RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

For latest information on this product please use **HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers QuickSpecs**

HPE Smart Array E208e-p SR Gen10 Controller

The HPE Smart Array E208e-p SR Gen10 Controller, supporting 12Gb/s SAS and PCIe 3.0, is an ideal cost-effective solution for RAID 0, 1, 5, and 10 and Software Defined Storage solutions on externally attached drives. This controller operates in Mixed Mode which combines RAID and HBA operations simultaneously. It has eight external SAS lanes, allowing connection to externally attached SAS or SATA drives, and provides enterprise-class reliability, security and efficiency needed to address your evolving data storage needs. This controller offers enhanced security by encrypting data-at-rest on any drive with HPE Smart Array SR Secure Encryption.

Models

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21

NOTE: Kit contents include E208e-p controller, high profile bracket, and low profile bracket

Standard Features

Key Features	Storage interface (SAS/SATA) 8 SAS lanes across 2 x4 external Mini-SAS HD ports 12Gb/s SAS, 6Gb/s SATA technology Mix-and-match SAS and SATA drives to the same controller Support for SAS tape drives PCI Express 3.0 x8 link RAID 0, 1, 5, 10 Mixed Mode (RAID logic drives and HBA physical drives simultaneously) Legacy and UEFI boot operation UEFI System Utilities (storage configuration) Up to 238 physical drives Up to 64 logical drives Supports up to 8 daisy chained HPE D3610 Disk Enclosure and HPE D3710 Disk Enclosure in dual domain configuration HPE Smart Array SR Secure Encryption (optional license) HPE SSD Smart Path Rapid Parity Initialization (RPI) Rapid rebuild Drive Sanitize Performance Optimization-Degraded Reads and Read Coalescing Power efficiency Seamless upgrades from HPE Smart Array Software RAID Seamless upgrades to HPE Smart Array P-class Controllers
Ports	External: 8 SAS/SATA lanes across 2 x4 external Mini-SAS HD ports
Form Factor	PCIe Plug-in Controller (occupies a PCIe expansion slot)
Performance	12Gb/s SAS (1200 MB/s theoretical bandwidth per physical lane) 6Gb/s SATA (600 MB/s theoretical bandwidth per physical lane) PCI Express 3.0 x8 link width
Fault Prevention	The following features offer detection of possible failures before they occur, allowing preventive action to be taken: Predictive drive failure detects possible drive failure before it occurs, allowing replacement of the component before failure occurs. Background surface scan checks drives during inactive periods and automatically remaps bad sectors, ensuring data integrity. HPE SmartSSD Wear Gauge reports the amount of lifetime remaining on your SSDs.
Fault Recovery	Minimizes downtime, reconstructs data, and facilitates a quick recovery from drive failure Recovery ROM: This feature protects the user from a firmware image corruption by storing a redundant copy of the firmware image. If the active firmware image becomes corrupt, the controller will use the redundant firmware image and continue operating. On-Line Spares: There is no limit to the number of spare drives that can be installed prior to drive failure. If a failure occurs, recovery begins with an On-Line Spare and data is reconstructed automatically. DRAM ECC detects and corrects data bit errors.

Standard Features

HPE SSD Smart Path

The HPE SSD Smart Path feature included in the Smart Array software stack improves Solid State Disk (SSD) read performance by up to 4x. HPE SSD Smart Path chooses the optimum path to the SSD and accelerates reads for all RAID levels and RAID 0 writes.

HPE Smart Array SR Secure Encryption (optional license)

HPE Smart Array SR Secure Encryption is a Smart Array controller-based data encryption solution that protects sensitive, mission critical data. This is an enterprise-class encryption solution for data-at-rest on any drives attached to the HPE Smart Array controllers including data on the controller cache. Secure Encryption requires an optional license per server (see Related Options for more information on the license).

The solution is available for both local and remote key management mode deployments. Local Key Management Mode is focused on single server deployment where there is one Master key per controller that is managed by the user. Remote Key Management Mode is for enterprise wide deployments from just a few servers to thousands of servers.

For more information on please visit: **http://www.hpe.com/servers/secureencryption**

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.

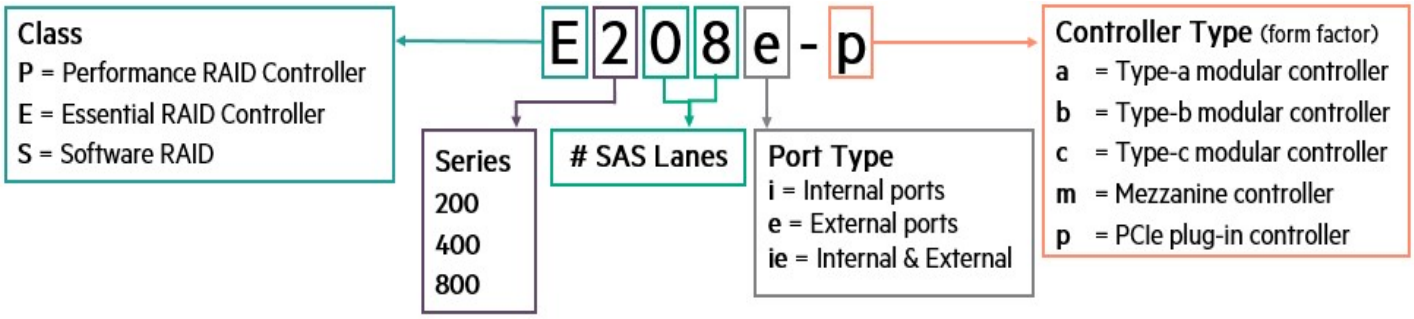
Coverage - Extend hours of coverage from 9 hours x 5 days to 24 hours x 7 days.

