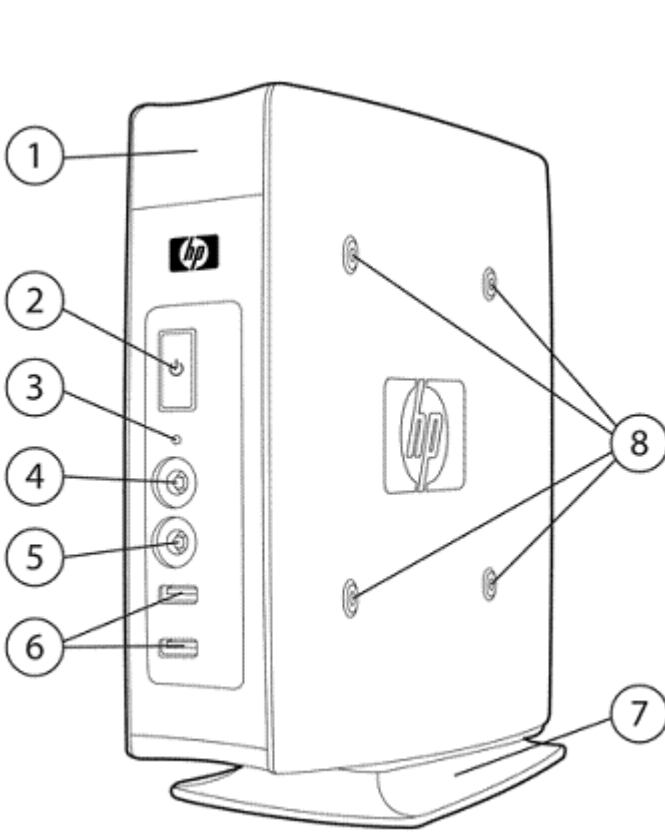


Overview

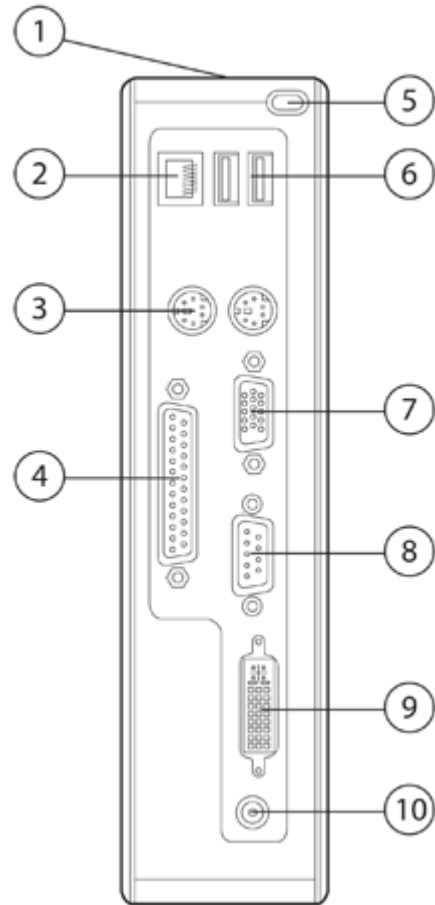
Introduction

The HP t5545 is an all inclusive access device designed for mainstream business. The HP t5545 offers convenient access to Windows or Citrix environments, the most common VDI ecosystems, mainframes, mid-range servers, and Unix/Linux hosts. The ThinPro operating system provides a single console interface with dashboard access to all user and administrative touch points. The t5545 includes dual monitor support, legacy ports, a secure USB compartment, Gigabit Ethernet support and a choice of client side or server based remote management solutions to simplify deployment and maintenance.



