

Overview

New G2 features allow for greater management of power and environment in IT racks

HPE Enterprise Series G2 Metered and Switched PDUs are designed to work precisely with HPE Infrastructure and Compute solutions, providing a highly accurate (billing grade accuracy) power distribution solution with outlet-level metering and switching for your IT racks. Designed for use with HPE Standard, Advanced, and Enterprise racks (and compatible with other industry-standard server racks), HPE G2 Metered and Switched PDUs guaranty a compatible fit and reliable operation backed by a 3 year warranty. HPE G2 Metered & Switched PDUs are also rated for operating temperatures up to 60°C, adding an increased level of operational reliability for power distribution in your IT racks.

A major concern for IT administrators and facility managers is their ability to quickly diagnose and service power related problems in their IT racks. G2 Metered & Switched PDU features such as color-coded outlets and low-profile form factors allow for simple and quick access to IT equipment and power cables in the rear of the rack.

HPE G2 Metered & Switched PDU features are also directly focused on other pain points in the data center. 1Gb Ethernet alleviates the need to maintain older switch solutions that have been traditionally required for PDU network connectivity. High-density outlet configurations that provide up to 48 power outlets in a full-height vertical form factor allow for simple access to power in the rack while minimizing physical cable requirements. Support for up to eight sensors per PDU provides a cost-effective and exhaustive solution for monitoring the environmental elements (temperature, humidity, and leakage) in both the front and rear of the rack.

All G2 Metered & Switched PDU models feature support for HPE's IEC Locking Power Cords, a new supported option available for most HPE G2 PDUs. The IEC Locking Power Cords provide secure cable retention to both the PDU and target device, protecting against vibration during shipping and ensuring that cables are not dislodged during a service event. HPE's IEC Locking Power Cords provide a safe and secure solution against the common issues that lead to power-related downtime.

Why HPE Metered and Switched PDUs?

- HPE Foundation Care services purchased for server and storage products, such as extended warranties and premium support services, extend to our PDU products free of charge when purchased together.
- HPE guarantees 100% compatibility between its Rack and Power Infrastructure products and its industry-standard compute, storage, and networking solutions, backed with a 3-year warranty for all G2 Metered PDU models.
- HPE offers multiple Metered PDU form factors that promote efficient use of space in the rack and provide flexibility in how each PDU can be mounted and configured with cables.

Models

200-208V Input, Single Phase, North America/Japan

HPE G2 Metered/Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13, (4) C19/Vertical NA/JP PDU P9S15A

220-240V Input, Single Phase, International

HPE G2 Metered/Switched 7.3kVA/60309 3-Wire 32A/230V Outlets (20) C13, (4) C19/Vertical INTL PDU P9S18A

200-208V Input, Three Phase, North America/Japan

HPE G2 Metered/Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13, (6) C19/Vertical NA/JP PDU P9S19A

HPE G2 Metered/Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13, (12) C19/Vertical NA/JP PDU P9S21A

HPE G2 Metered/Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Out (12) C13, (12) C19/Vertical NA/JP PDU P9S22A

HPE G2 Metered/Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Out (36) C13, (12) C19/Vertical NA/JP PDU P9S23A

220-240V Input, Three Phase, International

HPE G2 Metered/Switched 3Ph 11kVA/60309 5-Wire 16A/230V Out (18) C13, (6) C19/Vertical INTL PDU P9S20A

HPE G2 Metered/Switched 3Ph 22kVA/60309 5-Wire 32A/230V Out (12) C13, (12) C19/Vertical INTL PDU P9S24A

HPE G2 Metered/Switched 3Ph 22kVA/60309 5-Wire 32A/230V Out (36) C13, (12) C19/Vertical INTL PDU P9S25A

Models

Single-Phase Full-Height Model (P9S15A, P9S18A)



Three-Phase Full-Height Model (P9S21A, P9S24A)



Three-Phase High-Density Outlet Model (P9S23A, P9S25A)



Key Features

- Power Metering and Management**
- All G2 HPE Metered & Switched PDUs meet IEC 62053-21, Class 1 standards for $\pm 1\%$ or better accuracy in outlet-level power metering of:
 - Amperage
 - Voltage
 - Wattage
 - Kilowatts per hour
 - OLED display provides local monitoring and alert indications
 - Remote PDU management and power monitoring supported through integrated web-based user interface, CLI, and third-party software applications supporting SNMP

- Compatibility**
- Designed specifically for use with HPE rack enclosures, but compatible with most 3rd party IT racks
 - Integrated web-based user interface compatible with IPv4/IPv6 and SNMPv1/SNMPv3

