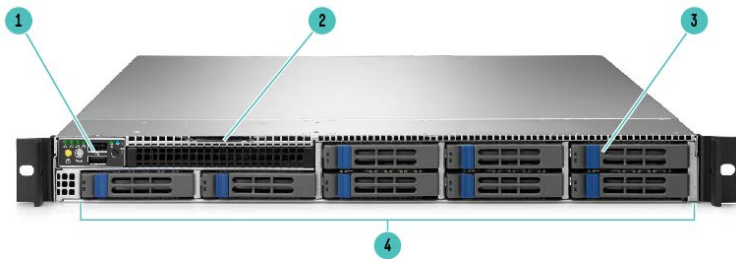
Overview



Internal View

- 1. (8) ports 2.5" SAS/SATA HDD Backplane
- 2. (2) Processors with Heat Sinks
- 3. (16) DDR4 DIMMS total
- 4. PCIe Expansion, OCP NIC or optional M.2 adaptors
- 5. (2) 550W/ 800W Platinum Hot Plug Power Supply
- 6. Air Baffle
- 7. (6) NHPE, N+1 Redundant System Fan

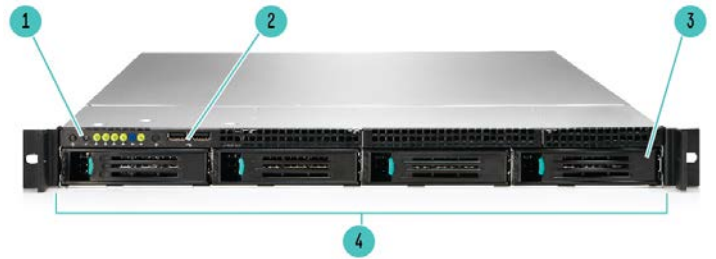
HPE Cloudline CL2100 G3 807S Server



Front View – 8SFF

- 1. (2) Front USB 2.0 ports
- 2. Asset Tag and HDD Sequence Label
- 3. (8) SFF Drive Cage Bay
- 4. (8) SFF Hot-plug Drives

