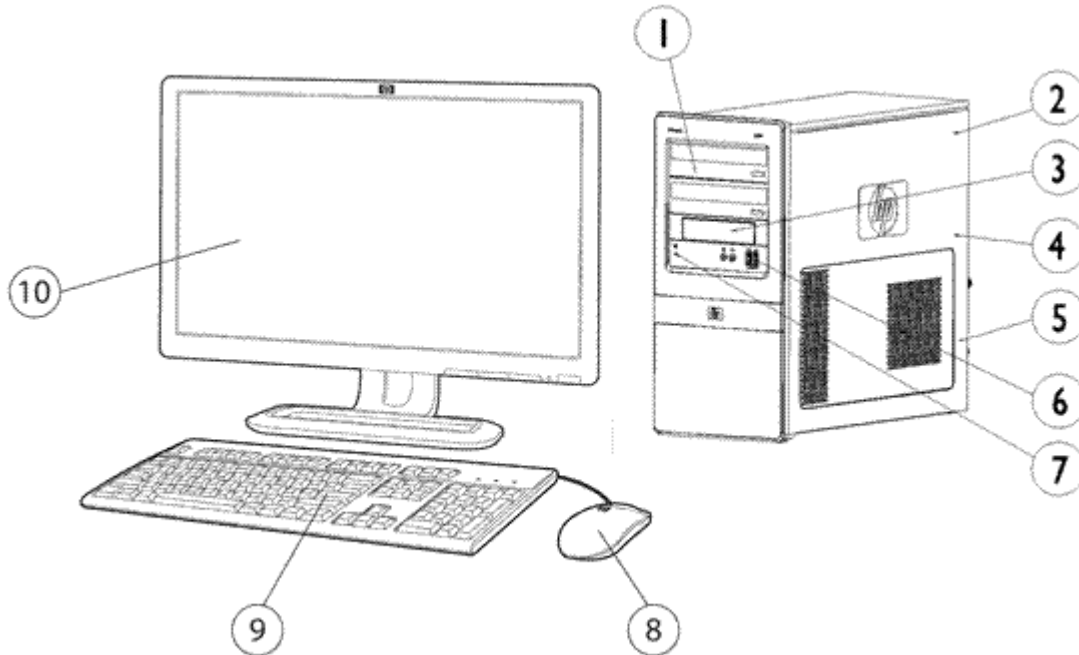


Overview

**HP recommends
Windows Vista® Business**

Microtower



- | | |
|---|---|
| <ol style="list-style-type: none"> 1. (2) external 5.25" drive bays for optional optical drives and (2) internal 3.5" hard drive bays 2. 300W PFC power supply 3. (1) external 3.5" drive bay for optional media reader or diskette drive 4. (2) full-height PCI 2.3 slot, (1) PCIe x1 slots, (1) PCIe x16 slot 5. Rear I/O—(6) USB 2.0 ports, (2) PS/2, (1) RJ-45, (1) VGA, (1) Parallel, (1) COM, (1) audio in, (1) audio out, (1) MIC | <ol style="list-style-type: none"> 6. Front I/O—(2) USB 2.0 ports, (1) MIC, (1) audio out (Headphone) 7. Reset button 8. HP standard Mouse 9. HP Standard Keyboard 10. Monitor (sold separately) |
|---|---|

* Model dx7518 differentiate from dx7510 on the front bezel

At A Glance

- Support for Intel® Core™2 Duo and Core™2 Quad processors, Intel Pentium® dual-core processors, Intel Celeron® processors
- Choice of operating systems—
 - Genuine Windows Vista Business 32
 - Genuine Windows Vista Business 64
 - Genuine Windows Vista Home Basic
 - Genuine Windows Vista Business with downgrade to Windows XP Professional custom installed
 - Windows XP Home cost Reduced (China only)
 - Red Flag Linux (China only)
 - FreeDOS
- Intel Q43 Chipset
- Legacy parallel and serial port support
- Intel I/O Controller Hub 10 (ICH10D)
- Intel Graphics Media Accelerator GMA4500 integrated in chipset
- PCI Express I/O bus
- Serial ATA controller
- Realtek 8111D Gigabit Ethernet Controller
- Choice of hard drives and optical drives
- DDR3 1333MHz SDRAM system memory (the DDR3 memory maximum operational speed is determined by Q43)

Overview

chipset(1066Mhz maximum) and the installed processor's Front Side Bus (FSB) in the system.)

- 300W PFC HV immunity power as standard configuration
- Protected by HP Services. Terms and conditions vary by country. Certain restrictions and exclusions apply.

Standard Features and Configurable Components

Processor and Speed

One of the following

Intel Celeron Processors⁻

Intel Celeron 430 Processor (1.8-GHz, 512-KB L2 cache, 800-MHz FSB)

Intel Celeron 440 Processor (2.0-GHz, 512-KB L2 cache, 800-MHz FSB)

Intel Celeron 450 Processor (2.2-GHz, 512-KB L2 cache, 800-MHz FSB)

Intel Celeron Dual-Core Processors

Intel Celeron E1400 Processor (2.0-GHz, 512K L2 cache, 800-MHz FSB)

Intel Celeron E1500 Processor (2.2-GHz, 512K L2 cache, 800-MHz FSB)

Intel Pentium Dual-Core Processors⁻

Intel Pentium E5200 Processor (2.5-GHz, 2-MB L2 cache, 800-MHz FSB)

Intel Pentium E5300 Processor (2.6-GHz, 2MB L2 cache, 800-MHz FSB)

Intel Pentium E5400 Processor (2.70-GHz, 2MB L2 cache, 800-MHz FSB)

Intel Core 2 Duo Processors⁻

Intel Core 2 Duo E7400 Processor (2.8-GHz, 3 MB L2 cache, 1066-MHz FSB)

Intel Core 2 Duo E7500 Processor (2.93-GHz, 3 MB L2 cache, 1066-MHz FSB)

Intel Core 2 Duo E8400 Processor (3.0-GHz, 6 MB L2 cache, 1333-MHz FSB)

Intel Core 2 Duo E8500 Processor (3.16-GHz, 6-MB L2 cache, 1333-MHz FSB)

Intel Core 2 Duo E8600 Processor (3.33-GHz, 6 MB L2 cache, 1333-MHz FSB)

Intel Core 2 Quad Processors⁻

Intel Core 2 Quad Q8200 Processor (2.33-GHz, 4 MB L2 cache, 1333-MHz FSB)

Intel Core 2 Quad Q8300 Processor (2.50-GHz, 4 MB L2 cache, 1333-MHz FSB)

Intel Core 2 Quad Q9400 Processor (2.66-GHz, 6 MB L2 cache, 1333-MHz FSB)

Intel Core 2 Quad Q9550 Processor (2.83-GHz, 12 MB L2 cache, 1333-MHz FSB)

Intel Core 2 Quad Q9650 Processor (3.0-GHz, 12 MB L2 cache, 1333-MHz FSB)

NOTE—Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families.

