

### Overview

### HPE H240nr Smart Host Bus Adapter

The HPE H240nr Smart Host Bus Adapter comes in a flexible Smart SAS HBA form factor that provides a reliable, high performing SAS connectivity to the data in compute module drives. Supported on HPE Synergy Compute Modules, it features 4 internal physical links and it delivers 12 Gb/s SAS performance. The H240nr Smart HBA provides flexibility to run in HBA mode or simple RAID mode. When operating in simple RAID mode, it provides RAID 0, RAID 1, and RAID 5 with optional HPE Secure Encryption capabilities. Unlike the HPE Smart Array Controllers, the H240nr Smart HBA does not offer any acceleration or support cache modules.



**Host Bus Adapter**

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<b>Model</b>	HPE H240nr 12Gb 1-port Internal Smart Host Bus Adapter	759553-B21
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**Kit contents** HPE H240nr Smart Host Bus Adapter

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## Standard Features

### Key Features

- Storage interface (SAS/SATA)
  - 4 physical links across 1 x4 internal port
  - 12Gb/s SAS, 6Gb/s SATA technology
  - Mix-and-match SAS and SATA drives to the same controller
- PCI Express Gen3 x4 link
- RAID 0, 1, 5
- Simple RAID or HBA mode
- Legacy and UEFI boot operation
- Up to 4 physical drives
- Up to 64 logical drives
- HPE Secure Encryption (optional license)
- FIPS 140-2 Level 1 Validation in Progress
- Seamless upgrades to HPE Smart Array P-class controllers
- Flexible Smart HBA (daughter card)
  - Dimensions: 7.03 x 4.12 x 0.6 in (17.86 x 10.46 x 1.52 cm)

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### Ports

Internal: 4 SAS/SATA physical links across 1 x4 internal ports

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### 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 Gen3 x4 link width

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### HPE Secure Encryption

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 bulk storage attached to the HPE Smart Array controllers including data on the cache memory of the controller. Secure Encryption is an optional license per server requiring encryption enablement (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.

#### FIPS 140-2 Cryptographic Module Validation

FIPS provides a security assurance level validation for cryptographic modules. The HPE H240nr Smart Host Bus Adapter FIPS 140-2 Level 1 validation is currently in progress. The National Institute of Standards and Technology (NIST) issues the FIPS 140-2 requirements and standards for cryptography modules that include both hardware and software components.

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

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### Warranty

The warranty for this device is 1 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
- Warranty upgrade options can come in the form of Care Packs, which are sold at the HPE System level this product attaches too

## Compatibility

### Compute Module Support

HPE Synergy 480 Compute Modules  
HPE Synergy 620 Compute Modules  
HPE Synergy 660 Compute Modules  
HPE Synergy 680 Compute Modules

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### Operating Systems

Microsoft Windows Server  
Microsoft Windows Hyper-V Server  
VMware vSphere ESXi  
Red Hat Enterprise Linux (RHEL)  
SUSE Linux Enterprise Server (SLES)  
Oracle Solaris  
Oracle Linux  
Canonical Ubuntu  
CentOS  
Wind River  
Citrix XenServer

**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>

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### Storage Management Software Suite

#### **HPE Smart Storage Administrator (HPE SSA)**

Comprehensive management for HPE Smart Storage products with advanced scripting and diagnostic features and simplified and intuitive interface and functionality. For more information please visit: <http://www.hpe.com/servers/ssa>

#### **HPE Systems Insight Manager**

Powerful server and server options/storage manager tool with configuration/diagnostic utilities

#### **HPE Storage Management Utility**

Offers the simplest method for configuring the storage system via Initial System Configuration Wizard

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## Related Options

**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.

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### 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.

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### 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>

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### 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

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## Related 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.

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

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### 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 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](#).

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### Additional Service Information

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

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## Related Options

### HPE Smart Array SR Secure Encryption

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

Q2F26AAE

**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>

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### 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 in a responsible manner.

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
15-Oct-2018	Version 8	Changed	SKU decription updated.
04-Jun-2018	Version 7	Changed	SKU decription updated.
07-May-2018	Version 6	Changed	Standard Features, Compatibility, and Related Options sections were updated: Updated FIPS Validation.
05-Feb-2018	Version 5	Changed	Replaced picture. Added Secure Encryption as a Related Option. Updated Service and Support.
13-Feb-2017	Version 4	Changed	HPE Datacenter Care-Infrastructure Automation (DC-IA) content was revised.
19-Aug-2016	Version 3	Changed	Overview, Standard Features, and Compatibility were revised.
31-Mar-2016	Version 2	Changed	Warranty and Compatibility were revised.
01-Dec-2015	Version 1	New	Initial version



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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.

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