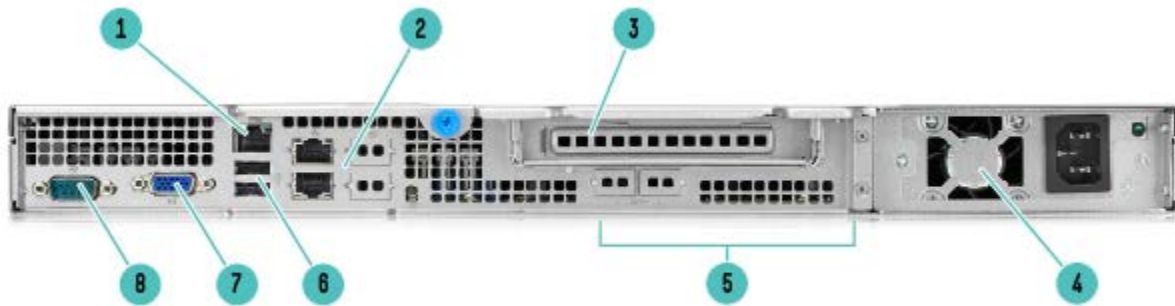
HPE Cloudline CL2100 G3 407S Server



Front View – 4LFF

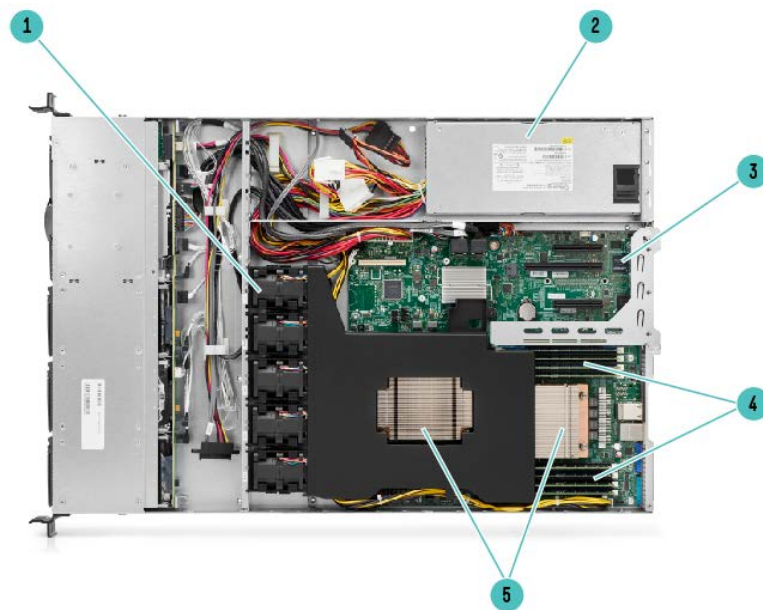
- 1. Front Control Panel w/ LED Status indicators
- 2. (2) Front USB 2.0 ports
- 3. (4) LFF Hot-plug Drives / or SFF (via conversion tray)
- 4. (4) LFF Drive Cage Bay

Overview



Rear View

1. (1) BMC Management Port 10/100Base-TX
2. (2 or 4) 1GbE LAN ports, depends on the Motherboard
3. (1) PCIe Slot
4. (1) 550W Power Supply
5. (1) OCP Mezzanine Card ports, depends on the Motherboard
6. (2) USB 2.0 Ports
7. (1) VGA Port
8. (1) Serial Port



Internal View

1. (5) None hot plug System Fans
2. (1) Power Supplies
3. (1) BMC
4. (16) DDR4 DIMMs populated (8) showing
5. (2) Processors with Heat Sinks

Standard Features

Processor

HPE Cloudline CL2100 G3 806r Server

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
E5-2695v4	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

HPE Cloudline CL2100 G3 407s Server

HPE Cloudline CL2100 G3 807s Server

Intel® Xeon® processor E5-2600 v4 product family

Model	CPU frequency	Cores	L3 Cache	TDP	QPI	DDR4 Maximum Speed
E5-2695v4	2.1GHz	18	45MB	120W	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

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

Up to 16 DIMM slots available for higher Memory capacity

OCP Mezzanine connector for 10 Gigabit networking options

4 LFF/SFF (via conversion tray) Drive Cage Bay (Model depended)

8 SFF Drive Cage Bay (Model depended)

8 SFF Drive Cage Bay and 1 internal SFF SSD drives and 2x M.2 (Model depended)

On System Management Processor

iBMC ASPEED AST2400 with KVM Support

Standard Features

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 1024GB (16 x 64GB RDIMM) 16GB/32GB/64GB 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
 One of the following depending on model

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
Slot 1	PCIe 3.0	X20	x16	FHHL	CPU 0
OCF Mezz	PCIe 3.0	x8	x8	OCF	CPU 0, Networking Controller or M.2
SAS Mezz	PCIe 3.0	X8	X8	Internal Mezz	CPU 0, Optional
Slot 2	PCIe 3.0	X24	x16	FHHL or HHHL	CPU 1, HHHL if SAS HBA Mezzanine card or BBU installed

HPE Cloudline CL2100 G3 806r Server

HPE Cloudline CL2100 G3 407s Server

HPE Cloudline CL2100 G3 807s Server

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
Slot 6	PCIe 3.0	x16	x16	FH/HL	CPU 0
OCF Mezz	PCIe 3.0	x8	x8	OCF	CPU 0, depends on the motherboard

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

Internal Storage Devices
 One of the following depending on model
 Optical Drive None
 Hard Drives ship standard
 Drive Bays(Model dependint)
 4 LFF/SFF (via conversion tray) or 8 SFF or 8 SFF + 1 internal SFF SSD

Maximum Internal Storage

Hot Plug LFF SATA	32 TB	4 x 8 TB
Hot Plug SFF SAS	9.6 TB	8 x 1.2TB
Hot Plug SFF SATA SSD	12.8 TB	8 x 1.6 TB

