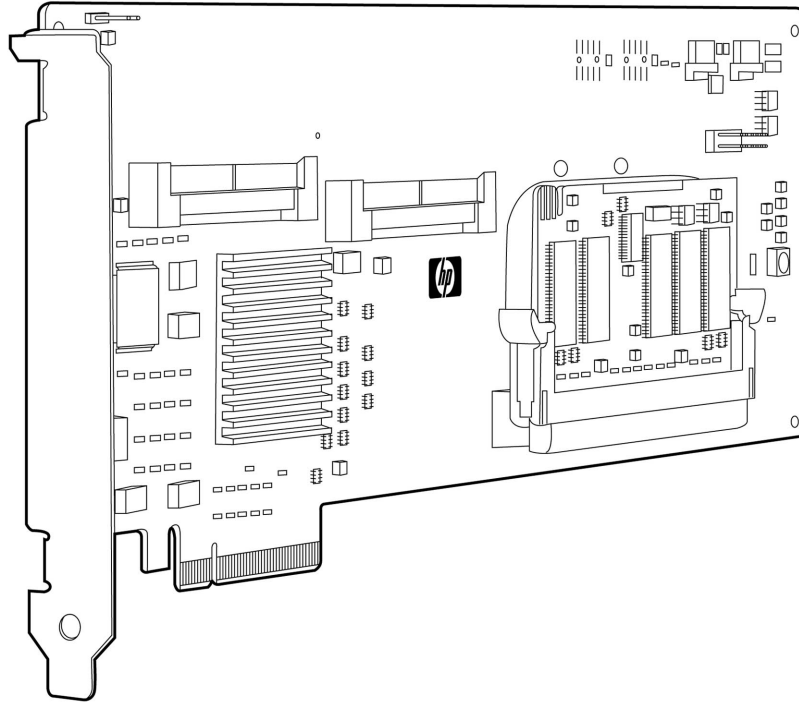


Overview

The HP Smart Array E200 is HP's entry level PCI Express (PCIe) Serial Attached SCSI (SAS) RAID controller. The full size card has 8 ports and utilizes DDR1-266 memory. The E200 is ideal for RAID 0/1 and has 128 MB battery-backed write cache (BBWC) module for RAID 5.



What's New

- Updating supported hard drives.

Models

**HP Smart Array E200
Controller**

HP Smart Array E200/128 BBWC 2-ports Int PCIe x4 SAS Controller

411508-B21

Standard Features

The Smart Array Advantage

HP's innovative design and integration work of the Smart Array family of products creates customer value that is unmatched in the industry. Use of Smart Array products across multiple applications results in a much lower Total Cost of Ownership (TCO) than any other server storage RAID product. The HP Smart Array family brings an unparalleled return on investment through:

Data Compatibility among all models of Smart Array controllers allows simple and easy upgrades any time needs for higher performance, capacity, and availability increase. Even successive generations of Smart Array controllers understand the data format of other Smart Array Controllers.

Consistent Configuration and Management Tools. All Smart Array products utilize a standard set of management and utility software. These tools minimize Total Cost of Ownership (TCO) by reducing training requirements and technical expertise necessary to install and maintain the HP server storage.

Universal Hard Drive form factor is for use across multiple HP servers, disk enclosures and storage systems. With compatibility across many enterprise platforms, you are free to deploy and re-deploy these drives to quickly deliver increased storage capacity, migrate data between systems, and easily manage spare drives.

Pre-Failure Warranty means HP Insight Manager not only reports when a drive is going to fail but allows replacement of failing drives prior to actual failure. For complete details, consult the HP Support Center or refer to your HP Server documentation.

Key Features

- Seamless upgrades from past generations and upgrades to next generation HP high performance and high capacity Serial Attached SCSI Smart Array controllers.
- 3G SAS technology delivers high performance and data bandwidth up to 300 MB/s per physical link and contains full compatibility with 1.5G SATA technology.
- x4 2.5G PCI Express host interface technology delivers high performance and data bandwidth up to 2 GB/s maximum bandwidth.
- Addition of the battery backed cache upgrade enables BBWC, RAID 5, Capacity Expansion, RAID migration, and Stripe Size Migration.
- Mix-and-match SAS and SATA hard drives, lets you deploy drive technology as needed to fit your computing environment.
- Support for up to 2 TB in a single logical drive.
- Software consistency among all Smart Array family products: Array Configuration Utility (ACU), Option ROM Configuration for Arrays (ORCA), Systems Insight Manager, Array Diagnostic Utility (ADU) and SmartStart. Some of these features are not available with ProLiant 100 series platforms.
- The SA-E200 controller supports up to 8 drives. The SA-E200i supports 2-8 drives depending on the server implementation.

