

### Overview

### Models

HP External USB CD/DVD R/RW Drive	FS943AA
HP SuperMulti (DL) DVD+/-RW LightScribe Drive*	ET353AA
HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive	AK869AA
HP 320-GB 7200rpm Primary SATA Hard Drive	AS282#xxx
HP 250-GB 5400rpm Primary SATA Hard Drive	AK072AA
HP 120-GB 7200rpm Primary SATA Hard Drive	AH920AA
HP External MultiBay II	PA509A#xxx
HP 250-GB Pocket Media Drive	FE477AA
HP Upgrade Bay 250-GB 5400rpm Hard Drive	AK868AA

\*This drive uses PATA technology

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### Introduction

HP storage solutions for your HP business notebook provide additional flexibility and expandability by enabling hot swapping of removable storage devices such as SuperMulti (DL) DVD+/-RW LightScribe Drives optical drives and SATA Hard Drives between most HP notebooks.

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### HP Storage Solutions

For those users who require additional storage or a dedicated back-up or storage alternative, HP removable storage solutions offer a convenient and affordable alternative.

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### Key Benefits

- Extend the life of your HP Business Notebook by providing additional storage
- Easy low-cost back-up solution without burdening network resources
- Switch drives between most HP business notebooks

### Standard Features

#### HP External USB CD/DVD R/RW Drive

The HP External USB CD/DVD R/RW Drive is a convenient, lightweight, portable data storage device that reads and writes to a variety of optical disc formats.

##### Key Benefits

- Portable design, using USB2.0 connection to ensure the best performance
- Highly efficient power saving mode, slim size, and ultra light weight
- Up to 4.7GB of data storage capacity (up to 8.5GB double layer)
- Supports DVD+R, DVD+RW, DVD-R, DVD-RW, DVD+R9, DVD-R9, DVD-RAM, DVD-ROM, CD-R, CD-RW, and CD-ROM formats (including double-layer DVD+/-R9 recording function)
- Convenience of Plug & Play
- Emergency manual eject
- HP's LightScribe technology enables the burning of a custom, professional label on DVD or CD media

##### Service and Support

One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.

**NOTE:** [Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.](#)

##### Compatibility

The HP External USB CD/DVD R/RW Drive is compatible with all HP Business notebooks.

#### HP SuperMulti (DL) DVD+/-RW LightScribe Drive and HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive

The HP SuperMulti (DL) DVD+/-RW LightScribe Drive and HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive are user-removable, drawer-load data storage devices that can write to CD-R, CD-RW, DVD+R, DVD-R, DVD+RW and DVD-RW media and can read from any industry standard CD and DVD media.

Media capacity for CD-ROMs is up to 700MB and up to 4.7GB for DVDs (up to 8.5GB double layer) The HP SuperMulti (DL) DVD+/-RW LightScribe Drive and HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive are exceptional solutions for creating CDs and DVDs, and for archiving permanent data files on CD or DVD media. With DVD burning capabilities the MultiBay DVD+/-RW Drive is a great source for data backup. HP's LightScribe technology enables the burning of a custom, professional label on DVD or CD media.

##### Key Benefits

- Single user-removable drive with 8X DVD-ROM, 10X CD-RW, & 2X DVD+/-RW Dual Format functionality
- Up to 4.7GB of data storage capacity (up to 8.5GB double layer)
- HP's LightScribe technology enables the burning of a custom, professional label on DVD or CD media

##### Service and Support

One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.

**NOTE:** [Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.](#)

### Standard Features

Compatibility	The HP SuperMulti (DL) DVD+/-RW LightScribe Drive is compatible with the following HP Business notebooks: HP Compaq 6300, 7400, 8400 and 9400 series Notebook PCs.
	The HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive is compatible with the following HP Business notebooks: HP Compaq 6530b, 6535b, 6730b, 6735b and 6930p Notebook PCs.