Power Supply **HPE Cloudline CL2100 G3 806r Server**
 HPE CL2100 806R 550W Redundant Power Supply Unit
 HPE CL2100 806R 800W Redundant Power Supply Unit

HPE Cloudline CL2100 G3 407s Server

HPE Cloudline CL2100 G3 807s Server

HPE CL 550W Platinum HVDC-Fixed PSU

System Fans **HPE Cloudline CL2100 G3 806r Server**
 6 N+1 Redundant Fans, non hot-swap
HPE Cloudline CL2100 G3 407s Server
HPE Cloudline CL2100 G3 807s Server
 Redundant 5 Fans, none hot-swap

Standard Features

Interfaces	HPE Cloudline CL2100 G3 806r Server	
	Serial	1
	Video	1
	Network ports	2x 1GbE
	OCP NIC ports	2x SFP+ ports (from OCP NIC Mezzanine card)
	IPMI management port	dedicated 10/100M LAN port
	USB Ports	Up to 4 total: 2 front (USB 2.0), 2 back (USB3.0)
	HPE Cloudline CL2100 G3 407s Server	
	HPE Cloudline CL2100 G3 807s Server	
	Serial	1
Video	1	
Network ports	2x 1GbE, 4x 1GbE ports - depending on model	
OCP NIC ports	2x SFP+ ports (for OCP NIC Mezzanine card) - depending on model	
IPMI management port	dedicated 10/100M LAN port	
USB 2.0 Ports	Up to 4 total: 2 front, 2 back	
Operating Systems Test for CL Servers with E5-2600v4	RHEL 7.0	
	CentOS 7.0	
	Windows Server 2012 R2	
	VMware ESXi 5.5.0	
	VMware ESXi 6.0	
Industry Standard Compliance	ACPI 2.0b Complaint	
	PCIe 3.0 Complaint	
	PXE Support	
	WOL Support	
	USB 2.0 Support	
	Integrated PCIe VGA/2D Controller via ASPEED 2400 BMC, 1600 x 1200 @ 60Hz (32 bpp)	
Graphics		
Form Factor	1U Rack form factor	
	1.7" (4.3cm) Height x 17" (43.2cm) Width x 26.5" (67.4cm) Length	
Security	Power-on password	
	Administrator's password	
	UEFI	

Warranty

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: 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.

NOTE: Addition information regarding worldwide limited warranty and technical support is available at 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.

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.

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.

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.

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.

Configuration Information - Factory Integrated Models for E5-2600v4 with Redundant PSU (HPE Cloudline CL2100 G3 806R Server)

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 Cloudline CL2100 G3 806R 8SFF Configure-to-order Server	
SKU Number	855426-B21	
Processor	2 (optional) up to 145W	
DIMM Slots	16 DIMM slots for RDIMM DDR4 Memory	
Storage Controller	Embedded SATA 3.0 controller via Intel PCH (standard) HPE CL LSI-9300-8i SAS HBA Card (optional) HPE CL LSI MegaRAID 9341-8i Raid Card (optional) HPE CL LSI MegaRAID 9361-8i Raid Card (1G) (optional)	
PCIe	2 PCIe x16 Gen3 for FH/HL add-on card 1 PCIe x8 Gen3 OCP Mezzanine card slot for NIC or 2x M.2	
Drive Cage	8 SFF Hot Plug	8 SFF Hot Plug + 1 SFF Fixed
Network Controller	2 x GbE ports + 1 x OCP mezzanine slot	
Fans	6 N+1 redundant, 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	
USB	4 USB Ports; 2 front (USB 2.0) / 2 rear (USB3.0)	

NOTE: Embedded SATA 3.0 only support in Windows OS

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

HPE Processors

NOTE: Select up to two (2) Processors, Processor one and two use the same heatsink

