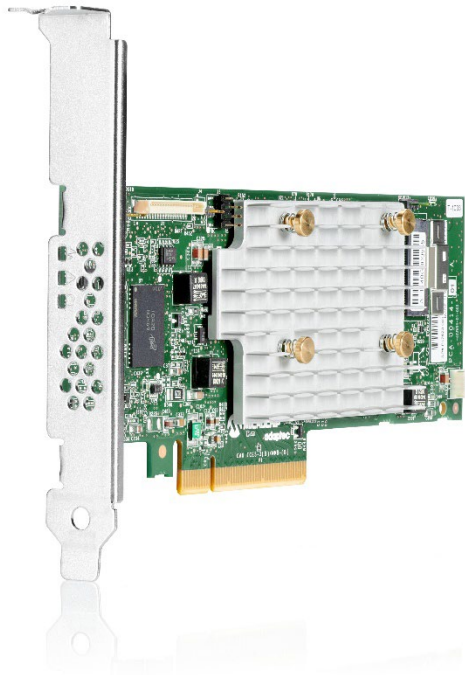


Overview

HPE SR Gen11 Storage Controllers

A versatile, simplified, and flexible choice for data centers. HPE offers a choice of HPE SR Gen11 storage controllers based on Microchip® SmartRAID® firmware using SmartROC 3100 and 3200 delivering quality, performance, and security for mission-critical applications.



Standard PCI HH/HL

SR932 Gen11 Key Features

- Tri-mode (24G SAS, 6G SATA, 16G NVMe) Drive Support
- 16-lane (x16) (SR932i-p) PCIe 4.0 host interface
- DMTF Security Protection Data Model (SPDM) supports certificate-based authentication with HPE iLO6.
- Hardware Root of Trust (HWRoT) protects against malicious firmware
- Standard PCI HH/HL and OCP NIC 3.0 form-factors
- Mixed Mode (RAID and/or JBOD) supporting RAID 0,1,5,6,10,50,60,1T/10T
- 144b 8GB DRAM (SR932) supporting read and write cache (FBWC)
- Smart Cache Included
- Data-At-Rest Encryption support
 - Controller-Based Encryption (CBE) supporting Local (LKM) and Remote (RKM) key management
 - Self-Encrypting Drive (SED) supporting Host (HKM) key management
- Support for 32 (SR932) drives without expander
- Support for 64 volumes
- Support for HPE Smart Storage Battery and Hybrid Capacitor (Optional)