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Spares information	HP SuperMulti (DL) DVD+/-RW LightScribe Drive option service spares kit	416264-001
	HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive option service spares kit	375197-001

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### HP 320-GB 7200rpm Primary SATA Hard Drive

For those who require additional storage or a faster dedicated second hard drive, the HP 320-GB 7200rpm Primary SATA Hard Drive is a convenient and affordable solution.

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Key Benefits	<ul style="list-style-type: none"><li>• Extend the life of your HP Business Notebook by providing additional storage</li><li>• Easy low-cost back-up solution without burdening network resources</li><li>• Switch drives between most HP business notebooks</li><li>• SMART predictive failure analysis (PFA)</li></ul>
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Service and Support	One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms. <b>NOTE:</b> <a href="#">Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a>
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Compatibility	The HP 320-GB 7200rpm Primary SATA Hard drive is compatible with the HP 2133 Mini-Note PC, HP Mini 2140 Notebook PC, HP Compaq 2230s, 6530b, 6530s, 6535b, 6535s, 6730b, 6730s, 6735s, 6735b, 6820s, 6830s Notebook PC, HP EliteBook 6930p, 8530p Notebook PC, HP EliteBook 8530w, 8730w Mobile Workstation
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Spares information	HP 320-GB 7200rpm Primary SATA Hard drive option service spares kit	493397-001
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### HP 250-GB 5400rpm Primary SATA Hard Drive

For those who require additional storage or a dedicated second hard drive, the HP 250-GB 5400rpm Primary SATA Hard Drive is a convenient and affordable solution.

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Key Benefits	<ul style="list-style-type: none"><li>• Extend the life of your HP Business Notebook by providing additional storage</li><li>• Easy low-cost back-up solution without burdening network resources</li><li>• Switch drives between most HP business notebooks</li><li>• SMART predictive failure analysis (PFA)</li></ul>
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Service and Support	One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms. <b>NOTE:</b> <a href="#">Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a>
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### Standard Features

**Compatibility** The HP 250-GB 5400rpm Primary SATA Hard drive is compatible with HP Compaq 6510, 6515, 6530, 6535, 6710, 6715, 6730, 6735, 6910, 6930, 8510, 8530, 8730, series notebook PCs.

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**Spares information** HP 250-GB 5400rpm Primary SATA Hard drive option service spares kit 460911-001

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### HP 120-GB 7200rpm Primary SATA Hard Drive

For those who require additional storage or a faster dedicated second hard drive, the HP 120-GB 7200rpm Primary SATA Hard Drive is a convenient and affordable solution.

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- Key Benefits**
- Extend the life of your HP Business Notebook by providing additional storage
  - Easy low-cost back-up solution without burdening network resources
  - Switch drives between most HP business notebooks
  - SMART predictive failure analysis (PFA)
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**Service and Support** One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.

**NOTE:** [Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.](#)

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**Compatibility** The HP 120-GB 5400rpm Primary SATA Hard drive is compatible with HP Compaq 6510b, 6515b, 6710b, 6715b, 6910p, 8510p, 8510w, 8710p, 8710w notebook PCs.

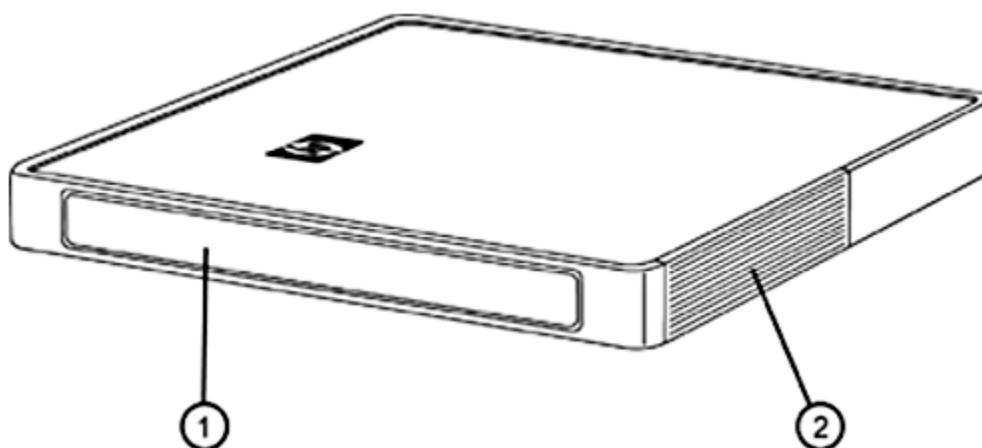
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**Spares information** HP 120-GB 7200rpm Primary SATA Hard drive option service spares kit 453523-001