Segmented Optimized - E5-2600v4 series Processors

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

Advanced - E5-2600v4 series Processors

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

Standard - E5-2600v4 series Processors

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

Basic - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2609 v4 (1.7GHz/8-core/85W) FIO Processor Kit	857634-L21
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Configuration Information - Factory Integrated Models for E5-2600v4 with Redundant PSU (HPE Cloudline CL2100 G3 806R Server)

HPE CL G3 Intel® Xeon® E5-2603 v4 (1.7GHz/6-core/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 heatsink

HPE CL2100 G3 806R Heat Sink Kit 857603-B21

HPE Memory DDR4-2400

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

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

HPE CL 64GB (1x64GB) Dual Rank x4 DDR4-2400 LR Registered Memory Kit 859992-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 Supply

HPE CL2100 806R 550W Redundant Power Supply Unit 847548-B21

HPE CL2100 806R 800W Redundant Power Supply Unit 847551-B2

When choosing a Single Power Supply, please choose the following:

HPE CL2100 G3 806R Blank Power Supply Cover Kit 866927-B21

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

HPE CL LSI MegaRAID SAS 9341-8i Adapter Kit 859910-B21

HPE CL LSI Mega RAID SAS 9361-8i Adapter 859912-B21

SAS Host Bus Adapters 12Gb/s

HPE CL LSI MegaRAID SAS 9300-8i Host Bus Adapter Kit 859916-B21

HPE Storage Controller Cabel

HPE CL2100 806R 8x HDD BP SAS Cable_HBA HD-1 and HD-2 (12G) 860251-B21

NOTE: Select this kit for the HPE CL2100 G3 806r 12G Server Model if a SAS Storage Controller is ordered.

HPE CL2100 G3 806R Embedded Controller SATA Cable Kit 866991-B21

NOTE: Select this kit for the HPE CL2100 G3 806r 12G Server Model if No SAS Storage Controller is ordered.

HPE Processors

NOTE: Second processor needs a heatsink

Segmented Optimized - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2698 v4 (2.2GHz/20-core/50MB/135W) Processor Kit 847808-B21

Configuration Information - Factory Integrated Models for E5-2600v4 with Redundant PSU (HPE Cloudline CL2100 G3 806R Server)

	HPE CL G3 Intel® Xeon® E5-2695 v4 (2.1GHz/18-core/120W) Processor Kit	857635-B21
	HPE CL G3 Intel® Xeon® E5-2683 v4 (2.1GHz/16-core/120W) Processor Kit	857670-B21
	Advanced - E5-2600v4 series Processors	
	HPE CL G3 Intel® Xeon® E5-2690 v4 (2.6GHz/14-core/35MB/135W) Processor Kit	847786-B21
	HPE CL G3 Intel® Xeon® E5-2680 v4 (2.4GHz/14-core/35MB/120W) Processor Kit	847792-B21
	HPE CL G3 Intel® Xeon® E5-2660 v4 (2.0GHz/14-core/105W) Processor Kit	847798-B21
	HPE CL G3 Intel® Xeon® E5-2650 v4 (2.2GHz/12-core/105W) Processor Kit	847810-B21
	Standard - E5-2600v4 series Processors	
	HPE CL G3 Intel® Xeon® E5-2640 v4 (2.4GHz/10-core/90W) Processor Kit	847812-B21
	HPE CL G3 Intel® Xeon® E5-2630 v4 (2.2GHz/10-core/85W) Processor Kit	847822-B21
	HPE CL G3 Intel® Xeon® E5-2620 v4 (2.1GHz/8-core/85W) Processor Kit	848499-B21
	Basic - E5-2600v4 series Processors	
	HPE CL G3 Intel® Xeon® E5-2609 v4 (1.7GHz/8-core/85W) Processor Kit	857634-B21
	HPE CL G3 Intel® Xeon® E5-2603 v4 (1.7GHz/6-core/85W) Processor Kit	847824-B21
HPE Heatsink	NOTE: Each processor needs a heatsink	
	HPE CL2100 G3 806R Heat Sink Kit	857603-B21
HPE Memory DDR4-2400	NOTE: The following memory is supported by the E5-2600v4 series Processors.	
	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
	HPE CL 64GB (1x64GB) Dual Rank x4 DDR4-2400 LR Registered Memory Kit	859992-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 1.2TB 12G SAS 10K rpm SFF (2.5in) Enterprise Hard Drive	848505-B21
	Hot Plug SFF (2.5-inch) SSD – 6Gb/s	
	HPE CL 256GB 6G SATA SFF VE SNDK SSD Kit	851019-B21
	HPE CL 800G 6G SATA INTL-s3610 SSD Kit	867477-B21
	HPE CL960GB 6G-SATA SM-pm863 VE SSD Kit	858337-B21
HPE M.2 Module Kit	HPE CL M.2 Mezzanine Module Kit	857156-B21
	HPE CL 128GB M.2-2280 SAT-MLC-HY SSD Kit	858311-B21
	NOTE: M.2 Solid State Drives can only be installed when the M.2 Modul Kit kit is installed and no OCP Mezzanone adaptor is supported when the Module kit is installed.	
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 E5-2600v4 with Redundant PSU (HPE Cloudline CL2100 G3 806R Server)**10 Gigabit Ethernet Adapters**