Overview

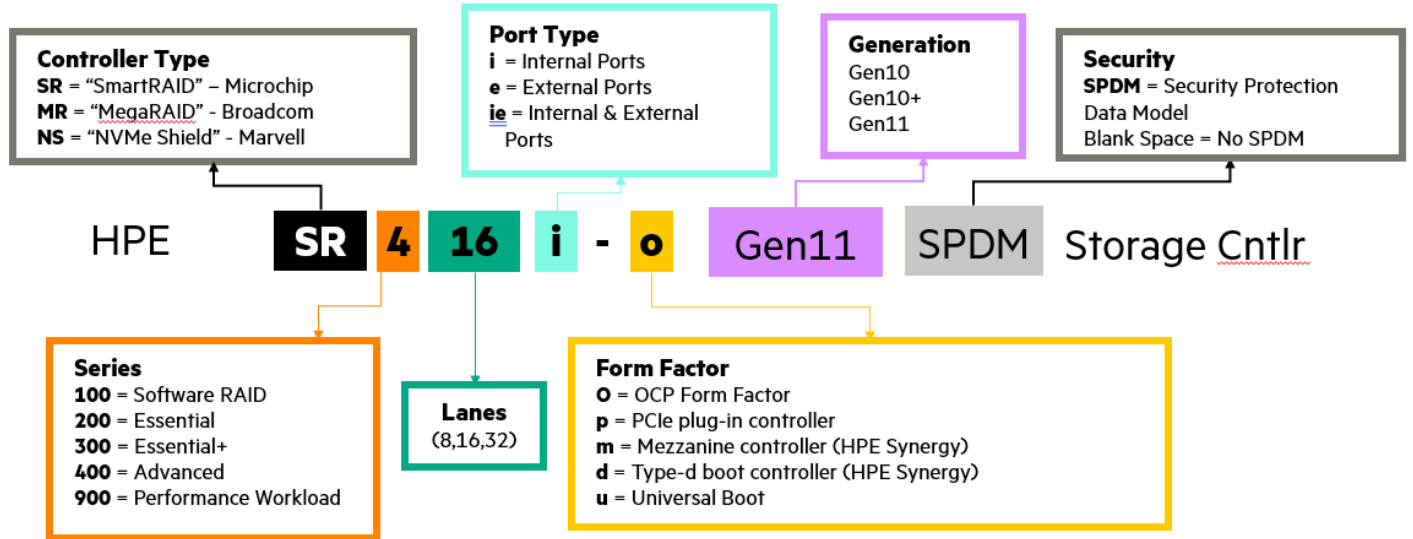
Models

HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller
 HPE SR416ie-m Gen11 x16 Lanes 4GB Cache SPDM Mezzanine Storage Controller

P47184-B21
 P39959-B21

Naming Framework

The Gen11 controller naming framework is illustrated below to help simplify controller identification.



Standard Features

Description	HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller
HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller	P47184-B21
Ports	4x8 SlimSAS
Storage Lanes	X32
Form Factor	PCIe FH/HL
ASIC	Microchip SmartROC 3200pe
Host Interface	X16 PCIe 4.0
Cache Size (FBWC)	8GB
Read Ahead Caching	✓
Write-back Caching	✓
Storage Protocol	6G SATA, 24G SAS, 16G NVMe
Max Drives (no expander)	32
Max Drives (with expander)	238
Max Volumes	64
RAID:	0/1/5/6/10/50/60/1T/10T
Mixed Mode: (RAID & HBA)	✓

Feature	Description
SSD Accelerator	Smart Path
Array Features	<ul style="list-style-type: none"> • Expand Array • Move Drives • Shrink Array • Spare Management (dedicated and shared)
Volume Features	<ul style="list-style-type: none"> • Extend Logical Drive • Background Surface Scan • Instant Secure Erase • Migrate RAID/Stripe Size • Modifying Cache Write Policy • Move Logical Drive • Re-enable Failed Logical Drive
Other Features	<ul style="list-style-type: none"> • Dynamic caching algorithm • Hot-plug drive support • Dynamic sector repair • SmartCache • Bootable array support through UEFI BIOS • Smart PQI driver with multiple queues and MSI-X support • Secure boot support for the UEFI BIOS • Smart Storage Administrator GUI and CLI utilities support • DRAM ECC detects and corrects data bit errors. • Redundant ROM Image, protects against firmware corruption • SSD Wear Gauge • SMART Predictive Drive Failure
HPE OneView Support	Managed Mode
Kit contents	Includes storage controller, information card, warranty statement, and storage controller battery cable.



Standard Features

Optional Accessories for SR Storage Controllers

Energy pack Options Sold Separately

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21
HPE 96W Smart Storage Lithium-ion Battery with 260mm Cable Kit	P01367-B21
HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21
HPE Smart Storage Hybrid Capacitor with 260mm Cable Kit	P02381-B21

Notes:

- An HPE Smart Storage energy pack is optional
 - Moving volumes or SED locked drives between SR and MR controllers is not supported.
-

Warranty

The warranty for this device is 3 years 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.