Operating Systems and Application Software

(availability varies by region)

Genuine Windows Vista Business 32*

Genuine Windows Vista Business 64*

Genuine Windows Vista Home Basic*

Genuine Windows Vista Business downgrade to Windows XP Professional custom installed*†

Windows XP Home cost Reduced (China only)

Red Flag Linux (China only)

Free DOS

* Certain Windows Vista product features require advanced or additional hardware. See <http://www.microsoft.com/windowsvista/getready/hardwarereqs.msp#> and <http://www.microsoft.com/windowsvista/getready/capable.msp#> for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit <http://www.windowsvista.com/upgradeadvisor>.

† Windows Vista Business disk may be included for future upgrade if desired. To qualify for this downgrade an end user must be a business (including governmental or educational institutions) and is expected to order annually at least 25 customer systems with the same custom image.

Microsoft Office 2007 Basic

Microsoft Office 2007 Small Business

Microsoft Office 2007 Professional

HP Backup and Recovery Manager

Mozilla Firefox for HP Virtual Solutions

Hard Disk Partitioning

Roxio Easy Media Creator 10**

Standard Features and Configurable Components

Intervideo WinDVD 8**
McAfee Total Protection Anti-Virus***
PDF Complete
2008 Intel Matrix Storage Manager
HP Power Manager v2.0
Credential Manager 2.5 for dx Series**
USB port disable
HP Total Care Advisor
Sun Java Runtime Environment
Welcome Center SMB Offers
Google Toolbar
Total Care Advisor 2.5
Total Care Setup 6.5

** Supporting software available with certain optical drive configurations

*** 60 day trial period for McAfee Total Protection for Small Business software. Internet access required to receive updates. First update included. Subscription required for updates thereafter.

Hard Drives

80-GB Serial ATA 3.0-Gb/s Hard Drive (7200 rpm)
160-GB Serial ATA 3.0-Gb/s Hard Drive (7200 rpm)
250-GB Serial ATA 3.0-Gb/s Hard Drive (7200 rpm)
320-GB Serial ATA 3.0-Gb/s Hard Drive (7200 rpm)
500-GB Serial ATA 3.0-Gb/s Hard Drive (7200 rpm)

System Memory

1-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (1 x 1GB)
2-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (2 x 1GB)
2-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (1 x 2GB)
3-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (3 x 1GB)
4-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (4 x 1GB)
4-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (2 x 2GB)
8-GB DDR3 Synch DRAM PC3-10600 (1333-MHz) Non-ECC (4 x 2GB)

NOTE—In any mode, the DDR3 memory maximum operational speed is determined by Q43 chipset (1066 MHz maximum) and the installed processor's Front Side Bus (FSB) in the system.

For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system.

Storage -

One or more of the following (see Storage section below)

Diskette Drive

1.44-MB Diskette Drive

Media Reader

HP 22-in-1 3.5" Media card Reader with 1394 port

HP 22-in-1 3.5" Media Card Reader

Optical Drives (Serial ATA)

SATA 16X/48X DVD-ROM Drive

SATA 16X SuperMulti LightScribe DVD Writer Drive

Standard Features and Configurable Components

Input Devices

Keyboard – One of the following

HP PS/2 Standard Keyboard

HP USB Standard Keyboard

Mouse – One of the following

PS/2 2-Button Optical Scroll Mouse

USB 2-Button Optical Scroll Mouse

USB 2-Button Laser Mouse

Audio

Realtek ALC662 High Definition audio codec

3D audio compliant with AC'97 Rev. 2.3 and HD Audio compatible

Internal PC speaker MT

HP Thin USB Powered Speakers

Communication

Realtek 8111D GbE Ethernet Controller

Intel Gigabit CT Desktop NIC

LSI PCIe x1 56K SoftModem

HP Wireless 802.11 b/g/n PCIe x1 Card

Graphics

Intel Graphics Media Accelerator GMA4500 integrated

ATI Radeon HD 2400XT 256MB Dual Head graphics adapter (PCIe x16)

ATI Radeon HD 3450 (256MB) PCIe x16 Card

ATI Radeon HD 3470 256MB Single Head graphics adapter (PCIe x16)

ATI Radeon HD 3650 512MB Dual Head graphics adapter (PCIe x16)

HP ADD2 SDVO PCIe DVI-D Adapter

HP DisplayPort To DVI-D Adapter (for HD3470 and HD3650)

Miscellaneous

Hood Sensor MT

Rear I/O Port Cover

2nd serial port

3-port 1394 PCI card, FH

HP Chassis Security Kit (1 bay filler)

HP Chassis Security Kit (2 bay fillers)

System Details

Base Unit	<ul style="list-style-type: none"> • Micro ATX Microtower chassis, including power supply and front bezel—five (5) drive bays and four expansion slots • Active type heatsink • L x W x H—90 mm x 90 mm x 72.5 mm chassis fan for Microtower chassis <p>System board with Intel Q43 Express chipset, Intel I/O Controller Hub 10D (ICH10D), Realtek RTL8111D Ethernet controller, Intel GMA GMA4500 graphics integrated, and Realtek ALC662 audio, (1) PCI Express x1 slots, (1) PCI Express x16 slot, (2) PCI, (4) DDR3 DIMM memory slots, (4) Serial ATA data connectors, (8) USB Ports (see USB support below), (1) Parallel and (1) serial port in the rear IO</p> <ul style="list-style-type: none"> • Power cord
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Slots	<p>PCI One (1) full-height PCI Express x1 slots on PCA One (1) full-height PCI Express x16 slot on PCA (for graphic cards) Two (2) full-height PCI slots on PCA</p> <p>Memory Expansion Four (4) DDR3 SDRAM DIMM slots (8 GB maximum memory support)</p> <p>NOTE—For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system.</p>
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Bays	<p>Internal Two (2) 3.5-inch</p> <p>External Two (2) 5.25-inch—One (1) 3.5-inch</p>
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USB Support	<p>EHCI high-speed USB 2.0 controller</p> <p>Two (2) front ports, Six (6) rear ports—three (3) internal headers on system board (one for front ports, one for media card reader, one reserved for 3PO device, such as tax controller)</p>
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Interfaces (Legacy)	<p>One (1) PS/2 keyboard port</p> <p>One (1) PS/2 mouse port</p> <p>One (1) analog VGA video port</p> <p>One (1) Parallel port</p> <p>One (1) serial port</p> <p>One (1) line in—one (1) line out—one (1) mic in</p> <p>One (1) RJ45 network port</p>
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Weight & Dimensions (MT)	<p>Chassis Dimensions 15.14 x 7.27 x 16.36 in (H x W x D) 385 x 185 x 416 mm</p> <p>Packaged Dimensions 19.63 x 24.13 x 10.56 in (L x W x H) 498.6 x 613 x 268.2 mm</p> <p>System Weight 18.4 lb (8.34 kg)</p> <p>Shipping Weight 26.7 lb (12.1 kg)</p>
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System Details

Technology and Features **Memory Type** PC3-10600 DDR3 SDRAM (133MHz) non-ECC
Up to 8 GB system memory standard

NOTE-In any mode, the DDR3 memory maximum operational speed is determined by Q43 chipset (1066 MHz maximum) and the installed processor's Front Side Bus (FSB) in the system.

For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system.

Hard Drive Interfaces Supported Serial ATA support

Chassis	Front Panel	Power button Power On LED HDD Activity LED Reset button
	Cooling Solutions Supported	Power Supply Fan (variable speed) Active heatsink (variable speed) Chassis fan (variable speed) (MT only)
	Slots Supported	Four (4) full-height expansion slots
	Front I/O	Two (2) USB 2.0 ports, Headphone, Mic
	Rear I/O	Standard Micro ATX I/O connectors, including four (6) USB 2.0 ports, serial and parallel ports
	Drive Bays	Two (2) 5.25-inch (13.335 cm) half height external One (1) 3.5-inch (8.89 cm) half height external Two (2) 3.5-inch (8.89 cm) half height internal
	Internal Speaker	Optional
	Security	Padlock loop Kensington Lock Support
	Power Supply	300-watt ATX Power Supply – PFC HV immunity (410V/s)

Unit Environment and Operating Conditions

General Unit Operating Guidelines

- Keep the computer away from excessive moisture, direct moisture and the extremes of heat and cold, to ensure that unit is operated within the specified operating range.
- Leave a 4 in (10.2 cm) clearance on all vented sides of the computer to permit the required airflow.
- Never restrict airflow into the computer by blocking any vents or air intakes.
- Do not stack computers on top of each other or place computers so near each other that they are subject to each other's re-circulated or preheated air.
- Occasionally clean the air vents on the front, back, and any other vented side of the computer. Lint, dust and other foreign matter can block the vents and limit the airflow.
- If the computer is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above will still apply.

Temperature Range	Operating	41° to 95° F (5° to 35° C)
	Non-operating	-22° to 140° F (-30° to 60° C)
Relative Humidity	Operating	15% to 80% (non-condensing at ambient)
	Non-operating	90% (non-condensing at ambient)
Maximum Altitude (unpressurized)	Operating	7500 low-profile ft (2286 m)
	Non-operating	15,000 ft (4572 m)

System Details

NOTE—Operating temperature is de-rated 1.0 deg C per 1000 ft (300 m) to 7500 ft (2286 m) for MT above sea level, no direct sustained sunlight. Maximum rate of change is 7.5 deg C/Hr for MT. The upper limit may be limited by the type and number of options installed.

System Board	Processor	Socket T ⁺ LGA775 industry standard Micro ATX form factor Support single Intel Core 2 Duo and Core 2 Quad, Pentium dual-core, or Celeron processors
	PWM	ON – NCP5392 – 4 phase
	Chipset	Intel Q43 Express Intel I/O Controller Hub 10 (ICH10D)
	Super I/O	ITE8720
	Front Side Bus Frequency	800/1066/1333 MHz
	Memory	DDR3 SDRAM 4 x DIMM slots
	Clock Generator	IDTCV184-2
	Integrated Graphics	Intel Graphics Media Accelerator (GMA) 4500
	Audio	Realtek ALC662 HD Audio compatible codec with two channel audio 3D audio compliant with AC'97 rev. 2.3
	LOM	Realtek RTL8111D
	Storage	Four Serial ATA interfaces
	Expansion Slots	1 x PCI Express x1 slots 1 x PCI Express x16 slot 2 x PCI
	BIOS	SPI FLASH ROM
	Industrial Standard	PCIe compliant USB 2.0
	Rear Side I/O Ports	1 x PS/2 keyboard port 1 x PS/2 mouse port 6 x USB 2.0 ports 1 x RJ-45 10/100/1000 port 1 x serial port 1 x parallel port 1 x D-sub 15-pin analog VGA port 3 x audio ports
	On Board I/O Interfaces	1 x ATX power connector 1 x +12V power connector 1 x Floppy connector 1 x LPC connector to support TCM daughter card 1 x header (1 – 1x2) to support hood sensor 1x COM2 header 1 x Front panel connector, Switch, LED (ON/Flash/OFF) 2 x Fan headers for CPU, chassis, with voltage/fan speed control 1 x header (1 – 2x5,) to support 2 USB 2.0 ports at front side 1 x header (1 – 2x5) to support USB Card Media Reader 1 x header (1 – 2x5) to support additional USB devices, such as tax controller 1 x header (1 – 1x2) to support one touch reset 1 x header to support 2 front (Headphone/Mic) audio ports