HPE CL Ethernet Intel® X520-DA2 10Gb PCIe Adapter	859908-B21
HPE CL Ethernet Intel® X540-T2 10Gb PCIe Adapter	859906-B21
HPE CL Ethernet 10Gb 2-port PCIe 3.0 Solarflare Card	857159-B21

HPE Rail Kits

HPE CL2100 G3 Tool Less Friction Rail Kit	865649-B21
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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 CL2100 G3 407S 12G 4 LFF Configure-to-order Server	HPE CL2100 G3 807S 12G 8 SFF Configure-to-order Server
SKU Number	855358-B21	855361-B21
Processor	2 (optional) up to 120W	
DIMM Slots	16 DIMM slots for RDIMM DDR4 Memory	
Storage Controller	Embedded SATA 3.0 controller via Intel PCH (standard) HPE CL LSI-9300-8i SAS HBA Card (optional) HPE CL LSI MegaRAID 9341-4i Raid Card (optional) HPE CL LSI MegaRAID 9341-8i Raid Card (optional) HPE CL LSI MegaRAID 9361-8i Raid Card (1G) (optional)	
PCIe	1 PCIe x16 Gen3 for FH/HL add-on card 1 PCIe x8 Gen3 OCP NIC Mezzanine card slot	
Drive Cage	4 LFF Hot Plug	8 SFF Hot Plug
Network Controller	HPE CL2100N – 2 x GbE ports + 1 x OCP mezzanine slot	
Fans	5 redundant, non-hot swap fans	
Management	ASPEED 2400, IPMI v2.0 compliant, on board "KVM over IP" support	
Power Supply	Fixed power supply	
USB	4 USB 2.0 Ports; 2 front / 2 rear	

NOTE: Embedded SATA 3.0 only support in Windows OS.

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

HPE Motherboard HPE CL2100N OCP 2GbE 1x16 Motherboard 858474-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® E5-2695 v4 (2.1GHz/18-core/120W) FIO Processor Kit 857635-L21

HPE CL G3 Intel® Xeon® E5-2683 v4 (2.1GHz/16-core/120W) Processor FIO Kit 857670-L21

Advanced - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2680 v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit 847792-L21

HPE CL G3 Intel® Xeon® E5-2660 v4 (2.0GHz/14-core/105W) FIO Processor Kit 847798-L21

HPE CL G3 Intel® Xeon® E5-2650 v4 (2.2GHz/12-core/105W) FIO Processor Kit 847810-L21

Standard - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2640 v4 (2.4GHz/10-core/90W) FIO Processor Kit 847812-L21

HPE CL G3 Intel® Xeon® E5-2630 v4 (2.2GHz/10-core/85W) FIO Processor Kit 847822-L21

HPE CL G3 Intel® Xeon® E5-2620 v4 (2.1GHz/8-core/85W) FIO Processor Kit 848499-L21