- Usability**
- Multiple full-height vertical models with a range of outlet configurations
 - Low-profile form factors ensure integrity of rear-rack keep-out zone for IT maintenance
 - Color-coded receptacles to easily distinguish between the different load segments/phases
 - Integrated cord retention for all IEC C19 and C13 receptacles
 - Optional dual-locking power cords securing both power connections
 - Local and remote firmware updates

- Security**
- Outlet-level on/off power switching that can be accessed locally and remotely
 - Local and LDAP security with multiple access levels
 - Support for HTTP, HTTPS, and SSH protocols
 - Configurable alarm thresholds for both power and environmental monitoring

HPE G2 Metered & Switched PDUs support multiple features that are unique to HPE and help to provide the best user experience. Information on these features is summarized below with additional information found online in HPE G2 Metered & Switched PDU User's Guide.

- Rated for High Operating Temperatures**
- Increasing IT densities and escalating operating costs have created a need for rack infrastructure that can operate reliably at higher operating temperatures. HPE G2 PDUs have been designed with high temperature-rated premium components and construction that support increased reliability levels at elevated temperatures. HPE G2 PDUs are rated for operation in temperatures up to 60°C (or 140°F) in the rear of the rack.

- IEC Locking Power Cords**
- HPE G2 PDU models support optional IEC Locking Power Cords with an integrated locking technology on both ends of the cable. HPE Locking Power Cord are available for both C13/14 and C19/20 power receptacles in multiple cable length options, and can be purchased in single or six-pack kits. One IEC Locking Power Cord has been included with each PDU model that supports either a C13 and/or C19 outlet.

- High-Density Vertical PDU Models**
- High-density Vertical PDU models provide 48 outlets in a full-height (42U) form factor. This density is achieved by placing the power receptacles on one side of the PDU and access to the circuit breakers on the opposite side without significantly impacting the height (profile) of the PDU. See the Model Matrix section for more information on high-density PDU models.

- Color-Coded Outlets**
- All HPE G2 PDU models now include color-coded outlets which are highly visible from the rear of the rack. The color-coding helps to easily and clearly identify outlets to simplify cabling and power phase balancing when configuring your IT equipment.

- 1Gb Ethernet Support**
- HPE is the first IT solutions company to standardize on 1Gb Ethernet for PDU network connectivity. This eliminates the need to maintain older switching solutions needed for the 10/100 connectivity provided by most other PDU manufacturers.

Key Features

Environmental Sensors

HPE G2 Metered & Switched PDU models include two environmental sensor ports (can be upgraded to six ports with the addition of up to two G2 PDU Sensor Port Hubs) that can monitor and record up to eight sensor measurements. Multiple sensor options are available providing the ability to monitor temperature, humidity, water leakage, and intrusion for each rack. Please review the Related Options section for a list of the options available.

Flexible Mounting

Most vertical HPE G2 PDU models support mounting on the back and both sides of the PDU using an industry-standard button and keyhole mounting system for easy drop-in installation. This provides a flexible mounting capability that allows power cables to be configured with outlets facing toward the center, back, or front of the rack.

HPE PDU Extension Bar Options

HPE PDU extension bar options help expand the availability of power in the rear of the rack. Each extension bar includes a locking input power cord that connects to the PDU and supports HPE's new IEC Locking Power Cords for C13/C14 and C19/C20 outlets. HPE PDU extension bars can be added to Horizontal and Vertical PDU models, with available C19 outlets, to add additional power outlets and expand access to power in the back of the rack when needed. Extension Bars mount directly to the frame of the rack in multiple locations allowing you the flexibility of placing access to power where it is needed most (see figure above). Multiple extension bar options are available to help you customize the outlet configurations you require extension bars are also compatible with previous generation PDU models that offer C20 outlets (locking feature only supported on new G2 PDU models). See the Related Options section for more information on G2 Extension Bar models.

3-Year Warranty

HPE G2 Metered PDU models are supported with a 3-year warranty. Additionally, the HPE Foundation Care Extension program provides additional support and services for your PDU models when purchased with HPE servers, storage, and networking solutions at no additional charge.

