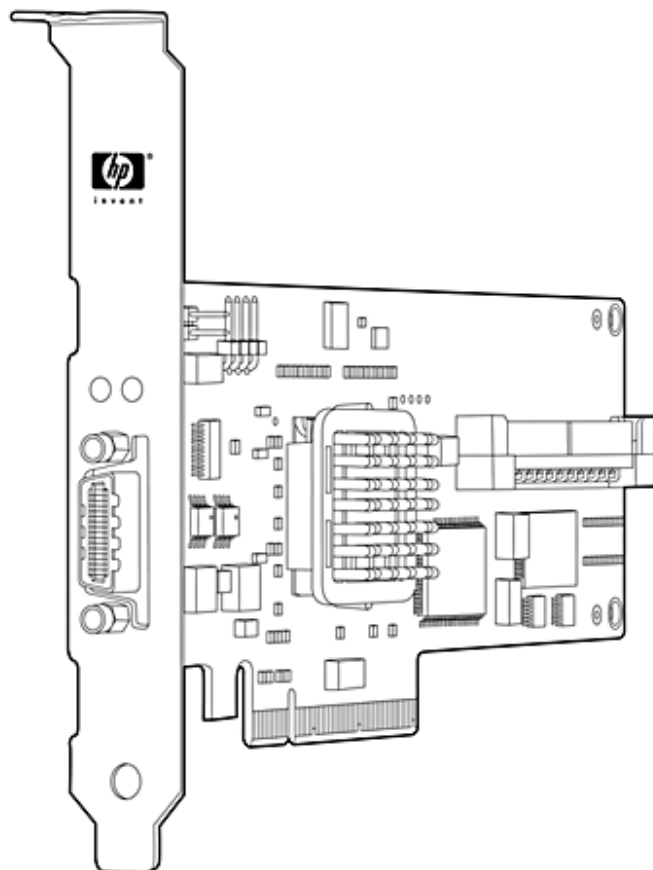


Overview

The HP SC44Ge Host Bus Adapter provides customers with the flexibility and speed they have come to expect from HP. The SC44Ge Host Bus Adapter is ideal for basic RAID (0, 1) and low cost connectivity to tape and HDDs. This adapter supports both 3G SAS and 1.5 G SATA devices. Providing up to 2 Gb/s maximum bandwidth, this HBA provides nearly four times the speed of a dual channel U320 SCSI adapters. The HP SC44Ge Host Bus Adapter has been thoroughly tested and integrated into many of the HP ProLiant and Integrity servers. The SC44Ge supports both a 1 x4 internal connection and a 1 x4 external connection.



What's New

- Updating supported hard drives.

Models

Serial Attached SCSI (SAS) HBA	HP Modular Smart Array SC44Ge 1-ports Int/1-ports Ext PCIe x8 SAS Host Bus Adapter	416096-B21
	HP PCIe SC44Ge SAS Host Bus Adapter	AH303A
	NOTE: This adapter supports Integrity servers only.	

Overview

Compatibility

Supported Servers

ProLiant DL (rack-optimized):

- HP ProLiant DL120 G5
- HP ProLiant DL140 G2
- HP ProLiant DL140 G3
- HP ProLiant DL145 G3
- HP ProLiant DL160 G5
- HP ProLiant DL160 G5 Storage
- HP ProLiant DL165 G5
- HP ProLiant DL165 G5p
- HP ProLiant DL180
- HP ProLiant DL180 G5
- HP ProLiant DL185
- HP ProLiant DL185 G5 Storage
- HP ProLiant DL320 G4
- HP ProLiant DL320 G5
- HP ProLiant DL320 G5p
- HP ProLiant DL320s
- [NOTE: External Tape support only](#)
- HP ProLiant DL360 G5
- HP ProLiant DL365
- HP ProLiant DL365 G5
- HP ProLiant DL380 G5
- HP ProLiant DL380 G5 Storage
- HP ProLiant DL385 G2
- HP ProLiant DL385 G5
- HP ProLiant DL385 G5p
- HP ProLiant DL580 G4
- HP ProLiant DL580 G5
- HP ProLiant DL585 G2
- HP ProLiant DL585 G5
- HP ProLiant DL785 G5