Online Management Features

- Online Capacity Expansion (with BBWC upgrade)
- Online RAID Level Migration (with BBWC upgrade)
- Online Stripe Size Migration (with BBWC upgrade)
- Mirror splitting and recombining
- Unlimited Global Online Spares Assignment
- User Selectable Expand and Rebuild Priority
- User Selectable RAID Level and Stripe Size
- User Selectable Read and Write Cache Sizes

Ports

- Eight (8) SAS physical links distributed across 2 internal x4 wide port connectors.

Standard Features

Performance

HP's High Performance Architecture sets new boundaries of industry performance expectations!

- 3Gb/s SAS (300MB/s bandwidth per physical link)
- x8 3Gb/s SAS physical links (compatible with 1.5G SATA)
- 64 MB or 128 MB DDR1-266 battery-backed cache provides up to 4.2 GB/s maximum bandwidth.
- x4 2.5G PCI Express host interface provides 2 GB/s maximum bandwidth.
- MIPS 32-bit Processor
- Read ahead caching
- Write-back caching (with battery-backed write cache upgrade)

Capacity

Given the increasing need for high performance and rapid capacity expansion, the SA-E200 offers:

- Up to 6TB of total storage with 6 x 1TB SATA MDL hard drives (3.5")
NOTE: Support for greater than 2TB in a single logical drive.
- Up to 2.4TB of total storage with 8 x 300GB SFF SAS hard drives

Availability

Provides increased server uptime by providing advanced storage functionality:

- Online Capacity Expansion (with BBWC upgrade)
- Online RAID Level Migration (with BBWC upgrade)
- Online Stripe Size Migration (with BBWC upgrade)
- Global Online Spare
- Pre-Failure Warranty

Fault Prevention

The following features offer detection of possible failures before they occur, allowing preventive action to be taken:

- S.M.A.R.T.: Self Monitoring Analysis and Reporting Technology first developed at HP detects possible hard disk failure before it occurs, allowing replacement of the component before failure occurs.
- Drive Parameter Tracking monitors drive operational parameters, predicting failure and notifying the administrator.
- Dynamic Sector Repairing continually performs background surface scans on the hard disk drives during inactive periods and automatically remaps bad sectors, ensuring data integrity.
- Smart Array Cache Tracking monitors integrity of controller cache, allowing pre-failure preventative maintenance.

Fault Tolerance

- Keeps data available and server running while a failed drive is being replaced; several fault tolerance configurations are supported including:
- RAID 5 (Distributed Data Guarding): This allocates one set of parity data across drives and allows simultaneous write operations. This level of fault tolerance can withstand a single drive failure without downtime or data loss.
NOTE: RAID 5 is available with the 128MB BBWC option on the Smart Array E200i.
- RAID 1, 1+0 (Drive Mirroring): This allocates half of the drive array to data and the other half to mirrored data, providing two copies of every file. It is a high-performance RAID.

Standard Features

Fault Recovery

Minimizes downtime, reconstructs data, and facilitates a quick recovery from drive failure

- **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** corrects against single bit data and address corruption.
 - **Battery-backed write cache** upgrade provides for up to three days of battery power for data cache retention. The data backup duration could be extended anytime the server's auxiliary power is available during system power down.
-

Ease of Use

Consistency and Upgradeability make the Smart Array family unique in the industry:

- GUI based configuration, management and diagnostic software tools
 - Common data format between generations of products
 - Data migration between servers and external Modular Smart Array enclosures
-

Warranty

The warranty for this device is 3 years parts, labor and onsite.

Pre-Failure Warranty: Drives attached to the Smart Array Controller and monitored under Insight Manager are supported by a Pre-Failure (replacement) Warranty. For complete details, consult the HP Support Center or refer to your HP Server Documentation.