Basic - E5-2600v4 series Processors

HPE CL G3 Intel® Xeon® E5-2609 v4 (1.7GHz/8-core/85W) FIO Processor Kit	857634-L21
HPE CL G3 Intel® Xeon® E5-2603 v4 (1.7GHz/6-core/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 CL2100 G3 Processor 1 Heat Sink Kit	858476-B21
HPE CL2100 G3 Processor 2 Heat Sink Kit	858489-B21

HPE Memory DDR4-2400

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

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
HPE CL 64GB (1x64GB) Dual Rank x4 DDR4-2400 LR Registered Memory Kit	859992-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 Supply	HPE CL 550W Platinum Fixed Power Supply Unit	Included
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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

HPE CL LSI MegaRAID SAS 9341-8i Adapter Kit	859910-B21
HPE CL LSI Mega RAID SAS 9361-8i Adapter	859912-B21

SAS Host Bus Adapters 12Gb/s

HPE CL LSI MegaRAID SAS 9300-8i Host Bus Adapter Kit	859916-B21
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HPE SAS Cable Kits

HPE CL2100 407S RAID Card with Mini SAS HD 4i (HDD 0-3) Cable Kit	860244-B21
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NOTE: Select this kit for the HPE CL2100 G3 407S 12G Server Model if a PCIe option is ordered.

HPE CL2100 407S Embedded Controller SAS Cable Kit	864719-B21
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NOTE: Select this kit for the HPE CL2100 G3 407S 12G Server Model if no PCIe option is ordered.

HPE CL2100 407S RAID Card with Mini SAS HD 4i (HDD 0-3) Cable Kit	860242-B21
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NOTE: Select this kit for the HPE CL2100 G3 807S 12G Server Model if a PCIe option is ordered.

HPE CL2100 807S Embedded Controller SAS Cable Kit	864711-B21
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NOTE: Select this kit for the HPE CL2100 G3 807S 12G Server Model if no PCIe option is ordered.

HPE Processors	NOTE: Second processor needs a heatsink	
	Segmented Optimized - E5-2600v4 series Processors	
	HPE CL G3 Intel® Xeon® E5-2695 v4 (2.1GHz/18-core/120W) Processor Kit	857635-B21
	HPE CL G3 Intel® Xeon® E5-2683 v4 (2.1GHz/16-core/120W) Processor Kit	857670-B21
	Advanced - E5-2600v4 series Processors	
	HPE CL G3 Intel® Xeon® E5-2680 v4 (2.4GHz/14-core/35MB/120W) Processor Kit	847792-B21
	HPE CL G3 Intel® Xeon® E5-2660 v4 (2.0GHz/14-core/105W) Processor Kit	847798-B21
	HPE CL G3 Intel® Xeon® E5-2650 v4 (2.2GHz/12-core/105W) Processor Kit	847810-B21
	Standard - E5-2600v4 series Processors	
	HPE CL G3 Intel® Xeon® E5-2640 v4 (2.4GHz/10-core/90W) Processor Kit	847812-B21
	HPE CL G3 Intel® Xeon® E5-2630 v4 (2.2GHz/10-core/85W) Processor Kit	847822-B21
	HPE CL G3 Intel® Xeon® E5-2620 v4 (2.1GHz/8-core/85W) Processor Kit	848499-B21
Basic - E5-2600v4 series Processors		
HPE CL G3 Intel® Xeon® E5-2609 v4 (1.7GHz/8-core/85W) Processor Kit	857634-B21	
HPE CL G3 Intel® Xeon® E5-2603 v4 (1.7GHz/6-core/85W) Processor Kit	847824-B21	
HPE Heatsink	NOTE: Each processor needs a dedicated heatsink	
	HPE CL2100 G3 Processor 2 Heat Sink Kit	858489-B21
HPE Memory DDR4-2400	NOTE: The following memory is supported by the E5-2600v4 series Processors.	
	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
	HPE CL 64GB (1x64GB) Dual Rank x4 DDR4-2400 LR Registered Memory Kit	859992-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 1.2TB 12G SAS 10K rpm SFF (2.5in) Enterprise Hard Drive	848505-B21
	Hot Plug LFF (3.5-inch) HDD – 6Gb/s	
	HPE CL 6TB 6G SATA 7.2K rpm LFF (3.5in) Seagate Midline Hard Drive	847820-B21
	HPE CL 6TB 6G SATA 7.2k 3.5 MDL HDD Kit	851232-B21
	HPE CL 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e Seagate Midline Hard Drive	848539-B21
	HPE CL 10TB 6GB SATA 7.2K HG-LFF MDL HDD	860038-B21
	HPE CL 10TB 6GB SATA 7.2K SG LFF MDL HDD	860036-B21
	Hot Plug SFF (2.5-inch) SSD – 6Gb/s	
	HPE CL 256GB 6G SATA SFF VE SNDK SSD Kit	851019-B21

