HPE ProLiant DL360p Gen8 SE Server - 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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Summary

Subtopics

Product description

Product description



HPE ProLiant DL360p Gen8 SE Server comes with industry-leading performance, efficiency, capacity, and reliability in a 1U space. The server provides enterprise-class design for performance workloads with versatile and future requirements, and it is ideal for low latency applications in a dense rack package.

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 HPE PartSurfer (**Click here to visit HPE PartSurfer website**) and click on one of the linked model numbers. When locating RoHS information in PartSurfer, you 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. You can find the sales order numbers and Option part numbers in the Product QuickSpecs.

Standard models

Description	Model Number
HPE DL360p Gen8 SE Low Latency small form factor (SFF) CTO Server	712360-B21 **Click here to obtain parts list for this model**.
HPE DL360p Gen8 SE Low Latency 10SFF CTO Server	712361-B21 **Click here to obtain parts list for this model**.

Product features

Feature	Description
Key features	• 8 SFF drive models available for 8TB capacity, with optional DVD. 10 SFF drive model available for 10TB capacity, without optional DVD • Intel Xeon E5-2600 or E5-2600v2 processor, with a choice of 2/4/6/8/10/12 cores, and speeds upto 3.5 GHz • HPE Smart Socket Guide for quick, precise intelligent processor installation • 24 Dual in-line Memory Module (DIMM) slots available for DDR3 Memory, and up to 1866 MHz speeds with 768GB maximumcapacity • HPE Smart Array P420i Controller with flash-backed write cache options • HPE FlexibleLOM options—4x1Gb-E, 2x10Gb-E, 2xIB and FlexFabric options • 1 x16 (full height, half length) or x8 PCIe 3.0 slot; 1 x8 (1P) or x16 (2P) (low profile) PCIe 3.0 slot

Feature	Description
	• HPE iLO Management Engine (HPE iLO 4) with Active Health System, HPE power/cooling management, Agentless Management, and Intelligent Provisioning

Physical Specifications

Specification	Description	
Dimensions (H x W x D) (chassis with SFF drive cage)	8 SFF and 10 SFF	4.32 x 43.47 x 69.85 cm (1.70 x 17.11 x 27.50 in)
	4 Large Form Factor (LFF)	4.32 x 43.47 x74.67 cm (1.7 x 17.1 x 29.5 in)
Weight Maximum (all hard drives, power supply, and processor installed)	8 SFF: two processors, two power supplies, eight hard drives	19.2 kg (42.33 lb)
	10 SFF: two processors, two power supplies, ten hard drives	19.185 kg (42.30 lb)
	4 SFF	20.7 kg (45.6 lb)
Weight Minimum (one hard drive, power supply, and processor installed)	14.51 kg (32 lb)	

Electrical Specifications

Specification	Description	
Input requirements	Rated line voltage	100 to 120 V ac
(per power supply)		200 to 240 V ac

Specification	Description	
	Rated input current	4.5 Amps (at 120 V ac) to 2.2 Amps (at 240 V ac)
	Rated input frequency	50 to 60 Hz
BTU Rating	Maximum	1773 BTU / hr (at 120 V ac), 1715 (at 240 V ac)
Power supply output (per power supply)	Rated steady-state power	460 W (at 100 to 120 V ac), 460 W (at 200 to 240 V ac) 750 W (at 100 to 120 V ac), 750 W (at 200 to 240 V ac)
	Maximum peak power	460 W (at 100 to 120 V ac), 460 W (at 200 to 240 V ac) 750 W (at 100 to 120 V ac), 750 W (at 200 to 240 V ac)

Environmental Specifications

Specification	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 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. The 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). The maximum rate of change is 20°C/hr (36°F/hr).

Specification	Description	
Relative humidity (non-condensing)	Operating	10 to 90% Relative Humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
	Non-operating	5 to 95% Rh, 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic noise [1]	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).	