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 HP System level this product attaches too

Compatibility

Server Compatibility: HP SA-E200 Controller

For up to date compatibility, please see the following URL for complete Smart Array E200/E200i Controllers compatibility and support information:
<http://h18006.www1.hp.com/products/servers/proliantstorage/arraycontrollers/index.html>

Operating Systems

[Microsoft Windows Server](#)
[Microsoft Windows Server Hyper-V](#)
[Red Hat Enterprise Linux \(RHEL\)](#)
[SUSE Linux Enterprise Server \(SLES\)](#)
[Oracle Enterprise Linux \(OEL\)](#)
[Solaris 10 for x86/x64 based Systems](#)
[VMware](#)

For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server and Smart Array RAID controller, please visit our Support Matrix at: <http://www.hp.com/go/ossupport>

NOTE: For more Linux OS support & certification information, please visit:

- [ProLiant & BladeSystem Server Linux matrix](#)
<http://h18004.www1.hp.com/products/servers/linux/>
- [Integrity & BladeSystem Server Linux matrix](#)
<http://h71028.www7.hp.com/enterprise/cache/321101-0-0-0-121.html>

Software Suite

All Smart Array products share a common set of configuration, management and diagnostic tools, including Array Configuration Utility (ACU), Array Diagnostic Utility (ADU), and Systems Insight Manager. This software consistency of tools reduces the cost of training for each successive generation of product and takes much of the guesswork out of troubleshooting field problems. These tools lower the total cost of ownership by reducing training and technical expertise necessary to install and maintain HP server storage.

Systems Insight Manager

- Powerful server and server options/storage manager tool
- Monitors over 1200 system wide parameters
- Configuration/Diagnostic Utilities
- SIM is only for the HP ProLiant 300, 500 and Blade series servers.

HP Array Configuration Utility (ACU)

- Powerful Web based configuration utility for all Smart Array controllers
- Provides a graphical view of HP drive array configurations.
- Allows for management of multiple arrays over a secure internet connection from anywhere in the world.
- Easy to use Wizards for configuration
- Runs offline for all supported Operating Systems on the ProLiant 300, 500 and Blade series and runs online for Windows and Linux. For online configuration of NetWare, use CPQONLIN.

HP Option ROM Configuration for Arrays (ORCA)

- A simple method for managing logical volumes during system power up by pressing F8 during POST
- Allows the ability to create arrays, logical volumes, and assign an online spare drive.
- Allows the ability to view and delete logical volumes
- Allows the ability to select the boot controller
- For advanced array configurations use ACU

HP Array Diagnostic Utility (ADU)

Compatibility

- In depth diagnostic and reporting utility for all Smart Array controllers
- Runs offline for all supported Operating Systems, and runs online for Windows and Linux in HP ProLiant 300, 500 and Blade series servers

Service and Support

Service and Support

HP Care Pack Services: Packaged server and storage services for increased uptime, productivity and ROI

When you buy HP server and storage products and solutions, it's also a good time to think about what levels of support you may need. Our portfolio of service options reduce deployment and management worries while helping you get the most out of your server and storage investments. We take a holistic approach to your environment, bridging servers, blades, storage, software and network infrastructures with our packaged HP Care Pack Services for servers and storage.

Protect your business beyond warranty

When it comes to robustness and reliability, standard computing equipment warranties have matured along with technology. Good news that can also create problems stemming from depending on standard warranties designed to only protect against product defects and some downtime causes. Using a standard approach to warranty uplifts, such as HP Care Pack Services, helps reduce downtime risks and provides operational consistency for mission-critical and standard business computing.

HP Care Pack Services: Upgrading or extending standard server and storage warranties cost effectively

HP Care Pack Services offer a standard reactive hardware and software support services suite sold separately, or combined with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of integrated proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition with HP Proactive Select, you can acquire the specific proactive constancy and technical services. HP Proactive Select menu offers a broad set of service options that you can mix and match depending on your specific requirements. Proactive service options include offers for server, storage, network, SAN device, software, environment and education services.

HP server and storage lifecycle support services offers a full spectrum of customer care—from technology support to complex migrations to complete managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education Services offer flexible, comprehensive training on to help your IT staff get the most out of your server and storage investments. HP Financial solutions extend innovative financing and cost-effective asset management programs—from purchase to equipment retirement.