System Details

Board Size	Micro-ATX, PCB Size=244mm x 244 mm 4-layer PCB with green color
Additional Features	Bootable without keyboard, mouse or monitor Keyboard/mouse/USB wake up Support S3, S4 and S5 ACPI status Hardware monitor capability CPU fan speed control One button reset

Network Interface	Realtek 8111D GbE Ethernet Controller Intel Gigabit CT Desktop NIC
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Wireless	Wireless 802.11b/g/n PCIe Card (full height bracket)
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Power Supply	<ul style="list-style-type: none">• 300W ATX Power Supply – Active PFC self-adaptable to 115v & 230v, with HV immunity up to 410V/s• 90 to 132VAC, or 180 to 264VAC operating voltage range• 100 to 127VAC, or 200 to 240VAC rated voltage range• 50–60 Hz rated line frequency• 47–63 Hz operating line frequency range• 300 watt maximum rated power• High voltage immunity up to 410V/s• Meet China Telecom YD/T 993-2006 spec• 80 mm x 80mm x 25 mm power supply fan – variable speed for optimum acoustics
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Power Conservation 'Energy Saver'	<ul style="list-style-type: none">• APM 1.2 support• Screen blanking• Hard drive 'Idle' mode• System Idle mode• ~2 watt power consumption in ES mode – suspend to RAM (S3) (instantly available PC)• Processor/Cache memory power-down (S3)
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System Details

System Environmental Specs

- Values are subject to change without notification and are for reference only.
- Performance of system, options, and ancillary equipment will vary depending on the system configuration.
- Levels presented do not account for non-HP/Compaq installed hardware.

Ambient Air Temperature	Operating	Operating 41° to 95° F (5 to 35° C) (Test 0 to 104° F (40° C)) at sea level with an altitude de-rating of 1.0° C per every 1000 ft (300 m) above sea level to a maximum of 8000 ft (2500 m), no direct sustained sunlight. Maximum rate of change is 77° F/Hr (25° C/Hr). The upper limit may be limited by the type and number of options installed.
	Storage	Storage—90% RH @ 60° C for 12 hours (Non-condensing) — Maximum rate of change— 410° F/Hr (210° C/Hr).
Humidity	Operating	10% to 90% relative humidity (Rh), 35° C non-condensing
	Storage	90% relative humidity (Rh), 60° C for 12 hours, non-condensing
Altitude	Operating	0 to 10,000 feet (0 to 3048 meters) – This value may be limited by the type and number of options installed.
	Non-Operating	0 to 30,000 feet (0 to 9,144 meters)
Shock		Listed are the levels of shock the product can withstand with No damage being incurred. The values represent peak input acceleration during a 2~3 ms half-sine shock pulse, 11 ms trapezoidal shock pulse.
	Non-Operating	35G's (Half-sine Shock) 30G's (Trapezoidal Shock)
Vibration		Listed are the levels of vibration the product can withstand with No damage being incurred. The values represent a flat random vibration input acceleration profile across the given frequency range.
	Operating	Random vibration at 5Hz@0.00025G ² /Hz, 10Hz@0.01G ² /Hz, 100Hz@0.01G ² /Hz, 300Hz@0.00001G ² /Hz 5Hz to 300Hz, (0.25G's nominal).
Acoustic Noise	Non-Operating	~2.09Grms (5-500Hz), Non-Operational
		Listed are the declared A-WEIGHTED SOUND POWER LEVELS (LWAd) and declared average desktop seated operator position A-WEIGHTED SOUND PRESSURE LEVELS (LpAm) when the product is operating in a 73.4° F (23° C) ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
	IDLE (Fixed disk drive spinning)	LWAd = 4.3 Bels, Desktop Average LpAm = 32 dBA
	FIXED DISK (Random write)	LWAd = 4.80 Bels, Desktop Average LpAm = 37 dBA
	DVD-ROM (Sequential Reads)	LWAd = 5.2 Bels, Deskside Average LpAm = 42 dBA

System Details

Service and Support

On-site Warranty ^{Note 1}-1-1-1, 3-1-1, 3-3-3, 3-3-3 Limited, 4-4-4, 5-5-5, limited warranty delivers on-site, next business-day ^{Note 2} service for parts and labor and includes free telephone support ^{Note 3}-24 x 7. Global coverage ^{Note 2} ensures that any product purchased in one country and transferred to another non-restricted country will remain fully covered under the original warranty and service offering. One-year onsite and labor are not available in all countries.

NOTE 1-Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.

NOTE 2-On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

NOTE 3-Technical telephone support applies only to HP-configured Compaq and third-party HP-qualified hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.

After-Market Options

Communications	NICs			
		Intel Gigabit CT Desktop NIC	FH969AA	
	Wireless LAN			
		HP Wireless 802.11/b/g/n PCIe x1	FH971AA	
	Modems			
		LSI PCIe x1 56K International SoftModem	FH970AA	
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Hard Disk Drives		HP 500-GB SATA 3.0-Gb/s Hard Drive	KW347AA	
		HP 320-GB SATA 3.0-Gb/s Hard Drive	FH963AA	
		HP 250-GB SATA 3.0-Gb/s Hard Drive	PY278AA	
		HP 160-GB SATA 3.0-Gb/s Hard Drive	PY277AA	
		HP 80-GB SATA 3.0-Gb/s Hard Drive	PY276AA	
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Removable Storage Devices	Diskette Drive			
		HP CDC 1.44MB 3.5 Internal Floppy	EY084AA	
		HP 1.44-MB Std Internal Floppy Drive	AH053AA	
		HP 1.44-MB USB Diskette Drive - External	DC141B	
		22-in-1 Media Reader	FX273AA	
		512MB thumb drive	RB883PA	
		1GB thumb drive	RB884PA	
		2GB thumb drive	GD704PA	
	4GB thumb drive	GD705PA		
<hr/>				
Input Devices	Keyboards			
		HP PS/2 Standard Keyboard	DT527A	
		HP USB Standard Keyboard	DT528A	
		Mice		
		HP PS/2 2-Button Scroll Mouse (Carbonite)	DD440B	
		Bulk pack, 100 EACH HP PS/2 2-Button Scroll Mouse (Carbonite)	DD440K	
		HP PS/2 2-Button Optical Scroll Mouse	EY703AA	
		HP USB 2-Button Optical Scroll Mouse	DC172B	
		HP USB 2-Button Laser Mouse	GW405AA	
<hr/>				
Memory		HP 1GB DDR3-1333 DIMM	AT023AA	
		HP 2GB DDR3-1333 DIMM	AT024AA	
<hr/>				
Audio		HP Thin USB Powered Speakers	KK912AA	
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After-Market Options