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

Operating System Support

- Microsoft Windows Server
- Red Hat Enterprise Linux (RHEL)
- SUSE Linux Enterprise Server (SLES)
- VMware ESXi
- Canonical Ubuntu

Notes: HPE SR controllers are supported by the server operating system. For more information on HPE's server operating systems and virtualization software, please visit: <http://www.hpe.com/info/ossupport>

Storage Management Software Suite

HPE SR Gen11 Storage Controllers

- Smart Storage Administrator (SSA) GUI
 - Smart Storage Administrator (SSA) CLI
 - Smart Storage Administrator (SSA) Scripting
 - HPE Intelligent Provisioning
 - UEFI System Utilities
 - iLO Redfish
-



Standard Features

Additional Information

HPE SR Gen11 Storage Controllers

For additional information on the features for the HPE SR Gen11 Storage Controllers, please see the HPE SR Gen11 User Guide at: <https://www.hpe.com/support/sr-gen11-ug>

Also see storage controller management overview at: <https://www.hpe.com/info/scmo>

And storage encryption overview at: <https://www.hpe.com/info/sceo>

Smart Storage Administrator (SSA) Management Tools

SSA GUI Management Tool

The Smart Storage Administrator is a Graphical User Interface (GUI) that enables you to monitor, maintain, troubleshoot, and configure SmartRAID (SR) storage controllers. The GUI displays the status of the controller, volumes, and drives. Additionally the tool offers an Array Diagnostic Report, and a SmartSSD Wear Gauge Report.

For more information visit: <https://www.hpe.com/support/SSA-UG>

SSA CLI Management Tool

The Smart Storage Administrator Command Line Interface (SSA CLI) tool is the command line management software designed for the SR product line. The SSACLI tool is designed to be easy to use, consistent, and easy to script.

For more information visit: <https://www.hpe.com/support/SSACLI-UG>

SSA Scripting Management Tool

The Smart Storage Administrator Scripting (SSASCRIPITING) is a command line scripting tool designed for the SR product line. The SSASCRIPITING tool is designed to capture, create, and clone the current SmartRAID configuration using INI or XML format.

For more information visit: <https://www.hpe.com/support/SSACLI-UG>

Know your choices when it comes to HPE storage controller management tools.

	MR Gen11 Controllers	SR Gen11 Controllers
Type	MegaRAID	SmartRAID
GUI Management Tool	✓ MR Storage Administrator	✓ Smart Storage Administrator
CLI Management Tool	✓ StorCLI	✓ SSA CLI / SSASCRIPITING



Standard Features

HPE SR3Secure Encryption (optional license)

HPE SR Secure Encryption is a controller-based data encryption solution that protects sensitive, mission critical data. This is an enterprise-class encryption solution for data-at-rest on any volume attached to the SmartRAID controllers including data in the controller cache. Secure Encryption requires an optional license per server.

The solution is available for both local (LKM) and remote (RKM) key management. LKM is focused on single server deployment where there is one key per controller that is managed by the user. RKM is for enterprise-wide deployments from just a few servers to thousands of servers.

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU

Q2F26AAE

For more information please visit:

- <https://www.hpe.com/psnow/doc/c04318075>
 - <https://www.hpe.com/servers/secureencryption>
 - <https://www.hpe.com/info/SCEO>
 - <https://www.hpe.com/support/SR-Gen11-UG>
-



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, taking into account 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, taking into account 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 services 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

www.hpe.com/services



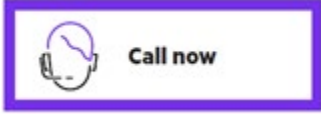
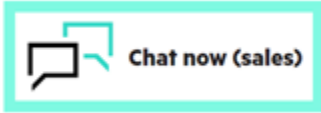
Summary of Changes

Date	Version History	Action	Description of Change
04-Dec-2023	Version 3	Changed	Service and Support Section was Updated
05-Jun-2023	Version 2	Changed	Standard Features Section was updated
05-Dec-2022	Version 1	New	New QuickSpecs



Copyright

Make the right purchase decision.
Contact our presales specialists.



© Copyright 2023 Hewlett Packard Enterprise Development 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.

a50004312enw - 16916 - Worldwide - V3 - 04-December-2023