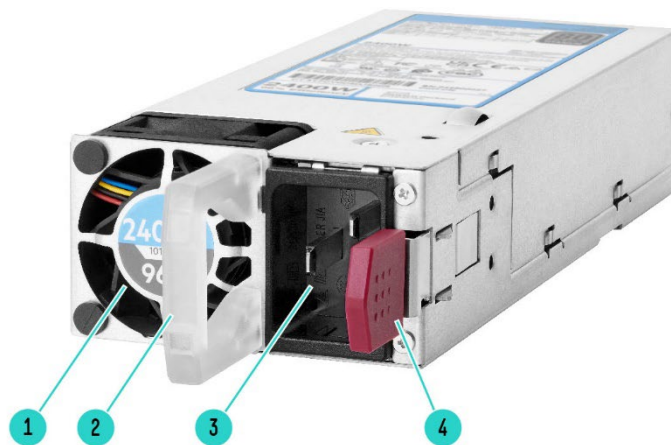


Overview

HPE Modular Common Redundant Power Supplies



HPE Modular Common Redundant Power Supplies

- | | |
|---|--------------------------------|
| 1. Identification Label | 3. Input Connector (C20 shown) |
| 2. Power Supply Handle/Status Indicator | 4. Release Lever |

What's New

- Addition to HPE Compute Power Supply Portfolio, all Titanium rated and Lot 9 compliant
- Output ranging from 1000W to 2400W
- Low-line (100 - 127V AC) and High-line (200 – 240V AC) input capable
- Two form factors: narrow (60mm) with C14 input connector, and wide (73.5mm) with C20 input connector

Overview

Models

HPE Power Supplies

Gen12 Modular Common Redundant Power Supplies

Notes:

- Mixing different power supplies on servers with more than one power domain as DL380a Gen12 is allowed, as long as all power supplies within a domain are identical.
- Mixing different power supplies within a power domain in a server may limit or disable some power supply features including support for power redundancy. To ensure access to all available features, all power supplies within the same power domain in a server should have the same output and efficiency ratings.

HPE M-CRPS Titanium Power Supply Kits

Notes:

- Mixing different power supplies on servers with more than one power domain as DL380a Gen12 is allowed, as long as all power supplies within a domain are identical.
- M-CRPS Titanium power supplies deliver efficiencies of up to 96%.
- Compliant with EU Lot 9 2024 minimum efficiency requirements.
- Capable of low-line (100V – 127V) or high-line (200V – 240V) AC input.
- Power supply output is a result of input voltage.

HPE 1500W M-CRPS Titanium Hot Plug Power Supply Kit

P67244-B21

Notes:

- 60mm wide, C14 input connector.
- 1500W at 200V AC and higher, 1000-1100W at 100V to 120V AC

HPE 2400W M-CRPS Titanium Hot Plug Power Supply Kit

P67252-B21

Notes:

- 73.5mm wide, C20 input connector.
- 2364W at 200V AC and higher, 1164W at 100V to 127V AC



Standard Features

Features/Benefits

Titanium-Certified Power Efficiency

- Titanium (96%) power efficiency certification from 80PLUS program – one of the highest power efficiency certifications available in the IT industry.
- Reduces data center operating costs related to power by reducing server power requirements and power waste.

M-CRPS Design

- New form factor, compliant with Open Compute Project (OCP) base specification. Not compatible with servers prior to Gen12.
- Two widths: 73.5mm and 60mm.
- Enhanced serviceability through enlarged handle that illuminates to indicate power supply status.
- Upgrade in security firmware with advanced features to protect the server and enhance the end-user's experience.
- Tool-less hot plug design improves serviceability by allowing quick and easy access to system power supplies.

Wide arrange of Power Output 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.
- Support for both low-line and high-line AC input voltages providing additional flexibility to operate in multiple IT environments.

Power Management

- Supports multiple operating modes to maximize power efficiency when configuring servers with redundant power supplies.

