

# HP Thin Client Family



HP Thin Clients are an affordable alternative to standard PC's in cloud or virtualised computing environments. Our broad portfolio lets you fine-tune your end user and cloud computing experience. Choose from wide-ranging options for processor, operating system, and communication protocol from VMware, Citrix, and Microsoft. For performance, security and simplicity, thin is in.

HP Thin Clients are built for speed. From the VMware-optimised hardware of HP Zero Clients to the latest quad-core processors in HP Flexible Thin Clients, our portfolio has what it takes to satisfy even the most power-hungry applications, including 3D and multimedia. And with support for up to four digital monitors, you work the way you want, as fast as you want.<sup>1</sup>



Monitor, keyboard, mouse, and integrated work center stand are sold separately

## 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.<sup>1</sup> 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<sup>2</sup> add extra layers of security. Designed for fast PCoIP, Amazon Workspace and VMware, HP Zero Clients are an ultra-low-cost-per-seat solution with ultra performance and reliability.

## HP Thin Clients

### Customise your level of performance, security and manageability.

Pair the thin client desktop form factor of your choice with the operating system of your choice, including Linux-based **HP Smart Zero Core** and **HP ThinPro**, or **Windows Embedded**. Choose the AMD 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-optimised thin client that's tested and certified for today's top ISV providers, including Citrix, VMware and Microsoft.



## HP Mobile Thin 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-optimised features with critical user and management software built right in. 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.



# Operating Systems



## ThinPro OS

### More flexibility. More freedom.

Get the highest customisation per user with HP ThinPro—featuring a new, simplified graphical user interface. Customise properties, rich graphics, terminal emulation connections, and permissions. Print locally and enable concurrent virtualisation sessions. Create multiple experiences and roll back to previous configurations with “snapshot” restore points. Switch between HP ThinPro and HP Smart Zero, or customise your own experience—all from one centralised interface.

For more information go to [hp.com/go/thinpro](http://hp.com/go/thinpro)



## Smart Zero Core OS

### 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 Core technology. Everyone wins with an easy-to-navigate ecosystem for end users and simple setup and maintenance for IT that doesn't require specialised administrative support. Switch between HP Smart Zero and HP ThinPro, or customise your own experience—all from one centralised interface.



## Windows Embedded OS

### A familiar interface.

Work efficiently with Windows Embedded, the thin client operating system you're already well-acquainted with. Reduce the cost of training and tools and make maintenance and roll-outs a breeze. Help prevent unauthorised updates and viruses with an integrated Write Filter. Take advantage of broad-range support for peripherals, drivers, and applications.

# HP Thin Client Software



## Device Manager

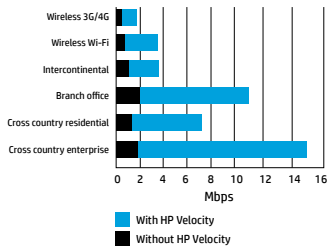
### Making your life easy to manage.

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.

For more information go to [hp.com/go/hpdm](http://hp.com/go/hpdm)

### 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 optimises network traffic for remote desktops and application streaming, IDs and fixes bottlenecks, and simplifies IT troubleshooting.

For more information go to [hp.com/go/velocity](http://hp.com/go/velocity)

### HP EasyShell

#### Quick. Simple. Customised.

Make your HP Thin Client Windows Embedded user experience easier than ever with HP Easy Shell. Customise 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.

For more information go to [hp.com/go/easysell](http://hp.com/go/easysell)

### HP True Graphics

#### True 3D<sup>3</sup> delivery you have to see to believe.

Achieve breakthrough loss-less video and graphics presentation from the cloud with HP True Graphics<sup>4</sup> which offloads rich multimedia content to your GPU HW decoder so your CPU can boost the efficiency of your thin client and scale easily for heavy compute demands.

For more information go to [hp.com/go/truegraphics](http://hp.com/go/truegraphics)



### 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).<sup>5</sup>

For more information go to [hp.com/go/rgs](http://hp.com/go/rgs)

## HP Thin Client Portfolio

Series	Thinpro, Smart Zero and Windows Embedded*				
Platforms	Zero	t420	t520	t620/t620 PLUS	t730
	t310/ t310 AiO				
<b>Processor and memory</b>					
Processor	TERA2321 PColP Zero Client processor	AMD G-Series System-on-Chip (SOC); 1.0 GHz dual core APU; AMD Radeon HD GPU	AMD GX-212JC 1.2GHz dual-core SOC APU with AMD Radeon HD Graphics <sup>6</sup>	AMD GX-217GA Dual-Core APU with AMD Radeon HD 8280E graphics (1.65 GHz); AMD GX-415GA quad-core <sup>7</sup> APU with AMD Radeon HD 8330E (1.5 GHz); AMD GX-420CA quad-core APU with AMD Radeon HD 8400E graphics (2 GHz)	AMD R-Series RX-427BB 2.7 GHz – 3.6 GHz quad-core <sup>7</sup> APU with a Radeon HD 9000 based graphics core
Flash/RAM <sup>8</sup>	32 MB/512 MB	2 GB DDR3 SDRAM; 1,066 MT/s data transfer rate	32GB/4-8GB	16 GB/4-16 GB	Up to 128GB NAND FLASH; up to 16GB DDR3L SDRAM
<b>Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)</b>					
Maximum resolution <sup>9</sup>	<b>t310</b> 1920 x 1200 2560 x 1600 <sup>10</sup> <b>t310 AiO</b> 1920 x 1080	1920 x 1200	1920 x 1200	2560 x 1600	Up to 4096 x 2160 x 24 bpp @ 60 Hz
Monitor support <sup>11</sup>	<b>t310</b> DVI-I and DVI-D <b>t310 AiO</b> DVI-I and VGA	1 x DVI-D digital video outputs 1 x VGA analog video output	2 x DisplayPort, 1 x VGA	2 x DisplayPort 1.2, or 1 x DisplayPort 1.2 and 1 x VGA (some models) PLUS: optional graphics configurations up to 4 monitors	4 X DisplayPort 1.2; VGA
Touchscreen support <sup>12</sup>	No	No	No	Yes	No
<b>Networking</b>					
Integrated Networking	10/100/1000 Mbit/sec Ethernet	10/100/1000 GbE	10/100/1000 GbE Mbit/sec Ethernet	10/100/1000 Mbit/sec Ethernet	10/100/1000 Mbit/sec Ethernet
Networking Options	Wake on LAN (WoL) using magic packet.	Optional 802.11n 2x2 dual band Wi-Fi Adapter with Bluetooth	Optional wireless 802.11 a/g/n 2x2 dual <sup>14</sup> and mini card with Bluetooth NIC, Wake on LAN module	Broadcom 802.11 a/b/g/n with dual antennas on select models <sup>13</sup> ; Broadcom 802.11ac <sup>14</sup> with dual internal antennas: HP 100 Mbps Mini-PCIe SC Fiber NIC factory-installed option (cannot be installed simultaneously with Wi-Fi)	Broadcom 802.11a/b/g/n; Intel 802.11a/b/g/n/ac <sup>14</sup> ; Fiber NIC factory option (cannot be installed simultaneously with Wi-Fi)
<b>I/O and expansion</b>					
Serial	0	0	0	Standard: 1/0/2/8 (2x USB 3.0; 4x USB 2.0; 2x USB 2.0 hidden) PLUS chassis: 2/2/2/8 (2x USB 3.0; 4x USB 2.0; 2x USB 2.0 hidden) (2x USB 3.0; 4x USB 2.0)	2
Parallel	0	0	0	0	1
PS2	0	0	0	2	2
USB	6 USB 2.0	4 USB 2.0	Total: 6 2 USB 3.0 4 USB 2.0	Total: 8 2 USB 3.0 4 USB 2.0 2 USB 2.0, hidden	Total: 9 2 USB 3.0 6 USB 2.0 1 USB 3.0, hidden
Slot expansion options <sup>15</sup>	No	No	No	Standard: No PLUS: 1 HH PCIe x16 card slot (x4 channels)	1 x half height PCI Express expansion slot x16 physical slot wired as a x8 (rear)
HP cable lock slot	Yes	Yes	Yes	Yes	Yes
<b>Environmental certifications</b>					
ENERGY STAR <sup>®</sup>	Yes	Yes	Yes	Yes	Yes
EPEAT <sup>®</sup> <sup>16</sup>	Yes	Yes	Yes	Yes	Yes
Low Halogen <sup>17</sup>	N/A	Yes	Yes	Yes	Yes

## HP Thin Client Portfolio

Series		Mobile	
Platforms	mt42	HP ElitePad 1000 G2 TC Tablet	HP ElitePad 1000 G2 Healthcare TC Tablet
<b>Processor and memory</b>			
Processor	AMD A8-Pro-8600B APU with Radeon™ R6 Graphics (1.66 up to 3 GHz, 2 MB cache, 4 cores)	Intel® Atom™ Z3795 (Quad-core 1.6 GHz base/2.39 GHz burst SoC BGA)	Intel® Atom™ Z3795 (Quad-core 1.6 GHz base/2.39 GHz burst SoC BGA)
Flash/RAM <sup>8</sup>	Up to 8 GB	Up to 4 GB	Up to 4 GB
<b>Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)</b>			
Maximum resolution <sup>9</sup>	Up to 3200 x 2000 @ 60Hz	1920 x 1200	1920 x 1200
Monitor support <sup>11</sup>	1 X DisplayPort 1.2; VGA	1 HDMI	1 HDMI
Touchscreen support <sup>12</sup>	No	Yes	Yes
<b>Networking</b>			
Integrated Networking	10/100/1000 Mbit/sec Ethernet; HP lt4120 LTE/HSPA+ 4G Mobile Broadband1; HP hs3110 HSPA+ Mobile Broadband1; Broadcom 943228 a/b/g/n (2x2) dual band 802.11 with Bluetooth® 4.0 LE 2	Broadcom 43241 802.11 a/b/g/n (2x2)+ BT 4 LE SDIO <sup>13</sup>	Broadcom 43241 802.11 a/b/g/n (2x2)+ BT 4 LE SDIO <sup>13</sup>
<b>I/O and expansion</b>			
Serial	0	0	0
Parallel	0	0	0
PS2	0	0	0
USB	1 USB 3.0 (charging)	1 USB 3.0	1 USB 3.0
Slot expansion options <sup>15</sup>	(1)SD media reader (Supports SD, SDHC, SDXC); (1)SC reader; (1)Micro SIM Slot	1 multi-format digital media card reader: Supports SD/SDHC/SDXC	1 multi-format digital media card reader: Supports SD/SDHC/SDXC
HP cable lock slot	Yes	No	No
<b>Environmental certifications</b>			
ENERGY STAR <sup>®</sup>	Yes	Yes	Yes
EPEAT <sup>®16</sup>	Yes	Yes	Yes
Low Halogen <sup>17</sup>	Yes	Yes	Yes

## HP Thin Client Portfolio

Software specifications	Windows 10 IoT Enterprise for Thin Clients	Windows Embedded 8 Standard	Windows Embedded Standard 7E/7P <sup>18</sup>	HP ThinPro	HP Smart Zero Technology <sup>19</sup>
<b>Available Platforms</b>	HP t520, HP t620/t620PLUS, HP t730, HP mt42, HP ElitePad 1000 G2 TC Tablet, HP ElitePad 1000 G2 Healthcare TC Tablet	HP t520, HP t620/t620 PLUS, HP ElitePad 1000 G2, HP ElitePad 1000 G2 Healthcare TC Tablet	HP t420†, t520, HP t620/t620 PLUS, HP t730‡, HP mt42†	HP t420, HP t520, HP t620, HP t620 PLUS, HP t730	HP t420, HP t520, HP t620, HP t730
<b>Applications</b>					
ICA/RDP	•	•	•	•	•
VDI brokers	•	•	•	•	•
HP TeemTalk Terminal Emulation	Add-on	•	•	•	
X Windows (X11R6)				•	
Java Virtual Machine	Add-on	Add-on	Add-on		
API compatibility	Win64	Win64	Win32	Linux	
Local browser	Full Internet Explorer	Full Internet Explorer	Full Internet Explorer	Mozilla Firefox	Mozilla Firefox for Smart Zero Technology
Media player	•	•	•		
PDF Reader	•	•	•	•	
ThinPrint print client (TCP/IP)	Available directly from vendor	Available directly from vendor	Available directly from vendor	•	
<b>Security</b>					
File protection	Unified Write Filter	Unified Write Filter	Enhanced Write filter or File based Write Filter	Read only file system	Downloads firmware at boot
Locked configuration/ accounts	•	•	•		
Firewall	Microsoft Firewall	Microsoft Firewall	Microsoft Firewall		
Smart Card support	•	•	•	•	•
<b>Management and User Experience Software</b>					
HP Device Manager	•	•	•	•	•
Microsoft SCCM	•		•		
Windows Embedded Device Manager			•		
HP Remote Graphics Software (HP RGS)	•	•	•	•	
HP Universal Print Driver	•	•	•	† 7E only	‡ 7P only
HP Velocity	•	•	•	•	•
HP Easy Shell	•	•	•		
HP True Graphics				•	

Model	OS Version	VMware Horizon View HCL	Citrix Ready/HDX Ready	
		Horizon View Client	XenDesktop/XenApp	ViaB 5.x
t310	No Operating System	Tera2 Certified	N/A	N/A
t310 AiO	No Operating System	Tera2 Certified	N/A	N/A
t420	HP ThinPro	In Progress	In Progress	In Progress
t420	HP Smart Zero Core	In Progress	In Progress	In Progress
t420	Windows Embedded	In Progress	In Progress	In Progress
t520	Windows Embedded	Certified	In Progress	Verified
t520	HP ThinPro	Certified	In Progress	Verified
t520	HP Smart Zero Core	In Progress	In Progress	In Progress
t620	HP Smart Zero Core	Certified	HDXP	Verified
t620	HP Thin Pro	Certified	HDXP	Verified
t620	Windows Embedded	Certified	HDXP	Verified
t730	Windows Embedded	In Progress	In Progress	Verified
mt42	Windows Embedded	In Progress	In Progress	In Progress
HP ElitePad 1000 G2	Windows Embedded	Certified	Verified	Verified
HP ElitePad 1000 G2 HC Tablet	Windows Embedded	Certified	Verified	Verified

HDX – HDX Ready    HDXP – HDX Premium Ready    N/A – Certification is not applicable to this device

\* Availability varies by region

- 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.
- t310 only
- 3D content required to view 3D images. 3D capable display required to take full advantage of 3D.
- 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—must be XenApp or XenDesktop v7.0 or higher. HP True Graphics is preinstalled on the OS starting with HP ThinPro 5.2. HP True Graphics will be available on HP ThinPro 5.0 or higher as an add-on through Easy Update for ThinPro or via HPDM in early 2015. See product QuickSpecs for exact compatibility.
- HP Remote Graphics Software requires Windows and internet connection.
- 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.
- Multi-core processing with AMD technology is designed to improve performance of this system. Given the wide range of software applications available, performance will vary. AMD's numbering is not a measurement of clock speed.
- 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.
- 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.
- With custom single-to-dual DVI conversion cable, sold separately.
- 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.
- Touchscreen support varies by OS. Not supported by Windows Embedded Standard 7E, Windows CE, or HP Smart Zero Client Technology.
- Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. 802.11 Wi-Fi and Bluetooth combo sold separately or as an optional feature.
- 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 thin client to communicate with other 802.11ac WLAN devices.
- Options sold separately. Availability varies by country.
- Configurations of the HP t620 and HP t620 PLUS Flexible Thin Clients that are ENERGY STAR® qualified are identified on HP websites and on [energystar.gov](http://energystar.gov). EPEAT® registered where applicable. EPEAT registration varies by country. See [epeat.net](http://epeat.net) for registration status by country.
- This product is low halogen except for power cords, cables and peripherals, as well as the customer-configurable 100 Mbps Fiber NIC module which is not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
- Windows Embedded Standard 7 products require 8 GB or more Flash memory.
- Configurable for one protocol at a time.

**For more information visit**  
[hp.com/go/thin](http://hp.com/go/thin)

© Copyright 2013–2016 HP Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. Intel, Atom, and Celeron are trademarks of Intel Corporation in the U.S. and other countries. AMD is a trademark of Advanced Micro Devices, Inc. Linux is the registered trademark of Linux Torvalds in the U.S. and other countries. ENERGY STAR® is a registered mark owned by the US Environmental Protection Agency. Java is a registered trademark of Oracle and/or its affiliates. ARM is a trademark or registered trademark of ARM Ltd or its subsidiaries. Citrix® and XenDesktop® are trademarks of Citrix Systems®, Inc. and/or one or more of its subsidiaries, and may be registered in the United States Patent and Trademark Office and in other countries. All other trademarks are the property of their respective owners. To learn more, visit [hp.com](http://hp.com).