Entry configuration

Idle	LWAd	5.0 Bels
Average Bystander	LpAm	33 dBA
Operating	LWAd	5.1 Bels
Average Bystander	LpAm	35 dBA

Base configuration

Idle	LWAd	5.0 Bels
Average Bystander	LpAm	33 dBA
Operating	LWAd	5.6 Bels

Specification	Description		
	Base configuration		
	Average Bystander	LpAm	39 dBA
	Performance configuration		
	Idle	LWAd	5.1 Bels
	Average Bystander	LpAm	34 dBA
	Operating	LWAd	5.8 Bels
	Average Bystander	LpAm	42 dBA
Emissions Classification (EMC) [2]	**FCC Rating**		Class A
	Normative Standards		CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS 13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

NOTE

1.

- Entry Configuration tested included one Intel E5-2609, 2.4 GHz, 80 W processor, one 500GB SAS Hard disk drive (HDD), one 8GB Registered Dual in-line Memory Module (RDIMM) 1333 MHz, one 460 W power supply and 4 x 1 GbE, embedded P420i controller.
- Base Configuration tested included one Intel E5-2640, 2.5 GHz, 95 W processor, four 500GB SAS HDD, two 8GB RDIMM's 1333 MHz, one 460 W power supply and 4 x 1 GbE, embedded P420i controller with 1GB Flash Backed Write Cache (FBWC).
- Performance Configuration tested included two Intel E5-2660, 2.2 GHz, 95 W processor, eight 500GB SAS HDD, four 8GB RDIMM's 1600 MHz, two 750 W power supplies and 4 x 1 GbE, embedded P420i controller with 2GB FBWC.
- Values are subject to change without notification and are for reference only.
- Performance of system, options, and ancillary equipment will vary depending on the system configuration.
- Levels presented do not account for non-Hewlett-Packard installed hardware.

Specification	Description
	2. 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 app ropriate compliance logos and statements.

Spare Parts

Subtopics

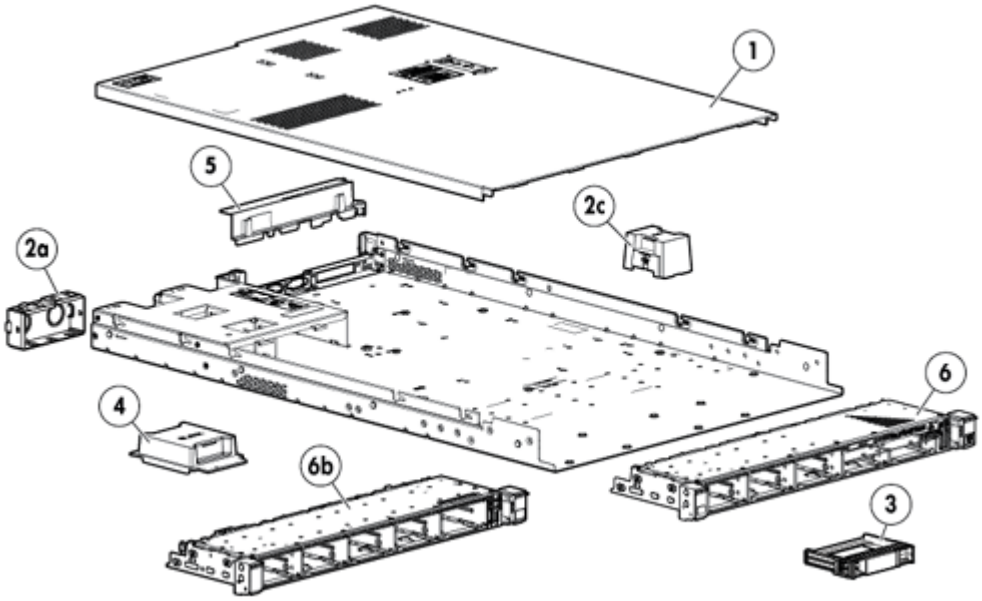
New model specific parts lists
Mechanical Components
System Components

New model specific parts lists

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 website(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 on the QuickSpecs or Standard Models page).