Graphics	ATI Radeon HD 2400 XT 256MB DH PCIe x16 Graphics Card	KD060AA
	ATI Radeon HD 3450 PCIe x16 Card – China Only	FG731AA
	ATI Radeon HD 3650 (512MB DH) PCIe x16 Graphics Card	KS505AA
	ATI Radeon HD 3470 256MB SH PCIe x16 Graphics Card	FH972AA
* 1GB of system memory required. Graphics cards use part of the total system memory to enhance graphics performance.		
Optical Drives	HP SATA DVD-ROM Drive	AH047AA
	HP SATA SuperMulti LightScribe DVD Writer Drive	GF343AA
Security	HP Business PC Security Lock Kit	PV606AA
	Security Cable with Kensington Lock	PC766A
Miscellaneous Accessories	Belkin Serial to USB adapter	EM449AA
	Adaptec FireConnect 2100 FireWire (1394) PCI card	PA997A
	HP 2nd Serial Port Adapter	PA716A
	HP ADD2 SDVO DVI-D Adapter	DY674A
	HP DisplayPort To DVI-D Adapter	FH973AA
	HP DisplayPort To VGA Adapter	AS615AA
	HP 22-in-1 Media Card Reader	FX273AA

Memory

DDR SYNCH DRAM NON-ECC MEMORY

The Intel Q43 Express chipset supports non-ECC DDR3 memory up to PC3-10600 (1333-MHz). Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

CAUTION—You must shut down the computer and disconnect the power cord before adding or removing memory modules. Regardless of the power-on state, voltage is always supplied to the memory modules as long as the computer is plugged in to an active AC outlet. Adding or removing memory modules while voltage is present may cause irreparable damage to the memory modules or system board.

HP recommends dual-channel symmetric configurations for maximum performance.

For best performance, add the same amount of total memory to each channel and do not mix speeds. For dual-channel symmetric performance, the total amount of memory in each channel must be equal. If speeds are mixed, speed will default to the slowest DIMM.

STANDARD MEMORY

1-GB, 2-GB DDR3 SYNCH DRAM

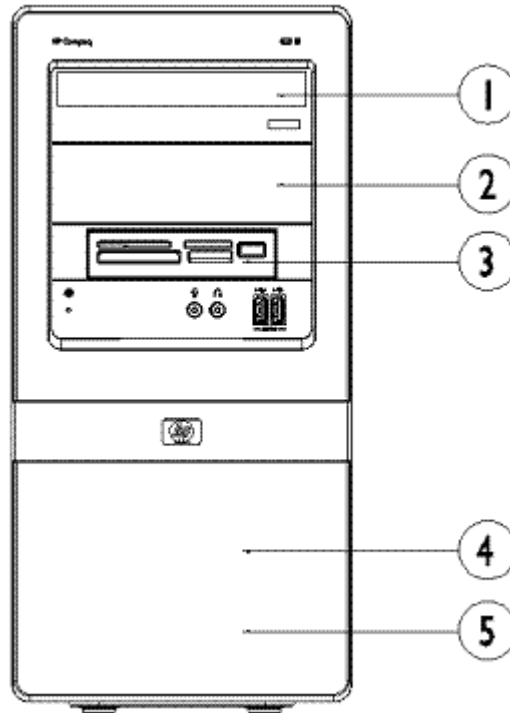
OPTIONAL MEMORY UPGRADES

Supports up to 8-GB of DDR3 SYNCH DRAM. Not all memory configurations possible are represented below.

NOTE—For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system.

DIMM Size	Slot 1 (White)	Slot 2 (Black)	Slot 3 (White)	Slot 4 (Black)
1-GB	1-GB			
2-GB	2-GB			
3-GB	1-GB	1-GB	1-GB	
2-GB (dual-channel symmetric)	1-GB		1-GB	
4-GB (dual-channel symmetric)	1-GB	1-GB	1-GB	1-GB
4-GB (dual-channel symmetric)	2-GB		2-GB	
8-GB (dual-channel symmetric)	2-GB	2-GB	2-GB	2-GB

Storage



HP Compaq dx7510 Microtower Business PC

	Maximum Quantity Supported	Position Supported	Controller
Drive Support			
Diskette Drives	1	3	SIO
Media Reader	1	3	Internal USB 2.0 port
SuperMulti Lightscribe Drives	2	1, 2	SATA
DVD-ROM Drives	2	1, 2	SATA
DVD+/-RW Drives	2	1, 2	SATA
3.5" Serial ATA Hard Drives	2	4, 5	SATA

Technical Specifications

Integrated Realtek ALC662-VC Audio	Type	Integrated
	HD Audio compatible codec	Yes
	Sampling	Supports 44.1/48/96 KHz
	Audio Jacks	Mic-In Line-In Line-Out / Headphone Out
	Power Support	Digital=3.3V Analog=5V
	Other	Meets Microsoft Windows Vista (WLP 3.08) Premium requirements High-performance DACs with 98dB SNR(A-Weighting) ADCs with 90dB SNR(A-Weighting)

Integrated Realtek 8111D GbE Ethernet Controller	Connector	RJ45
	Controller	Integrated Realtek 8111D GbE Ethernet Controller
	Memory	Transmit/Receive on-chip buffer support
	Compliance	IEEE 802.1P, 802.1Q, 802.3, 802.3AB and 802.3u compliant, 802.3x flow control
	Bus architecture	PCI Express™1.1
	Data transfer mode	DMA
	Hardware certifications	FCC, B, CE, TUV- cTUVus Mark Canada and United States, TUV- GS Mark for European Union
	Power requirement (LOM)	1000mbps (TxRx) max.558mW 100mbps (TxRx) max.274mW 10mbps (TxRx) max.320mW D3 cold with Link (10M) 106 mW D3 cold without Link 63 mW Link
	Network transfer rate	10/100/1000 Mbps over CAT.5
	Dimensions	9mm x 9mm
	Power management	ACPI rev 2.0, PCI PM rev 1.1, ASPM v1.0a

