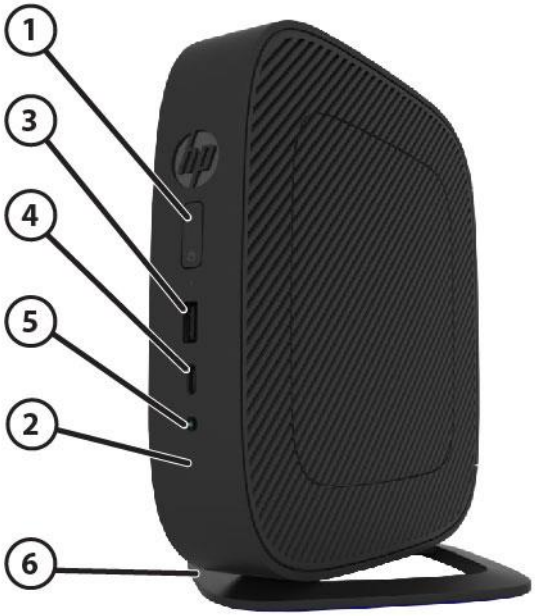
Overview

HP t530 Thin Client

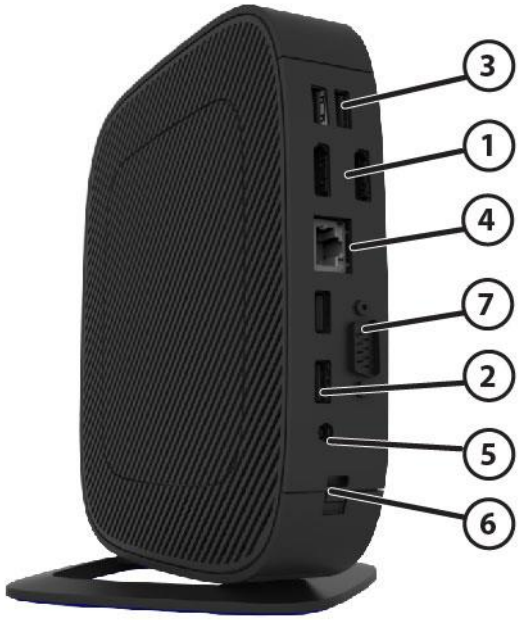
Front View Image



FRONT

1. Power button
2. Flash memory activity indicator light
3. 1 x USB-A 3.1 Gen 1 port for accessories
4. 1 x USB-C 3.1 Gen 1 port for accessories
5. 3.5mm headset jack
6. System stand

Rear View Image



BACK

1. DisplayPort™ 1.2 digital video outputs (2)
2. 2 x USB-A 2.0 ports for keyboard and mouse
3. 2 x USB-A 3.1 Gen 1 ports for accessories
4. RJ45 Gigabit Ethernet interface
5. 19V DC power input
6. Cable lock support
7. Option port; can be configured as one of the following:
   - Blank; no optional port
   - Serial port
   - VGA video output
   - External Wi-Fi antenna connector

Overview

AT A GLANCE

- AMD GX-215JJ System on Chip; 1.5 - 2.0 GHz dual-core with a Radeon™ R2E based graphics core
- DDR4 single-channel SDRAM system memory; up to 1,866 MT/s transfer rate; one SODIMM slot; up to 16 GB supported[1]
- 2 x DisplayPort™ 1.2 video outputs supporting up to Ultra High Definition (UHD)/4K (3840 x 2160) resolutions. Models can be configured with an optional VGA analog video port to support older displays
- Solid-state flash memory storage; single M.2 slot supporting up to a 512 GB flash drive
- Active thermal management technology monitors component operating temperatures, throttles SOC operation if appropriate, and prevents unit thermal shutdown
- Supports Amazon Workspaces cloud-based virtual desktop
- Gigabit Ethernet (GbE) network connection supported via an integrated Realtek GbE NIC module
- Optional Wi-Fi/Bluetooth® adapters including antennas integrated internally in the chassis. Models can be configured with an optional external Wi-Fi antenna system
- USB ports located on the front and back panels, including a USB-C 3.1 port for supporting accessory devices designed for this newest USB form factor
- Models configured with an optional serial port to support devices requiring the serial interface
- Integrated PC speaker for basic audio playback; 3.5 mm headset audio port on front panel that will support a headset, headphones or an external speaker systems
- TCG certified Trusted Platform Module (TPM) chipset; other security features include a system UEFI designed to address NIST SP 800-147 guidelines, cable lock slot, and power cord retention clip to prevent accidental power cord disconnects
- ENERGY STAR® certified and EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in other countries
- Post-consumer recycled plastics content greater than 25% total unit plastics (by weight)
- Low halogen[3] material content
- Models can be configured as TAA compliant

[1] If configured with a Windows Embedded 32-bit operating system, memory above 3.2 GB may not be available due to operating system limitations

[2] Wireless access point and Internet access is required; availability of public wireless access points is limited

[3] This product is low halogen except for power cords, cables and peripherals; service parts obtained aftermarket may not be low halogen

Warranty

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

Technical specifications

OPERATING SYSTEMS

HP Smart Zero Core (Linux®-based)

HP ThinPro (Linux®-based)

Microsoft Windows Embedded Standard (WES) 7E

Microsoft Windows 10 IoT Enterprise

PROCESSOR

Model	CPU Frequency base/max	x86 Cores	GPU CUs	L2 Cache	GPU	Memory
AMD GX-215JJ	1.5/2.0 GHz	2	2	1 MB	AMD Radeon R2E	DDR4 1866

NOTE: CPU Maximum frequency is based on AMD Turbo Core Technology

GRAPHICS

Number of displays supported: 2

2 x DisplayPort™ (standard)

Video outputs: 1 x VGA port (optional)

NOTE: the optional VGA port does not increase the number of displays supported.

Displays **Content**	**≤2 x 1080p FHD (1920x1080) 60Hz**	**2 x 4K UHD (3840x2160) 30Hz**	**2 x 4K UHD (3840x2160) 30Hz**	**1 x 4K UHD (3840x2160) 60Hz**
Static screen (no video)	√	√	√	√
Play 1080p 30fps (or below) video	√	√		
Play 1080p 60fps video	√			
Play 4k @ 30fps video	√ (resolution is scaled down)			

MEMORY

Type: Single channel DDR4 SDRAM

Technical specifications

Data Transfer Rate:	up to 1,866 MT/s
Peak Transfer Rate:	14,944 MB/s
Number of slots:	1 x SODIMM
Capacities offered:	4, 8 and 16 GB
Reserved for graphics:	256 MB, 512 MB (default) or 1 GB

NOTE: WES 7E is a 32-bit operating system, and only recognizes up to 3.2 GB SDRAM

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

UEFI (Unified Extensible Firmware Interface)

- UEFI Specification Revision: 2.3.1
- Meets requirements for Common Criteria, an independent third-party certification of trustworthiness
- Meets requirements for FIPS 140-2, a standard for cryptographic integrity
- Designed to address NIST SP800-147 guidelines

TRUSTED PLATFORM MODULE (TPM)

- TPM 1.2 when configured with Microsoft WES 7E
- TPM 2.0 when configured with HP ThinPro / Smart Zero Core, Windows 10 IoT Enterprise or with no operating system

STORAGE

Type:	NAND flash memory; non-volatile
Number of sockets:	1 x M.2
Capacities offered:	8, 16, 32, 64, 128, 256 and 512 GB WES 7E requires a minimum of 16 GB Windows 10 IoT Enterprise requires a minimum of 32 GB

Solid-state flash-based memory modules are the primary operating system storage media for thin clients supporting highly virtualized operating environments. Thin clients display a hosted session from a data center through standard IP networks which minimizes the required size of local flash-based storage. In a traditional VDI environment, data and application files are stored securely in the remote data center and not on the local storage device.

The HP t530 Thin Client uses three types of flash memory: MLC (2-bits per cell), Ultra MLC (2-bits per cell, but only 1 is utilized) and TLC (3-bits per cell). Because the classic thin client use cases seldom require writing to flash memory storage, a relatively low capacity MLC flash memory module is typically used to provide the best cost and performance. However, when the use case calls for writing to the local flash memory storage module careful consideration should be given to the selection of the proper storage module. A larger capacity and/or the use of Ultra MLC technology could be required to adequately support the usage being planned or expected from the thin client.

Technical specifications

INPUT/OUTPUT

USB ports:	1 x USB-C 3.1 (front access) 1 x USB-A 3.1 (front access) 2 x USB-A 2.0 (rear access); 2 x typically used for keyboard and mouse 2 x USB-A 3.1 Gen1 (rear access)
Video outputs:	2 x DisplayPort™ 1.2 digital video ports (standard) 1 x VGA analog video port (optional) **NOTE**: the optional VGA port does not increase the number of supported displays
Other:	1 x RJ45 Gigabit Ethernet interface 1 x serial port (optional) 1 x 3.5mm headset jack (front access) 1 x coaxial connectors for external Wi-Fi antenna (optional)

NOTE: a single position at the back of the system is used for one of three optional I/O features. One of the following can be configured to any system:

- blank; no optional port
- VGA video port
- serial port
- external Wi-Fi antenna connector

AUDIO/VIDEO

Audio:	Internal amplified speaker system for basic audio playback 3.5 mm headset jack (front access) Audio CODECs include MP3, AAC stereo, HE AAC Includes hardware acceleration support
Video:	MPEG-4 part 2 (DivX, Xvid) MPEG-4 part 10 (H.264), 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

NOTE 1: Playback of 2160p videos is not supported

NOTE 2: Playback of multiple 1080p videos and stretching 1080p videos is supported as long as the resolution in the operating system is set to 2560 x 1600 or lower.

