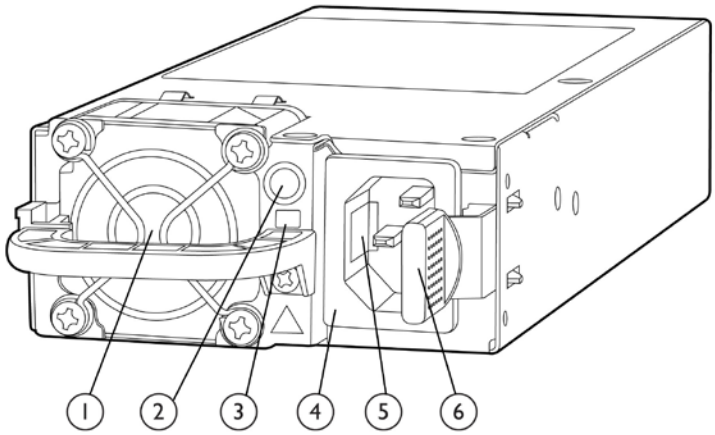
Overview

HPE Common Slot Power Supplies

HPE Common Slot (CS) Power Supplies share a common electrical and physical design that allows for hot-swap, tool-less installation into HPE server and storage solutions. The Hewlett Packard Enterprise CS power supplies offer high-efficiency power options available in multiple input and output options, allowing users to "right-size" a power supply for specific server/storage configurations and environments. This flexibility helps to minimize power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

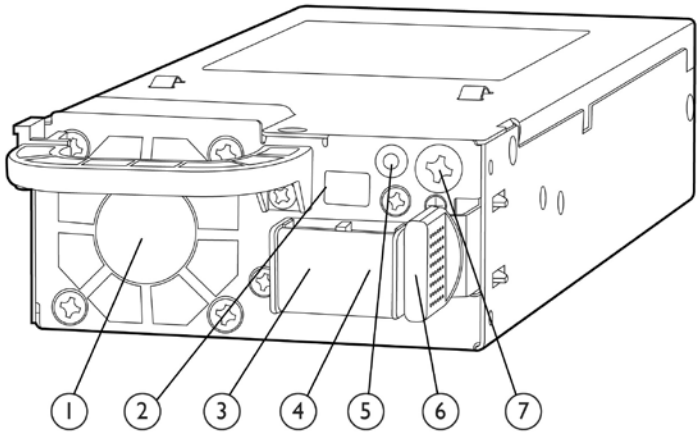
High efficiency options rated for up to 94% (Platinum/Platinum Plus) and up to 96% (Titanium) power efficiency are available in the Common Slot form factor. Most options also support HPE Power Discovery Services via embedded power line communication (PLC) technology. This feature enables each server to communicate identification, location, and power-related data to the Intelligent Power Distribution Unit in the rack which can then be shared with HPE Insight Control to manage power usage and efficiency in the data center.



HPE Common Slot Platinum Plus Power Supplies

1. Power Supply Identification Label
2. Power LED
3. Front-Side Revision Control Label
4. Blue C-13 Power Connector (indicates support for HPE Power Discovery Services)
5. Power Line Communication Port (requires PLC power cable for use)
6. Quick-Release Lever

Overview



HPE 750W Common Slot -48VDC Power Supply

1. Power Supply Identification Label
2. Front-Side Revision Control Label
3. Power Input Connector
4. Power Return Connector
5. Power LED
6. Quick-Release Lever
7. Power Grounding Connector

What's New

- New 1500W -48VDC 94% efficient Common Slot power supply options with Phoenix connectors (no support for HPE Power Discovery Services).

Models

HPE Power Supplies

NOTE: Mixing of power supplies in the same server is not supported. All power supplies must be of the same output and efficiency rating. If non-matched power supplies are inserted you will get errors and operation will fail.

HPE Common Slot Titanium Power Supply Kits

NOTE: Up to 96% efficiency with support for HPE Power Discovery Services (blue plug).

HP 750W Common Slot Titanium Hot Plug Power Supply Kit	697581-B21

HPE Common Slot Platinum Plus Power Supply Kits

NOTE: Up to 94% efficiency with support for HPE Power Discovery Services (blue plug).

HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit	656362-B21
HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit	656363-B21
HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit	656364-B21
HP 1500W Common Slot Platinum Plus Hot Plug Power Supply Kit	684532-B21

HPE Common Slot Platinum Power Supplies

NOTE: Up to 94% efficiency with no support for HPE Power Discovery Services (black plug).

HP 460W Common Slot Platinum Hot Plug Power Supply Kit	739252-B21
HP 750W Common Slot Platinum Hot Plug Power Supply Kit	739254-B21
HP 1200W Common Slot Platinum Hot Plug Power Supply Kit	748287-B21

HPE Common Slot Platinum Power Supplies

NOTE: Up to 94% efficiency with support for HPE Power Discovery Services (blue plug).

