

HPE Smart Storage Batteries QuickSpecs

Centralized lithium-ion backup protecting cache and NVDIMMs.

The HPE Smart Storage Battery is a lithium-ion, low-halogen centralized backup source and is required to back up the write cache content onto flash memory on the HPE Smart Array Gen9 and newer storage controllers in case of an unplanned server power loss. The battery is also the backup power source for HPE NVDIMMs and allows any data in flight on the DRAM to be moved to the non-volatile NAND flash. Only one battery is required per server as it can support multiple devices.

Overview

HPE Smart Storage Batteries

HPE Smart Array Hybrid Capacitors

The HPE Smart Storage Hybrid Capacitor is a battery-free technology for power storage that provides data protection for cached data while eliminating costs and environmental impact of lithium-ion batteries.

For those running HPE Gen10 servers, the HPE Smart Hybrid Capacitor is a centralized backup power source supporting multiple controllers where the NAND flash memory on HPE Smart Array Performance Class controllers and the HPE Smart Hybrid Capacitor work together to save cached data in the event of unplanned server power loss.

When the hybrid capacitor module detects power loss, it keeps critical parts of the controller active long enough to allow data to be copied from the onboard controller cache to the flash memory.

Please note, although the hybrid capacitor module is mechanically compatible with the 96W Smart Storage Battery (P01366-B21 and P01367-B21), the module cannot be used in combination with the Smart Storage Battery. In most cases, only a single Smart Storage Battery or a single Smart Hybrid Capacitor can be used per system. For details, see the platform QuickSpecs for your server.

Models

Batteries

HPE 96W Smart Storage Lithium-ion Assembled Battery with 145mm Cable Kit	P01366-B21
HPE 96W Smart Storage Lithium-ion Assembled Battery with 260mm Cable Kit	P01367-B21
HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P68039-B21
HPE 96W Smart Storage Lithium-ion Battery with 260mm Cable Kit	P68040-B21

Hybrid Capacitors

HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21
HPE Smart Storage Hybrid Capacitor with 260mm Cable Kit	P02381-B21
HPE 16W Smart Hybrid Capacitor with 145mm Cable	P65038-B21
HPE 16W Smart Hybrid Capacitor with 260mm Cable	P65042-B21

Notes: The HPE Smart Storage Hybrid Capacitor is only supported on Gen10 servers or later.

Before installing the HPE Smart Storage Hybrid Capacitor, verify that the system BIOS meets the minimum firmware requirements to support the hybrid capacitor module.

Notes: The 16W Capacitors are replacements for P02377-B21 and P02381-B21 and support the same servers. 16W spare replacements will also be supported if using the previous capacitors.

Notes: P68039-B21 and P68040-B21 are for Standalone BTO orders only. P01366-B21 and P01367-B21 are for CTO and factory integrated orders only.

HPE Smart Storage Battery Key Features

- Supports HPE Smart Array P-class controllers and HPE NVDIMMs.
- Supports up to 24 devices.
- Low halogen.
- Lithium-ion.

HPE Hybrid Capacitor Key Features

- High reliability, even in higher temperature environments.
- No batteries, not a Class 9 Dangerous Good product (no hazardous material disposal, no battery shipping requirements).
- A single module supports up to three (3) Smart Array Controllers.
- Charges to full capacity in ~3 minutes after discharge.
- Capable of operating in higher temperatures with no impact to service life.

Standard Features

HPE Smart Storage Battery	
Pack Power	7.2 Volts - 10.8 Watt-hour
Shelf Life	Stored at 25°C, shelf life is 15 months (26-30% State of Charge) Stored at 45°C, shelf life is 6 months (26-30% SOC)
Dimension	139 mm (length) x 19.5 mm (width) x 29 mm (height)
Server Support	Please see platform QuickSpecs for server support.
HPE Hybrid Capacitor	
Voltage	2.5-3.6v
Discharge/charge	Full capacity in approximately 3 minutes after discharge
Maintenance	Maintenance-free
Operating Temperature	10°C to 60°C operating environment
Storage Temperature	10°C to 35°C, less than 65% relative humidity
Notes: Sudden temperature changes or high humidity may cause deterioration of its characteristics.	
Shelf Life	When stored at 10 ~ 35°C and less than 65% relative humidity, shelf life is 20 months minimum. (100% State of Charge)
Relative Humidity	65% or less (non-condensing) for storage
Operating Altitude	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).
Non-operating Altitude	Up to 15,240 m (50,000 feet) above sea level
Leakage Current	<2.0 uA in Ship/Storage mode
Safety Conformance or Certifications	UL, CB, KCC, CE
EMC (Class A)	FCC 47 CFR Part 15 Subpart B and AS/NZS CISPR 32
Unit Dimensions (WxDxH)	5.46" (138.65mm)x1.13"(28.8mm)x0.76"(19.36mm)
Unit Weight	P02377-B21 - 85g (+5/-10) P02381-B21 - 90g (+5/-10)
Firmware Support Minimum requirements	Firmware Support Minimum requirements HPE servers with Intel processors (BIOS) Min version: 2.00 HPE servers with AMD processors (BIOS) Min version: 1.40 HPE Smart Array SR controllers (firmware) Min version: 1.90 HPE Smart Array MR controllers (firmware) Min version: 24.23.0-0041
Server Support	Please see platform QuickSpecs for server support.

