

Business Personal Systems

# Technical University 2014

Technical Excellence for Strategic Innovation

# Thin Clients, The Cloud and The Future of End User Computing

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EE Value products category

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# Agenda

**Client Virtualization** -----

**Client Virtualization modern view** -----

**Product features** -----

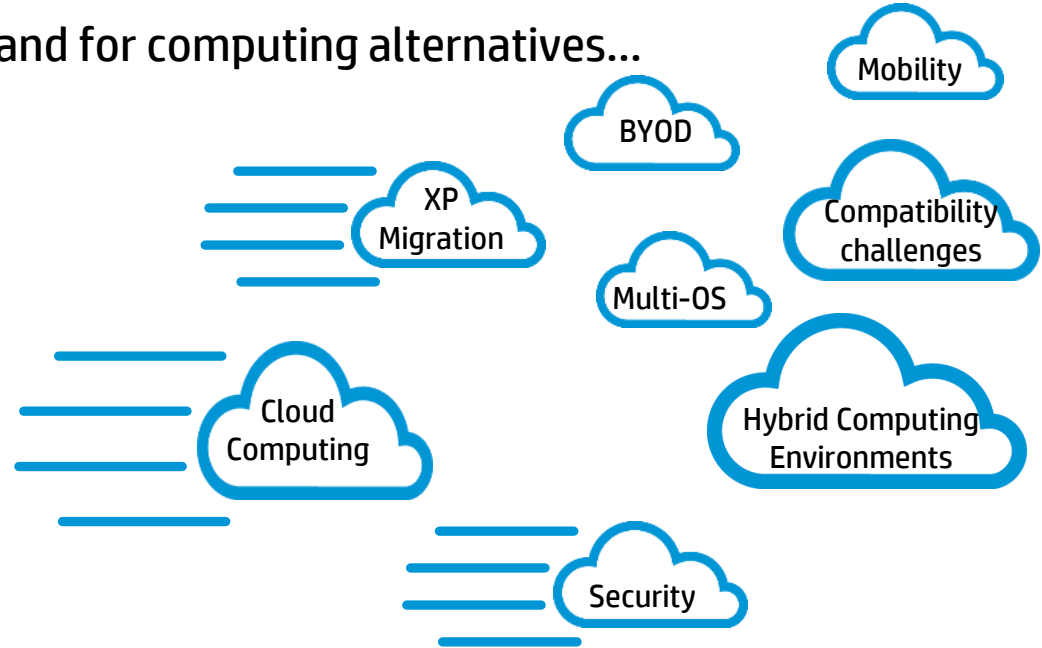
**Thin Client Hardware Products** -----

**NPI** -----



# Winds of Change...

The market continues to drive demand for computing alternatives...



While these new technologies/capabilities introduce a number of challenges, they also are enablers of a workplace transformation which can **increase workforce productivity and IT efficiency**.

HP and HP's Partners have the tools and expertise to help customers embrace this transformation.

# Future of End User Computing

## Decisions and Challenges

### Consumerization/BYOD

*“Can I use my iPad?”*

### Locations

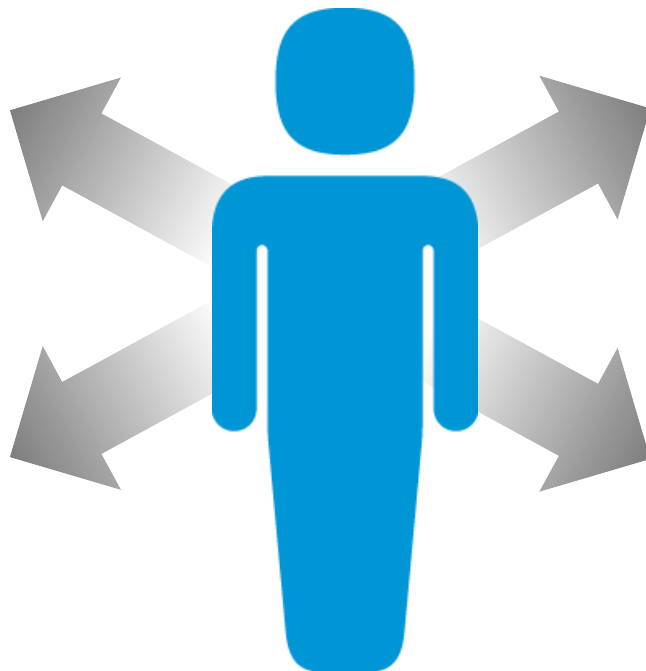
*“Can I access “my work stuff” from home?”*

### End Users vs. Customer

*“I need to deliver cloud experiences to end-users and customers?”*

### Different App Ecosystems

*“Why don’t all my apps work?”*



**Today’s CIO**

### Cloud Services

*Where do I host my Infrastructure?  
“Can I put everything in the cloud?”  
Pay “as-a-Service?”*

### Multiple Operating Systems

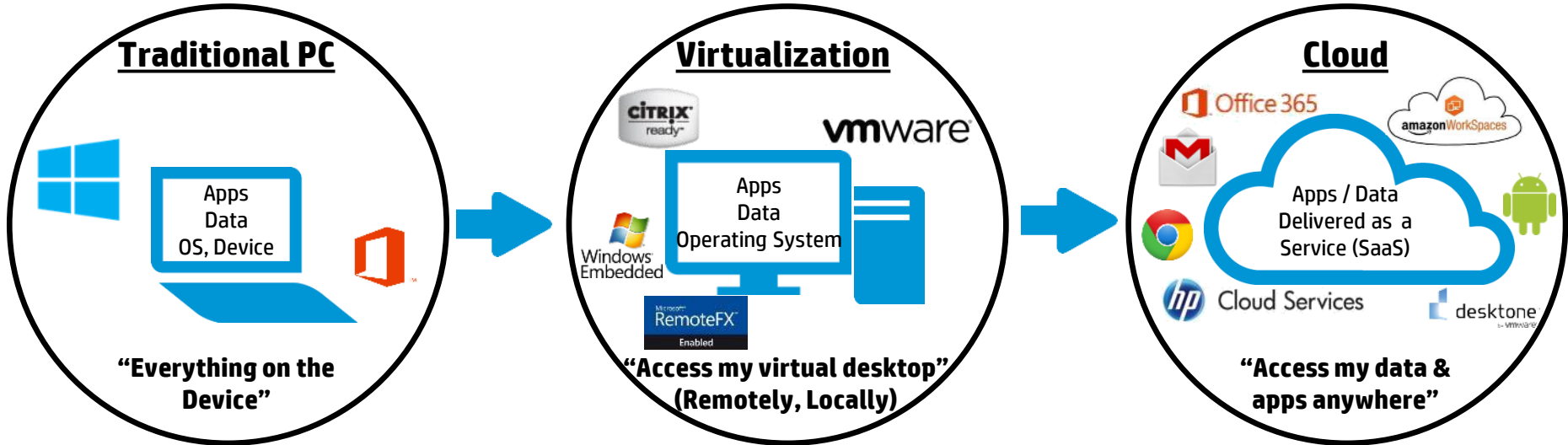
*“Do you support Chrome and Android devices?”*

### Standardization

*“How can I optimize user experience and lower Opex?”*

# The Move to Virtualization and Cloud

The continued evolution of computing



## First Wave – DT and Mobile PCs

- User tied to the device
- Secure data on the device

## Second Wave – Desktop Optimization

- Secure access to hosted applications & virtual desktops.
- Commercial devices, generally IT procured.
- Data stays secure in datacenter

## Third Wave – Mobility, Consumerization, Cloud

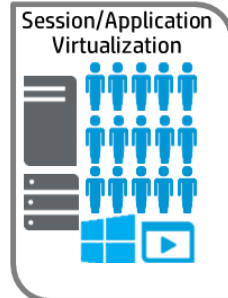
- Access & app delivery to both commercially and personally owned devices
- Secure data available to any device
- Remote interaction with the Cloud



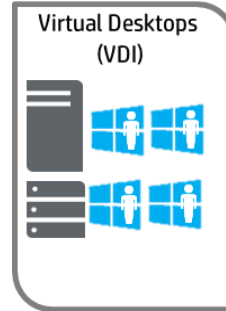
# Virtualization & Cloud Computing Models



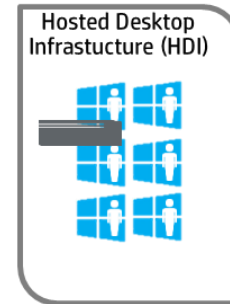
Web/Native Apps



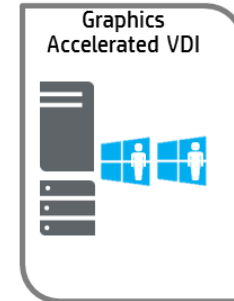
Win32/Legacy Apps



Virtual PCs



Dedicated PC



Workstation

Today

**On Premise**

Less "on Premise", More "as a Service" over time

**"as a Service"**

Future

**Win32/Legacy**

Less Win32 and Legacy, More "HTML5 over time"

**HTML5**

**Task Workers**

Basic data entry and usage with one or two applications

**Productivity users**

Standard office productivity tools like email and document creation

**Knowledge workers**

Multimedia applications with business graphics and multimedia performance essential for Web content, smooth graphics, and video

**Power users**

Simultaneous compute-intensive applications requiring graphics performance

**Workstation class users**

Highest CPU and accelerated graphics performance required.