ProLiant ML (expansion-optimized):

- HP ProLiant ML110 G4
- HP ProLiant ML110 G5
- HP ProLiant ML110 G5 Storage
- HP ProLiant ML115
- HP ProLiant ML115 G5
- HP ProLiant ML150 G3
- HP ProLiant ML150 G5
- HP ProLiant ML310 G3
- HP ProLiant ML310 G4
- HP ProLiant ML310 G5
- HP ProLiant ML310 G5p
- HP ProLiant ML350 G5
- HP ProLiant ML370 G4
- HP ProLiant ML370 G5
- HP ProLiant ML570 G4



Overview

Integrity Servers (RAID not supported. External Port connections only):

- HP Integrity Rx 2660
- HP Integrity Rx 3600
- HP Integrity Rx 6600
- HP Integrity Rx 7640
- HP Integrity Rx 8640
- HP Superdome sx2000 (PCI-e models only)

NOTE: This is a list of supported servers. Some may be discontinued.



Standard Features

Performance Designed to be as flexible as HP servers, the HP SC44Ge Host Bus Adapter provides support for up to 8 devices (with support for even greater numbers when connected to devices with SAS expander technology). The HP adapter delivers exceptional system performance, with eight 3 Gbps SAS ports providing up to 24 Gb/s total storage bandwidth.

HP Server Integration Fully integrated and tested with most HP ProLiant servers and management software.

Key Features

- SAS technology delivers high performance and data bandwidth up to 3 Gbps per physical link
- Mix-and-match SAS and SATA hard drives, lets you deploy drive technology as needed to fit your computing environment (ProLiant systems only)
- Support for SAS tape products
- PCIe x8 (2.5 Gb/s bandwidth)
- PCI Express x8 capable

Ports

- Eight (8) SAS physical links distributed across 1 x4 internal SFF-8484 and 1x4 external SFF-8470 connectors
 - Provides the ability to support up to 8 devices in a RAID configuration (additional drives supported through expander technology) or 3.6TB of SAS storage when connected to an MSA70 external drive enclosure with (25) 146GB drives (HP-UX and OpenVMS only).

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

- Transfer rate: 3 Gbps SAS, 1.5 Gb/s SATA (bandwidth per physical link)
- 24 Gbps total available bandwidth (8 physical links x 3Gbps)
- PCIe x8 (2.5 Gb/s bandwidth)

Capacity Given the increasing need for high performance and rapid capacity expansion, the SC44Ge SAS HBA with RAID offers:

- Eight 3 Gbps SAS physical links supporting up to 2 simultaneous x4 Wide SAS Ports
- Up to 3.6TB of storage per PCI slot of SAS storage when connected to an MSA70 external drive enclosure with (25) 146GB drives (HP-UX and OpenVMS only).

Fault Tolerance Keeps data available and server running while a failed drive is being replaced (ProLiant models only)

- Drive Mirroring (RAID 1): This allocates half of the drive array to data and the other half to mirrored data, providing two copies of every file.



Standard Features

Supported Enclosures

- 50 Modular Smart Array
 - Supports one MSA50 - additional tiered enclosures are not supported
- 60 Modular Smart Array (only in HP-UX and OpenVMS environments with selected HP Integrity Servers only)
 - Supports 1+3 MSA60's cascaded off the single x4 port - additional tiered enclosures are not supported
- 70 Modular Smart Array (only in HP-UX and OpenVMS environments with selected HP Integrity Servers only)
 - Supports 1+1 MSA70's cascaded off the single x4 external port - additional tiered enclosures are not supported