HPE 96W Smart Storage Battery or Smart Storage Hybrid Capacitor?		
	96W Battery	Smart Storage Hybrid Capacitor
Gen10 or newer	Yes	Yes
Controller Support	Yes	Yes
NVDIMM Support	Yes	No

Max. Device Support	Up to 24 NVDIMM and/or Smart Array Controllers	Up to 3 HPE Smart Array Controllers
Discharge to > Charge	Hours	Minutes
Operating Environments	Climate controlled environments	Higher temperature environments such as NEBS, ASHRAE, or Telco
Class 9 Dangerous Goods	Yes	No
Notes: The HPE Smart Storage Hybrid Capacitor is only supported on Gen10 servers or newer. Before installing the hybrid capacitor module, verify that the system BIOS meets the minimum firmware requirements to support the capacitor pack. Not for use with server that use NVDIMMs. For more information on updating firmware, see the Intelligent Provisioning User Guide on the Hewlett Packard Enterprise website (http://www.hpe.com/info/intelligentprovisioning/docs). To get the latest firmware and software updates, download the Service Pack for ProLiant (SPP) from the Hewlett Packard Enterprise website (http://www.hpe.com/servers/spp/download).		

Material Safety Data Sheet

Hewlett Packard Enterprise provides battery Material Safety Data Sheets (MSDS) and other battery product information sheets as a service to its customers. For more information please visit:

<https://www.hpe.com/us/en/about/environment/msds-specs.html#.WIDLu2bruUk>

Warranty

The warranty for this device is 3-year parts only.

Warranty Upgrade Options

- Response: Upgrade on-site response from next business day to same day 4 hours.
- Coverage: Extend hours of coverage from 9 hours x 5 days to 24 hours x 7 days.
- Duration: Select duration of coverage for a period of 1, 3, or 5 years.

Notes: Warranty upgrade options can come in the form of HPE Services, which are sold at the HPE System level this product attaches to.

Service and Support

For the most up-to-date information on HPE Services, please refer to the [HPE Services - Supplemental QuickSpecs](#), which provides a comprehensive and regularly updated overview of available services.

Related Options

HPE Smart Array SR SmartCache

Single-Server License

Used to purchase a license for one server.

Contains one license per server, a printed license entitlement certificate, end user license agreement, and license key installation card delivered via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HPE Software Technical Support Services.

Flexible-Quantity License

Used to purchase multiple licenses with a single activation key.

Contains license(s) for a customer defined quantity of servers, a license entitlement certificate for the quantity of licenses purchased, end user license agreement, and license key installation card delivered via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HPE Software Technical Support Services.

Flexible-Quantity Electronic License

Used to purchase multiple licenses with a single activation key.

Contains license(s) for a customer defined quantity of servers, a license entitlement certificate for the quantity of licenses purchased, end user license agreement, and license key installation information delivered via email. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HPE Software Technical Support Services.

Notes: For more information please visit: <http://www.hpe.com/servers/smartcache>.

HPE Smart Array SR Secure Encryption

Summary

Date	Version History	Action	Description of Change
08-Sep-2026	Version 12	Changed	Overview section was updated.
01-Jun-2026	Version 11	Changed	Standard Features section was updated.
		Added	HPE Hybrid Capacitor specs.
06-Apr-2026	Version 10	Changed	Overview section was updated.
02-Mar-2026	Version 9	Changed	Overview and Standard Features sections were updated.
04-Dec-2023	Version 8	Changed	Service and Support section was updated
06-Mar-2023	Version 7	Changed	Merged Batteries and Hybrid Capacitors
16-Jan-2023	Version 6	Changed	Obsolete SKUs were removed
04-Oct-2021	Version 5	Changed	Service and Support Section was updated.
18-Jan-2021	Version 4	Changed	Related Options section was updated.
04-Mar-2019	Version 3	Changed	Related Options section was updated.
05-Feb-2018	Version 2	Added	Added 12W Battery SKUs and Gen9 compatibility
04-Dec-2017	Version 1	Added	New QuickSpecs.

Copyright

[Have feedback on QuickSpecs? We're listening](#)

[Chat now](#)

© Copyright 2026 Hewlett Packard Enterprise Development LP. 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.

a00028553enw - 15928 - Worldwide - V12 - 08-September-2026
HEWLETT PACKARD ENTERPRISE
HPE.com