80PLUS Certification

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

The 80PLUS 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 80PLUS certified power supply more efficient than typical power supplies found in many 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?

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



Standard Features

What level of certification do HPE Modular Common Redundant Power Supplies meet?

HPE's Titanium power supply options meet 80PLUS requirements for Titanium certification. To review 80PLUS certification reports for each HPE M-CRPS Power Supply, please refer to the 80PLUS website at: <https://www.plugloadsolutions.com/>.

European Union Erp Lot 9 Regulation

Beginning on January 1st, 2024, units sold into the European Economic Area (EEA), the United Kingdom, Switzerland or Turkey must include more efficient AC power supplies: 96% for single output. HPE Modular Common Redundant Power Supplies are single-output, and are 96% efficient, thus meeting requirements.

Support for Redundant Power Supplies

A power domain configured with identical M-CRPS Power Supplies on an HPE ProLiant server solution supports the following three scenarios:

- Operation with N-1 power supplies.
- Operation with redundant power supplies in load-balanced mode.
- Operation with redundant power supplies in high-efficiency mode.

For redundant M-CRPS Power Supplies operating in load-balanced mode (the default mode when adding redundant power supplies), the load on a domain is shared equally between the power supplies.

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

Compatibility

HPE Gen12 M-CRPS power supplies are initially compatible with the HPE ProLiant DL380a Gen12 server, with more models to follow.

Notes:

- To check for power supply compatibility, please review the appropriate HPE Server QuickSpecs at <http://www.hpe.com/info/qs>.
-



Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where, and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

<https://www.hpe.com/services>

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

<https://www.hpe.com/services/consulting>

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

[HPE Managed Services | HPE](#)

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

<https://www.hpe.com/services/operational>

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud.
- An assigned HPE team.
- Modular and fully personalized engagement.
- Enhanced Incident Management experience with priority access.
- Digitally enabled and AI driven customer experience.

<https://www.hpe.com/services/complecare>

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

<https://www.hpe.com/services/techcare>



Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, considering the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, considering the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:

<https://www.hpe.com/services/lifecycle>

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](#)

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

<https://www.hpe.com/services/training>

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and service options.

Parts and Materials

HPE 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 quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at <https://ssc.hpe.com/portal/site/ssc/>



Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience.

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

<https://support.hpe.com/hpesc/public/home/signin>

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market.
- Save on TCO, align costs to business.
- Scale quickly, meet unpredictable demand.
- Simplify IT operations across your data centers and clouds.

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"

<https://www.hpe.com/us/en/contact-hpe.html>

For more information

<http://www.hpe.com/services>



Related Options

C13 – C14 Jumper Cords

Notes:

- Cables below to be used with the 1500W power supply (P67244-B21) only
- Worldwide use except India, unless otherwise noted

HPE C13 - C14 WW 250V 10Amp 2.0m Jumper Cord	A0K02A
HPE C13 - C14 WW 250V 10Amp Flint Gray 2.0m Jumper Cord	AF573A
HPE C13-C14 IN 250V 10Amp 2m Black Jumper Cord	R1C65A

Notes: For India use only

C13 Country specific Jumper Cords

Notes:

- Cables below to be used with the 1500W power supply (P67244-B21) only
- Worldwide use except India, unless otherwise noted

