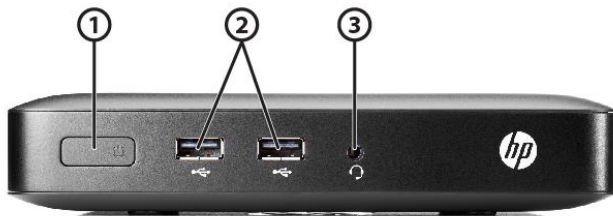# QuickSpecs

Overview

HP t420 Thin Client

FRONT

1. Power button with integrated power indicator light
2. Hi-Speed USB 2.0 ports
3. 3.5 mm headset jack

BACK

1. RJ45 modular jack for Gigabit Ethernet connection
2. Hi-Speed USB 2.0 ports
3. VGA analog video output
4. DVI-D digital video output
5. DC power input
6. Cable lock slot
7. Power cord retention clip

Overview

Hardware features:

- Compact 0.88 liter thin client; convenient horizontal orientation with fixed rubber feet; mount almost anywhere with an integrated VESA 100 mounting system
- AMD GX-209JA System-on-Chip (SOC), including a 1.0 GHz dual core APU and discrete-level GPU
- Integrated 2 GB DDR3L SDRAM system memory; 1,066 MT/s data transfer rate[1]
- 8 GB or 16 GB capacity flash memory storage on internal Super Speed USB 3.0 modules
- Active thermal management monitors component operating temperatures, throttles SOC operation if appropriate, and prevents unit thermal shutdown
- Integrated Gigabit Ethernet LAN module; rear access RJ45 modular jack
- Optional 802.11n 2x2 dual band Wi-Fi Adapter with Bluetooth[2]
- One VGA analog video output and one DVI-D digital video output[3].
- Two Hi-Speed USB 2.0 front access ports and two Hi-Speed USB 2.0 rear access ports. The two rear access ports are typically utilized by the keyboard and mouse.
- Front access headset jack
- ENERGY STAR® certified and EPEAT® Gold registered in the United States. [4] Post-consumer recycled plastics content greater than 25% total unit plastics (by weight)
- Low halogen materials[5]

[1] Graphics chipset uses part of the total system memory (RAM) for graphics performance. System memory dedicated to graphics performance is not available for other use by other programs.

[2] 802.11n is an optional or add on feature. Use of Wi-Fi module requires Wi-Fi access point and Internet service. Availability of public Wi-Fi access points is limited.

[3] The use of dual displays attached to models configured with the Microsoft Windows Embedded Standard 7E operating system is not recommended due to the system's limited SDRAM. Less than optimal performance from the thin client and the displays could be experienced.

[4] EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country.

[5] External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen

HP ThinPro with HP Smart Zero Core (32-bit) operating system:

- HP's purpose-built Linux®-based thin client operating systems.
- Easy-to-use, easy-to-configure, user-friendly Graphical User Interface (GUI).
- Locked-down file system and low-maintenance upkeep.
- Two operating systems in one. Enjoy the flexibility to choose between a locked-down and simple environment with HP Smart Zero Core, or the more robust HP ThinPro desktop-style interface.
- Boot directly into a user log-in on the server or portal with no device training or user interface required.
- Configure multiple user experiences with individual Snapshots so you can always roll back to a "last known good" setting when executing updates.
- ICA and RDP support for accessing Citrix® and Windows resources.
- VMware® Horizon View PCoIP support for accessing VMware Horizon View sessions.
- VDI broker support includes VMware Horizon View, Citrix® XenDesktop®.
- Multimedia and USB redirection support.

Overview

Windows Embedded Standard 7E (32-bit) software features:

- Microsoft® WES 7E with support for RemoteFX provides a rich user experience.
- Microsoft Internet Explorer for genuine Internet browsing and Web-application interfaces.
- Excellent multimedia experience and enhanced USB device support in VDI environments.
- Protocol support from Citrix Receiver 4.2, RDP 8.1 w/RemoteFX, and VMware Horizon Client 3.2.
- Enhanced Write Filter (EWF) and File-Based Write Filter (FBWF) provide complete flexibility to protect the entire flash storage device, or configure areas of the drive for persistent access by local applications.
- Microsoft Firewall for enhanced data security.
- Support 802.1x LAN-based authentication for greater security.