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### HP External MultiBay II

External MultiBay II



1. Drive Bay

2. Pivoting Foot

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### Standard Features

If you are looking for the perfect solution to expand the storage capability of your HP Business Notebook, why not add an optical or hard drive? The HP External MultiBay II lets you quickly and easily add an additional drive to your system.

#### Key Benefits

- Convenient 9.5mm MultiBay II technology provides a compact optical and hard drive storage solution.
- Unique foot design allows you to place the MultiBay II in either a vertical or horizontal position.
- Quickly and easily add an optical drive or hard drive.

AC Adapter, Regular USB cable and High-powered USB cable included.

Drive Bay	Accepts 9.5-mm optical drives and hard drives (does not support diskette drive or battery)
Pivoting foot	Allows the MultiBay II to stand vertically
Eject mechanism	Ejects the drive
Security cable slot	Secures the MultiBay II to a stationary object when you attach a security cable lock
Mini-USB port	Connects the MultiBay II to the computer or docking station using a standard or powered mini-USB cable
Power connector	Connects the AC Adapter

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Service and Support One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.  
**NOTE:** [Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.](#)

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Compatibility The HP External MultiBay II is compatible with HP Compaq 2133, 2400, 4200 and 4400 series, as well as the HP Docking Station, HP Advanced Docking Station and HP 2400/2500 Series Docking Station, via the powered USB cable. HP Compaq 2533t, 4000, 5000, 6000, 6100, 6200, 6300, 6400, 6530b, 6530s, 6535b, 6535s, 6730b, 6730s, 6735b, 6735s, 6830s, 6930p, 7000, 7400, 8000, 8200, 8400 and 9400 series Notebook PCs, and 1000 series Tablet PCs are compatible with the HP External MultiBay II via a regular USB cable and AC adapter (powered USB not supported).  
**NOTE:** [Not all models are available in all regions.](#)

### HP 250-GB Pocket Media Drive

For those who require additional storage or a faster dedicated second hard drive, the HP 250GB Pocket Media Drive is a convenient and affordable solution.

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Spares information	HP 250GB Pocket Media Drive option service spares kit	500019-001
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Compatibility The HP 250GB Pocket Media Drive is compatible with all HP Compaq Notebook PCs.

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Service and Support One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.  
**NOTE:** [Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.](#)

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### Standard Features

- Extend the life of your HP Business Notebook by providing additional storage
  - Easy low-cost back-up solution without burdening network resources
  - Switch drives between most HP business notebooks
  - Warm swappable
  - High speed USB 2.0 data transfer
  - Power/drive activity LED indicator
  - USB powered, no AC adapter required
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### HP Upgrade Bay 250 GB 5400rpm Hard Drive

For those who require additional storage or a faster dedicated second hard drive, the HP Upgrade Bay 250 GB 5400rpm Hard Drive is a convenient and affordable solution.

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- Extend the life of your HP Business Notebook by providing additional storage
  - Easy back-up solution without burdening network resources
  - Switch drives between most HP business notebooks
  - Warm swappable
  - High speed SATA data transfer
  - Power/drive activity LED indicator
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**Service and Support**    One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.  
**NOTE:** [Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.](#)

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**Compatibility**    The HP Upgrade Bay 250-GB 5400rpm Hard Drive is compatible with the HP Compaq 6530b, 6535b, 6730b and 6735b Notebook PCs and the HP EliteBook 6930p Notebook PC.