HPE C13 - JIS C8303 JP 100V 12Amp 2.0m Power Cord	AF572A
HPE C13 - AS3112-3 AU 250V 10Amp 2.5m Power Cord	AF569A
HPE C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
HPE C13-NEMA 6-15P 10A/250V 3.6m Black Power Cord	A0N33A
HPE C13 - GB-1002 CN 250V 10Amp 1.83m Power Cord	AF557A
HPE C13 - CNS-690 TW 110V 13Amp 1.83m Power Cord	AF561A
HPE C13 - IRAM -2073 AR 250V 10A 2.5m Power Cord	AF558A
HPE C13 - NBR-14136 BR 250V 10Amp 1.83m Power Cord	AF591A
HPE C13 - DK-2.5A DK 250V 10Amp 1.83m Power Cord	AF566A
HPE C13 - CEE-VII EU 250V 10Amp 1.83m Power Cord	AF568A
HPE C13 - SI-32 IL 250V 10Amp 1.83m Power Cord	AF564A
HPE C13 - KSC- 8305 KR 250V 10Amp 1.83m Power Cord	AF560A
HPE C13 - SABS-164 ZA 250V 10Amp 2.5m Power Cord	AF567A
HPE C13 - SEV 1011 CH 250V 10Amp 1.83m Power Cord	AF565A
HPE C13 - Nema 5-15P TH/PH 250V 10Amp 1.83m Power Cord	AF559A
HPE C13 - BS-1363A UK/HK/SG 250V 10Amp 1.83m Power Cord	AF570A
HPE C13 - IS-1293 IN 240V 6Amp LV 2.0m Power Cord	AF562A

Notes: For India use only

Visit [HPE Power Cords and Cables](#) for details of optional power cords



Related Options

C19 – C20 Jumper Cords

Notes:

- Cables below to be used with the 2400W power supply (P67252-B21) only
- Worldwide use except India, unless otherwise noted

HPE Jumper Cord, Flint Gray, 1.2m, 16A, C19-C20

AF575A

HPE Jumper Cord, Flint Gray, 2m, 16A, C19-C20

AF574A

HPE C19-C20 IN 250V 2.5m Blk Jumper Cord

R1C66A

Notes: For India use only

C19 Country specific Jumper Cords

Notes:

- Cables below to be used with the 2400W power supply (P67252-B21) only
- Worldwide use except India, unless otherwise noted

HPE PWR CRD, 3.6m, 20A/250V, C19—U.S.

AF593A

HPE PWR CRD, 3.6m, 16A/250V, C19—EU

AF576A

HPE PWR CRD, 4.5m, 16A/250V, Stripped end/C19

E7806A

HPE 3.6m 16A C19 IEC309 Pwr Cord

AF581A

HP 2.5m 16A C19 IN PWR CORD

AF582A

Notes: For India use only

Visit [HPE Power Cords and Cables](#) for details of optional power cords



Technical Specifications

HPE 1500W M-CRPS Titanium Hot Plug Power Supply (P67244-B21)	HPE's Generic Part Number							P67246-001
	HPE's Option Kit Part Number							P67244-B21
	HPE's Spares Part Number							P68456-001
Input connector	C14							
Input Voltage Range (V rms)	100 - 240							
Frequency Range (Nominal) (Hz)	50 - 60							
Nominal Input Voltage (V rms)	100	110	120	200	208	230	240	
Maximum Rated Output Wattage Rating (Watts)	1000	1100	1100	1500	1500	1500	1500	
Nominal Input Current (A rms)	11.2	11.2	10.2	8.2	7.9	7.1	6.8	
Maximum Rated Input Wattage Rating (Watts)	1111	1220	1212	1630	1628	1624	1622	
Maximum Rated VA (Volt-Amp)	1123	1233	1225	1646	1644	1640	1638	
Efficiency (%)	90.0	90.1	90.7	92.1	92.2	92.4	92.5	
Power Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Leakage Current (mA)	0.33	0.36	0.40	0.66	0.69	0.76	0.80	
Maximum Inrush Current (A peak)	30							
Maximum Inrush Current duration (mS)	10							
Maximum British Thermal Unit Rating (BTU-Hr)	3792	4164	4137	5560	5554	5539	5534	
HPE 2400W M-CRPS Titanium Hot Plug Power Supply (P67252-B21)	HPE's Generic Part Number							P67254-001
	HPE's Option Kit Part Number							P67252-B21
	HPE's Spares Part Number							P68454-001
Input connector	C20							
Input Voltage Range (V rms)	100 - 240							
Frequency Range (Nominal) (Hz)	60							
Nominal Input Voltage (V rms)	100	110	120	200	208	230	240	
Maximum Rated Output Wattage Rating (Watts)	1164	1164	1164	2364	2364	2364	2364	
Nominal Input Current (A rms)	12.6	10.4	9.8	12.7	12.2	11.0	10.5	
Maximum Rated Input Wattage Rating (Watts)	1251	1239	1236	2512	2510	2503	2500	
Maximum Rated VA (Volt-Amp)	1264	1252	1249	2538	2535	2528	2526	
Efficiency (%)	93.0	93.9	94.1	94.1	94.2	94.4	94.5	
Power Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Leakage Current (mA)	0.33	0.40	0.42	0.66	0.69	0.76	0.80	
Maximum Inrush Current (A peak)	30							
Maximum Inrush Current duration (mS)	10							
Maximum British Thermal Unit Rating (BTU-Hr)	4268	4228	4219	8572	8563	8540	8532	



