Overview

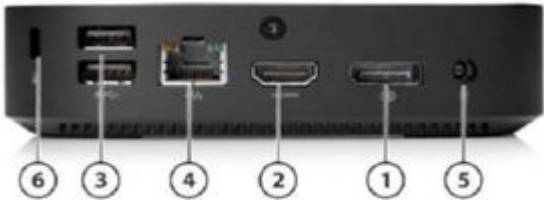## HP t430 Thin Client

Front View Image

Rear View Image

FRONT

1. Power button

2. Power memory activity indicator LED light

BOTTOM

VESA 100 mounting points located underneath the system's rubber foot pads

BACK

1. DisplayPort™ 1.2 digital video output

2. HDMI digital video output

3. 2 x USB-A 3.1 Gen 1 ports for keyboard/mouse

4. RJ45 Gigabit Ethernet interface

5. 19V DC power input

6. Cable lock slot

SIDE

1. 1 x USB-C™ port, supporting DisplayPort™ over USB-C™ and USB Power Delivery

2. USB-A 3.1 Gen 1 port for accessories

3. 1 x 3.55 mm headset jack

Overview

AT A GLANCE

- Intel® Celeron® Processor N4000; 1.1 - 2.6 GHz dual-core processor
- Intel® Celeron® Processor N4020; 1.1 - 2.8 GHz dual-core processor[3]
- Embedded DDR4 single-channel SDRAM system memory

  - HP ThinPro models configured with minimum of 2 GB

  - Windows models configured with 4 GB

- Embedded solid-state flash memory storage

  - HP ThinPro models configured with minimum of 16 GB

  - Windows models configured with 32 GB

- 1 x DisplayPort™, 1 x HDMI and 1 x DisplayPort™ over USB-C™ digital video outputs supporting up to Ultra High Definition (UHD)/4K (3840 x 2160) resolutions.
- Active thermal management technology monitors component operating temperatures, throttles SOC processor if appropriate, and prevents unit thermal shutdown
- Gigabit Ethernet (GbE) network connection supported via an integrated Realtek GbE NIC module and presented with an RJ45 connector on the rear I/O panel
- Optional Wi-Fi/Bluetooth® adapter including antennas integrated internally in the chassis[1].
- USB ports located on the back and side panels, including a USB-C™ 3.1 Gen 1 port that supports DisplayPort™ over USB-C™ and USB Power Delivery
- 3.5 mm headset audio port on side panel that will support a headset, headphones or an external speaker system
- Integrated VESA 100 mounting system; the four threaded holes are conveniently located under the unit's rubber foot pads
- TCG certified Trusted Platform Module (TPM) chipset on Windows models; 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[2] material content

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

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

[3] Windows configurations with N4020 are compatible with Win 10 IoT 64 Enterprise LTSC 2019

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 ThinPro, including HP Smart Zero Core

Microsoft Windows 10 IoT Enterprise

IGEL

PROCESSOR

Model	CPU Frequency base/max	x86 Cores	GPU EUs	Cache	GPU	Memory
Intel® Celeron® Processor N4000	1.1/2.6 GHz	2	12	4 MB	Intel® UHD Graphics 600	DDR4 2400
Intel® Celeron® Processor N4020	1.1/2.8 GHz	2	12	4 MB	Intel® UHD Graphics 600	DDR4 2400

NOTE 1: CPU Maximum frequency is based on Intel® Turbo Boost Technology

NOTE 2: Windows configurations with N4020 are compatible with Win 10 IoT 64 Enterprise LTSC 2019

GRAPHICS

Number of displays supported:

One or two displays.

NOTE: a maximum of two displays are supported.