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**Spares information**    HP Upgrade Bay 250-GB 5400rpm Hard Drive option service spares kit 469488-001

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### Technical Specifications

### Optical Drives

HP External USB CD/DVD R/RW Drive	Manual tray-load		
Interface	USB 2.0		
Dimensions (HxWxD)	0.73 x 5.31 x 5.94 in (1.85 x 13.5 x 15.1 cm)		
Form Factor	External		
Access Times	CD	1/3 Stroke: 110ms	Full Stroke: 220ms
		Random Access: 110ms	
	DVD	1/3 Stroke: 130ms	Full Stroke: 250ms
		Random Access: 130ms	
Supported Media (read)	Supports both 8cm and 12cm discs of CD and DVD family DVD single/dual layer (PTP/OTP), DVD-R (3.9GB/4.7GB), DVD-R multi-borders, DVD-RAM, DVD-R DL, DVD+R, DVD+R DL, DVD-RW, DVD+RW, CD-DA, CD-ROM, CD-ROM/XA, Photo-CD, Multi-session, Video-CD, CD-I FMV, CD Extra, CD Plus, CD-R, and CD-RW		
Supported Media (write)	DVD+R, DVD+RW, DVD-R, DVD-RW, DVD+R9, DVD-R9, DVD-RAM, CD-R, CD-RW		
Maximum speed		Normal	Power-saving mode
	Write	DVD+R	8X maximum by ZCLV 4X maximum by ZCLV
	DVD-R	8X maximum by ZCLV	4X maximum by ZCLV
	DVD+R9	6X maximum by ZCLV	4X maximum by ZCLV
	DVD-R	6X maximum by ZCLV	4X maximum by ZCLV
	DVD-RAM	5X maximum by ZCLV	3X maximum by ZCAV
	CD-R	24X maximum by ZCLV	10X maximum by CLV
Rewrite	DVD+RW	8X maximum by ZCLV	4X maximum by ZCLV
	DVD-RW	6X maximum by ZCLV	4X maximum by ZCLV
	CD-RW	24X maximum by ZCLV	10X maximum by CLV
Read	DVD	8X maximum by CAV	4X maximum by CAV
	CD-ROM	24X maximum by CAV	10X maximum by CAV
LightScribe labeling	CDR Media	V1.2	
	DVD+R Media	V1.2	
	Pixel Resolution	600 DPI	
	Track Resolution	470~1230 TPI	
	Linear Velocity	0.25 ~ 2.00 m/s	
	Color	Monochrome	
Environmental (all conditions, non-condensing)	Temperature (operating)	41° to 95° F (5° to 35° C)	
	Relative Humidity (operating)	10% to 80%	

### Technical Specifications

	Temperature (non-operating)	40 to 149° F (-40° to 65° C)
	Relative Humidity (non-operating)	10% to 90%
Operating systems supported	Microsoft Windows 2000 SP4, Windows XP, Windows Vista	
System requirements	Pentium III 1.0GHz or higher CPU 512MB or higher RAM Hard must have access time < 20 ms with a minimum of 100MB free space; 9GB free space for creating a DVD double layer image file (5GB for single layer)	
Option kit contents	HP External USB CD/DVD R/RW Drive, software, documentation	