HPE CL 800G 6G SATA INTL-s3610 SSD Kit	867477-B21
HPE CL960GB 6G-SATA SM-pm863 VE SSD Kit	858337-B21
HPE CL 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in Intel S3520 3yr Wty Solid State Drive	872624-B21

HPE Networking**10 Gigabit Ethernet OCP mezzanine Adapters**

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

HPE CL Ethernet Intel® X540-T2 10Gb PCIe Adapter	859906-B21
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HPE CL Ethernet Intel® X520-DA2 10Gb PCIe Adapter	859908-B21
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NOTE: NIC PCIe Card can only be installed if no PCIe Storage Controller is installed

HPE Rail Kits

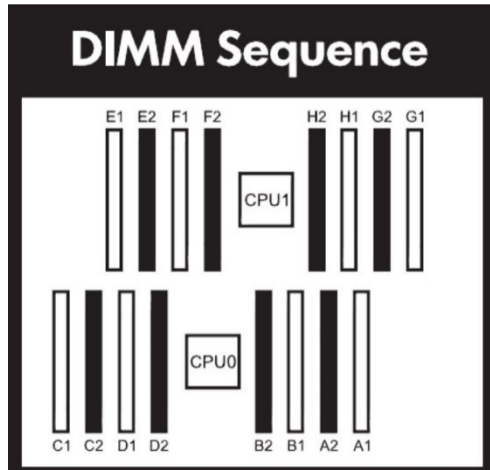
HPE CL2100 G3 Tool Less Friction Rail Kit	865649-B21
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Memory

Memory Subsystem Architecture

Each Intel® Xeon® E5-2600v4 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.

Memory Population guidelines



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 #	Slot #	CPU 0		CPU 1	
		Population Order	Slot #	Population Order	Slot #
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	Dual Rank		
DIMM Capacity	16GB	32GB	64GB
Voltage	Standard Voltage 1.2V		
16 slot servers	16		
MAXIMUM CAPACITY (GB)	256	512	1024

Memory Speed by Processor Model E5-2600v4

Processor Models	Supported Memory Speeds
E5-2603v4, E5-2609v4	1866MHz
E5-2620v4, E5-2630v4, E5-2640v4	2133MHz

Memory

E5-2650v4, E5-2660v4, E5-2680v4, E5-2683v4, E5-2690v4, E5-2695v4, E5-2698v4,	2400MHz
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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