Technical Specifications

Intel Gigabit CT Desktop NIC	Connector	RJ-45	
	Controller	Intel WG82574L Gigabit Ethernet Controller	
	Memory	Integrated Dual 48K configurable transmit receive FIFO Buffers	
	Data rates supported	10/100/1000 Mbps	
	Compliance	IEEE 802.1P, 802.1Q, 802.2, 802.3, 802.3AB and 802.3u compliant, 802.3x flow control	
	Bus architecture	PCI-E 1.0a	
	Data path width	X1, 250 MB/s, Bi-directional interface	
	Data transfer mode	Bus-master DMA	
	Hardware certifications	FCC, B, CE, TUV- cTUVus Mark Canada and United States, TUV- GS Mark for European Union	
	Power requirement	Aux 3.3V, 3.0 Watts in 1000base-T and 2.0 Watts in 100Base-T	
	Boot ROM support	Yes	
	Network transfer rate	10BASE-T (half-duplex)	10 Mbps
		10BASE-T (full-duplex)	20 Mbps
		100BASE-TX (half-duplex)	100 Mbps
		100BASE-TX (full-duplex)	200 Mbps
1000BASE-T (full-duplex)		2000 Mbps (actual rate limited by PCI Bus)	
Environmental	Operating temperature	32° to 131° F (0° to 55° C)	
	Operating humidity	85% at 131° F (55° C)	
Dimensions	4.75 x 2.25 x 0.8 in (12.1 x 5.7 x 2.0 cm)		
Management capabilities	WOL, PXE, DMI, WFM 2.0		

LSI PCIe x1 56K International SoftModem	Data Transmission	Technology speeds=56,000 Kbps maximum downstream data, controllerless NOTE=56 Kbps technology refers to download speeds only and requires compatible modems at server sites. Other conditions may limit modem speed. FCC limitations allow a maximum of 53 Kbps during download transmissions.
	Data Speeds	(Upload only) 33,600/31,200/28,800/26,400/21,600/19,200/ 16,800/14,400/12,000/9,600/7,200/4,800/2,400/1,200/300
	Data Standards	ITU-T V.90, ITU-T, ITU-T V.34, V.44, V.42, V.42bis21, V.32bis, Bell 212A, and Bell 103
	Fax Speeds	14,400/12,000/9,600/7,200/4,800/2,400/1,200/300 b/s
	Fax Mode Capabilities	ITU-T T.31 class 1 FAX, V. 17, V.29, V.27ter, and V.21 Channel 2
	Error Correction and Data Compression	V.44, 42bis, V.42 and MNP2-5
	Power Management	PCI Bus Power Management Interface Specification (PCI-PM) Revision 1.2, Appendix A. D0, D3hot, and D3cold. Wake on Ring state when in D3cold. If the power management event (PME) feature is enabled in D3cold, a modem can wake the system via WAKE# (WAKEN) or beacon. Meets PCI Express 1.1 standard.
	Upgradeability	Driver upgradeable for future enhancements
	Video	ITU-T V.80 video ready interface
	Other	TIA/EIA 602 standard AT command set
		Integrated DTE interface with speeds of up to 115.2 Kbps, parallel 16550a UART-compatible interface Optional ring wakeup signal
	Operating Temperature	32° to 158° F (0° to 70° C)

Technical Specifications

Operating Humidity	20% to 90%, non-condensing
Power	Requires a 3.3-V auxiliary power rail on PCI express bus Uses only one PCI express load (i.e., one grant/request pair), one shared IRQ, one electrical load
Chipset	LSI SV92EX - Integrated PCI interface with 3.3-V tolerant buffers and CardBus support
Dimensions (L X H)	Complies with PCI express low profile specifications-6.7 x 2.3 in (17.0 x 5.8 cm) and supports high- and low-profile brackets
Connection	Single RJ-11 connector
Other Features	Digital line protection, call progress monitoring via on-board piezo device, support for high profile and low profile brackets, PnP ID support
Safety	UL recognized to UL 1950, 3rd edition (U.S. and Canada)≠IEC 950 (TUV, NEMKO, DEMKO, SEMKO)≠CE Mark, EC 950 (TUV, NEMKO, DEMKO, SEMKO, CE mark
EMC	FCC Part 15, IC ES003, EN 55022, 3rd edition, EN 55024, annex A, EN 61000-4-6, EN 61000-4-8
Telecom	FCC Part 68, IC-CS-03 (Canada)≠Worldwide PTT approvals Not available in Korea or the Republic of South Africa.
Other	The SV92EX device is packaged in a 32-pin micro leadless chip carrier (MLCC). The SV92EX is fully compliant with the PCI Express revision 1.1 specification. WHQL approved≠ASPM compliant.

HP Wireless 802.11 b/g/n PCIe Card **NOTE**-Please see the QuickSpecs for Technical Specifications and additional information-
http://h18000.www1.hp.com/products/quickspecs/13112_#div/13112_#div.html
 (Worldwide)

Integrated Intel Graphics Media Accelerator GMA4500	3D/2D Controller	Microsoft DirectX® 10 based with support for Pixel Shader 4.0
	VGA Controller	Integrated
	RAMDAC	Integrated, 350 MHz
	Graphics Engine Clock	667 MHz
	Memory	Graphics memory is shared with system memory. Graphics memory usage varies depending on the amount of system memory installed, BIOS settings, operating system, and system load. 32 MB is pre-allocated for graphics use at system boot time. Additional memory can be allocated at boot time by the BIOS for PAVP (Protected Audio Video Playback) support for playback of protected video content. For Vista, use of PAVP heavy mode pre-allocates an additional 96MB.

Additional memory is allocated for graphics as needed using Intel's Dynamic Video Memory Technology (DVMT), to provide an optimal balance between graphics and system memory use.