Learn more: www.hp.com/services/servers and www.hp.com/services/storage

NOTE: Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at <http://www.hp.com/go/lookuptool>

Service and Support

Recommended HP Care Pack Services for optimal satisfaction with your HP product

Recommended Services

Hardware Options Support

HP Care Packs provide support for all HP-branded hardware options qualified for inclusion in your server or storage solution. Any additional HP-qualified options installed within the server are covered at the same service level and for the same period as the server and no additional cost.

- Help improve or maintain system uptime
- Convenient onsite support
- Committed response time

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE>

3-Year HP Hardware Support Onsite Service, 4-hour response, 24x7

Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

This service provides a trained HP service specialist to perform an installation that meets HP quality standards, for:

- Help improve or maintain system uptime
- Convenient onsite support
- Committed response time

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE>

HP Installation and Startup of HP ProLiant Servers

Provides for the installation of your new HP ProLiant server and operating system to assist you in bringing your new HP ProLiant server and operating system into operation in a timely and professional manner.

This service provides a trained HP service specialist to perform an installation that meets HP quality standards, for:

- Delivery of the service at a mutually scheduled time convenient to your organization
- Availability of an HP service specialist to answer basic questions during the onsite delivery of this service
- Custom installation as detailed in "Delivery specifications" or in a Statement of Work (SOW)
- Verification prior to installation that all service prerequisites are met

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982?7572ENN>

Service and Support

Optional HP Care Pack Services that will enhance your HP product experience

Optional Services

3-Year HP Hardware Support Onsite Call-to-Repair (CTR) Service, 6- or 24-hour

As an alternative to our recommended support level, for customers who need committed call-to-repair for server hardware.

Provides your IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 or 24 hours of the initial service request to the HP Global Solution Center.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6636ENN>

3-Year HP Support Plus 24

As an alternative to our recommended support level, for customers who need access to responsive 24x7 hardware and software support plus software updates on HP and selected third party products:

For a higher return on your server and storage technology, our 3-year combined reactive support service delivers integrated onsite hardware/software support services available 24x7x365, including access to HP technical resources, 4-hour response onsite hardware support and software updates.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EN.pdf>

HP Proactive Select Service

Customer needs on demand access to consulting, technical proactive services and education courses

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN>

eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: <http://www.hp.com/support>

Service and Support

HP Insight Remote Support software delivers secure remote support for your HP Servers and Storage, 24 X 7, so you can spend less time solving problems and more time focused on your business. You can have your systems remotely monitored for hardware failure using secure technology that's been proven at thousands of companies around the world. In many cases, you can avoid problems before they occur.

Customer Technical Training

In today's cost-conscious business environment, IT professionals, developers, consultants and users face an interesting challenge: how to keep up with the latest technologies and expand important skills while delivering profitable results on current projects. To help address this challenge, HP offers innovative training solutions that help keep you up-to-date on virtualization, server, storage, Insight Control, Citrix, Microsoft® and open source/Linux-related topics-while spending less time away from business-critical activities.

HP Services Awards

HP Technology Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction.

Additional Services Information

To learn more on HP ProLiant servers, HP BladeSystem servers and HP storage products, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: www.hp.com/services/proliant or www.hp.com/services/bladesystem or <http://www.hp.com/hps/storage>

Related Options

NOTE: This is a list of related options. Some may be discontinued.

HP Optional Upgrades	HP 128MB SA641/642/E200 Battery Backed Write Cache	351580-B21
	HP 128MB Battery Backed Write Cache with Battery Housing Kit	346914-B21

HP Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	619291-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	581286-B21
HP 450GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	581284-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	507127-B21
HP 300GB 3G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	492620-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	512547-B21
HP 146GB 3G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	504062-B21
HP 146GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	507125-B21
HP 146GB 3G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	418367-B21
HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	512545-B21
HP 72GB 3G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	418371-B21
HP 146GB 10K rpm Hot Plug SAS 2.5 Single Port Hard Drive	431958-B21
HP 72GB 15K rpm Hot Plug SAS 2.5 Single Port Hard Drive	431935-B21
HP 72GB 10K rpm Hot Plug SAS 2.5 Dual Port Hard Drive	384842-B21
HP 72GB 10K rpm Hot Plug SAS 2.5 Hard Drive	375861-B21
HP 36GB 15K rpm Hot Plug SAS 2.5 Dual Port Hard Drive	418369-B21
HP 36GB 15K rpm Hot Plug SAS 2.5 Single Port Hard Drive	431933-B21