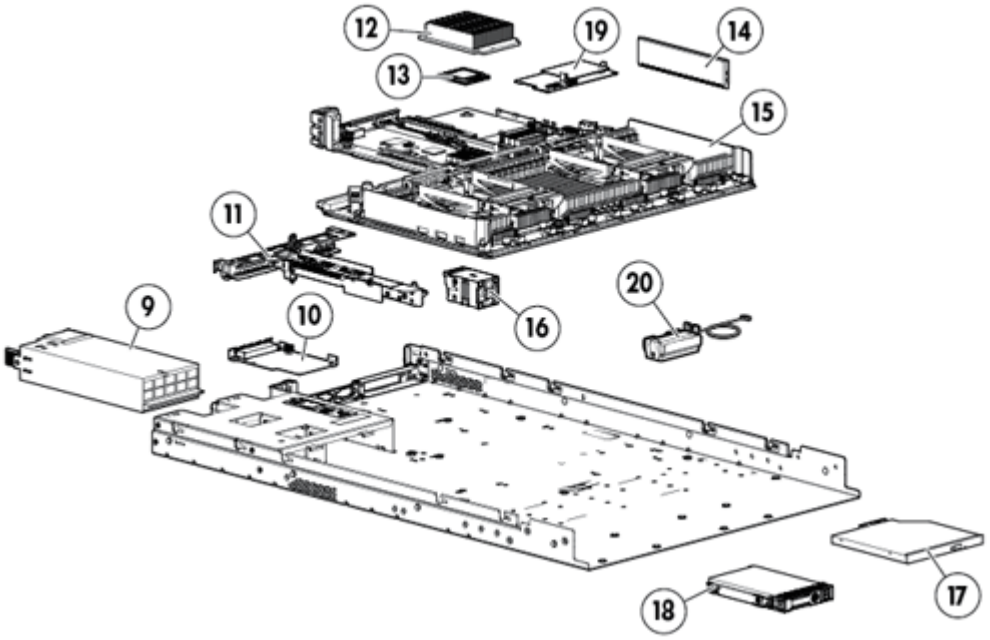
Mechanical Components



Item	Description	Spare PartNumber
1	**Access panel**	
	a) Access panel - Top cover for the server	671351-001
	b) Top cover assembly - Includes DL360p SE Gen8 Label - For use with DL360p SE Gen 8 Ivy Bridge (IVB)	743499-001
2	Miscellaneous hardware kit contains Power supply blank (cover), power cord clip, and fan module blank	671354-001
3	Hard drive blank (cover) - To fill empty SFF drive bays	670033-001
4	**Processor blank**	
	a) Caged processor blank	675061-001
	b) Screw-down processor blank	743136-001
5	Power supply airflow baffle - Upright clear plastic piece that mounts to the chassis dire	675037-001

Item	Description	Spare PartNumber
	ctly in front of the two power supply bays	
6	**Hard drive cage**	
	a) HDD cage - Front cage wit h 8 SFF bays - Includes 20-pi n cable, 24-pin cable, and bac kplane board	667868-001
	b) 10-SFF hard drive cage - Front cage with 10 SFF bays - Includes cable and backplan e board	692479-001
7	**Rack mounting hardware kit**	
	a) Rack mounting rail kit - For 1U server models with SFF d rives - Includes left and right telescoping ball bearing type slide rails	675042-001
	b) Rack mounting rail kit - Fo r 1U server models - Includes left and right friction type sli de rails (non-telescoping) - C annot be used with the cable management arm	675040-001
	c) SFF easy install rail kit	744111-001
	d) LFF easy install rail kit	744112-001
	e) 1U CMA easy install rail kit	744113-001
8	Cable management arm kit - Guides the power and interfa ce cables to prevent binding when the server is slid in and out of the rack - Mounts to th e rear of the rack	675043-001