Front

1. Secure USB compartment (2 USB connectors)
2. Power button with LED
3. Flash activity indicator
4. Audio connector (mic in)
5. Audio connector (headphone out)
6. USB connectors (2)
7. Vertical stand (removable)
8. VESA mounting points (4)



Back

1. Cable lock slot
2. 10/100/1000 Ethernet RJ-45 connector
3. PS/2 connectors (2)
4. Parallel port
5. Cable management feature
6. USB connectors (2)
7. VGA monitor output
8. Serial port
9. DVI-D monitor output
10. +12V DC power input



Overview

At A Glance

Hardware features:

- VIA Eden 1 GHz processor for great performance
- 512 MB RAM (64 MB reserved for video) & 512 MB Flash
- 6 USB 2.0 ports
- Secure USB compartment is ideal for protecting USB wireless and USB Flash
- Legacy support includes parallel, serial, and PS/2 connections
- Dual monitor support options (VGA plus DVI-D through optional adapter)
- MIC in and Audio out ports in front
- Built in dual monitor support (VGA and DVI-D native)
- ENERGY STAR® qualified

Software features:

- HP ThinPro operating system provides a single console interface for dashboard visibility to all user and administrative touch points with user and administrator logins for added security.
- HP ThinPro supports modular software updates that can be applied remotely over the network with less bandwidth overhead. This type of update mechanism also improves HP's ability to deliver time to market client-side updates from third party software partners such as Citrix, VMware and Quest.
- HP EasyConfig wizard guides administrators through one time setup and deployment, reducing the need for lengthy documentation
- ICA and RDP support for accessing Windows and Citrix resources
- VDI broker support includes VMware View, Citrix XenDesktop (with CDA mode utility), Quest vWorkspace LeoStream, HP Session Allocation Manager (SAM)
- Native HP TeemTalk terminal emulation suite and local XDMCP/X.11 for accessing legacy application resources such as mainframes and mid-range servers or Unix/Linux X-window environments
- Enhanced multimedia and USB redirection support
 - HP RDP 6 Multimedia & USB Enhancements software
 - Citrix HDX MediaStream and Plug-n-Play
 - HP Remote Graphics Software (RGS) with USB redirection support
- HP Easy Tools
 - HP Easy Update: Keep your connectivity software current
 - HP Easy Setup Wizard: Guides administrators through one time setup
 - HP Easy Config: Purpose your HP t5545 as an optimized VDI appliance
 - HP ThinState: Capture your master image or settings and port to USB key or HP Automatic Update repository
 - HP Automatic Update: Update: Automate configuration changes and/or software updates to multiple devices

NOTE: run devices in stateless mode, or cache settings locally in persistent mode
- HP Device Manager simplifies visibility and management for small and large thin client deployments scattered across multiple subnets and NATed environments at no extra charge
- Client Aggregation Support for controlling up to 4 devices with one keyboard and mouse, practical for expanding visible desktop real estate across multiple monitors (see administration guide for more details)

Warranty:

- Protected by Hewlett-Packard Services, including a limited three-year mail-in warranty (certain restrictions and exclusions apply)



Models

VN134AA#ABA	Model Name	HP t5545 Thin Client
VN134AT#ABA (SmartBuy or Promo)	Processor	VIA Eden 1 GHz
	Storage	512 MB Flash
	Memory	512 MB RAM (64 MB reserved for video)
	Graphics	VIAChrome9 HC3 Integrated Graphics Processor
	Operating System	HP ThinPro
	Keyboard	USB or PS/2 (varies by region)
	Mouse	USB or PS/2 (varies by region)
	Side Panels	Standard 100 mm VESA mounting holes



