Overview
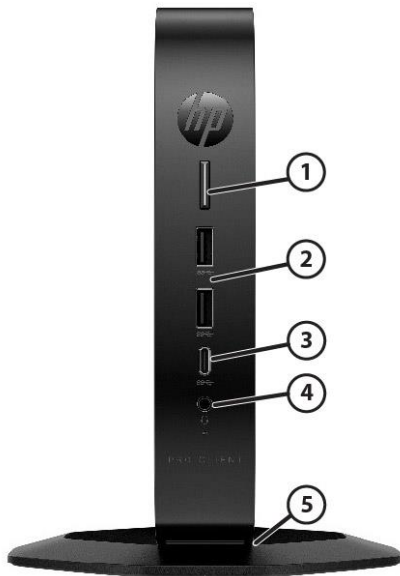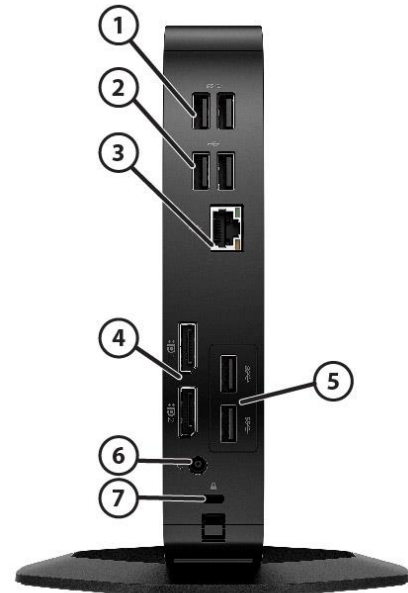
HP Pro t550 Thin Client

FRONT

1 Power Button
2 (2) USB-A 3.2 Gen1 (5Gbps signaling rate)
3 (1) USB-C® 3.2 Gen1 (5Gbps signaling rate)
4 3.5mm Universal Audio Jack
5 System stand

BACK

1 (2) USB-A 3.2 Gen2 (10Gbps signaling rate)
2 (2) USB-A 2.0
3 (1) LAN (RJ45) 1Gb Ethernet
4 (2) DisplayPort™ 1.2
5 Configurable Option Port supporting one of the following:
- Serial
- VGA
- External Wi-Fi® antenna
- HDMI
- 2x USB-A 3.2 Gen1(5Gbps signaling rate)
- DisplayPort™ over USB-C®
- No optional port
6 DC 4.5mm
7 Cable Lock support

QuickSpecs

Overview

AT A GLANCE

- Intel® Celeron® Quad-Core Processor J6412, 1.5M Cache, up to 2.60 GHz (2.00 GHz base clock, up to 2.60 GHz max boost clock, 1.5 MB L2 cache, 4 cores)

- DDR4 single channel SDRAM system memory; up to 3200 MT/s transfer rate; 1 SODIMM slot

- 2 x DisplayPort™ 1.2 video outputs supporting up to UHD/4K (3840 x 2160) resolutions

  NOTE: DisplayPort™ cables and displays sold separately.

- 32 GB up to 256 GB NAND flash memory; non-volatile; M.2 form factor module

- RJ45 Gigabit Ethernet (GbE) network connection

- Optional Wi-Fi® 6 RT 8852AE AND 8852BE ax 2x2 +Bluetooth® 5.2 Including antennas integrated internally in the chassis

  NOTE: Wireless features, performance and support may vary depending on environmental variables such placement, settings and firmware of your access points. Please contact your wireless vendor for support of your wireless environment

- Option Port with a selection of available factory options (see detailed listing later in this document)

- 3.5 mm combo headset audio jack

- 45W non-PFC external power adapter

- TPM version 2.0 (available with WIN 10 IoT system); UEFI (BIOS), cable lock slot

- Passive thermal design (no cooling fans) and active thermal management technology that monitors the system operating temperatures, throttles SOC operation if appropriate and prevents unit thermal shutdown.

- Rated for a maximum ambient operating temperature of 40 degree C

- ENERGY STAR® certified and EPEAT® Silver registered in the United States. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.