*Increasing performance and price per seat*



# Vertical Solutions



## SMB

- Professional services
- Admin offices
- Branch offices



## Education

- Classrooms and labs
- Libraries
- Common areas



## Banking

- Call Centers
- Retail Banking
- Teller Terminals



## Enterprise

- Administrative
- Call Centers
- Knowledge Workers



## Public Sector

- Federal Government
- DoD



## HealthCare

- Hospitals
- Physician clinics
- Senior care facilities
- Pharmacies



## Public Use

- Libraries
- Coffee shops
- Internet cafés
- Retail Warehouses

## Why Virtualization?



Enhanced security



Easy manageability



High reliability



Faster service



Lower mgmt costs

WORKING IN SMALLER  
**SPACES**

60% ITDMs likely to buy convertibles for versatility<sup>5</sup>  
Convertible Notebook Features, Communispace  
Survey, October 2015



82% of ITDM's feel the technology employees  
carry is a reflection of our company<sup>2</sup>

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WITH MORE SECURITY  
**THREATS**

Only 38% think of data security when collaborating  
externally<sup>6</sup>  
HP Commercial Premium Research, 2015



60% of ITDMs state security is their #1  
concern<sup>3</sup>

& TRYING TO  
**CONNECT**

59% of millennials are dissatisfied with  
collaboration tech<sup>7</sup>  
HP Commercial Premium Research, 2015



49% spend more than 4 hours in meetings  
per week<sup>4</sup>





# The transition to cloud-first computing



More than **10%** growth in cloud IT infrastructure spending, surpassing non-cloud IT by 2020.<sup>1</sup>



The Global virtual desktop infrastructure (VDI) is expected to grow by **27%** from 2016 to 2023.<sup>2</sup>



Software as a Service growing **18%** by 2020<sup>3</sup>

Sources:

<sup>1</sup> IDC Worldwide Quarterly Cloud IT Infrastructure Tracker, April 2017. Percentage is CAGR.

<sup>2</sup> Global Virtual Desktop Infrastructure Market Insights, Opportunity, Analysis, Market Shares and Forecast 2017 – 2023, January 2018. Percentage is CAGR.

<sup>3</sup> Bain & Company The Changing Faces of the Cloud report.



# Pain points for IT



## High-touch maintenance

Costly maintenance and labor after deployment with traditional PCs



## Security

Data breaches are a growing threat and concern



## Meeting business needs

Providing the right devices and applications for the job

# How thin clients can help



## Simplified Management

Centralized process to make it easy to manage devices

- ✓ Software and applications stored on a server, not the client
- ✓ Reduces labor involved with device upgrade and app updates
- ✓ Efficient energy management



## Enhanced Security

Eliminates local data storage by storing it securely on a server

- ✓ Lean OS that protects from viruses and unauthorized updates
- ✓ Locked file system and greater control over access permissions



## Versatility

Delivers high-quality computing experiences for a variety of users

- ✓ Cloud computing increases flexibility, mobility, and security
- ✓ Compact, versatile form factor

# WHY HP THIN CLIENTS?



## VALUE

Cost effective vs standard PC

---

High performance

---

Easier to manage



## SECURE & MANAGEABLE

No data stored on end device

---

Protects against malware with read-only OS

---

Data privacy - no data shared with cloud providers

# HP thin clients have versatile uses

Desktop



Customer experiences



Digital signage



Shared device



Run cloud-based applications like Office 365 and Skype for Business

Supply self-service kiosks for check-in, product catalogs, or transactions

Deliver menus, flight times, or interactive digital signage

Provide quick, secure access to line of business applications for multiple users



# VERSATILE USES



Healthcare	Financial Services and Enterprise	Government	Retail
More Secure Access to patient data	Adopt Regulatory changes with ease	Enhanced Data Security	Multi-Store Single Point Management



# TAILORS TO YOUR ENVIRONMENT

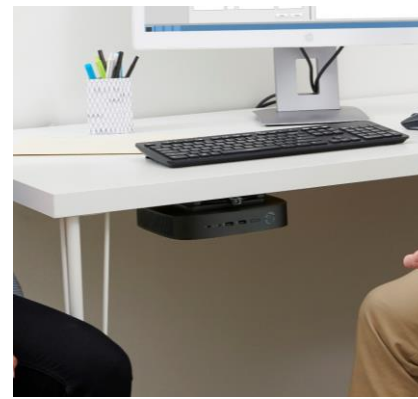
SET IT



STAND IT



MOUNT IT<sup>10</sup>





# THIN CLIENT MOUNTING



Display mounting  
HP B300 Mounting Bracket<sup>10</sup>



Comprehensive mounting  
HP Thin Client Mounting Bracket<sup>10</sup>



Workspace mounting  
HP Quick Release Adapter<sup>10</sup>







# MULTIPLE OS OPTIONS

## LINUX®-BASED HP THINPRO OS<sup>16</sup>

Limits virus threats

Locked file system that deters unauthorized updates

Built-in firewall

Customizable user permissions

Fast boot times & instinctive workflow

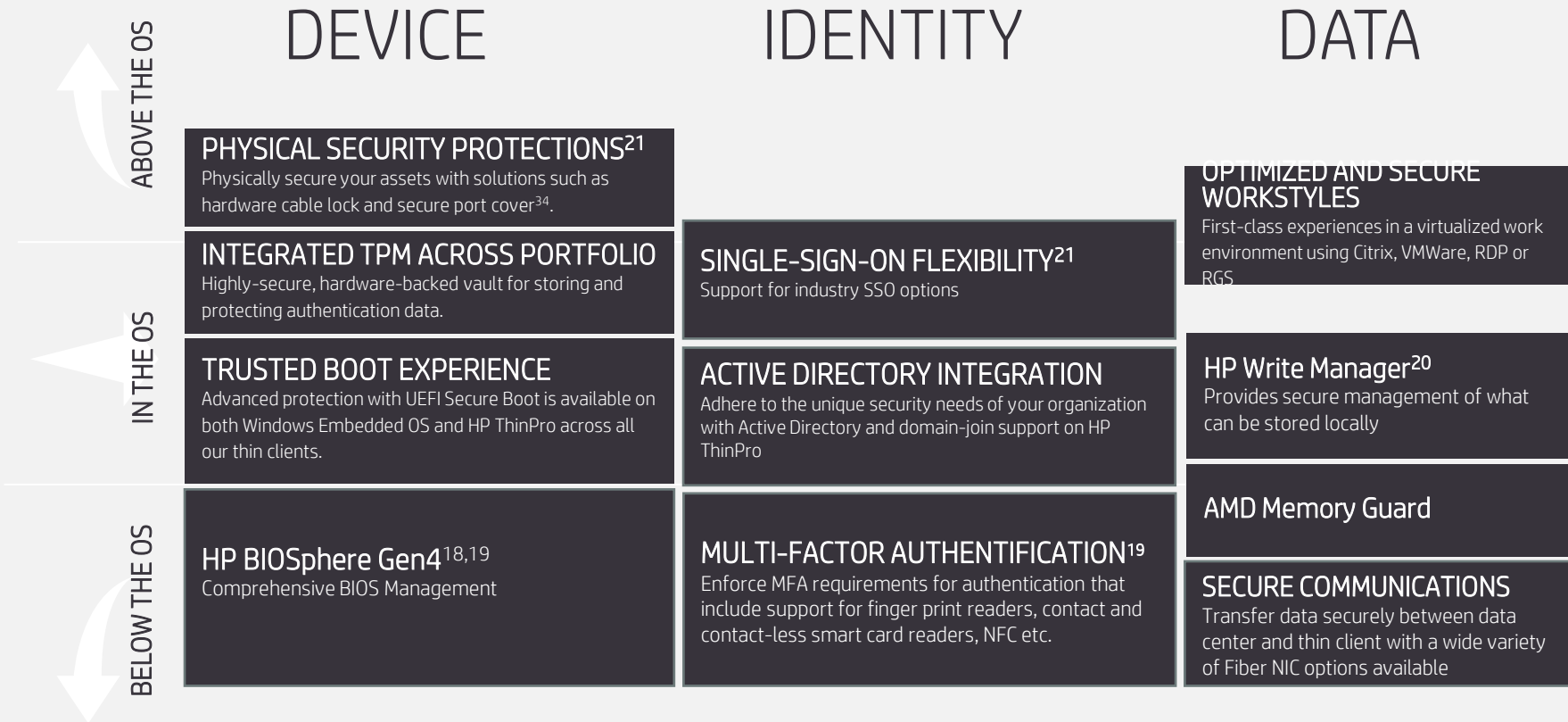
## WINDOWS 10 IOT ENTERPRISE<sup>8</sup>

Familiar development and management tools

Built-in machine learning capabilities

Built-in Security

# HP DESKTOP THIN CLIENT ENDPOINT SECURITY STACK



# AMD MEMORY GUARD

## BETTER SECURITY

2017 saw more than 5,200 breaches that exposed nearly 7.9 billion records<sup>23</sup>



### Real-time Memory Encryption

Use your thin client the way it was intended. Never turn the thin client off with memory encryption that starts protecting your device automatically and in real-time.



### Guards against cold boot attacks

For ITDM's who require the highest level of data security and whose business requires maximum productivity at all times, AMD MG is a built-in, full system memory encryption that protects critical data.