SAS Non-Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

HP 600GB 6G SAS 10K rpm SFF (2.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	590698-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	537809-B21
HP 146GB 6G SAS 10K rpm SFF (2.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	537807-B21
HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	537805-B21

SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives

HP 600GB 6G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	516828-B21
HP 450GB 6G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	516816-B21
HP 450GB 3G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	454232-B21
HP 400GB 10K rpm Hot Plug SAS 3.5 Dual Port Enterprise Hard Drive	459508-B21
HP 300GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	431944-B21
HP 300GB 6G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	516814-B21
HP 300GB 3G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	416127-B21

Related Options

HP 146GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	375872-B21
HP 146GB 3G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	384854-B21
HP 72GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	375870-B21
HP 72GB 15K rpm Hot Plug SAS 3.5 Dual Port Hard Drive	384852-B21
SAS Non-Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives	
HP 600GB 6G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	516830-B21
HP 450GB 6G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	516826-B21
HP 450GB 3G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	454234-B21
HP 400GB 10K rpm Non Hot Plug SAS 3.5 Dual Port Enterprise Hard Drive	508232-B21
HP 300GB 6G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	516824-B21
HP 300GB 6G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	516824-B21
HP 300GB 3G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	417950-B21
HP 300GB 15K rpm Non Hot Plug SAS 3.5 Single Port Hard Drive	431950-B21
HP 146GB 3G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	417855-B21
HP 146GB 15K rpm Non Hot Plug SAS 3.5 Single Port Hard Drive	432093-B21
HP 72GB 15K rpm Non Hot Plug SAS 3.5 Single Port Hard Drive	432095-B21
SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	605835-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) Dual Port Midline 1yr Warranty Hard Drive	507610-B21
SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive	507616-B21
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive	507614-B21
HP 1TB 3G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive	461137-B21
HP 750GB 3G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive	461135-B21
SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive	625609-B21
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive	507750-B21
HP 250GB 3G SATA 7.2K rpm SFF (2.5-inch) Hot plug Midline 1yr Warranty Hard Drive	625607-B21
HP 160GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive	530888-B21
SATA Non-Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507753-B21
HP 160GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	530891-B21
SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	507632-B21
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	454146-B21
HP 750GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	458930-B21
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	458928-B21

Related Options

HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	458926-B21
SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507774-B21
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507772-B21
HP 750GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	462595-B21
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	458941-B21
HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	458939-B21
SATA Hot Plug SFF (2.5-inch) Entry (ETY) Drives	
HP 250GB 3G SATA 5.4K rpm SFF (2.5-inch) Entry 1yr Warranty Hard Drive	460355-B21
HP 120GB 1.5G SATA 5.4K rpm SFF (2.5-inch) Entry 1yr Warranty Hard Drive	458924-B21
SATA Non-Hot Plug SFF (2.5-inch) Entry (ETY) Drives	
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot plug Entry 1yr Warranty Hard Drive	628033-B21
HP 250GB 3G SATA 5.4K rpm SFF (2.5-inch) Non-hot Plug Entry 1yr Warranty Hard Drive	460357-B21
HP 120GB 1.5G SATA 5.4K rpm SFF (2.5-inch) Non-hot Plug Entry 1yr Warranty Hard Drive	459357-B21
SATA Hot Plug LFF (3.5-inch) Entry (ETY) Drives	
HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive	571230-B21
HP 160GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive	458945-B21
SATA Non-Hot Plug LFF (3.5-inch) Entry (ETY) Drives	
HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Entry 1yr Warranty Hard Drive	571232-B21
HP 160GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Entry 1yr Warranty Hard Drive	458947-B21
Small Form Factor (SFF) SATA Hot Plug Drives	
HP 60GB 5.4K rpm Hot Plug SFF SATA 1yr Warranty Hard Drive	379306-B21
3.5" SATA Hot Plug Drives	
HP 80GB 7.2K rpm Hot Plug SATA 1yr Warranty Hard Drive	349237-B21
3.5" SATA Non-Hot Plug Drives	
HP 80GB 7.2K rpm Non Hot Plug SATA 1yr Warranty Hard Drive	383410-B21
SATA Hot Plug 2.5" Enterprise Mainstream Solid State Drives	
HP 400GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636597-B21
HP 200GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636595-B21
HP 120GB 3G SATA SFF (2.5-inch) Midline 1yr Warranty Solid State Drive	572073-B21
HP 100GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636593-B21
HP 60GB 3G SATA SFF (2.5-inch) Midline 1yr Warranty Solid State Drive	572071-B21
SATA Hot Plug 3.5" Midline (MDL) Solid State Drives	
HP 400GB 3G SATA MLC LFF (3.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636611-B21
HP 200GB 3G SATA MLC LFF (3.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636609-B21
HP 120GB 3G SATA LFF (3.5-inch) Midline 1yr Warranty Solid State Drive	570763-B21