Technical Specifications

Front View

HPE Cloudline CL2100 G3 806r Server



8x SFF Hot Pluggable Hard Drive Bays + 1x SFF Internal SSD

Front View

HPE Cloudline CL2100 G3 407s Server

HPE Cloudline CL2100 G3 807s Server



4x LFF / 8x SFF Hot Pluggable Hard Drive Bays

Technical Specifications

System Unit	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)
	HPE Cloudline CL2100 G3 806r Server	
	Maximum:	8SFF 30.75 lb (13.95 kg)
	(all hard drives, power supplies, and processors installed)	
	Minimum:	8SFF 25.35 lb (11.5 kg)
	(one hard drive, power supply, and processor installed)	
	HPE Cloudline CL2100 G3 407s Server	
	HPE Cloudline CL2100 G3 807s Server	
	Maximum:	4LFF 31.09 lb (14.1 kg)
(all hard drives, power supplies, and processors installed)	8SFF 28.49 lb (12.92 kg)	
Minimum:	4LFF 22.20 lb (10.07 kg)	
(one hard drive, power supply, and processor installed)	8SFF 22.20 lb (10.07 kg)	
Input Requirements	HPE Cloudline CL2100 G3 806r Server	
	HPE CL2100 806R 550W Redundant Power Supply Unit	
	Rated Line Voltage	AC input: 100~240V
	Rated Input Current	7.1 A (at 100~240 VAC)
		3.6 A (at 240 VDC)
	Rated Input Frequency	50/60Hz
	Rated Input Power	AC input: 710W
		DC input: 864W
	BTU Rating Maximum	2422.5 BTU/hour at 110Vac
		2320.2 BTU/hour at 220Vac
	HPE CL2100 806R 800W Redundant Power Supply Unit	
	Rated Line Voltage	AC input: 100~240V
	Rated Input Current	9.4 A (at 100~240 VAC)
		4.6 A (at 240 VDC)
	Rated Input Frequency	50/60Hz
	Rated Input Power	AC input: 940W
		DC input: 1104W
	BTU Rating Maximum	3207.3 BTU/hour at 110Vac
		3220.9 BTU/hour at 220Vac
	HPE Cloudline CL2100 G3 407s Server	
HPE Cloudline CL2100 G3 807s Server		
Rated Line Voltage	AC input: 100~240V	
Rated Input Current	3.3 A (at 200 VAC)	
	2.8 A (at 240 VDC)	
Rated Input Frequency	50/60Hz	
Rated Input Power	AC input: 648W	
	DC input: 646W	
BTU Rating Maximum	2288.6 BTU/hour at 110Vac	

Technical Specifications

			2204.47 BTU/hour at 220Vac
	System Inlet Temperature	Standard Operating Support	10° to 35°C (50° to 95°F) at sea level
		Non-operating	-40° to 70°C. Maximum rate of change is 20°C/hr (36°F/hr).
	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).
HPE Embedded Network Adapter	Network Interface Compatibility	10Base-T/100Base-TX/1000Base-TX 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	
	Ports depending on model	None, 2x 1GbE or 4x 1GbE	
	Connecter	RJ-45	
Environment friendly Products and Approach	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: http://www.hpe.com/recycle . To recycle your product, please go to: http://www.hpe.com/recycle 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: http://www.hpe.com/recycle . 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
27-Mar-2017	From version 13 to 14	Updated	Updated Configuration section and the Standard features
13-Feb-2017	From version 12 to 13	Updated	Add HPE CL 1.6TB 6G SATA Read Intensive solid state drive
9-Dec-2016	From version 11 to 12	Updated	Remove some SKUs in the document
15-Aug-2016	From version 10 to 11	Updated	Updates throughout the section of configuration information
6-Jun-2016	From version 9 to 10	Updated	Updates images and information overall
31-Mar-2016	Fromn version 8 to 9	Changed	Update throughout the section of configuration information for v3 and v4 processors
16-Feb-2016	From version 7 to 8	Update	Update images and callouts
15-Jan-2016	From version 6 to 7	Changed	Update the formatting and the memory options
1-Dec-2015	From version 5 to 6	Updated	Update the Processors
16-Oct-2015	From version 4 to 5	Updated	Update the Configuration Section
17-Aug-2015	From version 3 to 4	Changed	Changes made trouhout the QuickSpecs
12-Jun-2015	From version 2 to 3	Changed	Changes made in the overview of the QuickSpecs
26-May-2015	From version 1 to 2	Updated	Update Technical specifications sections
30-Mar-2015	Version 1	Created	Create QuickSpecs for HPE CL2100



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

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