- Post-consumer recycled plastics content 50% total unit plastics (by weight)

- Low halogen material content

- All models TAA compliant in North America

NOTE: See important legal disclosures for all listed specs in their respective features sections.

Warranty

HP Customer Support: limited three-year hardware limited warranty in most regions; Optional HP Care Packs[1] are available and are extended service contracts that go beyond your standard limited warranties; for more details visit http://www.hp.com/go/cpc

[1]HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

QuickSpecs

HP Pro t550 Thin Client

Technical Specifications

OPERATING SYSTEMS

- HP ThinPro, including HP Smart Zero Core
- Windows 10 IoT Enterprise LTSC 2021*
- IGEL OS

*Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com .

PROCESSOR[1]

Model	CPU Frequency Max/Base	Cores/Threads	GPU Type	GPU Frequency
Intel® Celeron® Quad-Core Processor J6412	2.0/2.6 GHz	4/4	Intel® UHD Graphics for 11th Gen Intel® Processors	800 MHz

[1]Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.

GRAPHICS

Number of displays supported: Up to 2x 4K@60Hz simultaneous displays

Video outputs: Standard: (2) DisplayPort™ 1.2

                       Optional: (1) DisplayPort™ over USB-C® with USB Power Delivery
                                     (1) VGA analog output
                                     (1) HDMI digital output

NOTE: adding and optional output does not increase the number of displays supported.

Max. screen resolution: DP and HDMI max: 3840x2160
                                VGA max: 2048x1152@50Hz / 1920x1080

Windows 10 IoT 21H2* *Min of 8GB required	≤2 x 1080p FHD (1920x1080) 60Hz	1 x 4K UHD (3840x2160) 30Hz	2 x 4K UHD (3840x2160) 30Hz	1 x 4K UHD (3840x2160) 60Hz
Static screen (no video)	√	√	√	√
Play 1080p 60fps (or below) video	√	√	√	√
4K 30fps video	√	√	√	√
4K 60fps video	√	√	√	√

c08409082 — DA – 17148 — Worldwide — Version 1— December 12, 2022   Page 3

Technical Specifications

Thinpro8.2	≤2 x 1080p FHD (1920x1080) 60Hz	1 x 4K UHD (3840x2160) 30Hz	2 x 4K UHD (3840x2160) 30Hz	1 x 4K UHD (3840x2160) 60Hz
Static screen (no video)	√	√	√	√

MEMORY

Type:	DDR4 Single Channel SODIMM
Data Transfer Rate:	Up to 3,200 MT/s
Number of Slots	1 x SODIMM
Capacities:	4*, 8, 16 GB NOTE 4GB min. for ThinPro 8.0, 8GB min. for Windows 21H2

NOTEs:

- The system's Graphics Processing Unit (GPU) uses part of the total system memory. System memory dedicated to graphics performance is not available for use by other programs

Technical Specifications

UEFI

UEFI Specification Revision	2.7
TPM 2.0	Meets requirements for Common Criteria, an independent third-party certification of trustworthiness
	Meets requirements for FIPS 140-2, a standard for cryptographic integrity
Security features	System UEFI designed to address NIST SP 800-147 guidelines

STORAGE*

Type:	NAND flash memory; non-volatile
Number of Sockets:	1 x M.2
Capacities:	32 GB M.2 eMMC Flash Memory
	64 GB M.2 eMMC Flash Memory
	128 GB M.2 PCIe NVMe Flash Memory
	256 GB M.2 PCIe NVMe Flash Memory

NOTE 32GB & 64GB eMMC used in special eMMC connector, NVMe can be used in the M.2
NOTE 64GB min. Storage for Windows 21H2

*For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB (for Windows) is reserved for system recovery software.