Windows XP Memory Usage=

Total System Memory (GB)	Total Graphics memory (MB)	Pre-Allocated (MB)	DVMT (MB)
0.5	128	32	96
	256	32	224
1	512	32	480
1.5	768	32	736
=>2.0	1024	32	992

Technical Specifications

Windows Vista Memory Usage	Support for DVMT 5.0. The graphics driver will determine DVMT memory. DVMT memory = Total GFX memory - Pre-allocated size and fixed memory = Pre-allocated memory.
HW Video Decode	Acceleration and Intel Clear Video Technology Support. Full HW acceleration VC1, AVC, decoder, HD security PAVP/HDCP.
Maximum Color Depth	32 bits/pixel
Maximum Vertical Refresh Rate	75 Hz at 2048x1536
Multi-display Support	Not Supported
Graphics/Video API Support	Microsoft DirectX® 10, OpenGL® 2.1

Resolutions Supported

NOTE-Other resolutions may be available but are not recommended as they may not have been tested and qualified by HP.

Resolution	Maximum Refresh Rate (Hz)
	Analog Connection
640x480	85
800x600	85
1024x768	85
1280x720	85
1280x1024	85
1440x900	75
1600x1200	85
1680x1050	75
1920x1080	85
1920x1200	85
1920x1440	85
2048x1536	75

NOTE-Other resolutions may be available but are not recommended as they may not have been tested and qualified by HP.

ATI Radeon HD 2400XT (256MB DH) PCIe Graphics Card **NOTE**-Please see the QuickSpecs for Technical Specifications and additional information-
http://h18000.www1.hp.com/products/quickspecs/12846_#div/12846_#div.html
(Worldwide)

ATI Radeon HD 3650 (512MB DH) PCIe x16 Graphics Card **NOTE**-Please see the QuickSpecs for Technical Specifications and additional information-
http://h18000.www1.hp.com/products/quickspecs/13120_#div/13120_#div.html
(Worldwide)

ATI Radeon HD 3470 (256 SH) PCIe Graphics Card **NOTE**-Please see the QuickSpecs for Technical Specifications and additional information-
http://h18000.www1.hp.com/products/quickspecs/13120_#div/13120_#div.html
(Worldwide)

Technical Specifications

ATI Radeon HD 3450 (256MB SH) PCIe Graphics Card	Bus type	PCI Express (x16 lanes)		
	Maximum vertical refresh rate	85 Hz		
	Display support	Integrated 400 MHz RAMDAC		
	Display max resolution	2560 x 1600 digital, 2048 x 1536 analog		
	Board display options	Supports two displays via the DisplayPort and DVI connectors		
	Board configuration	Specification	Description	
		Graphics Chip	RV620	
		Core clock	750 MHz	
		Memory clock	500 MHz	
		Frame buffer	256 MB DDR2, 128 bit wide	
Languages supported	24 languages—English, Arabic, Chinese Simplified, Chinese Traditional, Czechoslovakian, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Thai, Turkish			
Core power	22 W			
Dimensions	2.71 in x 6.60 in (68.90 mm x 167.65 mm)			
Compliance standards	<u>EMC Emissions</u> — <ol style="list-style-type: none"> FCC Part 15, Subpart B - Unintentional Radiators, Class B Computing Devices for Home & Office Use Taiwanese Standard BSMI Australian C-Tick Korean (MIC) 			

EMC Immunity—
CISPR 24-1997/EN 55024-1998 – Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement.

ATI Radeon HD 3450 (256MB SH) PCIe Graphics Card display resolutions and refresh rates

NOTE—Other resolutions may be available but are not recommended as they may not have been tested and qualified by HP.

Resolution	Maximum Refresh Rate (Hz)	
	Analog Connection	Digital Connection
640x480	85	60
800x600	85	60
1024x768	85	60
1280x720	85	60
1280x1024	85	60
1440x900	75	60
1600x1200	85	60
1680x1050	75	60
1920x1080	85	60-R
1920x1200	85	60-R
1920x1440	85	N/A
2048x1536	75	N/A
2560x1600	N/A	60*

* Only supported when using a dual-link DVI or DP connection

NOTE—60-R denotes reduced blanking timings are used on single-link DVI connections and may be used with other digital connection

Technical Specifications

HP PS/2 or USB Standard Keyboard	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/11880_#div/11880_#div.html (Worldwide)	
HP USB 2-Button Laser Mouse	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/12912_#div/12912_#div.html (Worldwide)	
HP PS/2 2-Button Optical Scroll Mouse	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/12490_#div/12490_#div.html (Worldwide)	
HP USB Optical Scroll Mouse	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/11356_#div/11356_#div.html (Worldwide)	
Serial ATA 3.0-Gb/s Hard Drives (7200 rpm)	80 GB 160 GB 250 GB 320 GB 500 GB	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/12229_#div/12229_#div.html (Worldwide)
SATA DVD-ROM Drive	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/12548_#div/12548_#div.html (Worldwide)	
HP SATA SuperMulti LightScribe Drive	NOTE —Please see the QuickSpecs for Technical Specifications and additional information— http://h18000.www1.hp.com/products/quickspecs/12739_#div/12739_#div.html (Worldwide)	
HP 1.44-MB Diskette Drive	Size	3.5 in (8.89 cm)
	LED Indicators (front panel)	Green
	Read/Write Capacity per Diskette (high/low)	1.44 MB/720 KB
	Drive Height	One-third
	Drive Rotation	300 rpm
	Transfer Rate (high/low)	500/250 KB/s
	Bytes/Sector	512
	Sectors/Track (high/low)	18/9
	Tracks/Side (high/low)	80/80
	Access Times	Track-to-Track (high/low) 3/6 ms
		Average (high/low) 94/173 ms
		Settling Time 15 ms
		Latency Average 100 ms