HARDWARE SECURITY

- Security lock support (cable lock sold separately)
- Trusted Platform Module (version 1.2 or 2.0 depending on the model's operating system)

NETWORKING

Wired networks:	Realtek Gigabit Ethernet (GbE) Wake on LAN PXE TCP/IP with DNS DHCP Secure Socket Tunneling Protocol (SSTP); supported with a Microsoft operating system

Technical specifications

Wireless networks:	Intel® Dual Band Wireless-AC 3168 with Bluetooth® Intel® Dual Band Wireless-AC 8265 with Bluetooth®

NOTE: Wireless access point and Internet access require. Availability of public wireless access point may be limited. Wireless features, performance and support may vary depending on environmental variables such as placement, settings and firmware of the access point. Contact your wireless vendor for support.

SOFTWARE SUPPORT

Host Environment	Protocol	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
Amazon WorkSpaces	Amazon WorkSpace Client/PCoIP			√
Microsoft Remote Desktop Services	Remote FX (RFX), RDP	√	√	√
Citrix®	ICA, HDX	√	√	√
VMware® Horizon™	RDP, PCoIP, Blast Extreme	√	√	√

Protocol Clients	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
Amazon WorkSpaces Client/PCoIP			√
Citrix Receiver™	√	√	√
Microsoft Remote Desktop Client		√	√
VMware® Horizon View™ Client	√	√	√
HP Remote Graphics Software (RGS)	add-on	√	√
HP TeemTalk Terminal Emulator	√	add-on	
Free RDP	√		

Browser Support	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
Mozilla Firefox	50.0.1		
Internet Explorer		11	11

Security	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
SmartCard	√	√	√
Logon Manager	√	√	√
Read-only operating system	√	√	√

802.1x	√	√	√
Operating system write filter		EWF, FBWF	UWF
Microsoft Firewall		√	√

Management Tools	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
HP Device Manager	√	√	√
HP ThinUpdate		√	√
HP Easy Tools	√	add-on	
HP Smart Zero Client Services	√		
Microsoft SCCM/EDM agent		√	√

Additional Components	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
HP Velocity	√	√	√
HP Easy Shell		√	√
HP Universal Print Driver		√	√
Windows Media Player		12	12
Microsoft Direct Access			√
Microsoft BranchCache			√
Microsoft AppLocker			√
Microsoft Sideloading			√
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.**			

Audio/Video CODEC	HP ThinPro HP Smart Zero Core	MS WES 7E	MS Win10 IoT
MP3	√	√	√
WMA Stereo	√	√	√
AAC stereo & HE AAC	√	√	√
Microsoft AC3 encoder		12	12
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	√		√

Technical specifications

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.**

WEIGHTS & DIMENSIONS

W x D x H (without stand) vertical orientation	35 x 200 x 200 mm (1.38 x 7.87 x 7.87 in.)
Volume	1.4 liter
System Weight (including stand)	962.8 g (2.12 lb.)
Shipping Weight	1919.7 g (4.23 lb.)

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

POWER SUPPLY

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

AGENCY COMPLIANCE

Accessibility:	Section 508 Accessibility. VPAT report available
Environmental Stewardship:	Worldwide (ENERGY STAR®, EPEAT, ROHS, ERP, TCO, MEPS, CECP, HP GSE, etc.)
Product Safety:	Worldwide (UL, CB, GS, CCC, etc.)
Electromagnetic Compliance (EMC):	Worldwide(FCC/CISPR/EN/VCCI/ICES/AS/NZS/CNS/KCC) “Class B” EMI regulations

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.

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®
- EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country.
- IT ECO declaration

Technical specifications

Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	7.42 W	7.48 W	7.47 W
Normal Operation (Long idle)	5.79 W	6.27 W	5.98 W
Sleep	0.78 W	0.78 W	0.75 W
Off	0.69 W	0.70 W	0.69 W

Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	25 BTU/hr	26 BTU/hr	26 BTU/hr
Normal Operation (Long idle)	20 BTU/hr	21 BTU/hr	21 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.

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 gold 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.)
- 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).

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)

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/reuse-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 HP Inc. 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.

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/ecolabels.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:
August 20; 2018	From v1 to v2	Changed	Software support for VMware Horizon