HP Easy Shell 3.0:

- Simplify the HP Thin Client Windows Embedded user experience with HP Easy Shell.
- Deny or limit access to apps and websites with precisely tailored controls and a simple interface.
- Deploy quickly without additional costs, training or hardware requirements.
- Supports cloud infrastructures, a web browser, applications and kiosk environments.

HP Device Manager software features:

- View and manage all your HP thin clients from anywhere through a network connection.
- Quickly and efficiently deliver add-ons, drivers and Service Pack updates with just a few clicks.
- Quickly view your install base with a new graphical user interface.
- Get a range of management and reporting functions, including configuration, automatic device discovery, device grouping for easy recognition, security certificate assignments, and FTP loading of images.
- Customize administration tasks and scripting.

Warranty:
Three-year hardware limited warranty in most regions. Optional HP Care Pack Services are extended service contracts available for protection beyond your standard limited warranty. For more details visit http://www.hp.com/go/cpc..

Citrix and XenDesktop are trademarks of Citrix Systems, Inc. and/or one more of its subsidiaries, and may be registered in the United States Patent and Trademark Office and in other countries.

QuickSpecs

Technical Specifications

OPERATING SYSTEMS

HP Smart Zero Core (32-bit)
HP ThinPro (32-bit)
Windows® Embedded Standard 7E (32-bit)

PROCESSOR

AMD G-Series GX-209JA System-on-Chip (SOC), including a 1.0 GHz dual core APU and discrete-level GPU

MEMORY

Type:	DDR3L SDRAM
Data Rate:	Transfer rates up to 1,066 MT/s
Peak Transfer Rate:	8,533 MB/s
Number of slots:	0; memory soldered down to PCA
Available capacities[6]:	2 GB; memory not upgradable

[6] The GPU uses part of the total SDRAM system memory for graphics performance. System memory dedicated to graphics performance is not available for other use by other programs.

STORAGE

Type:	Multi-Level Cell (MLC) NAND flash memory
Slot type:	Super Speed USB 3.0
Number of slots:	1
Available capacities:	8 GB, 16 GB

GRAPHICS

- Discrete-level graphics processor embedded alongside the AMD x86 CPU complex
- Dedicated graphics memory controller; highly-optimized 128-bit engine, capable of processing multiple pixels per clock
- Two independent display controllers enabling dual displays in extended or clone modes
  - DVI-D digital video output supports single-line DVI with resolutions of up to 1920 x 1200 @ 60 Hz, 24 bpp
  - VGA analog video output supports resolutions of up to 1920 x 1200 @ 60 Hz, 30 bpp

NOTE: Factors such as the capability and EDID information returned by the attached monitor, the interface used (VGA or DVI-D) and dual monitor mode may limit the availability of modes, color depth, and/or refresh rate

Technical Specifications

INPUT/OUTPUT

Hi-Speed USB 2.0	Front access: 2 x ports Rear access: 2 x ports **NOTE**: the keyboard and mouse will typically consume the two rear ports
Video	1 x DVI-D digital video output 1 x VGA analog video output **NOTE:** the use of dual displays attached to models configured with the Microsoft Windows Embedded Standard 7E operating system is **not recommended** due to the system's limited SDRAM. Less than optimal performance from the thin client and the displays could be experienced.
Audio	3.5 mm headset jack on front panel marked with a headset icon **NOTE:** the t420 does not include an internal PC speaker. All audio must be produced using peripheral devices, i.e. headsets, headphones, speakers, connected to the system through the 3.5 mm headset jack.
Network	RJ45 modular jack for Gigabit Ethernet network interface

Technical Specifications

HARDWARE SECURITY

- Security lock slot (cable lock sold separately)
- Built-in power cord retention clip