Duration - Select duration of coverage for a period of 1, 3, or 5 years.

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

Naming Framework

The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the **HPE Smart Array Gen10 Controllers Data Sheet**.



Compatibility

Server Support	HPE ProLiant DL360 Gen10 HPE ProLiant DL380 Gen10 HPE ProLiant DL385 Gen10 HPE ProLiant DL560 Gen10 HPE ProLiant DL580 Gen10 HPE ProLiant ML110 Gen10 HPE ProLiant ML350 Gen10 ProLiant XL170r Gen10 HPE ProLiant XL190r Gen10 HPE ProLiant XL230K Gen10
Disk Enclosure Support	HPE D3610 Disk Enclosure HPE D3710 Disk Enclosure HPE D6020 Disk Enclosure HPE MSA 1040 SAN Storage HPE MSA 1050 SAN Storage HPE MSA 2040 SAN Storage HPE MSA 2050 SAN Storage
Operating Systems	Microsoft Windows Server Microsoft Windows Hyper-V Server VMware vSphere Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) CentOS ClearOS **NOTE:** HPE Smart Array 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 Smart Storage Administrator (SSA) GUI HPE Smart Storage Administrator (SSA) CLI HPE Smart Storage Administrator (SSA) Scripting HPE Intelligent Provisioning UEFI System Utilities (storage configuration) UEFI Storage RESTful **NOTE:** For additional information see the HPE Smart Array SR Gen10 Configuration Guide at: **http://www.hpe.com/info/SmartArrayGen10-docs**

Service and Support

HPE Support Services

Protect your business beyond warranty with HPE Support Services
HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

Recommended Support

HPE Proactive Care* with 24x7 coverage, three year Support Service
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.
https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

HPE Proactive Care* with 6 hour call-to-repair commitment, three year Support Service
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years' proactive reporting and advice with our highest level of hardware support - HPE's 24x7, six hour hardware call-to-repair. HPE is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.
https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

NOTE: *HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables.

HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment.
http://www.hpe.com/ww/learn

HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers.
Learn more **http://www.hpe.com/support/hpesc**

HPE's 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 HPE warranty, HPE Support Service or HPE contractual support agreement.

NOTE: *HPE Support Center Mobile App is subject to local availability

Parts and Materials

Hewlett Packard Enterprise 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.

Service and Support

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.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Related Services

HPE Server Hardware Installation
Provides for the basic hardware installation of HPE branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

HPE Installation and Startup Service provides for the installation and startup of HPE technology including BladeSystems, C-Class enclosure, HPE ProLiant c-Class and Integrity server blades, storage blades, SAN switch blades, HPE Virtual Connect modules (Ethernet and Fibre Channel), Ethernet network interconnects, and InfiniBand, as well as the installation of one supported operating system type (Windows® or Linux).

NOTE: The Smart Array controller is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support **HERE**.

For more information

Visit the Hewlett Packard Enterprise Service and Support **website**.

HPE Smart Array Supporting Documents

For additional support documents, including the Smart Array Configuration Guide and User Guide, please visit: **http://www.hpe.com/info/SmartArrayGen10-docs**.

Related Options

Tape Support	For more information on supported SAS tape drives, SAS Tape autoloaders, and SAS tape libraries, see the HPE Data Availability, Protection and Retention Compatibility Matrix at: **http://www.hpe.com/storage/daprcompatibility**
HPE Smart Array SR Secure Encryption	HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) Q2F26AAE E-LTU **NOTE:** HPE Smart Array SR Secure Encryption licensing is based on the number of servers requiring encryption for direct attached storage. **NOTE:** For more information visit: **http://www.hpe.com/servers/secureencryption**

Summary of Changes

Date	Version History	Action	Description of Change
15-Oct-2018	Version 7	Changed	Overview updated.
04-Jun-2018	Version 6	Changed	SKU description and Service and Support were updated.
07-May-2018	Version 5	Changed	Key Features Section was updated
05-Mar-2018	Version 4	Changed	Overview, Standard Features, Related Services were updated.
05-Feb-2018	Version 3	Changed	Added support for HPE ProLiant DL385 Gen10; 875241-B21 replaced with P01366-B21 and 875242-B21 replaced with P01367-B21
25-Sep-2017	Version 2	Added	Compatible with DL580, ML110, ML350, XL170r, and XL190r Gen10 servers; Compatible with MSA 1050 and MSA 2050; naming framework
11-Jul-2017	Version 1	Added	New QuickSpecs.

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