Technical Specifications

All AC Power Supplies	
Operating Temperature	41° to 131°F (5° to 55°C)
Operating Relative Humidity (%)	5% to 95%, non-condensing
Operating Elevation	The maximum ambient temperature of the power supply shall have an altitude de-rating, from sea level, 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).
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 - 127V; Min 90V to Max 132V High Line - Rated: 200 - 240V; Min 180V to Max 264V
Input Frequency	Rated: 50 - 60Hz; Min 47Hz to Max 63Hz
FCC EMI Certification	CE Mark, UL, cUL, IEC, EN, KCC, BSMI, CCC, TUV, C-tick, CISPR Class A
Mechanical Dimensions (WxHxD)	<ul style="list-style-type: none"> 1500W PSU (P67244-B21): 2.36 x 1.57 x 7.28 in (60 x 40 x 185 mm) 2400W PSU (P67252-B21): 2.89 x 1.57 x 7.28 in (73.5 x 40 x 185 mm)
Unit Weight	<ul style="list-style-type: none"> 1500W PSU (P67244-B21): 1.64 lbs. (0.75 kg) 2400W PSU (P67244-B21): 2.34 lbs. (1.06 kg)
Shipping Dimensions (WxHxD)	14.75 x 7.5 x 5.75 in (37.47 x 19.05 x 14.61 cm)
Shipping Weight	<ul style="list-style-type: none"> 1500W PSU (P67244-B21): 3.14 lbs. (1.43 kg) 2400W PSU (P67244-B21): 3.84 lbs. (1.75 kg)
Kit Contents	Ships with (1) Power supply unit, (1) IEC C13-C14 jumper cable -on P67244-B21- or (1) IEC C19-C20 jumper cable -on P67252-B21- and installation/safety guide
Power Supply Hold-Up time in the event of AC loss	
Condition: 100% rated output power (Time in Milliseconds – Minimum)	Non-Redundant (1+0) – 10ms Redundant (1+1) – 20ms
Condition: 50% rated output power (Time in Milliseconds – Minimum)	Non-Redundant (1+0) – 20ms Redundant (1+1) – 30ms



Technical Specifications

Environment-friendly Products and Approach - End-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life **product return, trade-in, and recycling programs**, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered, or disposed of responsibly.

The EU WEEE Directive (2012/19/EU) 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](#)**. 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.



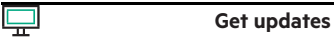
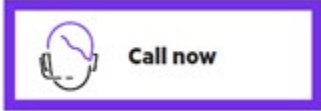
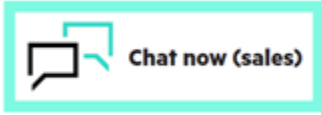
Summary of Changes

Date	Version History	Action	Description of Change
04-Nov-2024	Version 1	Created	New QuickSpecs



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