### Completely Transparent

AMD Memory Guard gives ITDMs the flexibility to send patches, updates, or re-image devices without compromising the memory encryption.

# HP WRITE MANAGER

## BETTER SECURITY

Zero-day attacks are four times more likely to compromise organizations<sup>22</sup>

Ponemon Institute 2018



### Built to last

Get the most out of your hardware investment. The HP Write Manager<sup>24</sup> secures and extends the life of your device by preventing unauthorized changes to the end user environment and OS and reducing overall write wear.



### Stateless operating system

HP Write Manager<sup>24</sup> ensures there is no data stored locally on the thin client by redirecting writes to a virtual drive in system memory that gets cleared when applications are closed or during a reboot of the thin client.



### Simple for IT

Ease the burden of IT admins with a single, simple write filter solution that works across Windows<sup>®</sup> operating systems with built-in optimization for Windows<sup>®</sup> security features required by today's enterprises.

# SIMPLIFY YOUR DEVICE MANAGEMENT

68% of ITDMs admit that they cannot keep up with employee demand for greater support and better mobile device connectivity<sup>24</sup>

Make it easy for your IT admins to manage thousands of HP Thin Clients from anywhere<sup>25</sup> **HP Device Manager** and **HP Thin Update**, included with HP Thin Clients **at no extra cost.**



# HP THIN UPDATE

71% of ITDMs state  
that managing  
endpoint security has  
become very difficult in  
the past 24 months<sup>24</sup>

Ponemon Institute



## ACCESS TO CATALOG OF ALL HP RELEASES

Use HP ThinUpdate<sup>20</sup> on your Windows-based PC or thin client to access and download the latest images and add-ons from HP.

## CUSTOMIZE AND DEPLOY OS IMAGES

Make changes to an HP Thin Client image and capture it as golden copy on USB drive using HP ThinUpdate<sup>20</sup>.

## QUICK USB DEPLOYMENT

Enable quick one-to-one bootable USB drive deployment to a small fleet of thin clients.

# HP DEVICE MANAGER

Highly scalable  
software for HP Thin  
Clients

78% of IT managers  
say supporting a multi-  
device, multi-OS  
environment with new  
technologies is  
challenging<sup>35</sup>.

IDC Transforming Device Deployment



## DEVICE MANAGEMENT SIMPLIFIED

Centralize management and monitoring with a simple, powerful admin tool that allows IT to remotely<sup>25</sup> configure, update and troubleshoot your HP Thin Clients, and even automate certain tasks

## FLEXIBLE AND INTUITIVE EXPERIENCE

Enable IT to keep track with a tool that sets up in minutes and has a drag and-drop interface that supports multiple displays and web-based console<sup>25</sup> for quick access or role-based task delegation.

## POWERFUL CONSOLE BUILT FOR SCALE

Operate across larger deployments with support for 64-bit applications and scalable memory, performance and reliability.



# What is HP Cloud Endpoint Manager?

HP Cloud Endpoint Manager is a hybrid-cloud-ready management solution that features continuous, real-time monitoring, alerts, notifications, and policy-driven management.

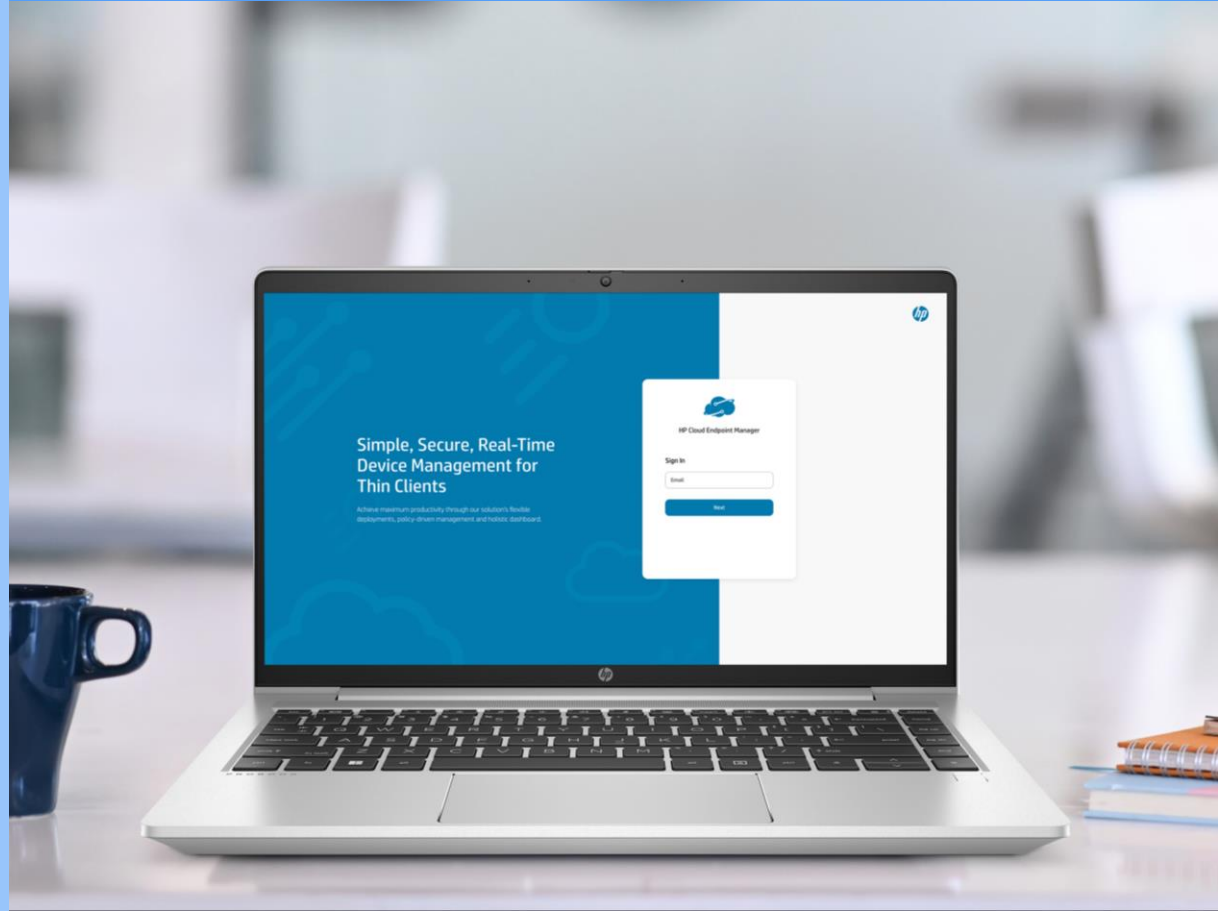


World's first thin client  
OEM device  
management software  
with real time device  
monitoring.<sup>20</sup>

*HP Cloud Endpoint Manager replaces  
HP Device Manager software.*



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# What's new

## HP Cloud Endpoint Manager<sup>1</sup>

A hybrid, cloud-ready management solution



### Cloud-ready design

- Install on cloud, or on-prem servers
- Optimization for data transfer over public networks
- Customizable bandwidth throttling<sup>9</sup>
- Quick scalability
- Share updates across managed devices (peer to peer updates)<sup>9</sup>
- Updates cached on the device before applied
- Supports horizontally scalable configurations for performance and disaster recovery<sup>9</sup>

### Comprehensive device management functions

- OS imaging
- SW delivery & updates
- BIOS management
- OS & SW patching
- Policies creation & deployment
- Task scheduling & monitoring

### Productivity capabilities

- Outbound and inbound APIs<sup>9</sup> to integrate with other IT tools
- Pre-built and ad-hoc reports that can be scheduled and delivered via email<sup>9</sup>

### Time-savers

- One-step device discovery & enrollment<sup>9</sup>
- Real-time data & analytics thru an always-connected device
- Policy-driven management: Compliance and alerting
- Dynamically retrieve any setting/configuration from the device
- Alerts & notifications to email<sup>9</sup>

### Enhanced security features

- All data over a single HTTPS port using mutual Transport Layer Security (TLS v1.3) authentication
- Built-in certificate management
- HP published security guidelines & policies<sup>9</sup>
- 2-factor authentication
- Active Directory integration<sup>9</sup>

### UX highlights

- Anytime, anywhere access using web browser
- Customizable dashboard with device health and critical alerts
- Integrated help and tool tips
- Unified experience between OS and the device management tool<sup>9</sup>
- Update in-place with zero downtime for maintenance



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HP Cloud Endpoint Manager

# HP Cloud Endpoint Manager<sup>1</sup>

World's first thin client OEM device management software with real-time device monitoring.<sup>20</sup>



Simple, intuitive  
browser-based  
UI



Hybrid ready: Can be installed  
locally or used in the cloud



Real-time device  
monitoring



Minimal downtime with  
non-intrusive updates



HP-provided  
templates and policies



## Easily scale as your fleet grows.

HP Cloud Endpoint Manager<sup>1</sup> can adapt to the changing needs of your organization while easily scaling to securely manage your fleet of devices.



## Manage with ease.

Keep up to date on deployments, device health, and critical alerts with HP Cloud Endpoint Manager's<sup>1</sup> simple, intuitive, and customizable dashboard.



## Let go of the reins.

Move away from tedious, time-intensive task-based management with the latest and greatest in policy-driven management with HP Cloud Endpoint Manager.<sup>1</sup>



## Never worry about your network.

HP Cloud Endpoint Manager<sup>1</sup> has built-in security and certificate management, and updates are cached before being applied to the device.



## Know your data is secure.

Ensure your management communications are secure with all traffic directed through a single HTTPS port using mutual Transport Layer Security (TLS) authentication.



# Specifications

## Software requirements

Supported server OS version(s)	Ubuntu 18.04 and 20.04 RHEL 7.7, 7.9, 8.2 and 8.3
Supported endpoint OS versions(s)	HP ThinPro 7.2 Service Pack 8, ThinPro 8.0 (or later) Windows 10 IoT LTSC 2016, 2019, 21H2 (or later)
Supported browsers	Google Chrome version 58 (or higher) Mozilla Firefox version 52.0 (or higher) Microsoft Edge Browser Version 90.0.818.62 (or higher)

## Server hardware requirements

Processor	Intel® Core™ i5 <sup>14</sup> (or higher), AMD Ryzen™ <sup>15</sup> (or higher) with a minimum of 8 physical CPU cores
Memory (RAM)	Minimum 32GB free memory available
Server storage	Minimum 200GB free storage available <sup>11</sup>

## Endpoint hardware requirements

ThinPro	ThinPro 7.2 SP8: 2GB RAM & 4GB SSD ThinPro 8.0: 4GB RAM & 8GB SSD <sup>12</sup>
Win10 IoT	Win 2016: 8GB RAM & 64GB SSD <sup>13</sup> Win 2019: 4GB RAM & 64GB SSD <sup>13</sup> Win 21H2: 8GB RAM & 64GB SSD <sup>13</sup>



# Device management, reimagined

HP Cloud Endpoint Manager is a modern software designed using cloud-native principles and open architecture.

HP Cloud Endpoint Manager <sup>1</sup>	HP Device Manager
Cloud-native	Client-Server
Horizontally & vertically scalable <sup>9</sup>	Vertically scalable
Linux-based	Windows-only
Real-time connectivity	Intermittent connectivity
Live data feed	Last-known state
Web-based application	GUI application
Open architecture (web-accessible APIs)	Closed architecture (no external APIs)
Continuous deployment	Packaged software
Single deployment model	Varied components and deployment strategies
Single port communication	Multi-port communication
Integrated contextual documentation <sup>9</sup>	External document library
Event-driven orientation	Task-driven orientation

## Level-up from HP Device Manager with HP Cloud Endpoint Manager

Leverage a multitude of advanced features and functionality, including:

- Customizable dashboard view with metrics
- Real-time device monitoring
- Common configuration
- Dynamic alerts to console
- HP-provided templates and policies
- 2FA
- Single port management
- Automated certificate management



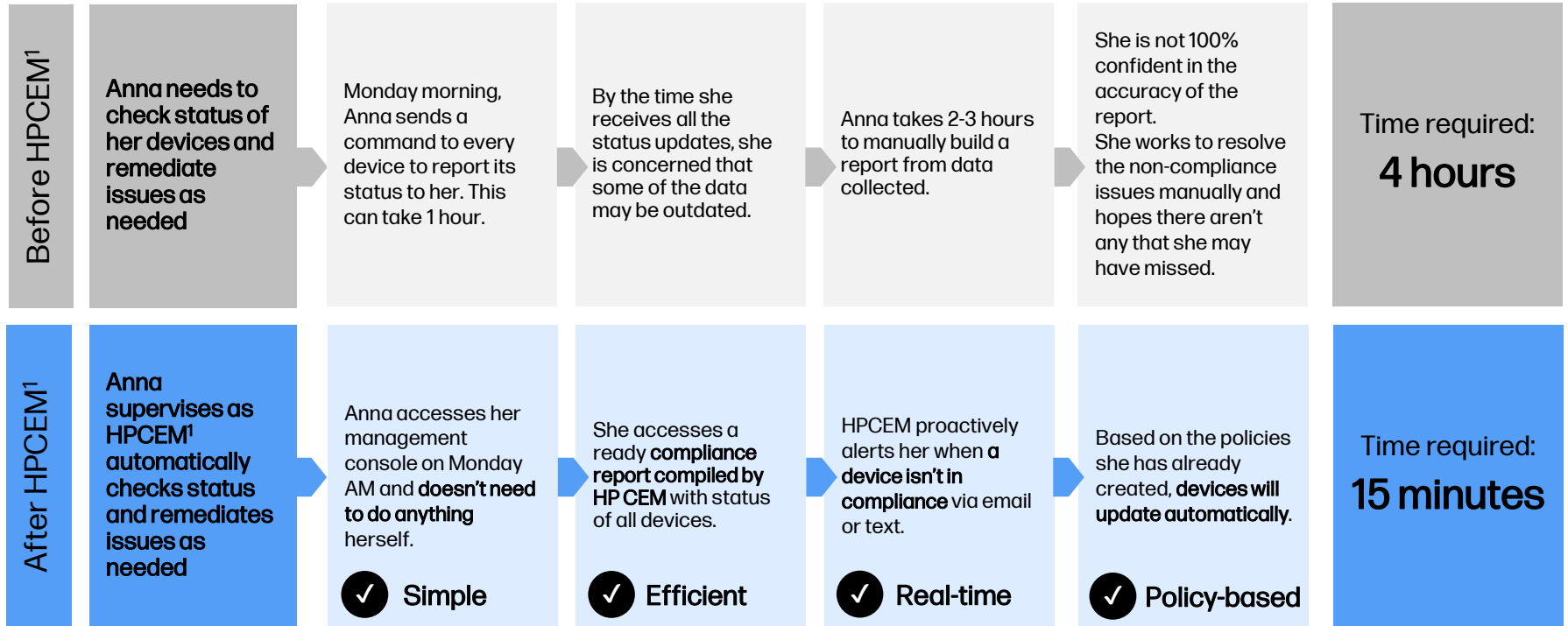
# Advanced features to fit customer needs

Cloud-based customers	On-prem customers
<p>Enhanced device management + advanced features that are essential for managing devices in the cloud:</p> <ul style="list-style-type: none"><li>• Supports private &amp; public cloud-based installations</li><li>• Cloud efficient network optimization (AWS, Azure and Google)<sup>9</sup></li><li>• Multi-tenant deployments<sup>9</sup></li><li>• High availability<sup>9</sup></li><li>• Load balancing<sup>9</sup></li><li>• Advanced metrics designed for cloud environment<sup>9</sup></li></ul>	<p>Enhanced device management + advanced features that make managing many devices easier than ever:</p> <ul style="list-style-type: none"><li>• Horizontal scaling<sup>9</sup></li><li>• Advanced policy management<sup>9</sup></li><li>• Alerting and reports via email<sup>9</sup></li><li>• User actions and approvals<sup>9</sup></li><li>• Metrics &amp; telemetry in real-time</li><li>• API integration with other IT tools (including pre-built flows &amp; certification by HP)<sup>9</sup></li></ul>
<p><b>Cloud-based customers</b> choose HPCEM<sup>1</sup> for the necessity of essential features for cloud manageability.</p>	<p><b>Large, on-prem customers</b> choose HPCEM<sup>1</sup> for the necessity of advanced features &amp; scalability. The features in the table are available to anyone with an active license.</p>



# A day in the life of an IT manager

Anna represents IT of large enterprise Thin Client customers



# Offering details

## HPCEM Standalone<sup>16</sup>

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Sustaining products &  
renewals

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1, 3, or 5 year license term:

- All features
- Full customer support

## Pre-Loaded on Select HP Thin Client Models

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12-month subscription to  
HPCEM included in select  
Thin Client models<sup>18</sup>:

- All features
- Full customer support

## HPCEM Evaluation Trial

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Via [HP Software Depot](#)

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Free, 180-day trial:

- All features
- Full customer support
- Limited to 10 devices

## Open Enrollment Promo

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Via [HP Software Depot](#)

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Enroll devices before end of  
this year and use HPCEM free  
through June 2023:

- All features
- Full customer support



# Open Enrollment Promo

Experience HPCEM<sup>1</sup> for free through June 2023



## Review requirements and install HPCEM

- Confirm devices in the field meet minimum OS and HW requirements, upgrade as necessary
- Get HPCEM license for Open Enrollment Promo from Software Depot
- Install HPCEM on your local server or in the cloud



## Enroll sustaining devices free of charge

- Enroll sustaining devices for free
- Open enrollment period ends December 31, 2022
- Register and manage all existing devices with HPCEM for free during this time



## Enjoy free use through June 2023

- Devices enrolled in HPCEM before December 31, 2022 **can continue using HPCEM at no charge through June 2023**
- Devices not enrolled before the cutoff date do not receive this additional runway



## Purchase HPCEM licenses

- If devices were enrolled prior to December 31, 2022, purchase licenses to take effect in July 2023
- If devices were not enrolled prior to December 31, 2022, purchase licenses beginning in January 2023<sup>16</sup>





# HP THIN CLIENT PORTFOLIO OVERVIEW

Desktop Thin Clients

Mobile Thin Clients

Multi-OS/multi-environment

PERFORMANCE

**t430**

Essential cloud computing



**t540**

Flexible cloud client for everyday needs



**t640**

Powerful and configurable to handle heavy workloads for cloud and virtual computing



**t740**

Ultimate performance, graphics and unique expansion capability with support for up to six UHD/4K displays



**Mt46 / mt645 G7**

High performance and collaboration



**Mt22 / mt440 G3**

Affordable and functional



HP ThinPro, featuring Smart Zero Core, and Windows embedded operating systems

Teradici-based 300 Series Zero Clients



# HP Pro mt440 G3 Mobile Thin Client



## Be productive

"I can get to work quickly, and Intel's® latest 12<sup>th</sup> Gen Celeron®<sup>8</sup> handles my VDI tasks and UC programs. I can stay connected to my company's cloud whether working in the office, at home, or on the road over 4G LTE<sup>9</sup>."

## Stay protected

"I can rest easy knowing my thin client has multiple layers of security with resilient firmware, a secure operating system, and additional protection provided by HP Cloud Endpoint Manager<sup>10</sup>."

## Travels Easy

"My HP Pro mt440 G3 is easy to transport around and fits neatly into my bag. I appreciate how it can handle the daily wear and tear caused by working from many places while still looking stylish."



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# Be productive



## Don't wait on your device.

The new PCIe NVMe SSD<sup>12</sup> quickly loads your desktop and apps so you can spend less time waiting and more time working.



## Get your work done.

Complete your tasks in a virtualized environment while collaborating across two 4k displays<sup>39</sup> with an efficient Intel<sup>®</sup> 12<sup>th</sup> Gen Celeron<sup>®</sup> processor<sup>8</sup>.



## More productivity & collaboration.

Connect to select displays (including conferencing displays<sup>19</sup>) and peripherals through a single USB-C<sup>®</sup> cable<sup>24</sup> with the new docking and display support.



# Multi-layered security



## Firmware you can trust.

Resilient firmware<sup>14</sup> is designed to meet NIST BIOS Protection & Integrity Guidelines<sup>49</sup>, has a TPM 2.0<sup>15</sup> module, and is continuously protected from corruption by HP Sure Start Gen7<sup>16</sup>.



## Protect your data.

In case your device is lost or stolen, the optional HP TamperLock<sup>17</sup> helps protect the device against most physical attacks like side channel and flash memory replacement attacks.



## Enhanced by software.

Both HP ThinPro 8.0 OS<sup>18</sup> and Win IoT help protect the system from unauthorized modification. IT can quickly respond to security bulletins and keep devices in compliance with HP Cloud Endpoint Manager<sup>10</sup>.





# Travels easy



## Easily fits in your bag.

Less than 2cm thick and weighing only 1.48kg<sup>20</sup>, the HP Pro mt440 G3 barely adds any bulk to your bag and is easy to carry.



## Designed for the road.

The durable design withstands daily wear and tear caused by taking your mobile thin client on the road. We put it through 120k hours of total testing<sup>21</sup> so you can have peace of mind.



## Stay connected.

Connect to your cloud from virtually anywhere with RJ-45, optional Wi-Fi 6<sup>13</sup>, and optional 4G LTE<sup>9</sup> modules, perfect for working on the road and having backup connectivity options.





HP Pro mt440 G3 Mobile Thin Client

# Additional product experiences





# Durable construction

Built to last

Undergoes  
**19**

MIL-STD 810H tests<sup>23</sup>

**120k**  
Hours

HP Total Test Process<sup>21</sup>

The real challenge of building thin, light, and powerful is to remember where this device will be used - in a mobile environment - a *moving* environment.

Quality can't be sacrificed for anything.



# What's new

## HP Pro mt440 G3 Mobile Thin Client



### Productivity

- Latest Intel® 12<sup>th</sup> Gen Celeron® Processor<sup>8</sup>
- Optional Wi-Fi 6<sup>13</sup> and 4G LTE<sup>9</sup> module
- Select HP Dock and Docking display support<sup>19,39</sup>
- Up to 256GB M.2 NVMe SSD<sup>12</sup>
- Up to 16GB DDR4 3200 RAM
- Long battery life
- Two battery options (42Whr or 51Whr)<sup>38</sup>
- Wakes quickly from standby

### Manageability & Security

- Self-healing BIOS<sup>14</sup> with Runtime Intrusion Detection and added firmware protection with HP SureStart Gen 7<sup>16</sup>
- HP ThinPro 8.0<sup>18</sup>
- Optional HP Tamper Lock<sup>17</sup>
- HP Cloud Endpoint Manager<sup>10</sup>

### Stylish, Durable & Reliable

- Narrow bezel and lighter weight
- 87% Screen to Body Ratio<sup>37</sup>
- Contains up to 75% PCR material, Ocean bound plastic<sup>25</sup>, EPEAT® Gold<sup>31</sup>, ENERGY STAR® 8.0 certified®





# HP Pro mt440 G3 Mobile Thin Client

Summer 2022

HP's mainstream mobile thin client for hybrid work with security, productivity, and connectivity features in a sleek, durable design.



Latest Intel® 12th Gen Celeron® processor<sup>8</sup>



Wi-Fi 6<sup>13</sup>  
WWAN LTE option<sup>9</sup>



HP Cloud Endpoint Manager<sup>10</sup>



HP Privacy Camera<sup>40</sup>



HP Sure Start Gen7<sup>16</sup>  
HP ThinPro 8.0 OS<sup>18</sup>



HP Fingerprint Sensor<sup>41</sup>



## Business-class cloud productivity.

Power through your multi-tasking day with the latest Intel® 12th Gen Celeron® processor<sup>8</sup> and WLAN or WWAN options. Connect to networks, displays, accessories, and more with a mix of modern and legacy ports.<sup>9,13,42</sup>



## Protect your data, device, and identity.

Rest easy with an HP mobile thin client that has multi-layered security to help keep your cloud computing experience safe with a self-healing BIOS<sup>14</sup> and optional HP Privacy Camera.<sup>40</sup>



## Built to be seen, built to last.

Get a device that looks sharp in any setting featuring a sturdy chassis built with aluminum materials that can withstand daily wear and tear and undergoes MIL-STD testing<sup>23</sup> for durability and dependability.



## Responsibly made.

The HP MT440 G3 Mobile Thin Client contains up to 5% ocean bound plastic<sup>25</sup>, 50% Recycled Aluminum, EPEAT® Gold<sup>31</sup> registered in US.



# Experiences walkaround



Weight  
3.26 lbs/1.48kg<sup>20</sup>



Dimensions  
323 x 221 x 19.9 mm



Supports legacy connection  
with RJ-45 port for LAN.

Quicker to service  
access device internals from the  
bottom with the easy-open D-cover.

For the road warriors  
Can choose between either  
a 42whr or 51whr<sup>38</sup> battery.

Be seen clearly  
with the 720p WFOV webcam.<sup>43</sup>

Be heard clearly  
With dual array microphones.

More screen space  
Narrow bezel w/ 87% STBR.

Expand productivity  
Multi-task more effectively by  
connecting up to two 4k displays.<sup>39</sup>

Work from almost anywhere  
Access the data and apps you need to  
work with the optional 4G LTE<sup>9</sup> module.



# Privacy & security walkaround

## Enforce compliance

Most security risks are due to out-of-date components. Keep devices updated, enforce policy compliance, and quickly respond to security bulletins with HP Cloud Endpoint Manager.<sup>10</sup>

## Resilient foundation

HP Sure Start Gen7<sup>16</sup> self-healing BIOS<sup>14</sup> & Secure Boot help protect your system's firmware.

## Protect against most physical attacks

Like side channel and TPM probes with the optional HP TamperLock.<sup>17</sup>



## Ensure privacy

Optional HP Privacy Camera has a shutter which can physically block your webcam.<sup>40</sup>

## Secure OS enhanced by HP

both Win 10 IoT Ent and the Linux-based HP ThinPro 8.0 OS<sup>18</sup>, protect the file system from unauthorized modification or writing.

## Quick and secure login

Optional fingerprint sensor<sup>41</sup> simplifies authenticating.

# Plenty of ports

## Sacrifice nothing in a slim design

1. Nano Security Lock Slot<sup>44</sup>  
(Lock sold separately)
2. Ethernet Port (RJ-45)
3. SuperSpeed USB Type-A  
5Gbps signaling rate port
4. Nano SIM Slot<sup>45</sup>  
(Select models)
5. Audio Combo Jack
6. HDMI 2.1  
(Cable not included)
7. SuperSpeed USB Type-A  
5Gbps signaling rate port
8. SuperSpeed USB Type-A  
5Gbps signaling rate port
9. SuperSpeed USB Type-C®  
10Gbps signaling rate port  
(USB Power Delivery,  
DisplayPort™ 2.1)
10. Power Connector

Left  
profile



Right  
profile



# HP mt22 Mobile Thin Client vs. HP Pro mt440 G3 Mobile Thin Client

## Gen-to-gen comparison

Component	HP mt22 Mobile Thin Client	HP Pro mt440 G3 Mobile Thin Client
Id/ Material	Clamshell, Ultra slim, Silver Aluminum	Ultra slim, Low-Weight Clamshell, Silver Aluminum
Dimension/Weight	324.2 mm X 237.7 mm X 17.95 MM 3.94 lbs, 1.8 KG <sup>20</sup>	321.9mm x 213.9mm x 19.95 3.26 lbs, 1.48kg <sup>20</sup>
Operating System	Win 10 IoT Ent 2019 LTSC, HP ThinPro 7.2, HP Smart Zero Core	Win 10 IoT Ent 2021 LTSC, HP ThinPro 8.0 <sup>18</sup> , HP Smart Zero Core <sup>18</sup>
Display Options	14" HD TN, FHD IPS, 220-250 nits AG, Narrow Border, touch option	14" display panel; 16:9 – HD 250n, FHD 250n, FHD 250n touch panel, narrow bezel <sup>50</sup>
Processors	Intel® 10th Gen Core Celeron® 5205U (CL) <sup>8</sup>	Intel® 12 <sup>th</sup> Gen Celeron® 7305 (ADL) <sup>8</sup>
Graphics	Intel® HD UMA Graphics	Intel® UHD Graphics
Storage	128 GB SSD <sup>12</sup> SATA	128 GB M.2 PCIe/NVMe, 256 GB M.2 PCIe/NVMe <sup>12</sup>
Memory	4G, 8GB DDR4 2400 <sup>43</sup>	8GB (2X4GB) / 16GB (2X8 GB) DDR4 3200 2x SODIMMs <sup>43</sup>
Connectivity	Intel (Jefferson Peak) 9560 ac 2x2 MU-MIMO vP160MHz+BT5WWI, Bluetooth and Bluetooth Low energy	WLAN 2ants 2x2 11AX/Wi-Fi 6 <sup>13</sup> RTL (CAVA), 2x2 11AX/Wi-Fi 6 <sup>13</sup> Intel® (Garfield Peak 2&4) + Bluetooth 5.2, WWAN 1 XMM 7560 R+ LTE-AP <sup>9</sup> , Bluetooth® and Bluetooth® Low energy
Audio	Integrated Microphone (Mono or Dual Array), 2 Integrated Stereo Speakers	Dual-array Mics, 2 Integrated Stereo Speakers
Camera	Integrated HD 720p DM Webcam <sup>43</sup>	Optional Integrated HD 720p Wide FOV DM Webcam <sup>43</sup>
Ports & Connectors	2 x USB 3.0, 1 x USB 2.0 (Power Port), 1 x USB Type-C 3.1 Gen 1 (DP+PD), RJ45, Combo Audio, HDMI 1.4b, Micro SD CR,	3 x USB-A 3.1 (1xcharging port, 1/side), 1 x USB-C® (up to 4K 60fps DisplayPort™ 1.2+PD), 1 x HDMI 2.1 (up to 4K 60fps), 1 opt. Ext. Nano SIM <sup>45</sup> , 1 Combo Headphone/Mic, RJ45, Select docking support
Battery & Adapters	45Whr <sup>38</sup> , LLB, HP Fast Charge (50/30) <sup>46</sup>	Choose either a barrel or USB-C® power adapter <sup>22</sup> , HP Fast Charge <sup>46</sup> support (30m/50%); Two battery options (42Whr or 51Whr <sup>49</sup> )
Security Hardware	Optional touch fingerprint sensor <sup>41</sup> , Hardware TPM 2.0 <sup>15</sup> , HP Sure Start Gen5 <sup>16</sup> , Privacy Camera <sup>40</sup> , Privacy Mic, HP BIOSphere <sup>14</sup>	Privacy Camera <sup>40</sup> , Privacy Mic, HP Sure Start Gen7 <sup>16</sup> , HP BIOSphere <sup>14</sup> ; Hardware TPM 2.0 <sup>15</sup> Optional touch fingerprint sensor <sup>41</sup> , Nano Lock Slot <sup>44</sup> , Optional HP Tamper Lock <sup>17</sup>
Manageability	HP Device Manager, HP Cloud Endpoint Manager <sup>10</sup>	HP Device Manager, HP Cloud Endpoint Manager <sup>10</sup>
Durability	Pass 19 MIL-STDG <sup>23</sup> including drop, Spill-resistant KB <sup>47</sup>	Pass 19 MIL-STDH <sup>23</sup> including drop, Spill-resistant KB <sup>47</sup>
Serviceability	Single serviceable panel; CSR memory; HDD, Battery accessible	Easy-open D-cover, Easy Open D service door; Certified service technicians can replace the battery, SSD, WLAN and WWAN modules



# HP Elite mt645 G7 Mobile Thin Client



## Performance on the go

Fit the power of a desktop into the sleeve your bag. Tackle demanding workloads from everywhere with the AMD Ryzen™ 5000 series processor<sup>8</sup>, blazing fast SSD<sup>12</sup>, and advanced connectivity including 4G LTE<sup>13</sup>.



## Refined security

Get peace-of-mind with multi-layered security designed for hybrid work. Resilient firmware, HP Tamper Lock<sup>19</sup>, secure OS, and endpoint management tools help protect the HP Elite mt645 G7 from the BIOS<sup>14</sup> to the browser.



## Beautifully designed

The HP Elite mt645 G7 travels easy while handling the daily wear and tear of hybrid work. Carry this striking and durable mobile thin client with confidence wherever work takes you.



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with Customers under HP CDA only.

# Performance on the go



## Don't wait on your device.

The new PCIe NVMe SSD<sup>23,40</sup> quickly loads your desktop and apps so you can spend less time waiting and more time working.



## Performance for today's VDI.

Power through demanding VDI workloads with an AMD Ryzen™ 5000 series processor and up to 16GB of DDR4 memory.<sup>16</sup> This high-performance combination drives up to two 4k displays<sup>58</sup> so you can multi-task effectively.



## Boost productivity & collaboration.

Connect to select displays (including conferencing displays) and peripherals through a single USB-C® cable<sup>55</sup> with the new docking and display support.





# Multi-layered security



## Firmware you can trust.

Resilient firmware<sup>14</sup> is designed to meet NIST BIOS Protection & Integrity Guidelines<sup>49</sup>, has a TPM 2.0<sup>10</sup> module, and is continuously protected from corruption by HP Sure Start Gen7<sup>9</sup>.



## Protect your sensitive data.

The HP Sure View integrated privacy screen<sup>43</sup> helps people work confidently from any location without fear of data on the screen being exposed to prying eyes. Also supports multiple forms of 2-factor authentication to help protect against unauthorized network access<sup>15</sup>.



## Enhanced by software.

Both HP ThinPro 8.0 OS<sup>18</sup> and Win IoT help protect the system from unauthorized modification. IT can quickly respond to security bulletins and keep devices in compliance with HP Cloud Endpoint Manager<sup>21</sup>.







# Beautifully designed



## Easily fits in your bag.

Less than 2cm thick and weighing only 1.38kg<sup>20</sup>, this striking aluminum mobile thin client fits the power of a desktop into the sleeve of your bag.



## Designed for the road.

The durable design withstands daily wear and tear caused by taking your mobile thin client on the road. We put it through 120k hours of total testing<sup>21</sup> so you can have peace of mind.



## Stay connected.

Connect to your cloud from virtually anywhere with RJ-45, optional Wi-Fi 6<sup>12</sup>, and optional 4G LTE<sup>13</sup> modules, perfect for working on the road and having backup connectivity options.





# Durable construction

Built to last

Undergoes  
**19**

MIL-STD 810H tests<sup>11</sup>

**120k**  
Hours

HP Total Test Process<sup>24</sup>

The real challenge of building thin, light, and powerful is to remember where this device will be used - in a mobile environment - a *moving* environment.

Quality can't be sacrificed for anything.



# Keep it clean

Your device can be wiped down repeatedly with common household cleaning wipes.<sup>26</sup>

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HP Elite mt645 G7 Mobile Thin Client

# Product features



# What's new



## HP Elite mt645 G7 Mobile Thin Client



### Desktop-like Performance

- New efficient and powerful AMD Ryzen™ 5000 series<sup>8</sup> Processors: AMD Ryzen™ 3 5425U<sup>8</sup> or AMD Ryzen™ 5 5625U<sup>8</sup>
- Do more with up to 16GB DDR4 (3200) memory<sup>16</sup>
- Quickly boot, resume, and load apps with the PCIe NVMe M.2 128/256GB SSD<sup>40</sup>
- Two battery options (42 Whr<sup>41</sup> or 51 Whr<sup>41</sup>)
- RJ-45 port for wired connections
- HD Webcam<sup>16</sup> now with Temporal Noise Reduction for better video quality
- Select dock and display support<sup>54</sup>
- Brighter 400nit display panel option

### Multi-layered Security

- Self-healing BIOS<sup>14</sup> - HP Sure Start Gen7<sup>9</sup>
- Protect against most physical attacks with the optional HP TamperLock<sup>19</sup>
- Both HP ThinPro 8.0<sup>20</sup> and Win 10 IoT Ent 2021 LTSC help protect against unauthorized modification of the file system
- HP Cloud Endpoint Manager<sup>21</sup> helps keep devices updated and compliant
- HP Sure View Reflect<sup>43</sup> with low blue light panel<sup>17</sup> enhances data privacy while reducing eye strain.

### Beautifully Designed

- Narrow bezel; 88% screen to body ratio<sup>42</sup>
- Lay the device flat for better in-person collaboration with the 180° hinge



# HP Elite mt645 G7 Mobile Thin Client

Recommended Mobile Thin Client from HP for cloud-first performance, security, and manageability



HP Cloud Endpoint Manager<sup>21</sup>



HP Sure Start Gen<sup>7</sup>  
HP ThinPro 8.0 OS<sup>20</sup>



HP Sure View Reflect  
Privacy Display<sup>43</sup>



Wi-Fi 6<sup>12</sup>  
WWAN LTE option<sup>13</sup>



Fingerprint Sensor<sup>15,16</sup>  
HP Smart Card reader<sup>15,16</sup>



HP Tamper Lock<sup>19</sup>



## Powerful mobile thin client

Effectively work in the office or remotely with advanced networking options and premium features. Get long-term productivity and tackle heavy workloads with the AMD Ryzen™ 5000 series processor<sup>8</sup> and varied connectivity options.



## Multi-layered security

Get peace-of-mind with premium features that help protect your device from the BIOS<sup>14</sup> to the browser. Designed for hybrid environments with firmware TPM 2.0 hardware-based encryption keys<sup>10</sup> and other versatile security options.



## Beautifully designed and durable mobile thin client

Durably designed with a refined aesthetic, carry this striking mobile thin client with confidence. The sturdy chassis can withstand daily wear and tear and undergoes MIL-STD testing.<sup>11</sup> Keep it clean with common household cleaning wipes.<sup>26</sup>



## Responsibly made

The HP Elite mt645 G7 Mobile Thin Client contains ocean bound plastics and EPEAT® Gold<sup>34</sup> registered in US.



# Experiences walkaround



**Weight**  
1.38kg/3.04lbs<sup>22</sup>



**Dimensions**  
321.9 x 213.9 x 19.95  
mm

**Experience more screen real estate**  
With a narrow bezel

**Be seen clearly**  
knowing others can see you clearly even in low light conditions using the 720p Wide Field View webcam with temporal noise reduction.<sup>16,25</sup>

**Be heard clearly**  
with dual array microphones

**Supports legacy connection**  
Has RJ-45 port for LAN<sup>45</sup>

**Quicker to service**  
Access device internals from the bottom with the easy-open panel

**For the road warriors**  
Can choose between either a 42whr or 51whr<sup>41</sup> battery

**Work from almost anywhere**  
Access the data and apps you need to work with the optional 4G LTE<sup>13</sup> module.

**Expand productivity**  
Multi-task more effectively by connecting up to two 4k displays<sup>23</sup>.



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# Privacy and security walkaround

## Protect against visual snooping

HP Sure View Reflect<sup>43</sup> protects your screen from prying eyes.

## HP Cloud Endpoint Manager<sup>21</sup>

Easily deploy, update, and manage your fleet with HP Cloud Endpoint Manager.<sup>21</sup>

## Two-factor authentication

Optional Smartcard reader<sup>15,16</sup>

## Secure foundation

HP Sure Start Gen7<sup>9</sup> self-healing BIOS<sup>14</sup> & Secure Boot runtime protection

## Protect against physical attacks

HP TamperLock<sup>19</sup> provides general configurable protection against unauthorized removal of the system cover



## Ensure privacy

HP Privacy Camera<sup>18</sup> camera shutter physically blocks your webcam<sup>57</sup>

## IR camera<sup>15,16</sup>

IR camera supports facial recognition

## Security-first operating system

Choose either Win 10 IoT enhanced by HP or the Linux-based HP ThinPro 8.0<sup>20</sup>.

## Two-factor authentication

Fingerprint sensor<sup>15</sup>



# Sacrifice nothing

Slim design with plenty of port space

1. Nano Security Lock Slot (Lock sold separately)<sup>46</sup>
2. Ethernet Port (RJ-45)
3. SuperSpeed USB Type A 5Gbps signaling rate port
4. Smartcard Reader (Optional)<sup>15</sup>



Left profile



Right profile

5. External SIM Card Slot (Optional)<sup>47</sup>
6. Audio Combo Jack
7. HDMI 2.1b Port (Cable not included)
8. SuperSpeed USB Type A 5Gbps signaling rate port
9. SuperSpeed USB Type A 5 Gbps signaling rate port
10. USB Type-C\* 10 Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)
11. Power Connector



# Home and Office Ecosystem

## HP Elite mt645 G7 Mobile Thin Client



HP USB-C  
120W G5 Dock<sup>55</sup>



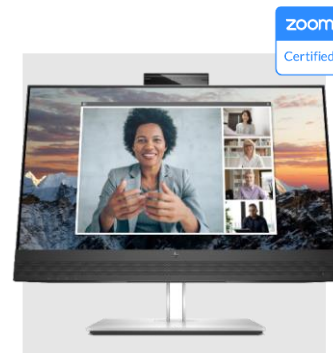
HP Thunderbolt  
G4 Dock<sup>52</sup>



HP Wireless  
Rechargeable 950MK  
Mouse/Keyboard



HP E24u G4 Display<sup>23,51</sup>  
HP E27u G4 Display<sup>23,51</sup>



HP E24m G4 Display<sup>23,51</sup>  
HP E27m G4 Display<sup>23,51</sup>

Conferencing Monitors  
for enhanced  
collaboration



# HP Elite mt645 G7 Mobile Thin Client use cases/ industries (Customer facing uses)



Mobile Worker/Office



Remote developers/Engineers



Financial Analyst



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# HP THIN CLIENT PORTFOLIO OVERVIEW

Desktop Thin Clients

Mobile Thin Clients

Multi-OS/multi-environment

PERFORMANCE

**t430**

Essential cloud computing



**t540**

Flexible cloud client for everyday needs



**t640**

Powerful and configurable to handle heavy workloads for cloud and virtual computing



**t740**

Ultimate performance, graphics and unique expansion capability with support for up to six UHD/4K displays



**Mt46 / mt645 G7**

High performance and collaboration



**Mt22 / mt440 G3**

Affordable and functional



HP ThinPro, featuring Smart Zero Core, and Windows embedded operating systems

Teradici-based 300 Series Zero Clients



# What is a Zero Client?



Uncompromised  
User Experience

No Local UI  
Fast and Responsive  
Boots Quickly into Host Environment



Zero Footprint

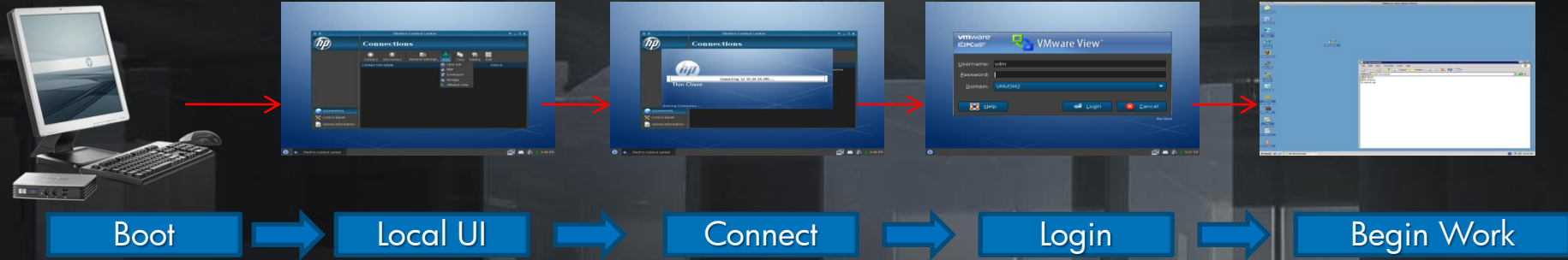
Low Power, Low Cost  
No Client-Side Administration  
Set & Forget Manageability

- Client is updated automatically (i.e. cell phone)

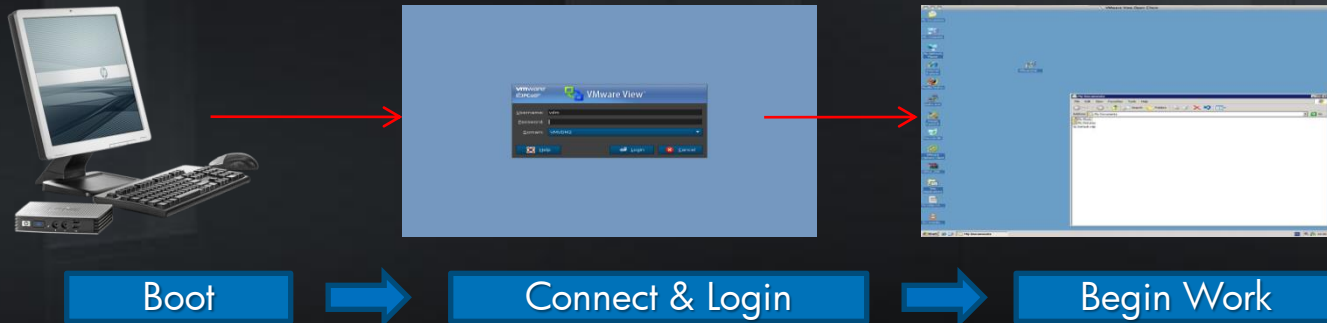


# Experience Comparison

## Traditional Thin Client – Booting into ISV Host



## Zero Client - Booting into ISV Host



# HP t430 THIN CLIENT



Versatile cloud-first device that's intuitive for IT admins and end users.

# HP t430 THIN CLIENT



## REFINED FROM THE INSIDE OUT

Everything from the user interface to the compact design and processing power delivers a modern computing experience.



## INSTANT CLOUD ACCESS<sup>90</sup>. EFFICIENT USABILITY

Increase everyday productivity and collaboration with the latest-generation Intel® Celeron® processor<sup>30</sup> with speeds up to 2.6 GHz<sup>3</sup>, DDR4 memory, solid-state storage, and support for a 4K display.



## ENGINEERED TO LAST

Rely on the durability of the HP t430 Thin Client to keep up with extended hours of use over a prolonged period—reducing downtime.



## HIGHLY SCALABLE SOFTWARE FOR HP THIN CLIENTS

Make it easy for your IT admins to remotely deploy, update, and manage thousands of HP Thin Clients from anywhere through a single console with the included HP Device Manager<sup>53</sup>.



Intel® Celeron® processor  
with speeds up to 2.6  
GHz<sup>3</sup>



Configurable  
input options



HP ThinPro<sup>63</sup>/Smart Zero Core  
Windows 10 IoT Enterprise<sup>62</sup>



Supports single  
or dual display



Intel® Wireless AC 802.11 Wi-Fi®  
and Bluetooth® 5 combo<sup>78</sup>





# HP t540 THIN CLIENT



Simple, secure virtual desktop solution.

# HP t540 THIN CLIENT

SIMPLE, SECURE VIRTUAL DESKTOP SOLUTION.



## ROBUST SECURITY.

Minimize security threats right from bootup with AMD Memory Guard and UEFI (BIOS) Secure Boot at the component level. Together with a certified Trusted Platform Module and a cable lock slot—keep your thin clients protected inside and out.



## INSTANT CLOUD ACCESS<sup>5</sup>. EFFICIENT USABILITY.

Increase everyday productivity and workforce collaboration with an AMD Ryzen™ System-on-Chip processor<sup>30</sup>, dual UHD/4K support, and optional Wi-Fi 6<sup>78</sup>.



## ENGINEERED TO LAST.

Rely on the durability of the HP t540 Thin Client to keep up with extended hours of use over a prolonged period—reducing downtime.



## HIGHLY SCALABLE SOFTWARE FOR HP THIN CLIENTS.

Make it easy for your IT admins to remotely deploy, update, and manage thousands of HP Thin Clients from anywhere through a single console with the included HP Device Manager<sup>53</sup>.



AMD Ryzen™ R1305G<sup>4</sup>; 1.5 GHz-2.8 GHz, 3400 CPU mark target



Configurable input options



HP ThinPro<sup>63</sup>/Smart Zero Core Windows 10 IoT Enterprise<sup>62</sup>



OOBE improvements



Wi-Fi 6<sup>78</sup>  
Internal and external Wi-Fi® options

# HP t640 THIN CLIENT



The world's first self-defending thin client<sup>79</sup>

# HP t640 THIN CLIENT

THE WORLD'S FIRST SELF-DEFENDING THIN CLIENT<sup>79</sup>



## REDEFINED SECURITY.

Encrypt data, protect firmware and lock down access with an inherently secure thin client that has AMD Memory Guard<sup>79</sup>, an embedded OS, and a NIST SP800-147 compliant UEFI.



## THE POWER TO GET THINGS DONE.

Empower your workforce with performance that conquers every task—an AMD Ryzen™ Embedded R1505G processor<sup>30</sup>, high-speed, responsive system memory and native support for up to three UHD/4K displays<sup>81</sup>



## MODERN FLEXIBILITY.

Select from up to 35 different subsystem options, including wired or wireless networking and legacy support.



## HIGHLY SCALABLE SOFTWARE FOR HP THIN CLIENTS.

Make it easy for your IT admins to remotely deploy, update, and manage thousands of HP Thin Clients from anywhere through a single console with the included HP Device Manager<sup>53</sup>.



Power Packed Processor  
Introducing the AMD Ryzen™  
R1505G processor<sup>30</sup>



Seamless ID across portfolio  
Every desktop thin client now  
features a sleek design in black



HP ThinPro<sup>63</sup>/Smart Zero Core  
Windows 10 IoT Enterprise<sup>62</sup>



One Cable Docking  
USB-C™ data +  
Power + Video<sup>96</sup>



Trusted Platform  
Module  
Integrated across all  
thin clients



# HP t740 THIN CLIENT



Simple, secure virtual desktop solution.



# HP t740 THIN CLIENT

THE WORLD'S MOST POWERFUL DESKTOP THIN CLIENT<sup>82</sup>



## ROBUST SECURITY.

Encrypt data, protect firmware, and lock down access with an inherently secure thin client that has AMD TSME, an embedded OS, and a NIST SP800-193 component.



## INSTANT CLOUD ACCESS<sup>5</sup>. EFFICIENT USABILITY.

Blaze through demanding workloads with the ultra-powerful AMD Ryzen™ Embedded V1756B processor<sup>30</sup> and fast system memory. Render content seamlessly with support for up to six UHD/4K displays.<sup>83</sup>



## BUILT TO SPEC, BUILT FOR YOU.

Get a thin client optimized for your unique business needs with a configurable PCIe slot that supports advanced graphics, multiple displays, alternative networking, and optional ports



## HIGHLY SCALABLE SOFTWARE FOR HP THIN CLIENTS.

Make it easy for your IT admins to remotely deploy, update, and manage thousands of HP Thin Clients from anywhere through a single console with the included HP Device Manager<sup>53</sup>.



AMD Ryzen Embedded V1756B processor<sup>94</sup>



PCI Expansion Slot- support advanced graphics & multiple displays



HP ThinPro<sup>63</sup>/Smart Zero Core Windows 10 IoT Enterprise<sup>62</sup>



AMD Radeon E9173 PCIe graphics card<sup>44</sup>



DDR4 dual-channel SDRAM system memory; up to 3200 MT/s transfer rate; two SODIMM slots

# DURABILITY & RELIABILITY

## 120K HOURS OF TESTING on HP t640 Thin Client & HP t740 Thin Client

The HP Total Test Process<sup>27</sup> helps drive superior quality & reliability in a wide range of applications & operating environments.

## HP t640 & t740 PASSED 13 MIL-STD 810 TESTS<sup>28</sup> FOR DURABILITY

This standard, created specifically for the U.S. Department of Defense (DoD), outlines a broad range of tests that can be tailored to measure the reliability of specific pieces of equipment.



# HP THIN PRO CONVERTER <sup>53,88</sup>

## WHAT THIS DOES FOR YOU

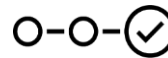
- Simplification of mixed device environments
- Mass fleet conversion
- Device lifecycle extension



Instant delivery  
through  
download



Mass  
Deployment



Simple set up



Intuitive  
interface



Secure, remote  
access



# Thin Clients

Current 2022 portfolio



## DESKTOP THIN CLIENTS

## MOBILE THIN CLIENTS

HP ThinPro

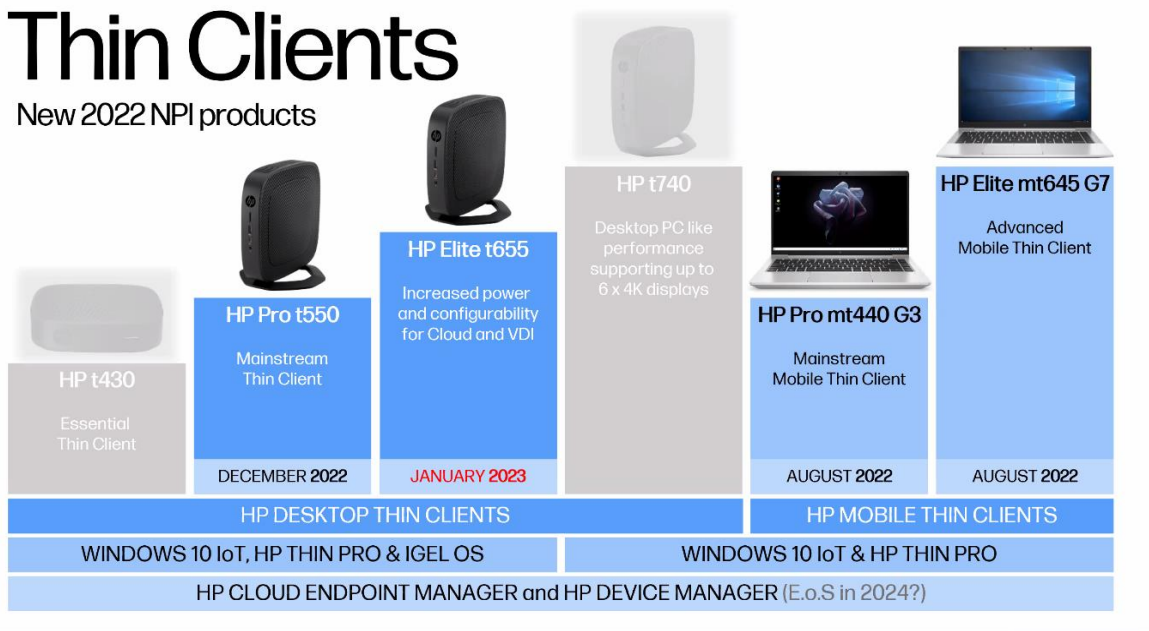
HP ThinPro, Windows Embedded OS

HP Device Manager 5.0



# Thin Clients

New 2022 NPI products



## DESKTOP THIN CLIENTS

## MOBILE THIN CLIENTS

HP ThinPro

HP ThinPro, Windows Embedded OS

HP Cloud Endpoint Manager,<sup>21</sup> HP Device Manager 5.0





THANK YOU