System Components



Item	Description	Spare PartNumber
9	**Hot-plug power supplies**	
	460 W AC Common Slot (CS) 'Gold' hot-plug power supply - Installs in the computer chassis as primary or redundant supply (92% efficiency) - Requires 100-240 V ac at 50/60 Hz	511777-001
	460 W AC CS 'Platinum Plus' hot-plug power supply - Installs in computer chassis as primary or redundant supply (94% efficiency) - Requires 100-240 V ac at 50/60 Hz	660184-001
	500 W AC CS '277 V ac' hot-plug power supply - Installs in the computer chassis as primary or redundant supply (94% efficiency) - Requires 200-277 V ac at 50/60 Hz	638549-001

Item	Description	Spare PartNumber
	750 W AC CS '277 V ac' hot-plug power supply - Installs in the computer chassis as primary or redundant supply (94% efficiency) - Requires 200-277 V ac at 50/60 Hz	674890-001
	750 W AC CS 'Titanium' hot-plug power supply - Installs in the computer chassis as primary or redundant supply (96% efficiency) - Requires 200-240 V ac at 50/60Hz	700287-001
	750 W AC CS 'Gold' hot-plug power supply - Installs in the computer chassis as primary or redundant supply (92% efficiency) - Requires 100-240 V ac at 50/60 Hz	511778-001
	750 W AC CS 'Platinum Plus' hot-plug power supply - Installs in computer chassis as primary or redundant supply (94% efficiency) - Requires 100-240 V ac at 50/60 Hz	660183-001
	750 W DC CS 'Gold' hot-plug power supply - Installs in the computer chassis as primary or redundant supply (92% efficiency), supports HP power discovery services	639173-001
	1200 W AC CS 'Platinum Plus' hot-plug power supply - Installs in computer chassis as primary or redundant supply (94% efficiency) - Requires 100-240 V ac at 50/60Hz	660185-001
10	**HPE FlexibleLOM for Racks**	
	FlexibleLOM Ethernet 1Gb 4-port 331FLR adapter - Has four 10/100/1000BASE-T RJ 45 ports - Requires one x4 (Gen 2) PCI Express slot (Me	789897-001

Item	Description	Spare PartNumber
	chanically compatible with x8 and x16 PCI Express slots)	
	FlexibleLOM Ethernet 10Gb 2-port 530FLR adapter - Has two Small Form-factor Pluggable Plus (SFP+) ports and 256MB integrated buffer memory - For ProLiant Gen8 rack servers	649869-001
	FlexibleLOM FlexFabric 10Gb 2-port 554FLR adapter - Has two SFP+ ports and 128MB integrated buffer memory	634026-001
	FlexibleLOM InfiniBand FDR/Ethernet 10/40Gb dual port 544FLR adapter - Has two Quad Small Form-factor Pluggable Plus (QSFP) ports	656090-001
	FlexibleLOM InfiniBand QDR/Ethernet 10Gb dual port 544FLR adapter - Has two QSFP ports	656091-001
11	PCI riser cage - L-shaped metal structure - For use with DL360p SE Gen 8 only	717426-001
12	**Heatsink**	
	a) Latch type heatsink - For standard processors (E5-2600 series less than 135 W power and no E5-2600 v2 series processors) - Includes thermal grease	667880-001
	b) Latch type heatsink - For high-end processors (E5-2600 series greater than or equal to 135 W power and all E5-2600 v2 series processors) - Includes thermal grease	667881-001