Overview

HP 1200W Common Slot Platinum Hot Plug Power Supply Kit	578322-B21
HPE Common Slot Gold Power Supplies	
NOTE: Up to 92% efficiency.	
HP 460W CS Gold Ht Plg Power Supply Kit	503296-B21
HP 750W Common Slot Gold Hot Plug Power Supply Kit	512327-B21
HPE Common Slot Silver Power Supplies	
NOTE: Up to 89% efficiency	
HP 1200W Common Slot Silver Hot Plug Power Supply Kit	500172-B21
HPE Common Slot -48VDC Power Supplies	
HPE 1500W Common Slot -48VDC Hot Plug Power Supply Kit	746708-B21
HP 750W Common Slot -48VDC Hot Plug Power Supply Kit	636673-B21
NOTE: The 750W Common Slot -48VDC Hot Plug Power Supply Kit does not include a power cord. To select an appropriate power cord for your server, please review the "Related Options" section of this document.	
HPE Common Slot 277VAC Power Supplies	
NOTE: Up to 94% efficiency.	
HP 500W Common Slot 277VAC Hot Plug Power Supply Kit	717362-B21
HP 750W Common Slot 277VAC Hot Plug Power Supply Kit	717364-B21
HP 1200W Common Slot 277VAC Hot Plug Power Supply Kit	717359-B21
NOTE: The HPE Common Slot 277VAC Hot Plug Power Supply Kits do not include a power cord. To select an appropriate power cord for your server, please review the "Related Options" section of this document.	
HPE Common Slot 380VDC Power Supplies	
NOTE: Up to 94% efficiency.	
HP 1200W Common Slot 380VDC Hot Plug Power Supply Kit	684539-B21
NOTE: The 1200W Common Slot 380VDC Hot Plug Power Supply Kit does not include a power cord. To select an appropriate power cord for your server, please review the "Related Options" section of this document.	

Standard Features

Common Slot Features and Benefits

Common Slot Design

- Tool-less hot-swap design allows for quick and easy access to power supplies
- Wide range of compatibility across HPE server and storage solutions minimizes the cost and management effort to maintain different sets of power supply spares

Multiple Output and Input Options

- Multiple output options allowing users to "right-size" their power needs and avoid "trapped" power capacity in their data centers caused by over-subscribing power needs
- Both AC and DC power input options available providing flexibility to operate in different IT environments
- Most Common Slot AC power supply options support both low-line and high-line voltage inputs providing additional flexibility to operate in multiple It environments

Power Management for Redundant Power Configurations

- Supports multiple operating modes to maximize power efficiency when configuring servers and storage with redundant power supplies
- Load-Balancing mode designed to maximize power efficiency at higher power supply utilization loads
- High-Efficiency mode designed to maximize power efficiency at lower power supply utilization loads

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Titanium and Platinum/Platinum Plus Features and Benefits

Highest Rated Power Efficiency

- Titanium (96%) and Platinum (94%) power efficiency certification from 80Plus program - highest certifications available in the IT industry
- Minimize data center operating costs related to power by reducing power waste and requirements for HPE server and storage solutions

Supports the Hewlett Packard Enterprise Power Discovery Services (on most options)

- Creates energy-aware network through embedded power line communication feature in Platinum power options
- Communicates power-related data to both iPDU and HPE Insight Manager
- Reduces human error, reclaims over-provisioned power capacity, and accurately measures/monitors power usage

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80Plus Certification

The 80PLUS test protocol was developed jointly by Ecos Plug Load Solutions and the Electric Power Research Institute (EPRI) in 2003, with the program being formally launched in 2004.

The 80 PLUS performance specification requires power supplies in servers to be 80% or greater energy efficient at 20%, 50% and 100% of rated load with a true power factor of 0.9 or greater. This makes an 80 PLUS certified power supply substantially more efficient than typical power supplies found in many

Standard Features

other electrical devices.

Who benefits from the 80PLUS power supply program?

- Commercial/Residential Consumers - empowered with information regarding energy efficient IT options that help them cut energy costs and reduce their environmental impact
- Utility/Power Providers - participation in a program that focuses on reducing power demands on overburdened grids as well as reducing power waste and its associated environmental impact

What are the efficiency requirements for each certification level?

80 PLUS Certification	230V Internal		
% of Rated Load	20%	50%	100%
80 PLUS Bronze	81%	85%	81%
80 PLUS Silver	85%	89%	85%
80 PLUS Gold	88%	92%	88%
80 PLUS Platinum	90%	94%	91%
80 Plus Titanium*	94%	96%	91%

***The 80 PLUS Titanium specification also requires a minimum of 90% efficiency at 10% utilization.**

What level of certification do HPE Common Slot (CS) Power Supplies meet?

Hewlett Packard Enterprise offers a range of CS Power Supplies that meet various 80PLUS levels of certification, from Silver to Titanium. The Hewlett Packard Enterprise Platinum Plus power supply options meet 80PLUS requirements for Platinum certification. To review 80Plus certification reports for each HPE Common Slot Power Supply, please refer to the 80Plus website at: **http://www.80plus.org/**.

NOTE: Only AC CS Power Supplies operating at between 90V to 264V are tested/certified by the 80PLUS program; 277VAC, 48VDC, and 380VDC power supplies are tested by Hewlett Packard Enterprise for efficiency ratings.

Enabling Power Discovery Services

HPE Power Discovery Services (PDS) combines the HPE Intelligent Power Distribution Unit (iPDU) and HPE Common Slot Platinum/Platinum Plus power supplies with HPE Insight Control software to create an automated, energy-aware network between IT systems and facilities.

HPE Power Discovery Services Features and Benefits :

- Captures highly accurate power data across racks and rows of servers in order to identify and eliminate areas of waste
- Extends the life of the data center by reclaiming up to 3x energy capacity of the data center
- Ensures uptime by eliminating human error during power planning and provisioning

Which HPE Power Supplies Support IPD?

