

Overview

HP t505 Flexible Thin Client

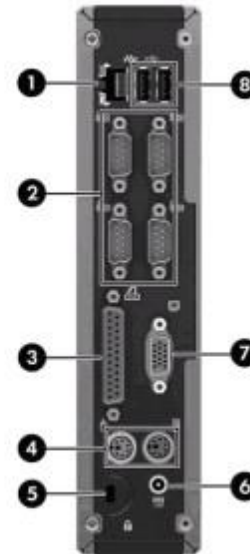
Introduction

The HP t505 Flexible Thin Client delivers a great desktop experience with added features to make deployment and use simple and efficient. Windows® Embedded Standard 2009, Windows® Embedded Standard 7, and HP ThinPro operating systems combined with a full-featured browser, the latest protocol support, write filter, firewall protection, and terminal emulation make the HP t505 the ideal choice for client virtualization environments.



FRONT

1. Power button
2. Flash storage activity indicator
3. Audio connector (headphone out)
4. Audio connector (mic in)
5. USB connectors (2)



BACK

1. 10/100/1000 Ethernet RJ-45 connector
2. Serial Ports
3. Parallel Port
4. PS/2 mouse and keyboard connector
5. Cable lock slot
6. +19V DC power input
7. VGA connector
8. USB connectors (2)

At A Glance

Hardware features:

- Intel Atom D525 Dual Core 1.8 GHz processor with Integrated Graphics Engine and Memory Controller
- Intel Tiger Point (NM10) South Bridge
- 2 GB 1333 MT/s DDR3 RAM (Raw type A & B)
- 0 GB or 8 GB Flash memory provides ample storage for applications and drivers
- 4 USB 2.0 ports
- 4 Serial Ports. 3 configurable and 1 standard
- Legacy support includes parallel, and PS/2 connections
- VGA Video

Overview

- ENERGY STAR® qualified

Software features:

- Highly extensible Windows® Embedded Standard 2009, Windows® Embedded Standard 7, and HP ThinPro operating systems with support for local applications
- Enhanced Write Filter and File-Based Write Filter provide complete flexibility to protect the entire Flash disk, or configure areas of the disk for persistent access by local applications
- HP TeamTalk Terminal Emulator enables connection and communication with applications on mainframes and midrange systems
- HP Easy Tools including:
 - The HP Easy Update utility that makes it quick and easy to identify and choose the latest image and add-on settings helping get up, running and productive faster than ever before.
 - Exclusive HP ThinState Tools offers in-box, easy-to-use image deployment and recovery tools
- HP Device Manager for optimal thin client management from remote locations
- HP Universal Print Driver (available as add-on) which supports a variety of printers
- MUI Simplified Chinese and English

Warranty:

- HP Total Care Warranty and Services: limited three-year hardware warranty in most regions. HP Care Pack Services extend service contracts which go beyond your standard warranties. For more details visit: www.hp.com/go/lookuptool

Models

D9F67AA (t505-No Flash)	Model Name	HP t505 Flexible Thin Client
	Processor	Intel D525 Dual Core 1.8 GHz
	Flash	0 GB or 8 GB
D9F68AA (t505-NoOS)	System Memory	2 GB RAM (128 MB reserved for video)
	Graphics	Intel Graphics Engine Integrated in D525 processor
D9F69AA (t505-ThinPro)	Operating System	Microsoft Windows Embedded Standard 2009, Microsoft Windows Embedded Standard 7, or HP ThinPro
	Keyboard	USB or PS/2 (varies by region)
D9F70AA (t505-WES 2009)	Mouse	USB or PS/2 (varies by region)
	Side Panels	Standard 100 mm VESA mounting holes
D9F70AA (t505-WES 2009-Chinese)		
D9F71AA (t505-WES7E-Chinese)		
D9F71AA (t505-WES7E-English)		