Item	Description	Spare PartNumber
	c) Screw down type heatsink - For standard processors - Includes thermal grease	735506-001
	d) Screw down type heatsink - For high-end processors (E5-2600 series greater than or equal to 135 W power and all E5-2600 v2 series processors) - Includes thermal grease	735507-001
13	**Processor**	
	Intel Xeon E5-2603 Quad-Core 64-bit processor - 1.80 GHz (Sandy Bridge-EP, 10MB Level-3 cache, Intel QuickPath interconnect (QPI) speed 6.4 GT/s, 80 W Thermal Design Power (TDP) , FCLGA 2011-pin socket)	670533-001
	Intel Xeon E5-2609 Quad-Core 64-bit processor - 2.50 GHz (Sandy Bridge-EP, 10MB Level-3 cache, Intel QPI speed 6.4 GT/s, 80 W TDP, FCLGA 2011-pin socket)	670530-001
	Intel Xeon E5-2620 Six-Core 64-bit processor - 2.00 GHz (Sandy Bridge-EP, 15MB Level-3 cache, Intel QPI speed 7.2 GT/s, 95 W TDP, FCLGA 2011-pin socket)	670529-001
	Intel Xeon E5-2630L Six-Core 64-bit low-power processor - 2.00 GHz (Sandy Bridge-EP, 15MB Level-3 cache, Intel QPI speed 8.0 GT/s, 60 W TDP, FCLGA 2011-pin socket)	670535-001
	Intel Xeon E5-2630 Six-Core 64-bit processor - 2.30 GHz (Sandy Bridge-EP, 15MB Level-3 cache, Intel QPI speed 7.2	670528-001

Item	Description	Spare PartNumber
	GT/s, 95 W TDP, FCLGA 2011 -pin socket)	
	Intel Xeon E5-2637 Dual-Core 64-bit processor - 3.00 GHz (Sandy Bridge-EP, 5MB Level-3 cache, Intel QPI speed 8.0 GT/s, 80 W TDP, FCLGA 2011-pin socket)	670539-001
	Intel Xeon E5-2637 v2 Quad-Core 64-bit processor - 3.5 GHz (IVB-EP, 15MB Level -3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, socket FC LGA 2011)	730249-001
	Intel Xeon E5-2640 Six-Core 64-bit processor - 2.50 GHz (Sandy Bridge-EP, 15MB Level -3 cache, Intel QPI speed 7.2 GT/s, 95 W TDP, FCLGA 2011 -pin socket)	670527-001
	Intel Xeon E5-2643 Quad-Core 64-bit processor - 3.30 GHz (Sandy Bridge-EP, 10MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, socket FCLGA 2011)	670538-001
	Intel Xeon E5-2643 v2 Six-Core 64-bit processor - 3.50 GHz (IVB-EP, 25MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, socket FCLGA 2011)	730248-001
	Intel Xeon E5-2650L Eight-Core 64-bit low-power processor - 1.80 GHz (Sandy Bridge-EP, 20MB Level-3 cache, Intel QPI speed 8.0 GT/s, 70 W TDP, FCLGA 2011-pin socket)	670534-001
	Intel Xeon E5-2650 Eight-Core 64-bit processor - 2.00 GHz (Sandy Bridge-EP, 20MB	670526-001

Item	Description	Spare PartNumber
	Level-3 cache, Intel QPI speed 8.0 GT/s, 95 W TDP, FCLGA 2011-pin socket)	
	Intel Xeon E5-2660 Eight-Core 64-bit processor - 2.20 GHz (Sandy Bridge-EP, 20MB Level-3 cache, Intel QPI speed 8.0 GT/s, 95 W TDP, FCLGA 2011-pin socket)	670525-001
	Intel Xeon E5-2665 Eight-Core 64-bit processor - 2.40 GHz (Sandy Bridge-EP, 20MB Level-3 cache, Intel QPI speed 8.0 GT/s, 115 W TDP, FCLGA 2011-pin socket)	670524-001
	Intel Xeon E5-2667 Six-Core 64-bit processor - 2.90 GHz (Sandy Bridge-EP, 15MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, FCLGA 2011-pin socket)	670537-001
	Intel Xeon E5-2667 v2 Eight-Core 64-bit processor - 3.00 GHz (IVB-EP, 25MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, socket FCLGA 2011)	730247-001
	Intel Xeon E5-2670 Eight-Core 64-bit processor - 2.60 GHz (Sandy Bridge-EP, 20MB Level-3 cache, Intel QPI speed 8.0 GT/s, 115 W TDP, FCLGA 2011-pin socket)	670523-001
	Intel Xeon E5-2680 Eight-Core 64-bit processor - 2.70 GHz (Sandy Bridge-EP, 20MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, FCLGA 2011-pin socket)	670522-001
	Intel Xeon E5-2687 W Eight-Core 64-bit processor - 3.10 GHz (Sandy Bridge-EP, 20	670536-001