Additional information regarding worldwide limited warranty and technical support is available at:

<http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/index.aspx#.V-10xE3rvbq>

Related Options

Related Options

Extension Bars	HPE G2 IEC C20 Input/(8) C13 Expansion Outlets/PDU Extension Bar Kit	P9Q66A
	HPE G2 IEC C20 Input/(4) C13 (2) C19 Expansion Outlets/PDU Extension Bar Kit	P9Q67A
	HPE G2 IEC C20 Input/(7) 5-20R Expansion Outlets/PDU Extension Bar Kit	P9Q68A
	NOTE: All kits include 2 extension bars with a locking C19 input power cord (1.8m).	
IEC Locking Power Cords	HPE C13 - C14 WW 250V 10Amp 0.7m Black Locking Power Cord	Q0P67A
	HPE C13 - C14 WW 250V 10Amp 0.7m Black 6-pack Locking Power Cord	Q0Q02A
	HPE C13 - C14 WW 250V 10Amp 1.4m Black Locking Power Cord	Q0P68A
	HPE C13 - C14 WW 250V 10Amp 1.4m Black 6-pack Locking Power Cord	Q0Q03A
	HPE C13 - C14 WW 250V 10Amp 2m Black Locking Power Cord	Q0P69A
	HPE C13 - C14 WW 250V 10Amp 2m Black 6-pack Locking Power Cord	Q0Q04A
	HPE C13 - C14 WW 250V 10Amp 3m Black Locking Power Cord	Q0P70A
	HPE C13 - C14 WW 250V 10Amp 3m Black 6-pack Locking Power Cord	Q0Q05A
	HPE C19 - C20 WW 250V 16Amp 0.7m Black Locking Power Cord	Q0R19A
	HPE C19 - C20 WW 250V 16Amp 0.7m 6-pack Black Locking Power Cord	Q0R15A
	HPE C19 - C20 WW 250V 16Amp 1.2m Black Locking Power Cord	Q0P71A
	HPE C19 - C20 WW 250V 16Amp 1.2m 6-pack Black Locking Power Cord	Q0R16A
	HPE C19 - C20 WW 250V 16Amp 2m Black Locking Power Cord	Q0P72A
	HPE C19 - C20 WW 250V 16Amp 2m 6-pack Black Locking Power Cord	Q0R17A
	HPE C19 - C20 WW 250V 16Amp 2.5m Black Locking Power Cord	Q0P73A
	HPE C19 - C20 WW 250V 16Amp 2.5m 6-pack Black Locking Power Cord	Q0R18A
	NOTE: HPE Locking Power Cords are only supported on either C13/14 or C19/20 outlets using HPE G2 PDUs.	
IEC Standard Power Cords	HP C13 - C14 WW 250V 10A Gray 0.7m Jumper Cord	A0K03A
	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 10A Gray 1.37m Jumper Cord	A0K04A
	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 Flint Gray 2.0m Jumper Cord	AF573A
	HP C13 - C14 WW 250V 10Amp 2.5m Jumper Cord	142257-002
	HP C13 - C14 WW 250V 10Amp 3.0m Jumper Cord	142257-003
	HP C13 - C14 WW 250V 10A Gray 3.0m Jumper Cord	A0K06A
	HP C20 - C13 WW 250V 15Amp 2.0m Jumper Cord	AF590A
	HP C19 - C20 WW 250V 16Amp Flint Gray 1.20m Jumper Cord	AF575A
	HP C19 - C20 WW 250V 16Amp Flint Gray 2.0m Jumper Cord	AF574A
	HP C19 - C20 WW 250V 16Amp 2.5m Jumper Cord	295633-B22
	HP 200-250V 10A C15 to C14 .76m Jumper Cable	E7807A
Country-Specific Power Cords	HP C13 - NEMA 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
	HP C13 - NEMA 5-15P TH/PH 250V 10Amp 1.83m Power Cord	AF559A
	HP C19 - CEE-VII EU 250V 16Amp 3.6m Power Cord	AF576A
	HP C19 - AS3112-3 AU/NZ 250V 15Amp 3.6m Power Cord	AF577A
	HP C19 - SABS-164 ZA 250V 16Amp 3.6m Power Cord	AF579A
	HP C19 - CEI-23-50 IT/CL 250V 16Amp 3.6m Power Cord	AF580A
	HP C19 - IEC-309 DK/SE/AR 250V 16Amp 3.6m Power Cord	AF581A

Related Options

HP C19 - IS-1293 IN/PK/BD 250V 16Amp 2.5m Power Cord	AF582A
HP C19 - ISI-32 IL 250V 16Amp 2.5m Power Cord	AF583A
HP C19 - GB-1002 CN 250V 16Amp 2.5m Power Cord	AF584A
HP C19 - NEMA 5-15P TH-PH 125V 15Amp 3.6m Power Cord	AF586A
HP C19 - NBR-14136 BR 250V 16Amp 2.5m Power Cord	AF592A
HP C19 - NEMA 5-15 US/CA 125V 15Amp 3.6m Power Cord	235603-001
HP C19 - NEMA L6-20P NA/JP 250V 20Amp High Voltage 3.6m Power Cord	AF593A
HP C19 - BS-1363/A UK/HK/SG 250V 13Amp 3.6m Power Cord	359615-031
HP C19 - NEMA 5-20P US/CA 125V 20Amp 4.5m Power Cord	E7802A
HP 240 VAC 4.5M Unterminated End NA Power Cord	E7806A