- HPE Common Slot Platinum Plus Power Supplies (including 460W, 750W, 1200W , and 1500W options)

Standard Features

- HPE Common Slot Platinum Power Supplies (including 460W, 750W, and 1200W options)

How Is PDS enabled by the Common Slot Platinum/Platinum Plus Power Supply?
HPE Common Slot Platinum and Platinum Plus Power Supplies include an embedded power line communication (PLC) feature that allows the power supply to communicate server data (such as server name, UUID, and IP address) to an HPE Intelligent Power Distribution Unit (iPDU). This feature is supported on most HPE ProLiant G6 and G7 servers that support HPE Common Slot Platinum power supplies, as well as on new HPE ProLiant Generation 8 servers supporting HPE Common Slot Titanium and Platinum Plus Power Supply options.

NOTE: Standard power cables and jumpers do not support Power Line Communications or Intelligent Power Discovery. Please refer to the HPE iPDU Data Sheet for more information on power cord options and part numbers at: http://h18004.www1.hp.com/products/QuickSpecs/DS_00193/DS_00193.pdf

To learn more on HPE Intelligent Power Discovery, please visit the IPD website at: **http://www.hp.com/go/ipd**.

Support for Redundant Power Supplies

An HPE ProLiant server configured with an HPE Common Slot VAC Power Supply (460W, 750W, 1200W, or 1500W) supports the following three power scenarios:

- Operating with a single supply
- Operating with redundant supplies in load-balanced mode
- Operating with redundant supplies in high-efficiency mode

A single Common Slot Power Supply supporting the entire load of the server can achieve the highest efficiency when operating in the middle range (50%) of its capacity.

For redundant Common Slot Power Supplies operating in load-balanced mode (the default mode when adding redundant power supplies), the load is shared equally between the two (or four) power supplies. In general, the load-balanced mode offers better efficiency for loads requiring more than 60 percent of the primary power supply capacity.

When high-efficiency mode is enabled for redundant supplies (via the server's ROM-based setup utility under System options -> Redundancy options), each power supply in the server is designated as either a primary or secondary supply, and the entire server load is shifted to the primary power supply. This allows the primary power supply to operate at higher efficiency points on the load curve while the secondary power supply operates in idle mode, providing no output power and consuming very little energy (typically two to four watts per supply). The user can also specify that odd or even power supplies will be designated manually or automatically as secondary supplies. This flexibility allows users to balance the load across a rack manually or automatically.

NOTE: HPE Common Slot VDC Power Supply options support load-balancing when configured with redundant power supplies. However, neither model supports high-efficiency mode.

Compatibility

HPE Common Slot (CS) power supplies are compatible with a wide range HPE server and storage solutions. To check for CS power supply compatibility with specific HPE ProLiant servers, use the HPE ProLiant Options Compatibility Guide located at: **http://www.hpproliantoptions.com/**. For compatibility with specific HPE Integrity servers and HPE Storage solutions, please review the appropriate QuickSpecs for that product.

Service and Support

Service and Support	**NOTE:** HPE Common Slot power supplies are supported as a part of the HPE Server Infrastructure. No separate care packs are needed to be purchased. **HPE Technology Services for Industry Standard Servers** 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 Care Pack Services** HPE Care Pack 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.
HPE Support Center	Personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more **http://www.hp.com/go/hpsc** The HPE Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Care Pack or Hewlett Packard Enterprise contractual support agreement. ***The Hewlett Packard Enterprise Support Center Mobile App is subject to local availability**
Parts and materials	Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-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.
Warranty / Service Coverage	For ProLiant servers and storage systems, this service covers Hewlett Packard Enterprise-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by Hewlett Packard Enterprise as consumable parts and/or that have exceeded maximum supported lifetime and/or the

Service and Support

	maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.
For more information	To learn more on services for HPE ESSN Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: **http://www.hp.com/services/proliant** or **http://www.hp.com/services/bladesystem**