Item	Description	Spare PartNumber
	MB Level-3 cache, Intel QPI speed 8.0 GT/s, 150 W TDP, socket FCLGA 2011)	
	Intel Xeon E5-2687 W v2 Eight core processor - 3.40 GHz (Sandy Bridge-EP, 20MB Level-3 cache, 150 W TDP, socket LGA 2011)	735174-001
	Intel Xeon E5-2690 v2 Ten-Core 64-bit processor - 3.00 GHz (IVB-EP, 25MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, FCLGA 2011 socket)	730234-001
	Intel Xeon E5-2690 Eight-Core 64-bit processor - 2.90 GHz (Sandy Bridge-EP, 20MB Level-3 cache, Intel QPI speed 8.0 GT/s, 135 W TDP, socket FCLGA 2011)	670521-001
	Intel Xeon E5-2697 v2 Twelve-Core 64-bit processor - 2.70 GHz (IVB-EP, 30MB Level-3 cache, Intel QPI speed 8.0 GT/s, 130 W TDP, socket FCLGA 2011)	730245-001
14	**Memory**	
	2GB, 1333 MHz, PC3L-10600E-9, DDR3, single-rank x8, 1.35 V, unbuffered with ECC dual in-line memory module (UDIMM)	664694-001
	2GB, 1600 MHz, PC3L-12800E-11, DDR3, single-rank x8, 1.35 V, UDIMM	715279-001
	2GB, 1866 MHz, PC3-14900E-13, DDR3, Single-Rank x8, 1.50 V, UDIMM	715269-001

Item	Description	Spare PartNumber
	4GB, 1600 MHz, PC3-12800 R-11, DDR3, Single-Rank x4, 1.50 V, registered DIMM	664689-001
	4GB, 1600 MHz, PC3L-1280 0R-11, DDR3, single-rank x4, 1.35 V, RDIMM	715282-001
	4GB, 1600 MHz, PC3L-1280 0E-11, DDR3, single-rank x8, 1.35 V, UDIMM	715280-001
	4GB, 1333 MHz, PC3L-1060 0R-9, DDR3, single-rank x4, 1 .35 V, RDIMM	664688-001
	4GB, 1333 MHz, PC3L-1060 0E-9, DDR3, dual-rank x8, 1. 35 V, UDIMM	664695-001
	4GB, 1866 MHz, PC3-14900 R-13, DDR3, dual-rank x4, 1. 50 V, RDIMM	715272-001
	4GB, 1866 MHz, PC3-14900 E-13, DDR3, Single-Rank x8, 1.50 V, UDIMM	715270-001
	8GB, 1600 MHz, PC3-12800 R-11, DDR3, single-rank x4, 1 .50 V, registered DIMM	664691-001
	8GB, 1600 MHz, PC3L-1280 0R-11, DDR3, quad-rank x4, 1.35 V, registered DIMM	735302-001
	8GB, 1600 MHz, PC3L-1280 0E-11, DDR3, Dual-Rank x8, 1.35 V, UDIMM	715281-001
	8GB, 1600 MHz, PC3L-1280 0R-11, DDR3, dual-rank x4, 1 .35 V, RDIMM	715283-001
	8GB, 1333 MHz, PC3L-1060 0R-9, DDR3, dual-rank x4, 1. 35 V, RDIMM	664690-001