HPE Mounting Brackets

HPE Vertical PDU 10K G2 Mounting Kit	H6L32A
NOTE: This kit allows for vertical HPE G2 PDU models to be mounted in HPE 10000 G2 series racks and in the HPE Standard Series rack.	

Environmental Sensors

HPE G2 Metered PDUs include 2 physical sensor ports and can monitor and record up to eight sensor measurements. Data collected by each sensor can be viewed and managed through the integrated graphical user interface (GUI), or by third-party applications that communicate through SNMP or through a Redfish supported API. Consult the HPE G2 Metered PDU User Guide for more information on use with third-party software applications.	
HPE G2 PDU Environmental Temperature Sensor	P9T00A
NOTE: Requires one input port and monitor/records one sensor measurement.	
HPE G2 PDU Environmental Temperature and Humidity Sensor	P9T01A
NOTE: Requires one input port and monitors/records two sensor measurements.	
HPE G2 PDU Environmental 3-Temperature and 1-Humidity Sensor	P9T02A
NOTE: Requires one input port and monitors/records four sensor measurements.	
HPE G2 PDU Open/Close Door Sensor	P9T03A
NOTE: Requires two input ports and monitors/records two sensor measurements.	
HPE G2 PDU Leak Detection Sensor	P9T04A
NOTE: Requires one input port and monitors/records one sensor measurement. Kit covers up to six linear meters and can be expanded to cover up to thirty linear meters with the addition of up to four HPE G2 PDU Leak Detection Sensor Extension Kits (P9T08A).	
HPE G2 PDU Sensor Port Hub	P9T07A
NOTE: This is an adapter that expands a single physical sensor port into three physical sensor ports.	
HPE G2 PDU Leak Detection Sensor Extension Kit	P9T08A
NOTE: Leak Detection Sensor (P9T04A) must be purchased separately to use in conjunction with this kit. Up to four Extension Kits can be added to a single Leak Detection Sensor to cover up to a maximum of thirty linear meters.	

Model Matrix – Input Power

Mounting options for Vertical PDU models in HPE Advanced and Enterprise racks (1075mm depth)							
Model	W x H x D (inches)	Unit Weight (lbs.)	Vertical Height	Maximum PDUs per Side of Rack			
				22U	36U	42U	48U
P9S15A	2.047 x 68.898 x 2.087	17.6	Full-Height	-	-	2	2
P9S18A	2.047 x 68.898 x 2.087	15.0	Full-Height	-	-	2	2
P9S19A	2.047 x 68.898 x 2.087	16.2	Full-Height	-	-	2	2
P9S20A	2.047 x 68.898 x 2.087	12.5	Full-Height	-	-	2	2
P9S21A	2.047 x 68.898 x 2.953	25.2	Full-Height	-	-	1	1
P9S22A	2.047 x 68.898 x 2.953	25.6	Full-Height	-	-	2	2
P9S23A*	2.047 x 71.654 x 4.409	32.0	Full-Height	-	-	2	2
P9S24A	2.047 x 68.898 x 2.953	20.2	Full-Height	-	-	2	2
P9S25A*	2.047 x 71.654 x 4.409	24.2	Full-Height	-	-	1	1

* HPE high density model mounts on its side with outlets facing the back of the rack

NOTE: HPE G2 Advanced and Enterprise 1200mm deep racks include an extra set (2) of PDU trays in the rear of the rack enabling support of up to 2x the number of PDUs listed above for 1075mm deep racks.

