

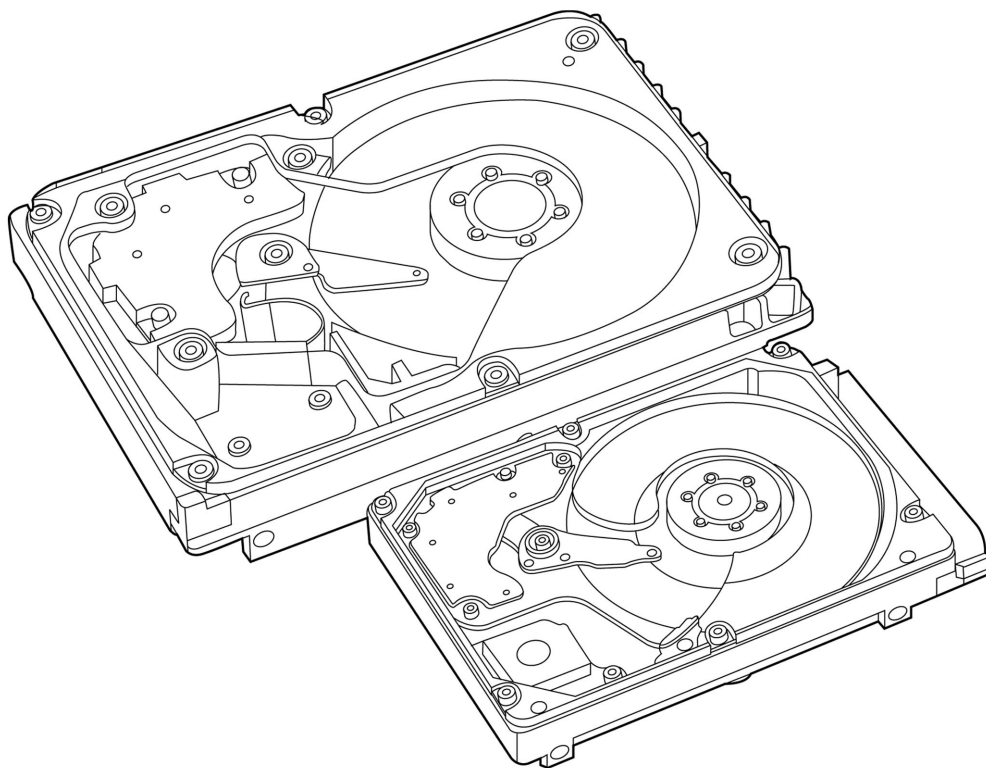
Overview

HP SATA drives are designed for the reliability and larger capacities demanded by today's entry server and external storage environments. The SATA portfolio is categorized into two categories: Entry (ETY) and Midline (MDL) drives. HP SATA Entry drives are the lowest unit-cost solution for entry-level servers. HP SATA Midline drives are designed with economical reliability and performance for external storage, backups and archival applications. These high capacity drives provide the lowest \$/GB to our customers. Both Entry and Midline SATA drives provide the best price advantage for non-mission critical applications with low workloads of 40% or less. HP SATA drives are available in both Large Form Factor (LFF) (3.5-inch) and Small Form Factor (SFF) (2.5-inch) and ship with a standard one year warranty, 1,0,0.

All HP hard drives pass a rigorous qualification process, which ensures that every HP drive is proven to perform in your HP ProLiant server. Before final certification, all HP SATA hard drives are optimized for compatibility and functionality, including support of SMART and HP Systems Insight Manager.

*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.

NOTE: For additional information regarding the different features of SATA Entry drives please visit the SATA hard drive website: www.hp.com/go/SATA



What's New

Introducing the largest Midline capacity drive offered in the industry, the 2TB. Including robust features optimized for more demanding storage environments, such as, rotational vibration sensors, native command queuing (NCQ), Time Limited Error Recovery (TLER) and 3Gb/s. Also introducing the 1TB Midline Non-Hot Plug(NHP) drive, as well as, the 250GB Hot Plug and NHP



Overview

Entry drive for the entry server space

The newest drives in the HP portfolio are listed below.

- HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive
- HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1y Wty Hard Drive
- HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1y Wty Hard Drive
- HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive
- HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Entry 1y Wty Hard Drive

Models

NOTE: SATA Drive Write Cache is disabled by default to minimize the risk of data loss in case of power loss. For information on how to enable Drive Write Cache on SATA drives via supported controllers and HBAs and what precautions should be followed please visit: www.hp.com/go/SATA

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.

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

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 1y Wty Hard Drive 507753-B21

HP 160GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot Plug Midline 1y Wty 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 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive 458928-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 1y Wty Hard Drive 507774-B21

HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1y Wty Hard Drive 507772-B21

HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1y Wty Hard Drive 458941-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 250GB 3G SATA 5.4K rpm SFF (2.5-inch) Non-hot Plug Entry 1y Wty Hard Drive 460357-B21

HP 120GB 1.5G SATA 5.4K rpm SFF (2.5-inch) Non-hot Plug Entry 1y Wty 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 1y Wty Hard Drive 571232-B21

HP 160GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Entry 1y Wty Hard Drive 458947-B21



Standard Features

Drive Quality

Today's entry-level servers and external storage solutions are seeing an increase in maximum storage capacity and demand for increased levels of drive quality. In the often-changing entry-level server and storage environment, storage has become a critical component of the information system, significantly defining both the systems reliability. This is why HP drives undergo an intense qualification process that eliminates firmware and O/S incompatibilities. All drives are proven to perform in the HP ProLiant and StorageWorks Modular Smart Array (MSA) storage systems for which they were designed.

Performance

Only those drives whose quality is suitable for an entry-level, external storage enclosures and server environments are selected through the HP qualification process. All our drives are proven to be reliable in the ProLiant server and MSA storage environment.

Native Command Queuing

Native Command Queuing (NCQ) is a technology designed to increase performance of SATA hard disk drives by allowing the individual hard disk to internally optimize the order in which received read and write commands are executed. This can reduce the amount of unnecessary going back-and-forth on the drive's heads, resulting in increased performance for workloads where multiple simultaneous read/write requests are outstanding, most often occurring in server or storage-type applications. Without NCQ the drive has to process and complete one command at a time. For NCQ to be enabled, it must be supported and turned on in the controller and in the hard drive itself.

NOTE: Please reference the [HP Smart Array Controller website](http://www.hp.com/products/smartarray) for NCQ enabled controllers at:

<http://www.hp.com/products/smartarray>.

Please see [SATA hard drive Technical Specifications section](#) for specific capacities supported with NCQ.

Integration

Many issues customers have with third party Serial-ATA drives are integration related issues. When buying from another supplier, there is no guarantee that a drive has been correctly set for proper operation with ProLiant entry-level servers or MSA enclosures. These incompatibilities can create problems in configuration, can rob your system of performance, or at their worst, can result in data corruption. HP hard drives are specifically designed and tested for flawless operation in your HP equipment. The integration of hard drives in HP systems means that cables, controllers, and firmware are right for your ProLiant entry level server or MSA enclosures.

Pre-Failure Alert

When used in conjunction with a SMART Array Controller and Systems Insight Manager, the SMART capable firmware in HP hard drives enables extensive fault prediction capabilities. If potential problems develop in one of the drives, the Smart Array Controller, Systems Insight Manager and/or SMART hard disk drive lets you know in advance so you can have the drive replaced, before it fails, under warranty.

NOTE: All drives are protected by a Pre-Failure Alert when used with a HP Smart Array controller and Systems Insight Manager, allowing hard drives to be replaced before failure under warranty. In addition, all drives are covered by a 1 or 3 year limited on-site warranty, regardless of the warranty period of the system in which they are installed. However, the drive warranty is automatically uplifted when used in a server or MSA for which a care pack is purchased. Please see the below [HP Care Pack Information section](#) for additional services.

NOTE: SATA hard drives have a 1 year limited warranty regardless of the warranty period for the system in which they are installed.

Server and Storage Support

Please see the following URL for the latest list of supported servers and enclosures:

<http://www.hp.com/servers/hdd-documentation>



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/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 StorageWorks 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>



Technical Specifications

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 500GB 3G SATA
7.2K rpm SFF (2.5-inch)
Midline 1yr Warranty
Hard Drive
507750-B21

500GB 7,200 rpm

Capacity	500,107MB
Height	0.63 in (16.0 mm)
Width	3.00 in (72.2 mm)
Depth	5.38 in (136.6 mm)
Interface	Serial ATA
Transfer Rate (Maximum)	3Gb/s
Native Command Queuing	Supported
Seek Time (typical reads, including settling)	Single Track .5 ms Average 8.2 ms Full-Stroke 17.55 ms
	Rotational Speed 7,200 rpm
Physical Configuration	Bytes/Sector 512 Logical Blocks 976,773,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)

HP 160GB 3G SATA
7.2K rpm SFF (2.5-inch)
Midline 1yr Warranty
Hard Drive
530888-B21

160GB 7,200 rpm

Capacity	160,041MB
Height	0.63 in (16.0 mm)
Width	3.00 in (72.2 mm)
Depth	5.38 in (136.6 mm)
Interface	Serial ATA
Transfer Rate (Maximum)	3Gb/s
Native Command Queuing	Supported
Seek Time (typical reads, including settling)	Single Track .5 ms Average 8.2 ms Full-Stroke 17.55 ms
	Rotational Speed 7,200 rpm
Physical Configuration	Bytes/Sector 512 Logical Blocks 312,581,808
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)

SATA Non-Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 500GB 3G SATA

500GB 7,200 rpm

Capacity 500,107MB



Technical Specifications

7.2K rpm SFF (2.5-inch)
 Non-hot Plug Midline 1y
 Wty Hard Drive
 507753-B21

Height	0.591 in (15.0 mm)	
Width	2.750 in (69.85 mm)	
Depth	3.937 in (100.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	.5 ms
	Average	8.2 ms
	Full-Stroke	17.55 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
	Logical Blocks	976,773,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 160GB 3G SATA
 7.2K rpm SFF (2.5-inch)
 Non-hot Plug Midline 1y
 Wty Hard Drive
 530891-B21

160GB 7,200 rpm

Capacity	160,041MB	
Height	0.591 in (15.0 mm)	
Width	2.750 in (69.85 mm)	
Depth	3.937 in (100.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	.5 ms
	Average	8.2ms
	Full-Stroke	17.55 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
	Logical Blocks	312,581,808
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

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

2TB 7,200 rpm

Capacity	2,000,398MB
Height	1.04 in (26.4 mm)
Width	4.36 in (110.7 mm)
Depth	7.25 in (184.2 mm)



Technical Specifications

Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	0.5 ms
	Average	<8.5 ms
	Full-Stroke	16.9 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
	Logical Blocks	3,907,029,168
	Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)

HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch)
Midline 1yr Warranty
Hard Drive
454146-B21

1TB 7,200 rpm

Capacity	1,000,204MB	
Height	1.04 in (26.4 mm)	
Width	4.36 in (110.7 mm)	
Depth	7.25 in (184.2 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	<8.5 ms
	Full-Stroke	25.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
	Logical Blocks	1,953,525,168
	Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)

HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch)
Midline 1yr Warranty
Hard Drive
458928-B21

500GB 7,200 rpm

Capacity	500,107MB	
Height	1.04 in (26.4 mm)	
Width	4.36 in (110.7 mm)	
Depth	7.25 in (184.2 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	



Technical Specifications

Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	<8.5 ms
	Full-Stroke	21.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
	Logical Blocks	976,773,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

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 1y Wty Hard Drive
507774-B21

2TB 7,200 rpm

Capacity	2,000,398MB	
Height	1.028 in (26.1 mm)	
Width	4.00 in (101.6 mm)	
Depth	5.787 in (147.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	0.5 ms
	Average	<8.5 ms
	Full-Stroke	16.9 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
	Logical Blocks	3,907,029,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1y Wty Hard Drive
507772-B21

1TB 7,200 rpm

Capacity	1,000,204MB	
Height	1.028 in (26.1 mm)	
Width	4.00 in (101.6 mm)	
Depth	5.787 in (147.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	



Technical Specifications

Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	<8.5 ms
	Full-Stroke	25.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	1,953,525,168
		50° to 95° F (10° to 35° C)

HP 500GB 3G SATA
7.2K rpm LFF (3.5-inch)
Non-hot Plug Midline 1y
Wty Hard Drive
458941-B21

500GB 7,200 rpm

Capacity	500,107MB	
Height	1.028 in (26.1 mm)	
Width	4.00 in (101.6 mm)	
Depth	5.787 in (147.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	<8.5 ms
	Full-Stroke	21.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	976,773,168
		50° to 95° F (10° to 35° C)

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

250GB 5,400 rpm

Capacity	250,059MB
Height	0.63 in (16.0 mm)
Width	3.00 in (76.2 mm)
Depth	5.38 in (136.6 mm)
Interface	Serial ATA
Transfer Rate (Maximum)	3Gb/s
Native Command Queuing	Supported



Technical Specifications

Seek Time (typical reads, including settling)	Single Track	1.5 ms
	Average	12 ms
	Full-Stroke	22 ms
	Rotational Speed	5400 rpm
Physical Configuration	Bytes/Sector	512
	Logical Blocks	488,397,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 120GB 1.5G SATA
5.4K rpm SFF (2.5-inch)
Entry 1yr Warranty Hard
Drive
458924-B21

120GB 5,400 rpm

Capacity	120,022MB	
Height	0.63 in (16.0 mm)	
Width	3.00 in (76.2 mm)	
Depth	5.38 in (136.6 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	1.5Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	1.5 ms
	Average	12 ms
	Full-Stroke	22 ms
	Rotational Speed	5400 rpm
Physical Configuration	Bytes/Sector	512
	Logical Blocks	234,441,648
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Non-Hot Plug SFF (2.5-inch) Entry (ETY) Drives

HP 250GB 3G SATA
5.4K rpm SFF (2.5-inch)
Non-hot Plug Entry 1y
Wty Hard Drive
460357-B21

250GB 5,400 rpm

Capacity	250,059MB	
Height	0.591 in (15.0 mm)	
Width	2.750 in (69.85 mm)	
Depth	3.937 in (100.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	



Technical Specifications

Seek Time (typical reads, including settling)	Single Track	1.5 ms
	Average	12 ms
	Full-Stroke	22ms
Physical Configuration	Rotational Speed	5400 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	488,397,168
		50° to 95° F (10° to 35° C)

HP 120GB 1.5G SATA
5.4K rpm SFF (2.5-inch)
Non-hot Plug Entry 1y
Wty Hard Drive
459357-B21

120GB 5,400 rpm

Capacity	120,022MB	
Height	0.591 in (15.0 mm)	
Width	2.750 in (69.85 mm)	
Depth	3.937 in (100.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	1.5Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	1.5 ms
	Average	12 ms
	Full-Stroke	22ms
Physical Configuration	Rotational Speed	5400 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	234,441,648
		50° to 95° F (10° to 35° C)

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

250GB 7,200 rpm

Capacity	250,059MB
Height	1.04 in (26.4 mm)
Width	4.36 in (110.7 mm)
Depth	7.25 in (184.2 mm)
Interface	Serial ATA
Transfer Rate (Maximum)	3Gb/s
Native Command Queuing	Supported



Technical Specifications

Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	11 ms
	Full-Stroke	21.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	488,397,168
		50° to 95° F (10° to 35° C)

HP 160GB 3G SATA
7.2K rpm LFF (3.5-inch)
Entry 1yr Warranty Hard
Drive
458945-B21

160GB 7,200 rpm

Capacity	160,041MB	
Height	1.04 in (26.4 mm)	
Width	4.36 in (110.7 mm)	
Depth	7.25 in (184.2 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	<11 ms
	Full-Stroke	22.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	312,581,808
		50° to 95° F (10° to 35° C)

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 1y
Wty Hard Drive
571232-B21

250GB 7,200 rpm

Capacity	250,059MB
Height	1.028 in (26.1 mm)
Width	4.00 in (101.6 mm)
Depth	5.787 in (147.0 mm)
Interface	Serial ATA
Transfer Rate (Maximum)	3Gb/s
Native Command Queuing	Supported



Technical Specifications

Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	11 ms
	Full-Stroke	21.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	488,397,168
	50° to 95° F (10° to 35° C)	

HP 160GB 3G SATA
7.2K rpm LFF (3.5-inch)
Non-hot Plug Entry 1y
Wty Hard Drive
458947-B21

160GB 7,200 rpm

Capacity	160,041MB	
Height	1.028 in (26.1 mm)	
Width	4.00 in (101.6 mm)	
Depth	5.787 in (147.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	2.0 ms
	Average	<11 ms
	Full-Stroke	22.0 ms
Physical Configuration	Rotational Speed	7,200 rpm
	Bytes/Sector	512
Operating Temperature (system inlet air temperature)	Logical Blocks	312,581,808
	50° to 95° F (10° to 35° C)	



Technical Specifications

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.

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.