Options

	NOTE: Options are available as separate purchase.	Part Number
Accessories	HP Quick Release Kit	EM870AA
	HP Integrated Work Center Stand	GN783AA
	65 Watt External Power Supply replacement	AZ552AA
Memory	Apacer 4GB AH522 USB 2.0 Flash Drive	91.HDE2S.HP00C
	Apacer 8GB AH522 USB 2.0 Flash Drive	91.HDF2S.HP00C
	Apacer 16GB AH522 USB 2.0 Flash Drive	91.HDG2S.HP00C
Input Devices	HP PS/2 Standard Keyboard	DT527A
	HP USB Standard Keyboard	DT528A
	HP USB Smartcard Keyboard	ED707AA
	HP PS/2 2-Button Optical Mouse	EY703AA
	HP USB 2-Button Optical Scroll Mouse	DC172B
Touch Screens	HP L5009tm Touchscreen Monitor	VK202AA
	ELO Touch 1529L Flat Panel - USB/serial combo ¹	E926109
Security	HP USB Smartcard Keyboard	ED707AA
	SCM USB Smart Card Reader SCR331 ¹	904622
	HP/Kensington Cable Lock	PC766A
Care Pack Services²	9x5 Next-Business-Day Advanced Exchange - 3 Years	331653-001; U4847E ³
	9x5 Next-Business-Day On-Site Coverage - 3 Years	331655-001; U4849E ³

¹ This is a third party option. Option, warranty and support available directly from third party vendor.

²Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Restrictions and limitations apply. For details, visit: <http://www.hp.com/go/carepack>.

³U4847E is available in all regions; U4849E is available in Americas and Asia-Pacific/Japan.

Technical Specifications

Processor	Intel Atom D525 Dual Core 1.8 GHz		
Chipset	Intel Tiger Point (NM10) South Bridge		
Memory	Flash	0 GB or 8 GB	
	System Memory	2 GB 1333 MT/s SODIMM	
Graphics	Intel Graphics Engine Integrated in D525 processor		
	Mode	Refresh Rates (Single Monitor)	Color Depth
	640 x 480	60, 72, 75, 85 Hz	8, 16, 32 bit
	800 x 600	60, 70, 72, 75, 85 Hz	8, 16, 32 bit
	848 x 480	60, 75, 85 Hz	8, 16, 32 bit
	1024 x 480	60 Hz	8, 16, 32 bit
	1024 x 768	60, 70, 72, 75, 85 Hz	8, 16, 32 bit
	1280 x 720	60, 75, 85 Hz	8, 16, 32 bit
	1280 x 768	60 Hz	8, 16, 32 bit
	1280 x 1024	60, 70, 75, 85 Hz	8, 16, 32 bit
	1360 x 768	60 Hz	8, 16, 32 bit
	1368 x 768	60, 75, 85 Hz	8, 16, 32 bit
	1400 x 1050	60 Hz	8, 16, 32 bit
	1440 x 900	60, 75, 85 Hz	8, 16, 32 bit
	1600 x 1200	60, 75, 85 Hz	8, 16, 32 bit
1680 x 1050	60, 75 Hz	8, 16, 32 bit	
1920 x 1080	60, 75 Hz	8, 16, 32 bit	
1920 x 1200	60, 75, 85 Hz	8, 16, 32 bit	
NOTE: The table represents a sample of possible modes that this controller is capable of displaying but various factors such as the capability and EDID info returned by the attached monitor, the interface used (VGA) may limit the availability of modes, color depth, and or refresh rate.			
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	
Audio	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	
Hardware Security	Security lock slot (cable lock sold separately)		
Networking	10/100/1000 Ethernet (RJ-45)		
	TCP/IP with DNS and DHCP		
	Point-to-Point Protocol (PPP), Point-to-Point over Ethernet (PPoE), Point-to-Point Tunneling Protocol (PPTP), Layer-2 Tunneling Protocol (L2TP), Wake on LAN (WOL), PXE and RPL		
	Server Network Time Protocol (SNTP)		
	Simple Network Management Protocol (SNMP)		
I/O ports and connectors	4 USB 2.0 ports , 4 Serial, 1 Parallel, 2 PS/2, RJ45, 1 VGA		
Languages (MUI)	Simplified Chinese and English		
Operating System	WES 09, WES 7 or HP ThinPro		
Server OS Compatibility/Support	Citrix XenApp 5 and 6		
	Citrix XenDesktop 2.x, 3, and 4		
	Citrix Presentation Server 4.0		
	Windows Server 2008 Terminal Services		
	Windows 2000/2003 Server families; Windows 2000/2003 Server Terminal Services VMware Horizon View Manager 4.x		

Technical Specifications

Software Included Operating System/ Protocols/Components

Preinstalled:
 Windows Embedded Standard 2009
 Windows Embedded Standard 7
 HP ThinPro
 Microsoft RDP 7.0
 Citrix ICA 12.0 (Citrix Online Plugin 12.0)
 Microsoft Internet Explorer 7
 Windows Media Player 11
 HP TeemTalk Terminal Emulator 7
 HP Remote Graphics Software
 Receiver 5.4 for VMware Horizon View
 and Microsoft Terminal Services
 Adobe Flash Player 10.1