Input/Output

	Front access:	(2) USB-A 3.2 Gen 1 (5Gbps signaling rate)
		(1) USB-C® 3.2 Gen 1 port (5Gbps signaling rate)
		(1) 3.5mm Universal Audio Jack
	Rear access:	(2) DisplayPort™ 1.2
		(2) USB-A 3.2 Gen2 (10Gbps signaling rate)
		(2) 2xUSB-A 2.0
		RJ45 1Gb Ethernet
		Cable Lock support
Video Outputs:	Standard:	(2) DisplayPort™ 1.2 digital outputs
	Optional:	(1) VGA analog output
		(1) HDMI digital output
		(1) DisplayPort™ over USB-C® with USB Power Delivery
	NOTE: adding an optional output does not increase the number of displays supported.	
I/O Interfaces:	Standard:	(1) RJ45 1Gb Ethernet (Rear)
		(1) 3.5 mm universal audio jack (front)

Option Port: The rear I/O panel includes an Option Port that can be configured with one of the following factory options:

- Serial
- VGA
- External Wi-Fi® antenna

QuickSpecs

Technical Specifications

- HDMI
- 2x USB-A 3.2 Gen1(5Gbps signaling rate)
- DisplayPort™ over USB-C® with USB Power Delivery
- No optional port

AUDIO/VIDEO

Audio
- Integrated PC speaker for basic audio playback
- 3.5 mm headset audio port on front supporting headphones, headset, external speaker systems, or microphone.
- Realtek ALC3252 high definition audio Codec; 4-channel DAC supports 16/20/24-bit PCM for independent stereo sound output (streaming playback); the 4-channel ADC supports 16/20/24-bit
- PCM format for two stereo and independent analog sound inputs; incorporating Realtek converter technology achieves a 97dB dynamic range playback quality and a 90dB dynamic range recording quality. It meets WLP (Windows Logo Program) requirements for Windows systems.

Video CODECs
- MPEG-4 part 2 (DivX, Xvid)
- MPEG-4 part 10 (H.264, AVC), Advanced Video Coding (AVC) (H.264 encode)
- MPEG-H part 2, High Efficiency Video Coding (HEVC) (H.265 decode)
- WMV 7/8/9 VC-1 & ASF Demuxer
- Includes hardware acceleration support

HARDWARE SECURITY

- Security lock support (cable lock sold separately)
- Trusted Platform Module 2.0

NETWORKING

Local Area Networking   Realtek RTL8111HSH-CG Gigabit Ethernet (GbE) Controller

Wi-Fi® Networking   Realtek 8852AE Wi-Fi6 +Bluetooth® 5.2 WLAN
Realtek 8852BE Wi-Fi6 +Bluetooth®5.2 WLAN

NOTES:

Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.

Wi-Fi 6 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels.

Wireless features, performance and support may vary depending on environmental variables such placement, settings and firmware of your access points. Please contact your wireless vendor for support of your wireless environment

Non-volatile Storage: The MAC address is unique for each system; assigned from the board assembly manufacturer's IEEE registered allocation.

The PCI subsystem ID is unique to HP and unique to each design to allow Windows Update to be finely controlled.

Technical Specifications

SOFTWARE SUPPORT

Host Environment	Protocol	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
Remote Desktop Services	Remote FX (RFX), RDP	✓	✓
Citrix®	ICA, HDX	✓	✓
VMware® Horizon	RDP, PCoIP, Blast Extreme	✓	✓

Protocol Clients	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
Citrix® Workspace app	✓	✓
Microsoft Remote Desktop Client		✓
Free Remote Desktop Client	✓	
VMware™ Horizon View™ Client	✓	✓
HP Remote Graphics Software (RGS)	via add-on	✓
Turbosoft TTerm for Linux® Terminal emulation Software	via add-on	
Turbosoft TTWin Terminal emulation software		via add-on
AVD/Win365	via add-on	via add-on
AWS Amazon Workspace	via add-on	via add-on
HP Anyware[1]	via add-on	via add-on

[1]HP Anyware supports Windows®, Linux® and MacOS® host environments and Window, Linux, MacOS, iOS®, Android®, and Chrome OS® end-user devices. For more on the system requirements for installing HP Anyware, refer to the Admin Guides at: https://docs.teradici.com/find/product/cloud-access-software

Browser Support	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
Mozilla Firefox	✓	
Microsoft Edge		✓

Security	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
Smart Card (external smartcard reader required)	✓	✓

Technical Specifications

Log-on Manager	✓	✓
Read only Operating System	✓	✓
802.1x	✓	✓
Microsoft Firewall		✓
HP Write Manager[1]		✓
Microsoft Unified Write Filter		✓
Encrypted file system (select w/ customer set up)	✓	
ThinPro signing solution	✓	

[1]The HP Write Manager is the default active write filter. The Microsoft Unified Write Filter is disabled by default but can be enabled by the user if required.