Operating Systems

Microsoft Windows 2003 Standard 32 Bit
Microsoft Windows 2003 Enterprise 32 Bit
Microsoft Windows 2003 Web
Microsoft Windows 2003 SBS
Microsoft Windows 2003 Standard x64
Microsoft Windows 2003 Enterprise x64
Microsoft Windows Server 2008
SCO UnixWare 7.1.3
SCO UnixWare 7.1.4
SCO Openserver 6.0.0
HP-UX 11iv2 and 11iv3
OpenVMS V8.3-1H1
Red Hat Enterprise Linux
SUSE Linux Enterprise Server

NOTE: For more Linux OS support & certification information, please visit our the ProLiant & BladeSystem Server Linux matrix: <http://h18004.www1.hp.com/products/servers/linux/hplinuxcert.html>

LSI Off Line

LSI Off Line option ROM Utility

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 HP System level this product attaches too



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/5982-6547EN.pdf>

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/5981-6638EEE>

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>

HP Insight Remote Support software delivers secure remote support for your HP Servers and Storage, 24



Service and Support

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 supported options. Some may be discontinued.

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 72GB 10K rpm Hot Plug SAS 2.5 Dual Port Hard Drive	384842-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



Related Options

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
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 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 3G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	417950-B21
HP 146GB 3G SAS 15K rpm LFF (3.5-inch) Non-hot Plug Dual Port Enterprise 3yr Warranty Hard Drive	417855-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 3TB 6G SAS 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	625031-B21
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
SAS Hot Plug SFF Enterprise (ENT) Drives	
HP 146GB 10K rpm Hot Plug SAS 2.5 Single Port Hard Drive	431958-B21
HP 72GB 10K rpm Hot Plug SAS 2.5 Hard Drive	375861-B21
HP 72GB 15K rpm Hot Plug SAS 2.5 Single Port Hard Drive	431935-B21
HP 36GB 15K rpm Hot Plug SAS 2.5 Single Port Hard Drive	431933-B21
SAS Hot Plug 3.5" Enterprise (ENT) Drives	
HP 300GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	431944-B21
HP 146GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	375872-B21
HP 72GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	375870-B21
SAS Non-Hot Plug 3.5" Enterprise (ENT) Drives	
HP 300GB 15K rpm Non Hot Plug SAS 3.5 Single Port Hard Drive	431950-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
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



Related Options

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive	507750-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 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	628059-B21
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
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 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628063-B21
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
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	



Related Options

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
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.

NOTE: When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required.

Related Options

DAT Tape Drives (Integrity support for External only)

HP DAT 160 SAS Internal Tape Drive	Q1587A
HP DAT 160 SAS External Tape Drive	Q1588A

LTO Ultrium Tape Drives

HP Ultrium 448 SAS Internal Drive	DW085A
HP Ultrium 448 SAS External Drive	DW086A
HP Ultrium 920 SAS Internal Tape Drive	EH847A
HP Ultrium 920 SAS External Tape Drive	EH848A
HP LTO-4 Ultrium 1840 SAS Internal Tape Drive	EH860A
HP LTO-4 Ultrium 1840 SAS External WW Drive	EH861A

Rack-mount Tape Drive Enclosures

HP 1U SAS Rack-mount Kit	AE459A
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NOTE: The 1U SAS Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the DAT 160 SAS, Ultrium 448 SAS and Ultrium 920 SAS tape drives.

HP 3U SAS Rack-mount Kit	AG576A
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NOTE: The 3U Rack-mount Kit can support up to (2) full-height or (4) half-height tape drives and compatible with multiple SAS tape drives including DAT 160 SAS, LTO-2 Ultrium 448 SAS, LTO-3 Ultrium 920 SAS, and LTO-4 Ultrium 1840 SAS tape drives.