HARDWARE NETWORKING

- Gigabit Ethernet
- Wake on LAN (WOL)
- PXE
- TCP/IP with DNS and DHCP

SOFTWARE NETWORKING

	HP ThinPro	HP Smart Zero Core	WES 7E
Point-to-Point Protocol (PPP)			X
Point-to-Point over Ethernet (PPPoE)			X
Direct Connection through RS-232	X	X	X
Point-to-Point Tunneling Protocol (PPTP)	X	X	X
Layer-2 Tunneling Protocol (L2TP)	X	X	X
Server Network Time Protocol (SNTP)	X	X	X

WI-FI NETWORK ADAPTER (SELECT MODELS)

Adapter [7]	Broadcom 802.11n 2x2 Wi-Fi Network Interface with Bluetooth®
Main Chipset	Broadcom BCM43228 + BCM20702
Wi-Fi Function	IEEE802.11a; IEEE802.11b; IEEE802.11g; IEEE 802.11n
Form Factor	PCI Express mini card with dual, internal antennas
Data Rate	802.11a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: MCS 0 to 15 for HT20MHz; MCS 0 to 15 for HT40MHz
Security	WPS, WPA, WPA2, WEP 64bit & 128bit, IEEE 802.11x, IEEE 802.11i

[7] 802.11 is an optional or add on feature. Use of Wi-Fi module requires Wi-Fi access point and Internet service. Availability of public Wi-Fi access points is limited.

Technical Specifications

SERVER OS COMPATIBILITY/SUPPORT

- Citrix XenApp 5 and later
- Citrix XenDesktop 3 and later
- Citrix Presentation Server 4.0 and later
- Windows Server 2003R2
- Windows Server 2008R2 Terminal Services
- Windows Server 2012/2012R2 Remote Desktop Services
- Windows 7/8/8.1
- VMware Horizon View Virtual Desktop Infrastructure

WEIGHTS / DIMENSIONS

- 0.74 kgs; 1.63 lbs (weight)
- 180 x 140 x 35 mm; 7.08 x 5.51 x 1.37 in (dimension - W x D x H)
- 0.88 liters; 53.4 cu in (volume)

POWER SUPPLY

- 45W external power adapter
- Worldwide auto-sensing 100-240 VAC, 50-60 Hz
- Energy saving automatic power down
- Surge tolerant

The t420 Thin Client power adapter is sourced from a number of suppliers in order to ensure adequate supply and availability is maintained. The actual dimensions of the power brick will vary by supplier:

Acbel: 91.4 x 44 x 26.8 mm
Chicony: 94.0 x 40 x 26.5 mm

COUNTRY OF ORIGIN

China

QuickSpecs

Software

Host Environment	Protocol	Smart Zero Core	ThinPro	WES 7E
Microsoft Remote Desktop Services	RFX	✓	✓	✓
	RDP	✓	✓	✓
Citrix	ICA	✓	✓	✓
	HDX	✓	✓	✓
VMware Horizon	RDP	✓	✓	✓
	PCoIP	✓	✓	✓

Protocol Clients	Smart Zero Core	ThinPro	WES 7E
Citrix Receiver	✓	✓	✓
VMware Horizon	✓	✓	✓
HP TeemTalk Terminal Emulator	✓	✓	via add-on
MS Remote Desktop Client	N/A	N/A	✓
Free RDP	✓	✓	N/A

Browser Support	Smart Zero Core	ThinPro	WES 7E
Mozilla Firefox	✓	✓	N/A
Internet Explorer	N/A	N/A	✓

Security	Smart Zero Core	ThinPro	WES 7E
Smart Card	✓	✓	✓
Logon Manager			✓
Read Only Operating System	✓	✓	✓
802.1x	✓	✓	✓
Image Protection	Locked File System	Locked File System	Enhance Write Filter File-Based Write Filter
Microsoft Firewall	N/A	N/A	✓