Management Tools	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
HP Cloud Endpoint Manager[1] **COMING SOON**	✓	✓
HP Device Manager	✓	✓
HP ThinUpdate		✓
HP Easy Tools	✓	
HP Smart Zero Client Services	✓	
Microsoft SCCM/EDM agent		✓
HP USB Port Manager		✓
HP User State Tool		Add-on only
ThinPro Connection Manager	✓	
ThinPro Snapshot	✓	

[1]HP CEM requires Windows 10 IoT Enterprise LTSC 2016 or later or HP ThinPro 7.2 operating system or later on endpoint and Internet access. Visit https://www.hp.com/us-en/solutions/cloud-computing/thin-client-software.html to download or view the complete details, features and configuration requirements.

Additional Windows Components	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
HP Easy Shell[1]		✓
Windows Media Player		✓
Microsoft Direct Access		✓
Microsoft BranchCache		✓

Technical Specifications

Microsoft AppLocker		✓
Microsoft Sideloading		✓
CyberLink Media Player		✓
Microsoft BitLocker		✓

NOTE: Other add-on software available (see: http://www.hp.com/support for latest list of available add-ons). Software performance and support may vary depending on customer environment and backend.

[1]HP Easy Shell is currently available on Windows Embedded Standard 7E, Windows Embedded Standard 7P, Windows Embedded 8 Standard, Windows Embedded 8.1 Industry Pro, Windows 10 IOT Enterprise 2016 LTSC, and Windows 10 IoT Enterprise 2019.

Audio/Video CODECs	HP ThinPro 8.0	Microsoft Windows 10 IoT Enterprise 2021
MP3	✓	✓
WMA stereo	✓	✓
AAC stereo & HE AAC	✓	
Microsoft AC3 encoder		✓
MPEG-1	✓	
MPEG-4 part 2 (DivX, Xvid, H.263)	✓	✓
MPEG-4 part 10 (H.264, AVC)	✓	✓
WMV 7/8/9/ VC-1 & ASF Demuxer	✓	✓

Recommended TC config for Microsoft Teams media optimization

	TC CPU	VMware Teams Optimization	Citrix Teams Optimization
t550	2.00 GHz 4 Core	✓	✓
- Not recommended, ✓ recommended			

WEIGHTS & DIMENSIONS

W x D x H: **(vertical orientation)**	35 x 200 x200 mm; (1.38 x 7.87 x 7.87 in.)
Volume:	1.4 liter
System Weight **(unit with stand)**	1019g
Shipping Weight	2,879g

NOTE: All measurements are approximate; the addition of optional modules will increase the weight

Technical Specifications

EXTERNAL POWER SUPPLY

45W non-PFC Smart external power adapter; 4.5mm Right Angle 1.8m output cable
Worldwide auto-sensing 100 - 240 VAC; nominal voltage is 120 VAC; 50 - 60 Hz
Entergy saving automatic power-down; surge tolerant

External power adapters are sourced from several suppliers in order to ensure adequate supply and availability is maintained. The actual dimensions of the power brick will vary by supplier.

HP P/N	Vendor	Dimensions:
L25296-001	Lite-On	94 x 40 x 26.5 mm
L25296-002	Chicony	95 x 40 x 26.5 mm
L25296-003	Delta	94 x 39 x 26.5 mm
L25296-004	AcBel	91.4 x 44 x 26.8 mm

Technical Specifications

COMPLIANCE/CERTIFICATIONS

Accessibility:	Section 508 Accessibility; VPAT report available.
Environmental Stewardship:	Worldwide (ENERGY STAR®, EPEAT® 2.0, RoHS2, ERP, TCO, CECP& SEPA, HP GSE, WEEE, Low Halogen[1], etc.)
Product Safety:	Worldwide (UL, CB, GS, CCC, BSMI, etc.)
Electromagnetic Compliance (EMC):	Worldwide (FCC/CISPR/EN/VCCI/ICES/AS/NZS/CNS/KCC) "Class B" EMI regulations
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: • US ENERGY STAR®[2] • EPEAT®[3] Silver registered in the United States. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information. • IT ECO declaration

