

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

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.

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.

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.

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| Key Benefits | <ul style="list-style-type: none"><li>• Portable design, using USB2.0 connection to ensure the best performance</li><li>• Highly efficient power saving mode, slim size, and ultra light weight</li><li>• Up to 4.7GB of data storage capacity (up to 8.5GB double layer)</li><li>• 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)</li><li>• Convenience of Plug &amp; Play</li><li>• Emergency manual eject</li><li>• HP's LightScribe technology enables the burning of a custom, professional label on DVD or CD media</li></ul> |
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|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service and Support | <p>One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.</p> <p><a href="#">NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a></p> |
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| Compatibility | <p>The HP External USB CD/DVD R/RW Drive is compatible with all HP Business notebooks.</p> |
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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.

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| Key Benefits | <ul style="list-style-type: none"><li>• Single user-removable drive with 8X DVD-ROM, 10X CD-RW, &amp; 2X DVD+/-RW Dual Format functionality</li><li>• Up to 4.7GB of data storage capacity (up to 8.5GB double layer)</li><li>• HP's LightScribe technology enables the burning of a custom, professional label on DVD or CD media</li></ul> |
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| Service and Support | <p>One-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forms.</p> <p><a href="#">NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a></p> |
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Standard Features

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| Compatibility      | The HP SuperMulti (DL) DVD+/-RW LightScribe Drive is compatible with the following HP Business notebooks:<br>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:<br>HP Compaq 6530b, 6535b, 6730b, 6735b and 6930p Notebook PCs. |            |
| 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 |

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.

|              |                                                                                                                                                                                                                                                                                                                          |  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 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.<br><a href="#">NOTE: 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.<br><a href="#">NOTE: 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 | <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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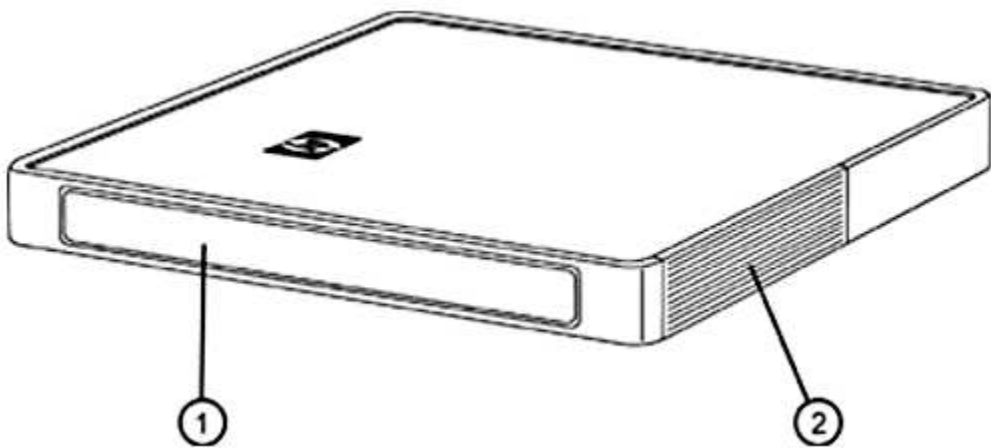
|                     |                                                                                                                                                                                                                                                                |  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 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.<br><a href="#">NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a> |  |
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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 |
|--------------------|---------------------------------------------------------------------|------------|

HP External MultiBay II

External MultiBay II



1. Drive Bay
2. Pivoting Foot

## 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.<br><a href="#">NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a> |
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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).<br><a href="#">NOTE: Not all models are available in all regions.</a> |
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## 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 |
| Compatibility       | The HP 250GB Pocket Media Drive is compatible with all HP Compaq Notebook PCs.                                                                                                                                                                                 |            |
| 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.<br><a href="#">NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a> |            |

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

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.

- 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.<br><a href="#">NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.</a> |            |
| 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.                                                                                               |            |
| Spares information  | HP Upgrade Bay 250-GB 5400rpm Hard Drive option service spares kit                                                                                                                                                                                             | 469488-001 |

Technical Specifications

Optical Drives

|                              |                                                                                                                                                                                                                                                                                                                          |                                               |                                                                 |                                         |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------|-----------------------------------------|
| HP External USB CD/DVD Drive |                                                                                                                                                                                                                                                                                                                          | Manual tray-load                              |                                                                 |                                         |
| R/RW Drive                   | 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<br>Full Stroke: 220ms<br>Random Access: 110ms |                                         |
|                              |                                                                                                                                                                                                                                                                                                                          | DVD                                           | 1/3 Stroke: 130ms<br>Full Stroke: 250ms<br>Random Access: 130ms |                                         |
|                              | Supported Media (read) Supports both 8cm and 12cm discs of CD and DVD family<br>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                | Write                                                                                                                                                                                                                                                                                                                    | DVD+R                                         | Normal<br>8X maximum by ZCLV                                    | Power-saving mode<br>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<br>(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<br>512MB or higher RAM<br>Hard must have access time < 20 ms with a minimum of 100MB free space;<br>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<br>(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<br>(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                            |                    |

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|                             |                                                |                                                                                                                   |
|-----------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 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%<br>Operating amperage: <0.6A (0,6A)<br>Spin up amperage: 1A                                 |
|                             | Environmental (all conditions, non-condensing) | Temperature (operating) 41° to 95° F (5° to 35° C)<br>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<br>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                                                                                   |                                                           |
| <hr/>                                        |                        |                                                                                                |                                                           |
| HP 120-GB 7200rpm<br>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                                                                                   |                                                           |
| <hr/>                                        |                        |                                                                                                |                                                           |
| 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 |                                                           |

## Technical Specifications

|                                             |                       |                             |
|---------------------------------------------|-----------------------|-----------------------------|
| HP Upgrade Bay 250-GB<br>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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