Security

Configure to use Enhanced Write Filter or File-based Write Filter
 Symantec Endpoint Protection
 Microsoft Firewall available as add-on
 Administrator and user passwords
 Remote BIOS configurability to disable local storage

Management

HP Device Manager agent
 HP ThinState for rapid deployment
 HP Easy Tools:

- HP Easy Update Utility for image and add-on update and installation

Emulations

Other add-on software available (see: www.hp.com/support for latest list of available add-ons)
 HP TeemTalk Terminal Emulator supports these emulations. SSH 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 Color), 3278-3-E (32x80 Color), 3278-4-E (43x80 Color), 3278-5-E (27x132 Color), 3279-2 (24x80 Color), 3279-3 (32x80 Color), 3279-4 (43x80 Color), 3279-5 (27x132 Color),

Technical Specifications

IBM 5250	3287-1 (Printer) 3179-2 (24x80 Color), 3180-2 (27x132 Mono Msg), 3196-A1 (24x80 Mono), 3477-FC (27x132 Color Msg), 3477-FG (27x132 Mono Msg), 3486-BA (24x80 Mono), 3487-HA (27x132 Mono), 3487-HC (27x132 Color), 3812-1 (Printer), 5251-11 (24x80 Mono), 5291-1 (24x80 Mono), 5292-2 (24x80 Color), 5553-B01 (DBCS Printer), 5555-B01 (DBCS 24x80 Mono), 5555-C01 (DBCS 24x80 Color)
McDonnell Douglas Prism-8, Prism-12	Tty
McDonnell Douglas Prism-9	Tty
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

Technical Specifications

	Wyse PCTerm	WYSE-PCTERM
Dimensions H x W x D	Without stand	8.66 in x 1.97 in x 7.74 in (220.00 mm x 50.00 mm x 194.00 mm)
	With stand	9.00 in x 1.97 in x 7.74 in (228.50 mm x 50.00 mm x 194.00 mm)
Weight (approximate)	With stand	1.47 kg (3.25 lb)
	Shipping Weight	2.50 kg (5.51 lb)
Power supply	Worldwide auto-sensing 100-240 VAC, 50-60 Hz energy-saving automatic power-down, surge-tolerant, 65-watt power supply supplying 19VDC	
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
	Ergonomics	The product has been tested and found to comply with all applicable GS ergonomic requirements.
	RF Interference	CE Mark
Warranty	Three-year limited hardware warranty. NOTE: Certain restrictions apply. Consult the HP Customer Support Center for details.	

Technical Specifications – Environmental Data

ECO-LABEL CERTIFICATIONS & DECLARATIONS

COMPLIANCE

This product is in compliance with:

- This product complies with the requirements of the European Union's Ecodesign Directive 2009/125/EC and its associated implementing measures.
- 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 (60Hz)	230 VAC (50Hz)	100 VAC (60Hz)
Idle State:	13.80 W	13.70 W	13.76 W
Off Mode:	0.87 W	0.86 W	0.88 W

NOTE: These power measurements made without integrated wireless Ethernet option installed.

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

	115 VAC (60Hz)	230 VAC (50Hz)	100 VAC (60Hz)
Idle State:	47.09 BTU/hr	46.75 BTU/hr	46.95 BTU/hr
Off Mode:	2.97 BTU/hr	2.93 BTU/hr	3.00 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

Technical Specifications – Environmental Data

RECYCLED MATERIAL

Product

- This product contains at least 0% recycled materials (by weight).
- This product is at least 90% (by weight) recyclable when disposed of properly at end of life.

Packaging

- The EPE foam packaging material contains at least 0% (by weight) post-consumer recycled content.
- The corrugated paper packaging materials contains at least 85% (by weight) post-consumer recycled content.
- The packaging for this product is 100% (by weight) recyclable when disposed of properly.

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: 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)

Technical Specifications – Environmental Data

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: <http://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: <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/qcreport/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>

Summary of Changes

Date of change:	Version History:		Description of change:
November 24, 2014	From v2 to v3	Changed	Weight data.
March 24, 2015	From v3 to v4	Changed	Memory nomenclature

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