Related Options

HP 100GB 3G SATA MLC LFF (3.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636607-B21
HP 60GB 3G SATA LFF (3.5-inch) Midline 1yr Warranty Solid State Drive	570761-B21
SATA Non-hot Plug 2.5" Midline (MDL) Solid State Drives	
HP 400GB 3G SATA MLC SFF (2.5-inch) Non-hot plug Enterprise Mainstream 3yr Wty Solid State Drive	636605-B21
HP 200GB 3G SATA MLC SFF (2.5-inch) Non-hot plug Enterprise Mainstream 3yr Wty Solid State Drive	636601-B21
HP 120GB 3G SATA SFF (2.5-inch) Non-hot plug Midline 1yr Wty Solid State Drive	572077-B21
HP 100GB 3G SATA MLC SFF (2.5-inch) Non-hot plug Enterprise Mainstream 3yr Wty Solid State Drive	636599-B21
HP 60GB 3G SATA SFF (2.5-inch) Non-hot plug Midline 1yr Wty Solid State Drive	572075-B21
6G SAS Hot Plug Enterprise Performance Solid State Drives	
HP 200GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive	632492-B21
HP 400GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive	632494-B21
6G SAS Hot Plug Enterprise Mainstream Solid State Drives	
HP 200GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	632502-B21
HP 400GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	632504-B21
HP 800GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	632506-B21

NOTE: Go to the [HP Hard Drive Compatibility table](http://www.hp.com/products/harddiskdrives) for complete drive compatibility information (<http://www.hp.com/products/harddiskdrives>). Using hard drives in unsupported configurations will result in voiding the warranty and could result in damage to the drive and/or loss of data.

Technical Specifications

Dimensions (not including bracket)	31.2 cm x 11.1 cm x 1.5 cm (12.3 in x 4.4 in x 0.6 in)
Disk Drive and Enclosure Interface	3Gb/s SAS (Serial Attached SCSI) 1.5Gb/s SATA (Serial ATA)
SAS Connectors	2 internal (SFF8484) x4 wide port connectors
Cache Memory Speed	DDR-1/266 MHz provides up to 4.2 GB/s maximum bandwidth.
Server Interface	x4 2.5G PCIe provides 2GB/s maximum bandwidth.
SAS Speed	x8 3G SAS provides 2.4GB/s maximum bandwidth.
Cache Memory	40-bit 64MB or 128MB cache: ECC protection, battery-backed, and transportable NOTE: The 64MB cache is not battery-backed or transportable.
Logical Volumes Supported	Up to 32 logical volumes
Maximum Volume Capacity	6TB (6 x 1TB SATA 3.5" MDL HDD) NOTE: Support for greater than 2TB in a single logical drive.
Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
RAID Support	RAID 5 (Distributed Data Guarding) NOTE: The 128MB BBWC upgrade is required to enable RAID 5 support on the Smart Array E200i. RAID 1, 1+0 (Striping & Mirroring) RAID 0 (Striping)
Upgradeable Firmware	Upgradeable Firmware

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to http://www.hp.com/go/green . To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.
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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 web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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