Item	Description	Spare PartNumber
	8GB, 1333 MHz, PC3L-10600E-9, DDR3, dual-rank x8, 1.35 V, UDIMM	664696-001
	8GB, 1866 MHz, PC3-14900R-13, DDR3, quad-rank x4, 1.50 V, registered DIMM	735303-001
	8GB, 1866 MHz, PC3-14900R-13, DDR3, dual-rank x4, 1.50 V, RDIMM	715273-001
	8GB, 1866 MHz, PC3-14900E-13, DDR3, Dual-Rank x8, 1.50 V, UDIMM	715271-001
	16GB, 1600 MHz, PC3L-12800R-11, DDR3, quad-rank x4, 1.35 V, RDIMM	715284-001
	16GB, 1600 MHz, PC3-12800R-11, DDR3, dual-rank x4, 1.50 V, registered DIMM	684031-001
	16GB, 1333 MHz, PC3L-10600R-9, DDR3, dual-rank x4, 1.35 V, RDIMM	664692-001
	16GB, 1333 MHz, PC3-10600H-9, DDR3, Dual-Rank x4, 1.50 V, HyperCloud Dual In-Line Memory Module (HDIMM)	684032-001
	16GB, 1866 MHz, PC3-14900R-13, DDR3, quad-rank x4, 1.50 V, RDIMM	715274-001
	32GB, 1333 MHz, PC3L-10600L-9, DDR3, Quad-Rank x4, 1.35 V, Load Reduced Dual In-Line Memory Module (LRDIMM)	664693-001
	32GB, 1866 MHz, PC3-14900L-13, DDR3, quad-rank x4, 1.50 V, LRDIMM	715275-001
15	**System board**	

Item	Description	Spare PartNumber
	a) Caged heatsink system board	713079-001
	b) Screw-down heatsink system board	737611-001
16	Dual-rotor hot-pluggable fan module assembly - Includes the locking latch	822531-001
17	**DVD-ROM drives**	
	a) SATA DVD-ROM drive, 9.5 mm (0.37 in)	652296-001
	b) SATA DVD-RW drive, 9.5 mm (0.37 in)	652297-001
18	**Hard drives**	
	72GB hot-plug dual-port SAS hard disk drive - 15,000 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Enterprise, SmartDrive Carrier (SC) - Not for use in MSA products	653949-001
	100GB hot-plug Solid State Drive (SSD) - SATA interface, 3 Gb/s transfer rate, 2.5 in SFF, Multi-Level Cell (MLC), SC	653965-001
	100GB hot-plug SSD - SATA interface, 3 Gb/s transfer rate, 3.5 in LFF, MLC, Enterprise Mainstream, Smart Drive Carrier	653968-001
	146GB hot-plug dual-port SAS hard disk drive - 15,000 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Enterprise, SC - Not for use in MSA products	653950-001
	200GB hot-plug SSD - SATA interface, 3 Gb/s transfer rate, 2.5 in SFF, MLC, SC	653966-001

Item	Description	Spare PartNumber
	200GB hot-plug SSD - SATA interface, 3 Gb/s transfer rate, 3.5 in LFF, MLC, Enterprise Mainstream, Smart Drive Carrier	653969-001
	200GB hot-plug SSD - SAS interface, 6 Gb/s transfer rate, 2.5 in SFF, Single-Level Cell (SLC), Smart Drive Carrier	653961-001
	300GB hot-plug dual-port SAS hard disk drive - 10,000 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Enterprise, Smart Drive Carrier - Not for use in MSA products	653955-001
	300GB hot-plug dual-port SAS hard disk drive - 15,000 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Enterprise, Smart Drive Carrier - Not for use in MSA products	653960-001
	400GB hot-plug SSD - SATA interface, 3 Gb/s transfer rate, 2.5 in SFF, MLC, SC	653967-001
	400GB hot-plug SSD - SAS interface, 6 Gb/s transfer rate, 2.5 in SFF, MLC, SC	653963-001
	400GB hot-plug SSD - SAS interface, 6 Gb/s transfer rate, 2.5 in SFF, SLC, SC	653962-001
	450GB hot-plug dual-port SAS hard disk drive - 10,000 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Enterprise, SC - Not for use in MSA products	653956-001
	500GB hot-plug dual-port SAS hard disk drive - 7,200 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Midline, SC - Not for use in MSA products	653953-001