Model Matrix – Input Power						
Model	Region	Phase & Nominal Voltage	Input Amps	Circuit Breaker	Input Plug Type	Input Cord Length
P9S15A	NA/JP	1-ph, 208V	24A	(2) 2-pole 20A	L6-30P	10'
P9S18A	INTL	1-ph, 230V	32A	(2) 1-pole 16A	IEC 32A, 1ph	10'
P9S19A	NA/JP	3-ph, 208V	24A	(3) 2-pole 20A	L15-30P	10'
P9S20A	INTL	3-ph, 200-240V 3-ph, 346-415V	16A	none	IEC 16A, 3ph	10'
P9S21A	NA/JP	3-ph, 208V	40A	(6) 2-pole 20A	CS8365C	10'
P9S22A	NA/JP	3-ph, 208V	48A	(6) 2-pole 20A	IEC 60A, 3ph	10'
P9S23A	NA/JP	3-ph, 208V	48A	(6) 2-pole 20A	IEC 60A, 3ph	10'
P9S24A	INTL	3-ph, 200-240V 3-ph, 346-415V	32A	(6) 1-pole 16A	IEC 32A, 3ph	10'
P9S25A	INTL	3-ph, 200-240V 3-ph, 346-415V	32A	(6) 1-pole 16A	IEC 32A, 3ph	10'

NOTE: All Input Circuit Ratings for NA/JP models have been de-rated according to NEC requirements.

Nominal Input Voltage Ratings used for calculating output power are as follows:

- 200 – 208V: 208V
- 220 – 240V: 230V
- 200 – 240V/346 – 415V: 230V

Model Matrix – Output Power

Model Matrix – Output Power						
Model	Region	kVA	Output Voltage Range	Output Receptacles	Support Extension Bar Options	Support Locking Power Cord Options
P9S15A	NA/JP	4.9	200-208V	(20)C13, (4)C19	✓	✓
P9S18A	INTL	7.3	220-240V	(20)C13, (4)C19	✓	✓
P9S19A	NA/JP	8.6	200-208V	(18)C13, (6)C19	✓	✓
P9S20A	INTL	11	220-240V	(18)C13, (6)C19	✓	✓
P9S21A	NA/JP	14.4	200-208V	(12)C13, (12)C19	✓	✓
P9S22A	NA/JP	17.3	200-208V	(12)C13, (12)C19	✓	✓
P9S23A	NA/JP	17.3	200-208V	(36)C13, (12)C19	✓	✓
P9S24A	INTL	22	220-240V	(12)C13, (12)C19	✓	✓
P9S25A	INTL	22	220-240V	(36)C13, (12)C19	✓	✓

PDU Plugs

Voltage	Amps	# Wires	Plug Name	Sample Plug Image (color may vary by manufacturer)	
				Receptacle (R)	Plug (P)
100-125 V Single Phase	15 A	3	NEMA 5-15		
	20 A	3	NEMA 5-20		
	30 A	3	NEMA L5-30		
200-240 V Single Phase	20 A	3	IEC C20		
	30 A	3	NEMA L6-30		
	32 A	3	IEC 309 32A		
	50 A	3	CS8265C		
	63 A	3	IEC 309 63A		
200 - 208 V NA/JPN Three Phase	30 A	5	NEMA L15-30		
	30 A	5	NEMA L21-30		
	50 A	4	CS8365C		
	60 A	4	IEC 309 60A		
200 - 240 V 400 - 415 V INTL Three Phase	16 A	5	IEC 309 16 A		
	32 A	5	IEC 309 32 A		

Technical Specifications

Operating Temperature	50° to 140° F (10° to 60° C)
Operating Relative Humidity (%)	10% to 90%
Operating Elevation	0 to 10,000 ft. (0 to 3000 m)
Storage Temperature	-4° to 140° F (-20° to 60° C)
Storage Relative Humidity (%)	5% to 95%
Storage Elevation	0 to 30,000 ft. (0 to 9144 m)
Conformance Standards	UL or CSA, CB Test+ FCC, ICES, VCCI - NA/JPN models CE, DEMKO, EAC, KC+KCC, ACMA, Ukraine - INTL models UL or CSA, CB Test+CE, DEMKO, EAC, FCC, ICES, KCC, KC, VCCI ACMA, Ukraine - WW models
Kit Contents	All G2 Metered & Switched PDU models ship with: <ul style="list-style-type: none">• Mounting brackets/hardware• Tie wraps• HPE IEC Locking Power Cord sample (for models with either C13 and/or C19 outlets)• Read me first card

Environment-friendly Products and Approach	End-of-life Management and Recycling	<p>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 in a responsible manner.</p> <p>http://www.hpe.com/recycle</p> <p>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. 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.</p> <p>http://www.hpe.com/recycle</p>
--	--------------------------------------	---

Summary of Changes

Date	Version History	Action	Description of Change
27-Mar-2017	Version 1	Added	New QuickSpecs.



Sign up for updates



© Copyright 2017 Hewlett Packard Enterprise Development Company, L.P.
The information contained herein is subject to change without notice.

The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

a00002910 - 15865 - Worldwide - V1 - 27-March-2017