Tape Autoloaders

HP 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader	AK377A
HP 1/8 G2 Ultrium 920 SAS Autoloader	AH558A

Tape Libraries

HP MSL2024 Ultrium 920 SAS Tape Library	AH559A
HP StorageWorks MSL4048 Ultrium 920 SAS Tape Library	AH560A
HP StorageWorks MSL8096 2 Ultrium 920 SAS Tape Library	AH561A

SAS Cables for Tape Drives

2M External SAS (SFF8470) to Mini SAS (SFF8088) 1x SAS Cable	AE466A
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NOTE: Use this cable to connect HP Ultrium SAS External Tape Drives to SAS Controllers with SAS (SFF8470) connectors.

HP 1U SAS TP I-E 3HDDs X 1Tape Drive X4M Server Cable Assembly Kit	AE464A
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NOTE: This split cable connects internally to SAS Hard Drive Cage (3x) and externally to the HP Storage Works 1U SAS Rack-Mount Kit (1x) with other connector going to internal SAS Controller port inside the server. Requires additional PCI slot on server for threading 1x split cable to SAS tape.

HP 1U SAS Ext-Min 1x-4M Cable Assembly Kit	AE468A
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NOTE: Use this cable to connect HP 1U SAS Rack-mount Kit to SAS Controllers with SAS (SFF8470) connectors.

HP SAS Min-Min 1x-2M Cable Assembly Kit	AE470A
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NOTE: Use this cable to connect HP Ultrium SAS External Tape Drives.

HP SAS MIN-MIN 1X-4M Cable Assembly Kit	AE465A
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NOTE: Use this cable to connect HP 1U SAS Rack-mount Kit.

HP SAS MIN-MIN 3X1X-5M Cable Assembly Kit	AG452A
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NOTE: This split cable connects internally to SAS Hard Drive Cage (3x) and externally to the HP Storage Works 1U SAS Rack-Mount Kit (1x) with other connector going to internal SAS Controller port inside the server. Requires additional PCI slot on server for threading 1x split cable to SAS tape. Valid only for ProLiant DL360 G5 and ProLiant DL365 servers.



Related Options

HP External SAS to mini-SAS Fanout Cable

AH587A

NOTE: Use this cable to connect HP 1/8 G2 SAS tape autoloaders and MSL2024/MSL4048/MSL8096 SAS tape libraries to SAS Controllers with Infiniband (SFF8470) connectors.



Technical Specifications

Dimensions (excluding bracket)	6.6 x 2.5 x 0.6 in (16.8 x 6.4 x 1.6 cm)
Disk Drive and Enclosure Protocol Support	3 Gbps SAS (Serial Attached SCSI) 1.5 Gbps SATA (Serial Advanced Technology Attachment)
Architecture	Serial Attached SCSI (SAS) Serial Advanced Technology Attachment (SATA) PCI-Express x8
SAS Connectors	1 x4 internal SFF-8484 and 1x4 external SFF-8470
Data Transfer Method	300 MB/s bandwidth (600 MB/s, full duplex) on each port for combined throughput of up to 2 Gb/s
PCIe Bus Speed	PCIe x8 (2.5 Gb/s maximum bandwidth)
Simultaneous Drive Transfer Ports	2 x4 Wide SAS Connectors (1 external only for Integrity Servers)
Port Transfer Rate	12 Gb/s per x4 Wide SAS Port (4 x 3 Gb/s)
Software upgradeable Firmware	Yes
Maximum Capacity	8.7TB of SAS storage when connected to (4) 300GB drives internal to the Server and an MSA70 external drive enclosure with (25) 300GB drives.
Memory Addressing	64-bit, supporting servers memory greater than 4 GB
Logical Drives Supported	(ProLiant only) Up to 2 Logical Volumes Up to 8 drives total in all RAID volumes 2 Drives per RAID 1 Up to 8 Drives per RAID 0
RAID Support	(ProLiant only) RAID 1 (Mirroring) RAID 0 (Striping)
Upgradeable Firmware	4-MB flashable ROM
Disk Drive and Enclosure Protocol Support	3Gb/s SAS and 1.5Gb/s SATA

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.



Technical Specifications

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