[1]This product is low halogen except for power cords, cables and peripherals; service parts obtained aftermarket may not be low halogen
[2]Configurations of the Product Name Notebook PC that are ENERGY STAR® qualified are identified as Product Name Notebook PC ENERGY STAR on HP websites and on http://www.energystar.gov.
[3]Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit http://www.epeat.net for more information

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:	Condensing: 20% to 80% Non-condensing: 10% to 90%

NOTE: Specifications are at sea level with altitude derating of 1° C/300m (1.8° F/1000ft) to a maximum of 3 Km (10,000 ft), with no direct, sustained sunlight. Upper limit may be limited by the type and number of options installed.

Basic Configuration :

Energy Consumption **(in accordance with US ENERGY STAR®** **test method)**	**115 V ac, 60 Hz**	**230 V ac, 50 Hz**	**100 V ac, 60 Hz**
Normal Operation (Short idle)	7.49W	7.60W	7.57W
Normal Operation (Long idle)	6.87W	6.95W	6.83W
Sleep	0.92W	0.95W	0.91W
Off	0.72W	0.75W	0.71W

Heat Dissipation*	**115 V ac, 60 Hz**	**230 V ac, 50 Hz**	**100 V ac, 60 Hz**
Normal Operation (Short idle)	26 BTU/hr	26 BTU/hr	26 BTU/hr
Normal Operation (Long idle)	23 BTU/hr	21 BTU/hr	21 BTU/hr
Sleep	3 BTU/hr	3 BTU/hr	2 BTU/hr
Off	2 BTU/hr	3 BTU/hr	2 BTU/hr

Technical Specifications

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

System configuration includes: ThinPro- 64 bit, 256 GB storage, 16 GB of system memory, USB Keyboard and USB Mouse

Energy Consumption (in accordance with US ENERGY STAR® test method)	115 V ac, 60 Hz	230 V ac, 50 Hz	100 V ac, 60 Hz
Normal Operation (Short idle)	6.21W	6.26W	6.22W
Normal Operation (Long idle)	5.73W	5.84W	5.82W
Sleep	0.96W	0.99W	0.93W
Off	0.69W	0.72W	0.69W

Heat Dissipation*	115 V ac, 60 Hz	230 V ac, 50 Hz	100 V ac, 60 Hz
Normal Operation (Short idle)	21 BTU/hr	21 BTU/hr	21 BTU/hr
Normal Operation (Long idle)	20 BTU/hr	20 BTU/hr	20 BTU/hr
Sleep	3 BTU/hr	3 BTU/hr	3 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

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

System configuration includes: Windows 10 IoT Enterprise LTSC 2019 operating system, 256 GB storage, 16 GB of system memory, USB Keyboard and USB Mouse

Additional Information

• This product is in compliance with the Restrictions of Hazardous Substances
(RoHS) directive -2011/65/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
California; Safe Drinking Water and Toxic Enforcement Act of 1986).
• This product is in compliance with the IEEE 1680 (EPEAT) standard at the silver
level, see www.epeat.net
• Plastics parts weighing over 25 grams used in the product are marked per ISO
11469 and ISO1043.
• This product contains 13.9 % post-consumer recycled plastic (by wt.) | Plastic declaration for main chassis is 45% PCR
• This product is 93.4 % recycle-able when properly disposed of at end of life.

Packaging Materials External: PAPER/Corrugated 455 g
Internal: PLASTIC/Polyethylene Expanded - EPE 44 g
PLASTIC/Polyethylene low density - LDPE 5 g

RoHS Compliance HP Inc. 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).

Technical Specifications

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 | t540 uses only Low VOC coatings
• 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

HP Inc. 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/reuserecycle 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 HP Inc. web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and

Technical Specifications

other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell
HP equipment.

**HP, Inc. 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/ec
olabels.html
ISO 14001 certificates:
http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842
and
http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

Summary of Changes

Date of change:	Version History:	Type of change	Description of change:
	From v1 to v2		