Options

	NOTE: Options are available as separate purchase ¹	Part Number
Accessories	HP Quick Release Kit	EM870AA
	HP Quick Release/VESA Panels Kit (for mounting models that ship with non-VESA panels)	FV248AA
	HP Integrated Work Centre Stand	GN783AA
	50 Watt External Power Supply	FJ851AA#ABA
Third Party Communications	HP USB 802.11a/b/g Wireless Ethernet Adapter - European Channel Configuration (not certified for use in Russia or Belarus)	AK256AA
	Security: WEP-128bit, WPA-PSK-TKIP, WPA-TLS, WPA2-PSK-TKIP, WPA2-PSK-AES, WPA2-TLS (TKIP & AES), EAP-TLS, LEAP	
	HP USB 802.11a/b/g Wireless Ethernet Adapter - North American Channel Configuration (U.S. only, not certified for use in Canada or Latin America)	AK257AA
	Security: WEP-128bit, WPA-PSK-TKIP, WPA-TLS, WPA2-PSK-TKIP, WPA2-PSK-AES, WPA2-TLS (TKIP & AES), EAP-TLS, LEAP	
	Asia/Pacific Certification: Taiwan, Australia, Malaysia, Singapore, Indonesia, Philippines	
	NOTE: This document represents only those wireless features qualified on HP Thin Clients in a test lab environment. Actual wireless features may vary based on your specific WLAN infrastructure. Wireless functionality is not supported in roaming environments. Thin client must be stationary for wireless device to properly function. This document does not reflect features tested or enabled for an HP thin client customer via PCCS.	
Touch Screens⁵	HP L5009tm Touchscreen Monitor	VK202AA
Security	HP USB Smartcard Keyboard	ED707AA
	SCM USB Smart Card Reader SCR331 ²	904622
	HP/Kensington Cable Lock	PC766A
Input Devices	HP PS/2 Standard Keyboard	DT527A#ABA
	HP USB Standard Keyboard	DT528A#ABA
	HP USB Smartcard Keyboard	ED707AA#ABA
	HP PS/2 2-Button Scroll Mouse	DD440B
	HP PS/2 2-Button Optical Scroll Mouse	EY703AA
	HP USB 2-Button Optical Scroll Mouse	DC172B



Options

Care Pack Services⁴ 9x5 Next-Business-Day Advanced Exchange – 3 Years
 9x5 Next-Business-Day On-Site Coverage – 3 Years

¹ The warranties for HP branded products are set forth in the express limited warranty statements accompanying such products. Although third-party products may work effectively on HP thin clients, these third-party products are provided "AS IS." HP does not support or warrant third-party products, including the interoperability of such products with HP thin clients. However, third-party manufacturers and vendors may provide their own warranties and support directly to you. Please contact the manufacturers or vendors for hardware or software support on their products.

² This is a third-party product. Product, warranty and support available directly from third-party vendor.

³ Wireless access point and Internet service sold separately. Roaming not supported. See Administrator's Guide for supported wireless features. Not certified in Korea, Malaysia, New Zealand, Pakistan, or Taiwan.

⁴ Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at:

www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: www.hp.com/hps/carepack.

⁵ May require installation of drivers. For a complete list of monitors compatible with HP thin clients, it is important to cross-reference the supported video resolutions of the HP thin client to the supported resolutions of the monitor. Most HP monitors have one or more supported resolutions that match HP thin client products.

⁶ Option, drivers, and support are available directly from third party.



Technical Specifications

Hardware

Processor	VIA Eden 1 GHz
Chipset	VIA VX800 north/south bridge unified chip
Storage	512 MB Flash
Memory	512 MB DDR2 RAM (64 MB reserved for video)
Graphics	VIAChrome9 HC3 Integrated Graphics Processor Supports high-resolution monitors up to 2048 x 1536 or up to 24 bit colour depth Client Aggregation Support for controlling up to 4 devices with one keyboard and mouse, practical for expanding visible desktop real estate across multiple monitors (see administration guide for more details)
Monitor resolutions	800 x 600, 960 x 600, 1024 x 768, 1152 x 864 1280 x 720, 1280 x 768, 1280 x 800, 1280 x 960, 1280 x 1024 1360 x 768, 1366 x 768, 1368 x 768 1400 x 1050, 1440 x 900 1600 x 1200, 1600 x 1024, 1680 x 1050 1920 x 1080, 1920 x 1200, 1920 x 1440 2048 x 1536 NOTE: The resolutions your monitor displays and the multi-display modes (i.e., clone, spanning, extended/independent) supported in ICA, RDP or locally may vary. The graphics controller supports these resolutions.

Input/output and peripheral support

Keyboard	USB or PS/2, varies by region
Mouse	USB or PS/2, varies by region
Printer	Local and/or network printers (RDP, ICA, LPD)
Video	VGA-type video output (DB-15) & DVI-D digital video output
Audio output	Internal amplified speaker, 1/8-inch mini-jack, 24-bit stereo, 192-kHz sample rate
Audio input	1/8-inch microphone mini-jack, 20-bit stereo, 96-kHz sample rate
I/O ports	6 USB 2.0, 1 serial, 1 parallel, 2 PS/2, 1 RJ45, 1 VGA, 1 DVI-D, 1 headphone, 1 microphone.
Networking	10/100/1000 Ethernet (RJ-45) DHCP or Static IP support Wake on LAN (WOL) PXE (requires bios change)

Security Features

Secure USB compartment with 2 USB 2.0 ports
Security lock slot (cable lock sold separately)
Smartcard support via PCSC Lite Framework & CCID Driver
User and Administrator logins for greater content control
Read-only operating system
Stateless security mode (requires quick and easy setup to enable)

Operating System

HP ThinPro

Server OS Compatibility

Citrix XenApp 4.5 and 5.0
Citrix XenDesktop 3 and 4
Citrix Presentation Server 4.0 and 4.5
Windows Server 2008 Terminal Services
Windows 2000/2003 Terminal Server families
Unix/Linux Servers (XDMCP/X.11 for X Windows)
Mainframes & Mid-Range Servers (see emulations below)



Technical Specifications

User Interface Language Support	Preinstalled: English, French, German, Spanish, Japanese, Simplified Chinese NOTE: Languages are selectable from the HP ThinPro Control Panel or EasyConfig wizard
Citrix and Windows Connectivity	Citrix ICA 11.1111, RDesktop 1.6 (RDP 6 client)
VDI Broker Support	XenDesktop/PNagent (also applicable for XenApp) Full screen Citrix Desktop Appliance (CDA) mode VMware View Manager 4 & VMware PCoIP Soft (download View 4.5 agent at HP.com) Leostream Desktop Connection Broker vWorkspace 7 (Quest) HP Session Allocation Manager (SAM) 3.1 NOTE: Broker features for ThinPro OS may vary from other HP products
Local Web Access	Local web browser with Sun JRE 1.6 (Java) & ePDFview (PDF Viewer)
Legacy Host Access Support	HP TeemTalk 7.2 Terminal Emulation Suite (see list of emulation below) XDMCP (X.11) for X-window applications SSH, Telnet & Custom Connections
Multimedia & USB Redirection Support	HP RDP 6 Multimedia & USB Enhancements (multimedia & USB redirection) Citrix HDX MediaStream (multimedia redirection) Citrix HDX Plug-n-Play (USB redirection) HP Remote Graphics Software (RGS) 5.4 with USB redirection support Enhanced Multimedia Experience Bit Rate: Up To 3,000 kbps Windows Size: 1600x1200 Network Latency <10 ms (100 Mb LAN): >15 fps, smooth video/audio synchronization Network Latency <50 ms (10/100 Mb WAN): >15 fps, smooth video/audio synchronization Network Latency <90 ms (1.5 Gb VPN): >15 fps, smooth video/audio synchronization Video Codecs (Pack 1 - Preinstalled): MPEG 1, WMV 7/8/9 Audio Codecs (Pack 1 - Preinstalled): MP3, WMA, ALAW, MULAW OPTIONAL (requires purchase from HP Software Depot): Video Codecs (Pack 2): MPEG 2, MPEG 4, H2.64, DivX, Xvid Audio Codecs (Pack 2): AAC, AC3 Flash Option Pack: Flash Redirection
Device management support	<ul style="list-style-type: none">● HP Easy Tools:<ul style="list-style-type: none">○ HP Easy Setup: Configuration setup wizard○ HP Easy Config: Purpose your HP t5325 as an optimized VDI appliance○ HP Easy Update: Automatically check for and install new software updates○ HP ThinState: Capture master image or settings and port to USB key or Automatic Update repository○ HP Automatic Update: Automate configuration changes and/or software updates to multiple devicesNOTE: Run devices in stateless mode, or cache settings locally in persistent mode● HP Device Manager - Simplifies visibility and management for small and large thin client deployments networked across multiple subnets and NATed environments● HP Client Automation - Provides visibility and control of mixed environments of HP thin clients and HP PCs● Altiris support for managing mixed environments of HP and non-HP desktop environments (Altiris DS license included)● VNC - Remote shadowing



Technical Specifications

- HP Add-on support provides no waiting, modular software releases for low bandwidth component updates in-between scheduled software releases to keep your thin client current with the latest host software technology.
- Debian Package Manager with Simplified GUI

See www.hp.com/support for more detail and the most up to date list of add-ons

Emulations

HP TeemTalk Terminal Emulation 7 supports these emulations. SSH/SSL is supported in terminal emulation mode allowing users to secure their connections to the host.

Emulation	Terminal ID
ADDS Viewpoint A2	ADDS-A2
AIXTerm	aixterm
ANSI BBS	ansi
AT&T AT 386	at386-m
AT&T Dataspeed 4410	att4410
Bull BQ3107	VIP7700, VIP7760
Data General Dasher 410/412	dg410
Hewlett Packard HP700- 92/96	2392A, 2622A, 70092, 70094, 70096
Hazeltine 1500	HZ1500
IBM 3151	11, 11-28, 31, 31-28
IBM 3270	3278-2 (24x80 Mono), 3278-3 (32x80 Mono), 3278-4 (43x80 Mono), 3278-5 (27x132 Mono), 3278-2-E (24x80 Colour), 3278-3-E (32x80 Colour), 3278-4-E (43x80 Colour), 3278-5-E (27x132 Colour), 3279-2 (24x80 Colour), 3279-3 (32x80 Colour), 3279-4 (43x80 Colour), 3279-5 (27x132 Colour), 3287-1 (Printer)
IBM 5250	3179-2 (24x80 Colour), 3180-2 (27x132 Mono Msg), 3196-A1 (24x80 Mono), 3477-FC (27x132 Colour Msg), 3477-FG (27x132 Mono Msg), 3486-BA (24x80 Mono), 3487-HA (27x132 Mono), 3487-HC (27x132 Colour), 3812-1 (Printer), 5251-11 (24x80 Mono), 5291-1 (24x80 Mono), 5292-2 (24x80 Colour), 5553-B01 (DBCS Printer), 5555-B01 (DBCS 24x80 Mono),



Technical Specifications

5555-C01 (DBCS 24x80 Colour)

McDonnell Douglas Prism- tty 8, Prism-12	
McDonnell Douglas Prism- tty 9	
Prime PT250	pt250
SCO Console	ansi
Siemens 97801	97801
Stratus V102	v102
Tandem TA6526, TA6530	tn6530-8
Televideo 910	TVI910
Televideo 920	TVI920
Televideo 925	TVI925
Televideo 950	TVI950
Televideo 955	TVI955
Unisys T27	UNISYS-TD830
Viewdata 40	VIEWDATA – 40
Viewdata 80	VIEWDATA – 80
Viewdata Split	VIEWDATA – SPLIT
DEC VT PCTerm	VT-PCTERM
DEC VT100	m2200, vt100, vt101, vt102, vt125, vt131, vt132, vt220, vt240, vt320, vt340, vt420, vt510, vt520, vt525
DEC VT100+	VT100+
DEC VT500 7-bit	m2200, vt100, vt101, vt102, vt125, vt131, vt132, vt220, vt240, vt320, vt340, vt420, vt510, vt520, vt525
DEC VT500 8-bit	m2200, vt100, vt101, vt102, vt125, vt131, vt132, vt220, vt240, vt320, vt340, vt420, vt510, vt520, vt525
DEC VT 52	m2200, vt100, vt101, vt102, vt125, vt131, vt132, vt220, vt240, vt320, vt340, vt420, vt510, vt520, vt525
VT HP220	vt220
VT UTF8	VT-UTF8
Wyse WY370	WYSE-370
Wyse WY50	WYSE-50
Wyse WY50+	WYSE-50
Wyse WY60	WYSE-60
Wyse PCTerm	WYSE-PCTERM
Dimensions H x W x D	
Without stand	8.25 x 2.05 x 8.5 in (209.55 x 52.07 x 215.90 mm)
With stand	8.65 x 2.05 x 8.5 in (219.70 x 52.07 x 215.90 mm)
Weight (approximate)	
With stand	3.40 lbs (1.54 kg)
Power*	
Operating voltage range	100-240 VAC
Rated line frequency	50-60 Hz
Power output (max)	50W



Technical Specifications

	Rated output current (max)	4.16A
	Output voltage	+12V DC
	Power consumption	Average power consumption of this thin client in a typical setup is 14.0 W <i>* The actual power consumption at your location could vary and is dependent on many factors including but not limited to software load on the thin client, attached peripherals, and environmental factors.</i>
Environmental	Operating temperature range	50° to 104° F (10° to 40° C)
	Non-operating temperature range	-22° to 140° F (-30 to 60° C)
	Humidity (non-condensing)	10% to 90% operating/5% to 95% non-operating
Regulatory Compliances	Product Safety	International: IEC60950-1, 12:2005, with CB Certificate and all National Deviations US and Canada: UL 60950-1 / CAN/CSA 22.2 No. 60950-1-03, 07:2006, Bi-National Standard for ITE Safety in the US and Canada and is published jointly by UL and CSA. Europe: EN 60950-1, 06:2003, Information Technology Equipment
	Ergonomics	The product has been tested and found to comply with all applicable GS ergonomic requirements.
	RF Interference	FCC Class B, CE Mark, VCCI
Warranty	Three-year limited hardware warranty. NOTE: Certain restrictions apply. Consult the HP Customer Support Centre for details.	



Technical Specifications— Environmental 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 marks:

- ENERGY STAR® Category B

Additional Compliance This product is in compliance with:

- Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.
- Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- California Proposition 65 (State of California; Safe 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.

Energy Consumption	115 VAC	230 VAC	100 VAC
Idle State:	13.90 W	14.32 W	13.70 W
Off Mode:	1.95 W	1.93 W	1.94 W

NOTE: This product is in compliance with US executive order 13221, WOL (wake on LAN) disabled.

NOTE: The actual power consumption at your location could vary and is dependent on many factors including, but not limited to, software load on the thin client, attached peripherals, and environmental factors.

Heat Dissipation	Idle State:	47.43 BTU/hr	48.86 BTU/hr	46.75 BTU/hr
	Off Mode:	6.66 BTU/hr	6.57 BTU/hr	6.62 BTU/hr

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

Batteries This product complies with ISO standards:

- EU Directive 91/ 157/ EEC
- EU Directive 93/ 86/ EEC
- EU Directive 98/ 101/ EEC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight
- Lead greater than 4000ppm by weight.

Battery size: CR2032 (coin cell)

Battery type: Lithium

Recycled material	Product	<ul style="list-style-type: none">● This product contains 0% recycled materials (by weight).● This product is 98.1% (by weight) recyclable when disposed of properly at end of life.
	Packaging	<ul style="list-style-type: none">● The EPE foam packaging material contains at least 5% (by weight) post-consumer recycled content.● The corrugated paper packaging materials contains at least 80% (by weight) post-consumer recycled content.● The packaging for this product is 94% (by weight) recyclable when disposed of properly.



Technical Specifications— Environmental Data

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. From 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

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 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: www.hp.com/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: 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



Technical Specifications— Environmental Data

equipment.

Hewlett-Packard

For more information about HP's commitment to the environment:

Corporate Environmental Information

Global Citizenship Report

www.hp.com/hpinfo/globalcitizenship/gcreport/index.html

Eco-label certifications

www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html

ISO 14001 certificates:

www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

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