HP SuperMulti (DL) DVD+/-RW LightScribe Drive	Drive	Manual tray-load		
	Orientation	Horizontal or vertical		
	Technology	PATA		
	Interface	EIDE		
	Dimensions (HxWxD)	0.37 x 5.51 x 5.04 in (0.95 x 14.0 x 12.8 cm)		
	Form Factor	12.7mm SuperMulti		
	Capacity	Read	Up to 8.5 GB	
		Write	Up to 8.5 GB	
	Access Times	CD	< 175 ms	
		DVD	< 230 ms	
	Max Data transfer rate (sustained)	24X CD-ROM	3,600 KB/s	
		8X DVD	10,800 KB/s	
		24X CD-R	3,600 KB/s	
		10X CD-RW	1,500 KB/s	
		8X DVD+R	10,800 KB/s	
		4X DVD+RW	5,400 KB/s	
		8X DVD-R	10,800 KB/s	
		4X DVD-RW	5,400 KB/s	
		2.4X DVD+R(9)	2,700 KB/s	
	5X DVD-RAM	6,750 KB/s		
Supported Media (read)	CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM			
Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, LightScribe			
Max Media Capacity (read)	8.5 GB			
Max Media Capacity (write)	8.5 GB			
Power	Four-pin, DC power receptacle			
	DC Power Requirement: 5 VDC ± 5%-100 mV ripple p-p			

### Technical Specifications

Environmental (all conditions, non-condensing)	Temperature (operating)	50° to 95° F (10° to 35° C)
	Relative Humidity (operating)	10% to 90%, non condensing
	Maximum Wet Bulb Temperature (operating)	101.6° F (38.7° C)
Operating systems supported	Microsoft® Windows® 2000, Windows XP Professional, Windows XP Home	
Option kit contents	HP SuperMulti (DL) DVD+/-RW LightScribe Drive, software, documentation	

HP SuperMulti (DL) DVD+/-RW LightScribe Drive, software, documentation	Drive	Manual tray-load		
	Orientation	Horizontal or vertical		
	Technology	SATA		
	Interface	Gen 1 SATA		
	Transfer Mode	UDMA Mode 5		
	Dimensions (HxWxD)	0.37 x 5.75 x 5.04 in (0.95 x 14.6 x 12.8 cm)		
	Form Factor	12.7mm SuperMulti		
	Capacity	Read	Up to 8.5 GB	
		Write	Up to 8.5 GB	
	Access Times	CD	< 175 ms	
		DVD	< 230 ms	
	Max Data transfer rate (sustained)	24X CD-ROM	Up to 3,600 KB/s	
		8X DVD	Up to 10,800 KB/s	
		24X CD-R	Up to 3,600 KB/s	
		16X CD-RW	Up to 2,400 KB/s	
		8X DVD+R	Up to 10,800 KB/s	
		4X DVD+RW	Up to 5,400 KB/s	
		8X DVD-R	Up to 10,800 KB/s	
		4X DVD-RW	Up to 5,400 KB/s	
		2.4X DVD+R(9)	Up to 2,700 KB/s	
5X DVD-RAM	Up to 6,750 KB/s			
Supported Media (read)	CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM			
Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, LightScribe			
Max Media Capacity (read)	8.5 GB			
Max Media Capacity (write)	8.5 GB			
Power	Four-pin, DC power receptacle			
	DC Power Requirement: 5 VDC ± 5%-100 mV ripple p-p			
Environmental (all conditions, non-condensing)	Temperature (operating)	50° to 95° F (10° to 35° C)		
	Relative Humidity (operating)	10% to 90%, non condensing		

### Technical Specifications

	Maximum Wet Bulb Temperature (operating)	101.6° F (38.7° C)
Operating systems supported	Microsoft® Windows® 2000, Windows XP Professional, Windows XP Home, Microsoft Windows Vista®	
Option kit contents	HP SuperMulti (DL) DVD+/-RW SATA LightScribe Drive, documentation	

HP 250GB Pocket Media Drive	Dimensions (HxWxD)	8.0 x 4.5 x 1.4 in (13.6 x 8.1 x 1.7 cm)	
	USB format	USB 2.0 (USB 1.1 backward compatible)	
	Capacity	250GB	
	Rotational speed	5,400 rpm	
	Data transfer rate	USB 1.1	12 MB/sec* (megabytes per second)
		USB 2.0	480 MB/sec
	Weight	0.45 lbs (0.2 kg)	
	Power requirements	Input voltage: 5V ±5% Operating amperage: <0.6A (0,6A) Spin up amperage: 1A	
	Environmental (all conditions, non-condensing)	Temperature (operating) 41° to 95° F (5° to 35° C) Temperature (non-operating) -22° to 176° F (-30° to +80° C)	
	Operating systems supported	Microsoft Windows XP Professional, Microsoft Windows XP Home, Microsoft Windows Vista	
	Option kit contents	HP 250GB Pocket Media Drive, pouch, USB cable, documentation	