Video outputs:

1 x HDMI port

1 x DisplayPort™

1 x DisplayPort™ over USB-C™

NOTE: dual displays are supported using the following video output combinations:

- HDMI + DisplayPort™
- HDMI + DisplayPort™ over USB-C™

Video Resolution Support Matrix

QuickSpecs

Technical specifications

Windows 10 IoT RS1	?2 x FHD 1920 x 1080 @ 60Hz	1 x UHD/4K 3840 x 2160 @ 60Hz	2 x UHD/4K 3840 x 2160 @ 30Hz
Static screen (no video)	✔	✔	✔
1080p 30fps (or below) video	✔	✔	✔
1080p 60fps video	✔	✔	✔
4k @ 30fps video	✔	✔	
HP ThinPro 6.2	?2 x FHD 1920 x 1080 @ 60Hz	1 x UHD/4K 3840 x 2160 @ 60Hz	2 x UHD/4K 3840 x 2160 @ 30Hz
Static screen (no video)	✔	✔	✔
1080p 30fps (or below) video	✔	✔	✔
1080p 60fps video			
4k @ 30fps video			

NOTES:

- 4K video playback is not supported over Virtual Desktop Infrastructure (VDI)
- Only 1 Citrix session can be launched

MEMORY

Type:	Single channel DDR4 SDRAM
Data Transfer Rate (speed):	up to 2,400 MT/s
Peak Transfer Rate (bandwith):	19,200 MB/s
Number of slots:	0 slots; memory is embedded
Memory Capacity ~~(Minimum)~~:	8~~2~~ GB on ThinPro models 8~~4~~ GB on Windows models
Reserved for graphics:	256 MB (default), 512 MB or 1 GB

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

Technical specifications

UEFI (Unified Extensible Firmware Interface)

- UEFI Specification Revision: 2.6
- 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)

- Trusted Computing Group (TCG) certified TPM 2.0 on Windows 10 IoT Enterprise models

NOTE: HP ThinPro models do not include a TPM

STORAGE

Type:	NAND flash memory; non-volatile
Number of sockets:	0 slots; flash storage is embedded
Storage Capacity (Minimum):	64~~16~~ GB on HP ThinPro models
	64~~32~~ GB on Windows models

INPUT/OUTPUT

USB ports:	1 x USB-C™ featuring DisplayPort™ over USB-C™ and USB Power Delivery
	3 x USB-A 3.1 Gen 1 ports; 2 x rear ports, 1 x side port
	1 x DisplayPort™ 1.2
Video outputs*:	1 x HDMI
	1 x DisplayPort™ over USB-C™
Other:	1 x RJ45 GbE interface
	1 x 3.5mm headset jack

NOTE: only 2 video outputs can be used simultaneously

Technical specifications

AUDIO/VIDEO

Audio:	3.5 mm headset jack supporting a headset, headphones or and external speaker
	Audio CODECs include MP3, AAC stereo, HE AAC
Video:	Includes hardware acceleration support
	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

HARDWARE SECURITY

- Security lock support (cable lock sold separately)
- Trusted Platform Module (TPM) on Windows models

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
Wireless networks:	Intel® Wireless-AC 9260 with Bluetooth®; M.2 module with integrated internal Wi-Fi antenna system

NOTE: Wireless access point and Internet access required. 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.

Technical specifications

SOFTWARE SUPPORT

Host Environment	Protocol	HP ThinPro HP Smart Zero Core	MS Win10 IoT
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 Win10 IoT
Citrix Receiver™	✔	✔
Microsoft Remote Desktop Client		✔
VMware® Horizon View™ Client	✔	✔
HP TeemTalk Terminal Emulator	✔	
Free RDP	✔	

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

Security		HP ThinPro HP Smart Zero Core	MS Win10 IoT
	SmartCard	✔	✔
	Logon Manager	✔	✔
	Read-only operating system	✔	✔
	802.1x	✔	✔
	Operating system write filter		HP Write Manager Microsoft Unified Write Filter
	Microsoft Firewall		✔

QuickSpecs

Technical specifications

Management Tools	HP ThinPro HP Smart Zero Core	MS Win10 IoT
HP Device Manager	✔	✔
HP ThinUpdate		✔
HP Easy Tools	✔	
HP Smart Zero Client Services	✔	
Microsoft SCCM/EDM agent		✔

Additional Components	HP ThinPro HP Smart Zero Core	MS Win10 IoT
HP Easy Shell		✔
Windows Media Player		12
Microsoft Direct Access		✔
Microsoft BranchCache		✔
Microsoft AppLocker		✔
Microsoft Sideloading		✔
NOTE: Software performance and support may vary depending on customer environment and backend.		

Audio/Video CODEC	HP ThinPro HP Smart Zero Core	MS Win10 IoT	
MP3	✔	✔	
WMA Stereo	✔	✔	
AAC stereo & HE AAC	✔	✔	
Microsoft AC3 encoder		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	✔	✔	
NOTE: Software performance and support may vary depending on customer environment and backend.			

Recommended TC config for Microsoft Teams media optimization

	TC CPU	VMware Teams Optimization	Citrix Teams Optimization
t430	1.10 GHz 2 Core	–	–
t530	1.50 GHz 2 Core	–	–
t540	1.50 GHz 2 Core	–	–

Technical specifications

t630	2.00 GHz 4 Core	✔	✔
t628	1.99 GHz 4 Core	–	✔
t638	2.00 GHz 4 Core	✔	✔
t640	2.40 GHz 2 Core	✔	✔
t730	2.70 GHz 4 Core	✔	✔
t740	3.25 GHz 4 Core	✔	✔
mt21	1.80 GHz 2 Core	–	✔
mt22	1.90 GHz 2 Core	–	✔
mt31	1.80 GHz 2 Core	–	✔
mt32	2.70 GHz 4 Core	✔	✔
mt45	2.10 GHz 4 Core	✔	✔
mt46	2.50 GHz 4 Core	✔	✔
- Not recommended, ✔ **recommended**			

WEIGHTS & DIMENSIONS

W x D x H	135 x 135 x 32 mm
Volume	0.58 liter
System Weight	0.74 kg (1.63 lb) (Weight will vary depending on configuration)
Shipping Weight	1270 g (2.80 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

Technical specifications

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:

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

Energy Consumption (in accordance with US ENERGY STAR® test method)	115 V ac, 60 Hz	230 V ac, 50 Hz	100 V ac, 50 Hz
Normal Operation (Short idle)	3.44 W	3.48 W	3.48 W
Normal Operation (Long idle)	2.67 W	2.64 W	2.71 W
Sleep	0.60 W	0.66 W	0.58 W
Off	0.58 W	0.66 W	0.58 W

Heat Dissipation*	115 V ac, 60 Hz	230 V ac, 50 Hz	100 V ac, 50 Hz
Normal Operation (Short idle)	12 BTU/hr	12 BTU/hr	12 BTU/hr
Normal Operation (Long idle)	9 BTU/hr	9 BTU/hr	9 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 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

Technical specifications

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 5.65 % post-consumer recycled plastic (by wt.)
- This product is 93.1 % recycle-able when properly disposed of at end of life.

Packaging Materials	External:	PAPER/Corrugated	402 g
	Internal:	PLASTIC/EPE	33 g
		PLASTIC/LDPE	39 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.

Technical specifications

- 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

QuickSpecs

Summary of Changes

Date of change:	Version History:	Type of change	Description of change:
June 18, 2018	From v1 to v2	Changed	Input/Output, Weights & Dimensions
July 24, 2018	From v2 to v3	Changed	Environmental section
August 20; 2018	From v3 to v4	Changed	Software support for VMware Horizon
September 10, 2018	From v4 to v5	Changed	Format
September 28, 2020	From v5 to v6	Added	Processor refresh
January 13, 2021	From v6 to v7	Changed	SOFTWARE SUPPORT section
February 3, 2021	From v7 to v8	Changed	WEIGHTS & DIMENSIONS section
September 27, 2021	From v8 to v9	Changed	MEMORY and STORAGE sections
April 3, 2023	From v9 to v10	Changed	OPERATING SYSTEMS section

title