Item	Description	Spare PartNumber
	500GB hot-plug SATA hard disk drive - 7,200 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Midline, SC	656107-001
	600GB hot-plug dual-port SAS hard disk drive - 10,000 RPM, 6Gb/sec transfer rate, 2.5 in SFF, Enterprise, SC - Not for use in MSA products	653957-001
	800GB hot-plug SSD - SAS interface, 6 Gb/s transfer rate, 2.5 in SFF, MLC, SC	653964-001
	900GB hot-plug dual-port SAS hard disk drive - 10,000 RPM,6 Gb/s transfer rate, 2.5 in SFF, Enterprise, SC - Not for use in MSA products	653971-001
	1TB hot-plug dual-port SAS hard disk drive - 7,200 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Midline, SC - Not for use in MSA products	653954-001
	1TB hot-plug SATA hard disk drive - 7,200 RPM, 6 Gb/s transfer rate, 2.5 in SFF, Midline, SC - Not for use in MSA products	656108-001
19	**Cache module**	
	a) 512MB FBWC memory module, 40-bit wide - Does not include the controller board or capacitor module - For use with the P222 Smart Array controller	633540-001
	b) 1GB FBWC memory module, 72-bit wide - Does not include the controller board or capacitor module - For use with the P420 and P421 Smart Array controllers	633542-001

Item	Description	Spare PartNumber
	c) 2GB FBWC memory module, 72-bit wide - Does not include the controller board or capacitor module - For use with the P420, P421, P430, P431, and 822 Smart Array controllers	633543-001
20	Miscellaneous cable kit - Includes the front video adapter cable, embedded SATA cable, Capacitor Pack with 36 in cable (provides back up power to the FBWC memory module), and mini-SAS cable with straight connector to left connector (33 in long)	671353-001
21	**PCI riser board options**	
	a) PCIe riser board - x16 bus, low profile form factor	713080-001
	b) PCIe riser board - x16 slot, full height, half length	667867-001
22	HPE Trusted Platform Module	450168-001
23	Battery for Real-Time Clock (RTC) - 3.0 V, 220 mAh, lithium coin cell, 20 mm diameter, 3.2 mm height (CR2032)	234556-001
24	AC power cord (Black) - 13 AWG, 3.6 m (12 ft) long - Has straight C13 (F) plug for power output (for 120 V in USA, Canada, and Mexico)	187335-001
Cables		
25	Hard drive data cable or Mini-SAS cable, 45 cm (18 in)	667874-001
26	Hard drive data cable or Mini-SAS cable, 64 cm (25 in)	667875-001

Item	Description	Spare PartNumber
27	Hard drive backplane power cable - Connects between the system I/O board and the ha rd drive backplane	667873-001
28	Front video adapter	671353-001
29	SATA DVD-ROM drive cable	667879-001
30	Chipset SATA cable	671353-001
31	Mini-SAS straight cable, 83.8 2 cm (33 in)	671353-001

OS Compatibility

Feature	Description
Operating systems and virtualization software su pport for ProLiant servers	• Microsoft Windows Server • Canonical Ubuntu • Red Hat Enterprise Linux (RHEL) • SUSE Linux Enterprise Server (SLES) • Oracle Solaris • VMware • Citrix XenServer