Session Brokers	Smart Zero Core	ThinPro	WES 7E
Citrix XenDesktop	✓	✓	✓
VMware Horizon	✓	✓	✓

QuickSpecs

Software

Management Tools	Smart Zero Core	ThinPro	WES 7E
HP Device Manager	✓	✓	✓
HP ThinUpdate	✓	✓	✓
HP Smart Zero Client Services	✓	✓	✓
HP Connection Manager	✓	✓	N/A
HP Easy Shell	N/A	N/A	✓

User Experience Software	Smart Zero Core	ThinPro	WES 7E
HP True Graphics	✓	✓	N/A
HP Universal Print Driver	N/A	N/A	✓
Windows Media Player	N/A	N/A	12

CODECs included	Smart Zero Core	ThinPro	WES 7E
MP3	✓	✓	✓
WMA stereo	✓	✓	✓
AAC stereo & HE AAC	✓	✓	N/A
Microsoft AC3 encoder	N/A	N/A	✓
MPEG-1	✓	✓	N/A
MPEG-4 part 2 (DivX, Xvid, H.263)	✓	✓	✓
MPEG-4 part 10 (H.264, AVC)	✓	✓	✓
WMV 7/8/9 VC-1 & ASF	✓	✓	✓

Software

TEXT AND GRAPHICS TERMINAL EMULATIONS
(PROVIDED BY HP TEEMTALK 7 IN HP THINPRO AND MICROSOFT WES 7E OPERATING SYSTEMS)

Emulation	Terminal ID
HP 700-92/96	70092, 70094, 70096, 2392A, 2622A
IBM3151	Mod11, Mod31
IBM3270	3278-2 (24x80), 3278-3 (32x80), 3278-4 (43x80), 3278-5 (27x132), 3278-2-E (24x80), 3278-3-E (32x80), 3278-4-E (43x80), 3278-5-E (27x132), 3279-2 (24x80), 3279-3 (32x80), 3279-4 (43x80), 3279-5 (27x132), 3287-1
IBM5250	5291-1, 5292-2, 5251-11, 3179-2, 3196-A1, 3180-2, 3477-FC (27x132), 3477-FG (24x80), 3486-BA, 3487-HA, 3487-HC, 3812-1
VT52, VT100, VT100+, VT500 (7- or 8-bit)	VT100, VT101, VT102, VT125, VT131, VT132, M2200, VT220, VT240, VT320, VT340, VT420, VT510, VT520, VT525
VT HP220, VT UTF8	VT100, VT101, VT102, VT125, VT220, VT240, VT320, VT340, VT420, VT131, VT132, M2200, VT510, VT520, VT525

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

LANGUAGES (local user interface)

The following local user interface languages are available for Windows Embedded Standard 7E:

English, French, German, Spanish, Dutch, Norwegian, Russian, Korean, Simplified Chinese, Traditional Chinese, Japanese and Arabic

The following local user interface languages are available for HP ThinPro and HP Smart Zero Technology:

English, French, German, Spanish, Russian, Korean, Simplified Chinese, Traditional Chinese and Japanese

QuickSpecs

Options and Accessories

		Part #
Accessories	HP Quick Release Kit	EM870AA
	HP Integrated Work Center Stand	G1V61AA
Communications	HP USB to Serial Adapter	J7B60AA
Input Devices	HP USB Standard Keyboard	DT528A
	HP USB CCID Smartcard Keyboard	BV813AA
	HP USB Optical Mouse	DC172B
Security	HP UltraSlim Cable Lock	H4D73AA
Care Pack Services	9x5 Next-Business-Day Advanced Exchange - 3 Years	331653-001; U4847E[8]
	9x5 Next-Business-Day On-Site Coverage - 3 Years	331655-001; U4849E[9]
	Hardware Installation	331686-001; UJ865E

[8] Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Restrictions and limitations apply. Service starts at date of hardware purchase. 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.

[9] U4847E is available in all regions; U4849E is available in Latin America and Asia-Pacific/Japan.

Summary of Changes

Date of change:	Version History:		Description of change: