HP Thin Client Family

HP Thin Clients deliver the tools for simple cloud manageability and control. Plus with powerful security and productivity-maximizing features, experience the added benefit of IT peace of mind.

HP Thin Clients give you the tools to easily rule the cloud with features from HP, like HP Device Manager and HP EasyShell[18] - set up, manage and monitor thousands of HP Thin Clients remotely from a single point.

With features like multi-display support, remote access to your data, and cloud optimized OS options, your users can be at their most productive whether at the office or on the go.

January 2018

HP Zero Clients

Zero in on a better VMware client.
HP Zero Clients are designed for VMware environments with the latest PCoIP technology ideal for graphics-intensive applications that need workstation-like performance and support for dual monitors.[1] No operating system or moving parts mean HP Zero Clients require zero management. Deployment is simple and viruses are history. As HP's most secure endpoints, HP Zero Clients keep your data safe in the datacenter—only pixels are transferred. Hardware USB authorization and fiber NIC[2] add extra layers of security. Designed for fast PCoIP, Teradici[26], Amazon Workspaces™ and VMware®, HP Zero Clients are an ultra-low-cost-per-seat solution with ultra performance and reliability.

HP Desktop Cloud Clients

Customize your level of performance, security and manageability.
Pair the thin client form factor of your choice with the operating system of your choice, including Linux®-based **HP Smart Zero** and **HP ThinPro,** or **Windows Embedded.** Choose the processing power that matches your productivity needs, whether it's for mission-critical multimedia access, or everyday task-based demands. Support your growth with expansion options and legacy ports, choose native support for up to four digital displays, and maintain network adaptability with wired-in ethernet and Wi-Fi options. Get a cloud-ready and VDI-optimized thin client that's tested and certified for today's top ISV providers, including Citrix®, VMware® and Microsoft.

HP Mobile Cloud Clients

Ultimate cloud convenience.
Mobile cloud computing is easier and more flexible than ever with HP Mobile Thin Clients. Employees can get the job done from just about anywhere thanks to professional cloud and VDI-optimized features with critical user and management software built right in. HP ThinPro and Windows-based programs and tools make it easy for everyone to log in and get to work with familiar tools and programs. No training required.

HP Thin Client Operating Systems

ThinPro OS

More flexibility. More freedom.
Experience true efficiency and focus on your business instead of your IT with the easy customization, enhanced security, and simplified maintenance of the flexible, 64-bit Linux®-based HP ThinPro OS, which delivers up to 30% improved performance[3] over the predecessor 32-bit version. Rest easy with an OS that attracts few virus threats and has a locked file system to help against unauthorized updates, while the HP ThinPro Certificate Manager keeps all your relevant certificates in a single certificate store. With HP ThinPro, it's easy to customize user settings, properties, and permissions, rich graphic and terminal emulation connections, and more, as well as print locally and enable concurrent virtualization sessions.

Zero and Smart Zero Core

The smarter zero client.
Configure it and forget it. It's that easy with the smarter HP Zero Client experience provided by HP Smart Zero technology. Everyone wins with an easy-to-navigate ecosystem for end users and simple setup and maintenance for IT that doesn't require specialized administrative support. Switch between HP Smart Zero and HP ThinPro, or customize your own experience—all from one centralized interface. HP Smart Zero supports five different Zero client experiences: Citrix® ICA®, Microsoft RDP, VMWare® Horizon™, VMware® Blast Extreme™, and a Firefox web browser.

Windows Embedded OS

A familiar interface.
Work efficiently on Windows Embedded Standard, the thin client operating system you're already well-acquainted with. The familiarity of a powerful Windows®-based environment will help reduce the cost of training and tools and make maintenance and roll-outs a breeze for end users, application developers, and IT administrators.

For more information, visit **HP Thin Client Operating Systems.**

HP Thin Client Software

HP Thin Client Conversion Suite

One Solution. One software package. One cost.
Accelerate your transition to the cloud with the HP Thin Client Conversion Suite. This simple software bundle allows you to optimize your PCs with all the benefits of a thin client, ensuring superb end user experience and effortless device management.
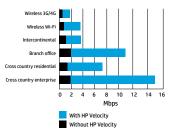
HP Device Manager

Making your life easy to manage.
HPDM provides full life cycle management for HP Thin Clients; from initial discovery, deployment and configuration to maintenance and EOL of product. IT administrators can control and make decisions about their IT resources locally or remotely with HPDM which provides detailed asset information through a simple console "dashboard". With just one software you can do it all—track, configure, upgrade, clone, and manage up to thousands of thin client devices.

Network performance improvements with HP Velocity
Figure 1. Effective network performances seen by user under different network conditions.

HP Velocity

Accelerate network performance.
Improve network performance and the end-user experience with HP Velocity software, which optimizes network traffic for remote desktops and application streaming, IDs and fixes bottlenecks, and simplifies IT troubleshooting.

HP EasyShell

Quick. Simple. Customized.
Make your HP Thin Client Windows Embedded user experience easier than ever with HP Easy Shell[18]. Customize the intuitive interface and level of protection to fit your needs, and enjoy targeted control at a great price so you can make the most of your cloud infrastructure, VDI, and kiosk environments.

HP True Graphics

Truly astounding cloud-based multimedia.
Experience breakthrough video playback, smooth graphics, and impressive high-speed performance of your cloud-based multimedia with HP True Graphics[4] for Windows®- and Linux®-based HP Thin Clients. Power through more applications, redirect H.264 content, and add heavy compute programs to your current environment with a solution that offloads tasks from the CPU.

HP Remote Graphics Software

Work virtually anywhere.
Access your workstation or server-based graphic-rich applications and collaborate remotely in real time from any PC, Thin Client or Windows tablet with HP Remote Graphics Software (RGS).[5]

For more information, visit **HP Thin Client Operating Systems.**

HP Desktop Thin Clients

Series	ThinPro, Smart Zero and Windows Embedded*			
Platforms	t420	t530	t630	t730
Processor and memory				
Processor	AMD GX-209JA SOC features a 1.0GHz dual-core APU[7]	AMD GX-215JJ Dual-Core APU SoC with Radeon™ R2E Graphics (1.5 GHz base frequency, up to 2 GHz burst frequency, 1 MB cache)[7]	AMD GX-420GI (2.0GHz - 2.2 GHz quad-core[7]) APU with a Radeon R7E based graphics core	AMD R-Series RX-427BB (2.7GHz– 3.6 GHz quad-core[7]) APU with a Radeon HD 9000 based graphics core
Flash/RAM[8]	Up to 16GB flash/ 2GB SDRAM[20]	Up to 512GB flash/up to 16 GB DDR4-1866 SDRAM[20]	Up to 512GB flash/up to 32 GB DDR4-1866 SDRAM[20]	Up to 128GB flash/up to 16GB SDRAM[20]
Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)				
Maximum resolution[9]	1920 x 1200	3840 x 2160 via DisplayPort™ 1920 x 1080 via optional VGA output	3840 x 2160 via DisplayPort™ 1920 x 1200 via optional VGA output	3840 x 2160
Monitor support[11]	1 x DVI-D; 1 x VGA	2 x DisplayPort™; 1 x VGA (optional)[24]	2 x DisplayPort™; 1 x VGA (optional)	4 X DisplayPort™; 6 x DisplayPort™ (optional)[22]
Networking				
Embedded Networking Interface	LAN: Gigabit Ethernet (RJ-45) WLAN: Intel® 802.11ac wireless with Bluetooth® (optional) [13]	LAN: Gigabit Ethernet (RJ-45)WLAN: Intel® Dual Band Wireless-AC 3168 Wi-Fi/Bluetooth® combo (optional)[13] Intel® Dual Band Wireless AC 8265 Wi-Fi/Bluetooth® combo (optional)[13]	LAN:Gigabit Ethernet (RJ-45) WLAN: Intel® Dual Band Wireless-AC 3168 Wi-Fi/Bluetooth® combo adapter (optional)[13] Intel® Dual Band Wireless AC 8260 Wi-Fi/Bluetooth® combo adapter (optional)[13] Allied Telesis Fiber Optic NIC (optional)[13,23]	LAN: Gigabit Ethernet (RJ-45) WLAN: Intel® 802.11a/b/g/n/ac PCIe[13] Allied Telesis AT-27M2/SC M.2 Fiber Fast Ethernet Network Interface[13] Allied Telesis Fiber Optic NIC (optional)[13,23]
I/O and expansion				
Serial	0	0	1 (2nd port optional)	2
Parallel	0	0	0	1
PS2	0	0	2	2
USB	4 USB 2.0	Total: 6 3 USB-A 3.1 2 USB-A 2.0 1 USB 3.1 Type-C™	Total: 7 2 USB 3.0 1 USB 3.0, hidden 4 USB 2.0	Total: 9 2 USB 3.0 6 USB 2.0 1 USB 3.0, hidden
Slot expansion options[14]	No	Yes 1 configurable port (choice of serial, VGA or coaxial port)[24]	No	1 x half height PCI Express expansion slot x16 physical slot wired as a x8 (rear)
HP cable lock slot	Yes	Yes	Yes	Yes
Environmental certifications				
ENERGY STAR®	Yes	Yes	Yes	Yes
EPEAT® [15]	Yes	Yes	Yes	Yes
Low Halogen[21]	Yes	Yes	Yes	Yes

HP Zero Clients

Series	Zero Clients		
Platforms	t310 G2	t310 AiO G2	t310 Quad Display
Processor and memory			
Processor	TERA2321 PCoIP Zero Client processor	TERA2321 PCoIP Zero Client processor	TERA2140 PCoIP Zero Client processor
System Memory[8]	512 MB DDR3-1333 SDRAM	512 MB DDR3-1333 SDRAM	32 MB/512 MB SDRAM
Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)			
Maximum resolution[9]	Dual displays: 1920 x 1200 Single display: 2560 x 1600[10]	Dual displays: Single displays:	Four displays: 1920 x 1200 Dual displays: 2560 x 1600[10]
Monitor support[11]	1 x DVI-I 1 x DisplayPort™ [25]	1 x DVI-I 1 x VGA 1 x DisplayPort™ [25]	1 x DVI-D; 1 x VGA
Networking			
Embedded Networking Interface	Gigabit Ethernet (RJ-45 interface) 1 Gbps Fiber NIC[14]	Gigabit Ethernet (RJ-45 interface)	Gigabit Ethernet (RJ-45 interface) 100Mbps Fiber NIC[14] 1Gbps Fiber NIC[14]
Networking Options	Wake on LAN (WoL) using magic packet.	Wake on LAN (WoL) using magic packet.	Wake on USB
I/O and expansion			
USB	6 USB 2.0	6 USB 2.0	4 USB 2.0
Slot expansion options[14]	No	No	No
HP cable lock slot	Yes	Yes	Yes
Environmental certifications			
ENERGY STAR®	No	No	No
EPEAT® [15]	No	No	No

HP Mobile Thin Clients

Series	Mobile	
Platforms	**mt43**	**mt21**
Processor and memory		
Processor	AMD PRO A8-8600B APU (1.66 up to 3 GHz, 2 MB cache, 4 cores[7]) with Radeon™ R6 Graphics	Intel® Celeron® 3865u with Intel HD Graphics (1.8 GHz, 2 cores[7])
System Memory[8]	Up to 8 GB	Up to 8 GB
Operating System and Flash		
Operating System	Windows 10 IoT Enterprise[19]	Windows 10 IoT Enterprise[19] HP ThinPro with Smart Zero Core
Flash	128GB M.2 flash drive	128GB M.2 flash drive
Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)		
Maximum resolution[9]	1920 x 1080	1920x1080
Monitor support[11]	1x DisplayPort™ 1x VGA	1x VGA 1x HDMI
Touchscreen support[12]	No	No
Networking		
Integrated	Broadband Wireless (WWAN): HP lt4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module HP hs3210 HSPA+ Mobile Broadband Wireless LAN (WLAN): Intel® Dual Band Wireless-AC 7265: 802.11 a/b/g/n/ac (2x2) Wi-Fi + Bluetooth® 4.2 Combo13 Wired LAN: Broadcom 5762 Gigabit Ethernet NIC with DASH support	Wireless LAN (WLAN): Intel® Dual Band Wireless-AC 8265 802.11ac (2x2) Wi-Fi® Bluetooth® 4.2 Combo Wired LAN: Realtek RTL 8111HSH Gigabit Ethernet
Peripheral support		
	1x USB 3.0 Type A 1x USB 3.1 gen 1 Type-C™ (charging) 1x VGA output 1x DisplayPort™ video output 1x headphone/microphone combo jack 1x AC power interface 1x RJ-45 Gigabit Ethernet interface 1x Smart Card Reader 1x SD Multi-media Reader slot; supports SD, SDHC, SDXC	2 x USB 3.1 Gen 1 (1 charging) 1x USB 3.1 Type-C™ port 1x VGA 1x HDMI 1x headphone/microphone combo jack 1x AC power interface 1x RJ-45 Gigabit Ethernet interface 1x SD Multi-media Reader slot; supports SD, SDHC, SDXC
Security		
	TPM v2.0 Security lock slot	TPM v2.0 Security lock slot Pre-boot Authentication
Environmental certifications		
ENERGY STAR®	Yes	Yes
EPEAT® [15]	Yes	Yes
Dimensions		
	13.3 x 8.9 x 0.74 in; starting at 3.48 lbs	13.23 x 9.37 x 0.79 in; 3.6lbs

HP Thin Clients

Software specifications	Windows 10 IoT Enterprise for Thin Clients[19]	Windows Embedded Standard 7E/7P[16]	HP ThinPro	HP Smart Zero Technology[17]
Available Platforms				
	HP t530, HP t630, HP t730, HP mt43, HP mt21	HP t420†, t530†, HP t630†, HP t730‡	HP t420, HP t530, HP t630, HP t730, HP mt21	HP t420, HP t530, HP t630, HP t730, HP mt21
Applications				
ICA/RDP	•	•	•	•
VDI brokers	•	•	•	•
HP TeemTalk Terminal Emulation		•	•	
X Windows (X11R6)			•	
Java Virtual Machine	Add-on	Add-on	Add-on	Add-on
API compatibility	Win64	Win32/Win 64	Linux	Linux
Local browser	Full Internet Explorer	Full Internet Explorer	Mozilla Firefox	Mozilla Firefox
Media player	•	•	Through VDI protocol	Through VDI protocol
PDF Reader	•	•	•	•
ThinPrint print client (TCP/IP)	Available directly from vendor	Available directly from vendor		
Security				
File protection	Unified Write Filter	Enhanced Write filter or File based Write Filter	Read only file system	Read only file system
Locked configuration/accounts	•	•		
Firewall	Microsoft Firewall	Microsoft Firewall		
Smart Card support	•	•	•	•
Management and User Experience Software				
HP Device Manager	•	•	•	•
Microsoft SCCM	•	•		
HP Remote Graphics Software (HP RGS)	•	•	•	
HP Universal Print Driver		•		
Velocity (not offered on HP t420)	•	•	•	•
HP Easy Shell	•	•		
HP True Graphics	•	•	•	•

† 7E only   ‡ 7P only

Model	OS Version	VMware Horizon View HCL Horizon View Client	Citrix Ready/HDX Ready XenDesktop/XenApp
t310 G2	No Operating System	Tera2 Certified[26]	N/A
t310 AiO G2	No Operating System	Tera2 Certified[26]	N/A
t420*	HP ThinPro	Certified	Verified**
t420	HP Smart Zero Core	Certified	Verified**
t420	Windows Embedded	Certified	Verified**
t530	Windows Embedded	TBD	TBD
t530	HP ThinPro	TBD	TBD
t530	HP Smart Zero Core	TBD	TBD
t630	ThinPro	Certified	Verified
t630	HP Smart Zero Core	Certified	Verified
t630	Windows Embedded	Certified	Verified
t730	Windows Embedded	Certified	Verified
mt21	Windows Embedded	Certified	Verified
mt21	HP ThinPro	Certified	Verified
mt21	HP Smart ZeroCore	Certified	Verified
mt43	Windows Embedded	Certified	Verified

N/A – Certification is not applicable to this device

* Availability varies by region
** The HP t420 product was verified with Citrix HDX

1. The resolutions your monitor displays and the multi-display modes (i.e. clone, spanning, extended/independent) supported in ICA, RDP or locally may vary. Number of monitors supported varies by model.
2. t310 only
3. Based on 64-bit vs. 32- bit and tested using x11perf comparing HP ThinPro 6.1 on an HP t620 Thin Client vs, HP ThinPro 5.2 on a similarly configured HP t620 Thin Client.
4. HP True Graphics requires an HP Thin Client with an HP ThinPro 5.0 or higher operating system (combo OS with HP Smart Zero Core begins at v5.0), AMD processing technology, and a Citrix® virtual desktop infrastructure—XenApp® or XenDesktop® v7.0 or higher or WES 7E 32-bit/Windows 10 IoT with a Citrix® 4.4 receiver and Citrix® virtual desktop infrastructure—XenApp® or XenDesktop® v7.0 or higher. HP True Graphics is preinstalled on the OS starting with HP ThinPro 5.2. See product QuickSpecs for exact compatibility.
5. HP Remote Graphics Software requires Windows and internet connection.
6. This system requires a 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of AMD technology. Multi-core processing available with AMD technology is designed to improve performance of this system. Given the wide range of software applications available, performance of a system including a 64-bit operating system will vary.
7. 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 will vary depending on your hardware and software configurations. Intel® AMD's numbering is not a measurement of clock speed.
8. Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows and Linux 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
9. The resolutions your monitor displays and the multi-display modes (i.e. clone, spanning, extended/independent) supported in ICA, RDP or locally may vary. Number of monitors supported varies by model.
10. With custom single-to-dual DVI conversion cable, sold separately.
11. 64 MB or more memory reserved for video. 42 GB/1 GB SKU available in North America. Up to 1 GB may not be available in 4GB configurations with 32-bit operating systems due to system resource requirements. Flash and RAM maximum vary with OS.
12. Touchscreen support varies by OS. Not supported by Windows Embedded Standard 7E, Windows CE, or HP Smart Zero Client Technology.
13. Wi-Fi and WWAN modules are sold as optional modules and must be configured at the factory. WWAN requires a separately purchased service contract with a wireless service provider. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions. The Wi-Fi adapter provides Wi-Fi access only. WLAN requires wireless access point and Internet service is required and is not included with the purchase of a Wi-Fi adapter. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
14. Options sold separately. Availability varies by country.
15. EPEAT® registered where applicable. EPEAT registration varies by country. See epeat.net for registration status by country.
16. Windows Embedded Standard 7 products require 8 GB or more Flash memory.
17. Configurable for one protocol at a time.
18. HP Easy Shell is currently available on HP Thin Clients with a Windows Embedded OS.
19. 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. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com.
20. 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. WES 7E is a 32-bit operating system and only recognizes up to 3.2 GB RAM.
21. External power adapters, power cords, cables and peripherals are not low halogen; service parts obtained aftermarket may not be low halogen.
22. An optional AMD FirePro™ W2100 discrete graphics solution provides two additional digital video streams for a system total of six video outputs.
23. Fiber NIC cannot be installed simultaneously with Wi-Fi.
24. You can configure an additional port between one of three optional I/O features: Serial, VGA or an External Antenna port. The optional VGA port does not increase the number of supported displays.
25. The DisplayPort™ did not pass VESA 1.2 certification guidelines.
26. Teradici Desktop Access one (1) year subscription included. Proof of purchase required. Trial begins on date of hardware purchase. PCoIP Zero Clients purchase must be more recent than December 1, 2017. For more information, visit teradici.com.

For more information visit hp.com/go/thin