\*Byte is an abbreviation for binary term, a unit of storage capable of holding a single character. On almost all modern computers, a byte is equal to 8 bits. Large amounts of memory are indicated in terms of kilobytes (1,024 bytes), megabytes (1,048,576 bytes), and gigabytes (1,073,741,824 bytes).

### Removable Hard Drives

HP 320-GB 7200rpm Primary SATA Hard Drive	Drive Weight	0.25 lb (115 g)
	Capacity	320 GB
	Height	0.37 in (9.5 mm)
	Width	2.75 in (70 mm)
	Interface	ATA-7 / SATA 1.0a
	Transfer Rate	Synchronous (maximum) 100 MB/s (Drive Capability)
	Operating Temperature	41° to 131° F (5° to 55° C)
	Features	ATA Security

### Technical Specifications

HP 250-GB 5400rpm Primary SATA Hard Drive	Drive Weight	0.22 lb (101 g)
	Capacity	250 GB
	Height	0.37 in (9.5 mm)
	Width	2.75 in (70 mm)
	Interface	ATA-8 / SATA 2.5 (150 Gb/s)
	Transfer Rate	Synchronous (maximum) 150 MB/s (Drive Capability)
	Operating Temperature	41° to 140° F (5° to 60° C)
	Features	ATA Security

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HP 120-GB 7200rpm Primary SATA Hard Drive	Drive Weight	0.25 lb (115 g)
	Capacity	120 GB
	Height	0.37 in (9.5 mm)
	Width	2.75 in (70 mm)
	Interface	ATA-7 / SATA 1.0a
	Transfer Rate	Synchronous (maximum) 100 MB/s (Drive Capability)
	Operating Temperature	41° to 131° F (5° to 55° C)
	Features	ATA Security

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HP External MultiBay II	Dimensions (H x W x D)	6.77 x 6.46 x 0.71 in (17.2 x 16.4 cm x 1.8 cm)	
	Weight	1.3 lbs (515 g)	
	Power Supply (input)	Rated Voltage	100 to 240 V
		Rated Current	0.6A rms
		Line Frequency	50 - 60 Hz
	Temperature	Operating	50° to 95° F (10° to 35° C)
		Non-operating	14° to 140° F (-10° to 60° C)
	Relative Humidity	Operating/Non-condensing	10% to 90% relative humidity
	Maximum Altitude	Operating	0 to 10,000 ft (0 to 3,048 m)
		Non-operating	0 to 30,000 ft (0 to 9,144 m)
	Shock	Operating	10 G, 11 ms, half-sine
		Non-operating	60 G, 11 ms, half-sine
	Vibration	Operating	0.5 G zero-to-peak, 10 to 500 Hz, 0.25 oct/min sweep rate
		Non-operating	1 G, zero-to-peak, 10 to 500 Hz, 0.5 oct/min sweep rate
	Option Kit Contents	HP External MultiBay II, Powered USB cable, Regular USB cable, AC power adapter, documentation	

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### Technical Specifications

HP Upgrade Bay 250-GB 5400rpm Hard Drive	Drive Weight	0.3 lb (0.14 kg)
	Capacity	250 GB
	Height	0.50 in (1.27 cm)
	Width	5.75 in (14.6 cm)
	Interface	ATA-8 / SATA 2.5 (150 Gb/s)
	Transfer Rate	150 Gb/s
	Operating Temperature	41° to 140° F (5° to 60° C)
	Features	ATA Security

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