Technical Specifications

Cylinders (high/low)	80/80
Read/Write Heads	Two

HP 22-in-1 Media Card Reader	USB interface	USB 2.0 High-speed device via PCI card or pass-through via internal USB port of system board												
	Advance protocol support	<ul style="list-style-type: none"> • Supports hardware ECC (Error Correction Code) function • Supports hardware CRC (Cyclic Redundancy Check) function • Supports MS 4-bit parallel transfer mode • Supports MS-PRO 4-bit parallel transfer mode • Supports SD 4-bit parallel transfer mode • Supports high-speed 50 MHz SD 4-bit card (version 1.1) • Support high-speed 52 MHz MultiMedia Card 8-bit card (version 4.x) 												
	Supported media types	<ul style="list-style-type: none"> • Supports CompactFlash Card Type I (CF I), CompactFlash Card Type II (CF II), MicroDrive (MD) • Supports 3.3V SmartMedia Card (SM), SmartMedia ROM (SM ROM), Picture Card • Supports Secure Digital Card (SD), Secure Digital ROM Card (SD ROM), miniSD, MultiMedia Card, Secure MultiMediaCard (Secure MultiMedia Card), ROM Type MultiMediaCard (MultiMedia Card ROM), Reduced Size MultiMediaCard (RS MultiMedia Card), MultiMediaCard 4.0 (MultiMedia Card Plus), Reduced Size MultiMediaCard 4.0 (MultiMedia Card Mobile) • Support Memory Stick (MS), Memory Stick ROM (MS ROM), MagicGate Memory Stick (MG), Memory Stick Select, Memory Stick Duo (MS Duo), Memory Stick PRO (MS-PRO), Memory Stick PRO Duo (MS PRO Duo) 												
	Mechanical	<table> <tr> <td>Length (3.5")</td> <td>124.7 cm</td> </tr> <tr> <td>Width (3.5")</td> <td>101.6 cm</td> </tr> <tr> <td>Height (3.5")</td> <td>25.4 cm</td> </tr> <tr> <td>Length (5.25")</td> <td>171.6 cm</td> </tr> <tr> <td>Width (5.25")</td> <td>148.9 cm</td> </tr> <tr> <td>Height (5.25")</td> <td>42.7 cm</td> </tr> </table>	Length (3.5")	124.7 cm	Width (3.5")	101.6 cm	Height (3.5")	25.4 cm	Length (5.25")	171.6 cm	Width (5.25")	148.9 cm	Height (5.25")	42.7 cm
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	Environmental	<table> <tr> <td>Operational environmental extremes</td> <td> Test Parameters/Conditions – Power applied, unit operating on system $\pm 5\%$ nominal supply voltage. 10° C 10% R.H. \geq 24 hours 10° C 90% R.H. \geq 24 hours 20° C 90% R.H. \geq 24 hours 30° C 90% R.H. \geq 24 hours 40° C 90% R.H. \geq 24 hours 50° C 90% R.H. \geq 24 hours 50° C 10% R.H. \geq 24 hours </td> </tr> <tr> <td>Storage environmental extremes</td> <td> Test Parameters/Conditions 60° C @ 80% R.H. for 96 hours -30° C @ 20% R.H. for 48 hours No power applied Delta ° C < 1.0° C/min Delta % R.H. < 1.5% R.H./min </td> </tr> </table>	Operational environmental extremes	Test Parameters/Conditions – Power applied, unit operating on system $\pm 5\%$ nominal supply voltage. 10° C 10% R.H. \geq 24 hours 10° C 90% R.H. \geq 24 hours 20° C 90% R.H. \geq 24 hours 30° C 90% R.H. \geq 24 hours 40° C 90% R.H. \geq 24 hours 50° C 90% R.H. \geq 24 hours 50° C 10% R.H. \geq 24 hours	Storage environmental extremes	Test Parameters/Conditions 60° C @ 80% R.H. for 96 hours -30° C @ 20% R.H. for 48 hours No power applied Delta ° C < 1.0° C/min Delta % R.H. < 1.5% R.H./min								
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	Approvals	USB-IF, WHQL, Compliant with USB Mass Storage Class Bulk only Transport Specification Rev. 1.0, Compliant Intel Front Panel I/O Connectivity Design Guide V. 1.2 FCC, CE, BSMI, C-Tick, VCCI, MIC, cUL, TUV-T												

Technical Specifications

Eco Data

Eco-Label Certifications & declarations

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks²

- China Energy Conservation Program
- IT ECO declaration

* This product conforms to the examination standards (2003 version) under JEITA's 'PC Green Label System.'

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Microtower model is based on a typically configured product.

Energy Consumption

	115 VAC	230 VAC	100 VAC
Normal Operation	57.89W	73.24W	75.85W
Sleep (Energy Star low power mode)	2.41W	2.80W	2.37W
Off	NA	NA	NA

Heat Dissipation*

	115 VAC	230 VAC	100 VAC
Normal Operation	259 BTU/hr	250 BTU/hr	259 BTU/hr
Sleep (Energy Star low power mode)	8 BTU/hr	9 BTU/hr	8 BTU/hr
Off	NA	NA	NA

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.88	NA
Fixed Disk (random writes)	4.50	NA

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain²
Mercury greater the 5ppm by weight
Cadmium greater than 10ppm by weight

Battery size²-CR2032 (coin cell)

Battery type²-Lithium

Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive – 2002/95/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California³Safe Drinking Water and Toxic Enforcement Act of 1986).
- Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.
- This product contains 0% post consumer recycled plastic (by wt.)
- This product is 91.2% recyclable when properly disposed of at end of life.

Technical Specifications

Packaging Materials

- External⁻
 - Polyester 5 g
- Internal⁻
 - Polystyrene 25 g

- The Polyester packaging material is made from 0% recycled content.
- The Polystyrene packaging materials contains at least 0% recycled content.

RoHS Compliance

Hewlett-Packard is committed to compliance with all applicable environmental laws and regulations, including the European Union Restriction of Hazardous Substances (RoHS) Directive. HP's goal is to exceed compliance obligations by meeting the requirements of the RoHS Directive on a worldwide basis. By July 1, 2006, RoHS substances will be virtually eliminated (virtually = to levels below legal limits) for all HP electronic products subject to the RoHS Directive, except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).

Material Usage

This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html)⁻

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Packaging

HP follows these guidelines to decrease the environmental impact of product packaging⁻

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in

Technical Specifications

packaging materials.

- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to <http://www.hp.com/go/reuse-recycle> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at <http://www.hp.com/go/recyclers>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Hewlett-Packard Corporate Environmental Information

For more information about HP's commitment to the environment—
Global Citizenship Report
<http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html>
Eco-label certifications
<http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html>
ISO 14001 certificates—
<http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html>

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