Related Options

Related Options

Common Slot Power Supply Enablement Kits	HP DL160 Gen8 FIO Power Backplane Kit **NOTE: When configuring the HPE DL160 Gen 8 with a Common Slot power supply, this enablement kit must be used for proper installation. The Common Slot power supply and power backplane kit for the DL160 Gen8 must be factory installed and cannot be purchased as separate options.**	662959-B21
	HP DL320e Gen8 Factory Integrated RPS Enablement Kit **NOTE: When configuring the HPE DL320e Gen 8 with a Common Slot power supply, this enablement kit must be used for proper installation. The Common Slot power supply and enablement kit for the DL320e Gen8 must be factory installed and cannot be purchased as separate options.**	675451-B21
	HP 4U Redundant Power Supply Enablement Kit **NOTE: When configuring the HPE ML310e Gen 8 with a Common Slot power supply, this enablement kit must be used for proper installation. The Common Slot power supply and enablement kit for the Ml310e Gen8 must be factory installed and cannot be purchased as separate options.**	675843-B21
	HP Redundant Enablement Kit **NOTE: When configuring the HPE ML350e Gen 8 with a Common Slot power supply, this kit must be used for proper installation. The Common Slot power supply and enablement kit for the ML350e Gen8 must be factory installed and cannot be purchased as separate options.**	664046-B21
	HP 4X1200W RPS FIO Enablement Kit **NOTE: When configuring the HPE ML350p Gen 8 with a Common Slot power supply, this kit must be used for proper installation. The Common Slot power supply and enablement kit for the Ml350p Gen8 must be factory installed and cannot be purchased as separate options.**	659487-B21
VAC C13 to C14 Power Cables	HP C13 - C14 WW 250V 10A Gray 0.7m Jumper Cord	A0K03A
	HP C13 - C14 WW 250V 10A Gray 1.37m Jumper Cord	A0K04A
	HP C13 - C14 WW 250V 10Amp Flint Gray 2.0m Jumper Cord	AF573A
	HP C13 - C14 WW 250V 10A Gray 3.0m Jumper Cord	A0K06A
	HP C13 - C14 WW 250V 10Amp 0.7m Jumper Cord	142257-B28
	HP C13 - C14 WW 250V 10Amp 1.4m Jumper Cord	142257-006
	HP C13 - C14 WW 250V 10Amp 1.4m 15 pc Jumper Cord	142257-007
	HP C13 - C14 WW 250V 10Amp 2.0m Jumper Cord	A0K02A
	HP C13 - C14 WW 250V 10Amp 2.5m Jumper Cord	142257-002
	HP C13 - C14 WW 250V 10Amp 3.0m Jumper Cord	142257-003
	NOTE: Standard power cables and jumpers do not support Power Line Communications or Power Discovery Services.	
Power Line Communication (PLC) Power Cables	HP C13 - C14 WW 250V 10Amp IPD 0.76m 1pc Jumper Cord	SG506A
	HP C13 - C14 WW 250V 10Amp IPD 0.76m 5pc Jumper Cord	SG507A
	HP C13 - C14 WW 250V 10Amp IPD 1.37m 1pc Jumper Cord	SG508A
	HP C13 - C14 WW 250V 10Amp IPD 1.37m 5pc Jumper Cord	SG509A
	HP C13 - C14 WW 250V 10Amp IPD 1.83m 1pc Jumper Cord	SG510A

Related Options

	HP C13 - C14 WW 250V 10Amp IPD 1.83m 5pc Jumper Cord	SG511A
	HP C13 - C14 WW 250V 10Amp IPD 3.0m 1pc Jumper Cord	SG512A
277VAC Power Cables	HP LS-26 to LS-25 277 Volt 15Amp AC 0.76m Jumper Cord	TK801A
	HP LS-26 to LS-25 277 Volt 15Amp AC 1.37M Jumper Cord	TK802A
	NOTE: This power cord option is for use with the HPE Common Slot 277VAC Hot Plug Power Supply Kits (717359-B21, 717362-B21, and 717364-B21).	
VDC Power Cables	HP 1.3M 48V DC Power Cable Kit	A5S97A
	HP 2.5M 48V DC Power Cable Kit	A5S98A
	HP 8AWG W/Ground Lug 48V DC 3.0m Power Cord	J6X42A
	NOTE: The VDC cable options listed above can only be used with the HPE 750W Common Slot -48VDC Power Supply (636673-B21) excluding J6X42A which needs to be used with 1500W Common Slot -48VDC Power Supply (746708-B21).	
	NOTE: Please refer to the Power Cord Matrix for more information on power cords/cable part numbers, input/output descriptions: http://www.hp.com/go/powercordmatrix.	

Power Specifications

HP 750W Common Slot Titanium Hot Plug Power Supply Kit (697581-B21)	HPE Generic Part Number				697579-001
	HPE Spares Part Number				700287-001
Input Voltage Range (V rms)	200 - 240				
Frequency Range (Nominal) (Hz)	50 - 60				
Nominal Input Voltage (Vrms)	200	208	220	230	240
Maximum Rated Output Wattage Rating	750	750	750	750	750
Nominal Input Current (A rms)	4.0	3.9	3.7	3.5	3.3
Maximum Rated Input Wattage Rating (Watts)	803	802	800	799	798
Maximum Rated VA (Volt-Amp)	806	805	804	803	803
Efficiency (%)	93.4	93.5	93.7	93.8	93.9
Power Factor	0.996	0.995	0.996	0.995	0.994
Leakage Current (mA)	0.50	0.75	0.79	0.83	1.00
Maximum Inrush Current (A peak)	30				
Maximum Inrush Current duration (mS)	0.2				
Maximum British Thermal Unit Rating (BTU-Hr)	2739	2735	2731	2728	2724

HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit (656362-B21)	HPE Generic Part Number						643931-001
	HPE Spares Part Number						660184-001
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	460	460	460	460	460	460	460
Nominal Input Current (A rms)	5.2	4.3	2.5	2.4	2.3	2.2	2.1
Maximum Rated Input Wattage Rating (Watts)	517	509	496	496	495	495	494
Maximum Rated VA (Volt-Amp)	524	515	503	502	502	501	500
Efficiency (%)	89.0	90.4	92.7	92.8	92.9	93.0	93.1
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	1764	1736	1694	1692	1689	1687	1686

HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit (656363-B21)	HPE Generic Part Number						643932-001
	HPE Spares Part Number						660183-001
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	750	750	750	750	750	750	750

Power Specifications

Nominal Input Current (A rms)	8.5	7.0	4.1	3.9	3.7	3.6	3.5
Maximum Rated Input Wattage Rating (Watts)	843	831	811	811	809	808	821
Maximum Rated VA (Volt-Amp)	855	842	822	821	820	819	832
Efficiency (%)	88.9	90.3	92.4	92.5	92.7	92.8	91.3
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	2878	2834	2769	2766	2762	2758	2803

HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit (656364-B21)	**HPE Generic Part Number**				**643933-001**		
	HPE Spares Part Number				**660185-001**		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.1	8.4	6.7	6.4	6.1	5.8	5.5
Maximum Rated Input Wattage Rating (Watts)	897	999	1321	1319	1317	1315	1314
Maximum Rated VA (Volt-Amp)	909	1012	1338	1337	1334	1332	1331
Efficiency (%)	89.2	90.1	90.9	91.0	91.1	91.2	91.3
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3061	3408	4506	4501	4493	4487	4483

HP 1500W Common Slot Platinum Plus Hot Plug Power Supply Kit (684532-B21)	**HPE Generic Part Number**				**684529-001**
	HPE Spares Part Number				**704604-001**
Input Voltage Range (V rms)	200 - 240				
Frequency Range (Nominal) (Hz)	50 - 60				
Nominal Input Voltage (Vrms)	200	208	220	230	240
Maximum Rated Output Wattage Rating	1500	1500	1500	1500	1500
Nominal Input Current (A rms)	8.4	8.1	7.6	7.3	7.0
Maximum Rated Input Wattage Rating (Watts)	1661	1659	1655	1652	1649
Maximum Rated VA (Volt-Amp)	1681	1679	1675	1672	1669
Efficiency (%)	90.3	90.4	90.6	90.8	91.0
Power Factor	0.999	0.999	0.999	0.999	0.999
Leakage Current (mA)	0.50	0.75	0.79	0.83	1.00
Maximum Inrush Current (A peak)	40				
Maximum Inrush Current duration (mS)	0.2				
Maximum British Thermal Unit Rating (BTU-Hr)	5667	5661	5648	5637	5627

Power Specifications

HP 460W Common Slot Platinum Hot Plug Power Supply Kit (739252-B21)	HPE Generic Part Number				746071-001		
	HPE Spares Part Number				742515-001		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	460	460	460	460	460	460	460
Nominal Input Current (A rms)	5.2	4.3	2.5	2.4	2.3	2.2	2.1
Maximum Rated Input Wattage Rating (Watts)	517	509	496	496	495	495	494
Maximum Rated VA (Volt-Amp)	524	515	503	502	502	501	500
Efficiency (%)	89.0	90.4	92.7	92.8	92.9	93.0	93.1
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	1764	1736	1694	1692	1689	1687	1686

HP 750W Common Slot Platinum Hot Plug Power Supply Kit (739254-B21)	HPE Generic Part Number				746072-001		
	HPE Spares Part Number				742516-001		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	750	750	750	750	750	750	750
Nominal Input Current (A rms)	8.5	7.0	4.1	3.9	3.7	3.6	3.5
Maximum Rated Input Wattage Rating (Watts)	843	831	811	811	809	808	821
Maximum Rated VA (Volt-Amp)	855	842	822	821	820	819	832
Efficiency (%)	88.9	90.3	92.4	92.5	92.7	92.8	91.3
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	2878	2834	2769	2766	2762	2758	2803

HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit (748287-B21)	HPE Generic Part Number				746073-001		
	HPE Spares Part Number				748896-001		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.1	8.4	6.7	6.4	6.1	5.8	5.5
Maximum Rated Input Wattage Rating (Watts)	897	999	1321	1319	1317	1315	1314

Power Specifications

Maximum Rated VA (Volt-Amp)	909	1012	1338	1337	1334	1332	1331
Efficiency (%)	89.2	90.1	90.9	91.0	91.1	91.2	91.3
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3061	3408	4506	4501	4493	4487	4483

HP 1200W Common Slot Platinum Hot Plug Power Supply Kit (578322-B21)	**HPE Generic Part Number**				**570451-101**		
	HPE Spares Part Number				**579229-001**		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.3	8.6	6.7	6.5	6.1	5.8	5.6
Maximum Rated Input Wattage Rating (Watts)	889	989	1290	1290	1290	1290	1290
Maximum Rated VA (Volt-Amp)	927	1031	1345	1345	1345	1345	1345
Efficiency (%)	90	91	93	93	93	93	93
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	10						
Maximum British Thermal Unit Rating (BTU-Hr)	3033	3375	4403	4403	4403	4403	4403

HP 460W Common Slot Gold Hot Plug Power Supply Kit (503296-B21)	**HPE Generic Part Number**				**499249-001**		
	HPE Spares Part Number				**511777-001**		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	460	460	460	460	460	460	460
Nominal Input Current (A rms)	5.5	4.5	2.6	2.5	2.4	2.3	2.2
Maximum Rated Input Wattage Rating (Watts)	526	520	505	505	503	503	503
Maximum Rated VA (Volt-Amp)	548	542	527	527	524	524	524
Efficiency (%)	524	88.5	91	91	91.5	91.5	91.5
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	1794	1773	1725	1725	1715	1715	1715

NOTE: **The table above provides power specifications for this power supply; however, it is recommended that the HPE**

Power Specifications

Power Advisor tool be used to estimate power requirements for this server as power efficiency may vary when using this option kit. The HPE Power Advisor tool can be downloaded at: http://www.hp.com/go/hppoweradvisor.

HP 750W Common Slot Gold Hot Plug Power Supply Kit (512327-B21)	**HPE Generic Part Number**				**506821-001**		
	HPE Spares Part Number				**511778-001**		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	750	750	750	750	750	750	750
Nominal Input Current (A rms)	8.9	7.4	4.3	4.1	3.9	3.7	3.6
Maximum Rated Input Wattage Rating (Watts)	857	847	824	824	820	820	820
Maximum Rated VA (Volt-Amp)	894	884	859	859	854	854	854
Efficiency (%)	87.5	88.5	91	91	91.5	91.5	91.5
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	2925	2892	2812	2812	2797	2797	2797

NOTE: The table above provides power specifications for this power supply; however, it is recommended that the HPE Power Advisor tool be used to estimate power requirements for this server as power efficiency may vary when using this option kit. The HPE Power Advisor tool can be downloaded at: http://www.hp.com/go/hppoweradvisor.

HP 1200W Common Slot Silver Hot Plug Power Supply Kit (500172-B21)	**HPE Generic Part Number**				**490594-001**		
	HPE Spares Part Number				**498152-001**		
Input Voltage Range (V rms)	100 - 240						
Frequency Range (Nominal) (Hz)	50 - 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.7	9.0	7.0	6.8	6.4	6.1	5.9
Maximum Rated Input Wattage Rating (Watts)	930	1034	1348	1348	1348	1348	1348
Maximum Rated VA (Volt-Amp)	970	1079	1406	1406	1406	1406	1406
Efficiency (%)	86	87	89	89	89	89	89
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3174	3530	4600	4600	4600	4600	4600

HP 750W Common Slot -48VDC Hot Plug Power Supply Kit (636673-B21)	**HPE Generic Part Number**	**619671-401**
	HPE Spares Part Number	**639173-001**

Power Specifications

Input Voltage Range (V rms)	36 - 72		
Frequency Range (Nominal) (Hz)	DC		
Nominal Input Voltage (Vrms)	**36**	**48**	**72**
Maximum Rated Output Wattage Rating	750	750	750
Nominal Input Current (A rms)	23	17	12
Maximum Rated Input Wattage Rating (Watts)	840	820	830
Maximum Rated VA (Volt-Amp)	840	820	830
Efficiency (%)	92	94	92
Power Factor	N/A		
Leakage Current (mA)	N/A		
Maximum Inrush Current (A peak)	24		
Maximum Inrush Current duration (mS)	15		
Maximum British Thermal Unit Rating (BTU-Hr)	2865	2796	2830

HP 1500W Common Slot -48V Hot Plug Power Supply Kit (746708-B21)	**HPE Generic Part Number**		**746703-001**
	HPE Spares Part Number		**794734-001**
Input Voltage Range (VDC)	-40 to -72		
Frequency Range (Nominal) (Hz)	DC		
Nominal Input Voltage (VDC)	**-40**	**-48**	**-72**
Maximum Rated Output Wattage Rating (Watts)	1500	1500	1500
Nominal Input Current (ADC)	40.5	33.5	22.2
Maximum Rated Input Wattage Rating (Watts)	1621	1607	1598
Maximum Rated VA (Volt-Amp)	1621	1607	1598
Efficiency (%)	92.6	93.3	93.9
Power Factor	N/A		
Leakage Current (mA)	N/A		
Maximum Inrush Current (A peak)	63		
Maximum Inrush Current duration (mS)	10		
Maximum British Thermal Unit Rating (BTU-Hr)	5530	5484	5451

HP 1200W Common Slot 380VDC Power Supply Kit (684539-B21)	**HPE Generic Part Number**	**677721-101**
	HPE Spares Part Number	**704603-001**
Input Voltage Range (V rms)	240 - 380	
Frequency Range (Nominal) (Hz)	DC	
Nominal Input Voltage (Vrms)	240	380
Maximum Rated Output Wattage Rating	1200	1200
Nominal Input Current (A rms)	5.6	3.5
Maximum Rated Input Wattage Rating (Watts)	1320	1302
Maximum Rated VA (Volt-Amp)	1335	1317
Efficiency (%)	90.9	92.1
Power Factor	1.000	1.000

Power Specifications

Leakage Current (mA)	N/A	
Maximum Inrush Current (A peak)	8	
Maximum Inrush Current duration (mS)	0.2	
Maximum British Thermal Unit Rating (BTU-Hr)	4505	4444

HP 1200W Common Slot 277VAC Hot Plug Power Supply Kit (717359-B21)	**HPE Generic Part Number**				**703247-101**	
	HPE Spares Part Number				**714349-001**	
Input Voltage Range (V rms)	200 - 277					
Frequency Range (Nominal) (Hz)	50-60					
Nominal Input Voltage (Vrms)	200	208	220	230	240	277
Maximum Rated Output Wattage Rating	1200	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	6.7	6.4	6.1	5.8	5.6	4.8
Maximum Rated Input Wattage Rating (Watts)	1328	1327	1324	1322	1320	1314
Maximum Rated VA (Volt-Amp)	1343	1342	1339	1337	1335	1330
Efficiency (%)	90.3	90.4	90.6	90.8	90.9	91.3
Power Factor	1.000	1.000	1.000	1.000	1.000	0.999
Leakage Current (mA)	0.50	0.75	0.79	0.83	0.87	1.00
Maximum Inrush Current (A peak)	8					
Maximum Inrush Current duration (mS)	0.2					
Maximum British Thermal Unit Rating (BTU-Hr)	4532	4526	4518	4511	4504	4484

HP 750W Common Slot 277VAC Hot Plug Power Supply Kit (717364-B21)	**HPE Generic Part Number**				**666375-101**	
	HPE Spares Part Number				**674890-001**	
Input Voltage Range (V rms)	200 - 277					
Frequency Range (Nominal) (Hz)	60					
Nominal Input Voltage (Vrms)	200	208	220	230	240	277
Maximum Rated Output Wattage Rating	750	750	750	750	750	750
Nominal Input Current (A rms)	4.1	4.0	3.8	3.6	3.4	3.0
Maximum Rated Input Wattage Rating (Watts)	820	818	817	815	814	811
Maximum Rated VA (Volt-Amp)	829	827	826	824	824	821
Efficiency (%)	91.5	91.7	91.8	92.0	92.1	92.5
Power Factor	1.000	1.000	1.000	1.000	0.999	0.999
Leakage Current (mA)	0.50	0.75	0.79	0.83	0.87	1.00
Maximum Inrush Current (A peak)	8					
Maximum Inrush Current duration (mS)	20					
Maximum British Thermal Unit Rating (BTU-Hr)	2796	2792	2786	2782	2778	2767
Hold Up Time (ms)	10.0	10.0	10.0	10.0	10.0	10.0

HP 500W Common Slot 277VAC Hot Plug Power Supply Kit (717362-B21)	**HPE Generic Part Number**	**633680-101**
	HPE Spares Part Number	**638549-001**

Power Specifications

Input Voltage Range (V rms)	200 - 277					
Frequency Range (Nominal) (Hz)	50-60					
Nominal Input Voltage (Vrms)	200	208	220	230	240	277
Maximum Rated Output Wattage Rating	500	500	500	500	500	500
Nominal Input Current (A rms)	2.7	2.6	2.5	2.4	2.3	2.0
Maximum Rated Input Wattage Rating (Watts)	540	540	539	539	538	537
Maximum Rated VA (Volt-Amp)	547	546	545	545	544	544
Efficiency (%)	92.6	92.7	92.8	92.8	92.9	93.2
Power Factor	0.999	0.999	0.999	0.999	0.999	0.998
Leakage Current (mA)	1.00	1.00	1.00	1.00	1.00	1.00
Maximum Inrush Current (A peak)	8					
Maximum Inrush Current duration (mS)	20					
Maximum British Thermal Unit Rating (BTU-Hr)	1843	1841	1839	1837	1836	1831
Hold Up Time (ms)	10.0	10.0	10.0	10.0	10.0	10.0

Technical Specifications

All AC Power Supplies:

Operating Temperature	41° to 122°F (5° to 50°C)
Operating Relative Humidity (%)	5% to 95%, non-condensing
Operating Elevation	0 to 5,000ft (1,524m) with no derating; Maximum inlet air temperature derated linearly down to 40°C from 5000ft (1,524m) to 10,000ft (3,048m) msl
Storage Temperature	-40° to 185°F (-40 to 85°C)
Storage Relative Humidity (%)	5% to 95%, non-condensing
Storage Elevation	0 to 50,000ft (0 to 15,240m)
Input Voltage	Low Line - Rated: 100V; Min 90V to Max 132V High Line - Rated: 200 - 240V; Min 180V to Max 264V (model 684532-B21 and 697581-B21 supports High Line only) High Line - Rated: 200 - 277VAC; Min 180VAC to Max 305VAC (only models 717359-B21, 717362-B21, 717364-B21 supported)
Input Frequency	Rated: 50 to 60Hz; Min 47Hz to Max 63Hz
FCC EMI Certification	FCC Class A (models 578322-B21, 684532-B21, 697581-B21, 717359-B21, 717362-B21, 717364-B21, 739252-B21, 739254-B21, and 748287-B21 only); All other models are Class B certified
Mechanical Dimensions (WxHxD)	1.5 x 3.4 x 7.5 in (3.81 x 8.63 x 19.05 cm) for all models
Unit Weight	2.5 lb (1.13 kg) for models 656362-B21, 656364-B21, 697581-B21, 717359-B21, 717362-B21, and 717364-B21 3.0 lb (1.36 kg) for model 684532-B21 2 lb (0.91 kg) for all other VAC models
Shipping Dimensions (WxHxD)	16.56 x 7.38 x 5.75 in (42.06 x 18.75 x 14.61) for model 684532-B21 15.5 x 7.25 x 5.5 in (39.37 x 18.44 x 13.97 cm) for models 656362-B21, 656364-B21, and 697581-B21 only 12 x 8 x 4.5 in (30.48 x 20.32 x 11.43 cm) for all other VAC models
Shipping Weight	3.98 lb (1.81 hg) for model 684532-B21 3.5 lb (1.59 kg) for models 656362-B21, 656364-B21, 697581-B21, 717359-B21, 717362-B21, and 717364-B21 only 3 lb (1.36 kg) for all other VAC models
Kit Contents	All models except 697581-B21, 717359-B21, 717362-B21, and 717364-B21 ship with: (1) Power supply unit, (1) IEC C13-C14 jumper cable, installation/safety guide - models 697581-B21, 717359-B21, 717362-B21, 717364-B21 do not include a power cable

All DC Power Supplies:

Operating Temperature	41° to 122°F (5° to 50°C)
Operating Relative Humidity (%)	5% to 95%, non-condensing
Operating Elevation	0 to 5,000ft (1,524m) with no derating; Maximum inlet air temperature derated linearly down to 40°C from 5000ft (1,524m) to 10,000ft (3,048m) msl
Storage Temperature	-40 to 85°C
Storage Relative Humidity (%)	5% to 95%, non-condensing

Technical Specifications

Storage Elevation	0 to 50,000ft msl
Input Voltage	48VDC to 54VDC (nominal); Min 36VDC to Max 72VDC (model 636673-B21) 240VDC to 380VDC(nominal); Min 180VDC to Max 420VDC (model 684539-B21 only)
Input Frequency	DC input
Conformance Standards	CE Mark, UL, CSA, IEC, EN, CNS, KCC, BSMI, CCC, C-tick, TUV, FCC Class A (model 684539-B21 only)
Mechanical Dimensions (WxHxD)	1.5 x 3.4 x 7.5 in (3.81 x 8.63 x 19.05 cm)
Unit Weight	2.5 lb (1.13 kg) (model 636673-B21) 2.25 lb (1.02 kg) (model 746708-B21)
Shipping Dimensions (WxHxD)	4.4 X 12.25 X 8 in (11.18 x 31.12 x 20.32 cm) (model 636673-B21) 15.5 x 7.25 x 5.5 in (39.37 x 18.44 x 13.97 cm) (model 684539-B21) 16.56 x 7.38 x 5.75 in (42.06 x 18.74 x 14.6 cm) (model 746708-B21)
Shipping Weight	3.2 lb (1.45 kg) (model 636673-B21) 3.5 lb (1.59 kg) (model 684539-B21) 3.98 lb (1.8 kg) (model 746708-B21)
Kit Contents	Models 636673-B21and 684539-B21 ship with: (1) Power supply unit, installation/safety guide Model 746708-B21 ships with: (1) Power supply unit, installation/safety guide

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.hp.com/go/green**. To recycle your product, please go to: **http://www.hp.com/go/green** 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.

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Summary of Changes

Date	Version History	Action	Description of Change
19-Feb-2016	From Version 12 to 13	Changed	Models, Related Options, Power Specifications, and Technical Specifications were revised.
30-Mar-2015	From Version 11 to 12	Added	Added HPE 1500W Common Slot -48V Hot Plug Power Supply Kit VDC Power Cables were added to Related Options section.
		Changed	What's New changed to: New 1500W -48VDC 94% efficient Common Slot power supply options with Phoenix connectors (no support for HPE Power Discovery Services). Models in Overview section was revised. Service and Support, Power Specifications, and Technical Specifications sections were revised.
		Removed	460W Common Slot Platinum Hot Plug Power supply kit, 750W Common Slot Platinum Hot Plug Power supply kit, 460W Common Slot Gold Hot Plug Power supply kit, and 750W Common Slot Gold Hot Plug Power supply kit were removed from Models.
29-Sep-2014	From Version 10 to 11	Removed	DC Power Cable kits was removed from Related Options.
18-Feb-2014	From Version 9 to 10	Changed	Changes made to the What's New section: New Platinum-certified 460W, 750W, and 1200W Common Slot power supply options with standard C14 connectors (no support for HPE Power Discovery Services).
19-Aug-2013	From Version 8 to 9	Added	HPE 750W Common Slot Titanium Hot Plug Power Supply Kit and HPE 500W and 750W Common Slot 227VAC Hot Plug Power Supply Kits Mentions of Titanium power supplies were added throughout
07-Jun-2013	From Version 7 to 8	Changed	Changes made to the Related Options Section - DC Power Cable Kits
13-May-2013	From Version 6 to 7	Added	Power Specifications: Added HPE 1500W Common Slot Platinum Plus Hot Plug Power Supply Kit (684532-B21), HPE 1200W Common Slot 380VDC Power Supply Kit (684539-B21) and HPE 1200W Common Slot 277VAC Hot Plug Power Supply Kit (717359-B21).
		Changed	Overview: Updated Image descriptions, What's New with New HPE 1500W Common Slot Platinum Plus Hot Plug Power Supply Kit supporting high-line AC input voltages, up to 94% power efficiency (80+ Platinum-certified), and HPE Power Discovery Services

Summary of Changes

			New 1200W Common Slot 380VDC Hot Plug Power Supply Kit supporting DC power infrastructure from 200V to 380V with up to 94% efficiency Overview: cont. Updated Models section with 684532-B21, 717359-B21 and 684539-B21 Standard Features: Updated note in the 80Plus Certification and Enabling Power Discovery Services. Related Options: Updated Enablement Kits to Common Slot Power Supply Enablement Kits and DC Power Cable Kits with D4J67A. Power Specification: Updated entire section
25-Mar-2013	From Version 5 to 6	Changed	Updated What New with New HPE 1200W Common Slot 277VAC Hot Plug Power Supply Kit supporting an AC input voltage range from 200V to 277V with up to 94% power efficiency Changed HPE Power Supplies, 80Plus Certification, and Power line communication (PLC) Power Cables. Added HPE 750W Common Slot -48VDC Hot Plug Power Supply Kit (636673-B21) and HPE 1200W Common Slot 277VAC Hot Plug Power Supply Kit (717359-B21)
19-Feb-2013	From Version 4 to 5	Changed	Change made to Models in the Overview section.
13-Aug-2012	From Version 3 to 4	Changed	Change made in the Overview and Related Options sections.
10-May-2012	From Version 2 to 3	Changed	Change made in the Related Options section.
26-Mar-2012	From Version 1 to 2	Added	Enablement Kits was added to Related Options.

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