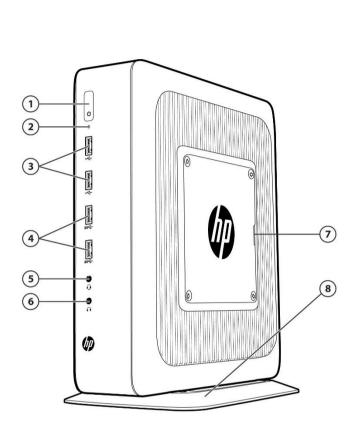
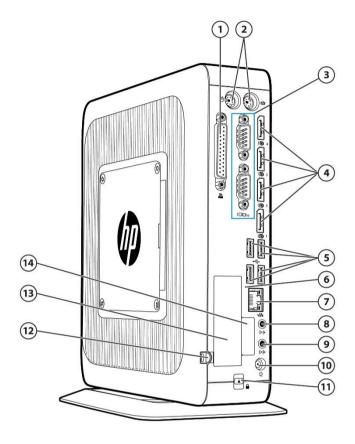
## Overview

# **HP t730 Thin Client**





#### **FRONT**

- 1. Power button (with integrated power indicator light)
- 2. Flash memory activity indicator light
- 3. Hi-Speed USB 2.0 ports (2)
- 4. SuperSpeed USB 3.0 ports (2)
- 5. 3.5 mm headset port
- 6. 3.5 mm headphone/ microphone port
- 7. Agency label pull-out tab (on side panel)
- 8 System stand

## **BACK**

- 1. Parallel port
- 2. PS/2 ports for keyboard and mouse
- 3. Serial ports (2)
- 4. DisplayPort 1.2 digital video outputs (4)
- 5. Hi-Speed USB 2.0 ports (4)
- 6. SuperSpeed USB 3.0 port (1) secured inside
- 7. Gigabit Ethernet RJ45 connector
- 8. Audio line in port
- 9. Audio line out port
- 10. +19V DC power input
- 11. Cable lock slot
- 12. Retractable power cord retention hook
- 13. PCI Express (low profile) expansion slot
- 14. Fiber Optic NIC expansion slot



## **Overview**

#### **AT A GLANCE**

- AMD R-Series RX-427BB 2.7 GHz 3.6 GHz quad-core APU with a Radeon HD 9000 based graphics core
- DDR3L SDRAM dual-channel system memory; two SODIMM slots; up to 16 GB supported<sup>1</sup>
- 4 x DisplayPort 1.2 digital video outputs supporting up to 4096 x 2160 resolutions
- Optional AMD FirePro W2100 discrete graphics card installed in PCI Express expansion slot providing an additional 2 x
   DisplayPort 1.2 digital video outputs for a system total of six outputs
- Solid-state NAND flash memory storage; M.2 form factor modules
- Active thermal management technology monitors component operating temperatures, throttles SOC operation if appropriate, and prevents unit thermal shutdown
- Ethernet network connection supported via an integrated Realtek Gigabit Ethernet (GbE) NIC module through an RJ45 port on the rear panel
- Optional Allied Telesis Fiber Optic NICs (Fast Ethernet or Gigabit) as well as optional Wi-Fi adapters including antennas integrated internally in the chassis.

NOTE: Fiber optic and Wi-Fi NIC options cannot be supported together<sup>2</sup>

- 2 x SuperSpeed USB 3.0 and 2 x Hi-Speed USB 2.0 on front, 4 x Hi-Speed USB 2.0 on rear and 1 x SuperSpeed USB 3.0 inside the chassis.
- Legacy ports include PS/2 keyboard and mouse, 2 x serial ports and 1 x parallel port
- Integrated PC speaker for basic audio playback; 3.5 mm audio ports on front and rear supporting headphones, microphones and external speaker systems
- Security features include a TCG certified Trusted Platform Module (TPM) 1.2 chipset, BIOS designed to address NIST SP 800-147 guidelines, cable lock slot, and power cord retention clip to prevent accidental disconnects; 1 x internal SuperSpeed USB 3.0 ports for securing USB flash drives inside the chassis
- Low profile PCI Express x8 (physical x16) expansion slot supports a variety of optional sub-systems including discrete graphics and I/O adapter cards
- ENERGY STAR® certified and EPEAT® Gold registered in the United States (except for some models configured with discrete graphics or Fiber Optic NIC networking options). 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<sup>3</sup> material content
- All models TAA compliant (in North America & EMEA) TAA models available in APJ by request

<sup>1</sup>With a Windows Embedded 32-bit operating system, memory above 3.2 GB may not be available due to operating system limitations

<sup>2</sup>Wireless access point and Internet access is required; availability of public wireless access points is limited

<sup>3</sup>This product is low halogen except for power cords, cables and peripherals, as well as the optional Fiber Optic NIC module; service parts obtained aftermarket may not be low halogen.



### **Overview**

#### HP ThinPro / Smart Zero Core operating system:

- HP ThinPro and HP Smart Zero Core are HP's purpose-built thin client operating systems based on Linux®
- HP ThinPro offers an easy-to-use, easy-to-configure, locked-down interface -- HP Connection Manager -- that allows administrators to quickly create server connections for end users.
- HP Smart Zero Clients using Smart Zero Client Core boot directly into a user log-in on the server or portal for which they are
  configured. No local thin client user interface means the end-user can get to work without special training on the access
  device. The Smart Zero Core technology reduces the administrative burden by enabling the IT administrator to perform the
  configuration settings on the server and the settings will be automatically applied to HP thin clients plugged in to the
  network.
- ICA and RDP support for accessing Citrix® and Windows® resources
- VMware® Horizon View™ PCoIP support for accessing VMware® Horizon View™ sessions
- VDI broker support includes VMware™ Horizon View™, Citrix® XenDesktop® (with CDA mode utility),
- Multimedia and USB redirection support
  - Citrix® HDX MediaStream (multimedia redirection)
  - Citrix® HDX Plug-n-Play (USB redirection)
- Improved end user experience with HP Velocity
  - Enables IT managers to monitor network activity and optimize end-user experience
  - o Intelligently reduces network retransmissions due to packet loss, providing a better user experience
  - o Built in monitors enable remote debugging and troubleshooting.
  - Available only on HP thin clients.
  - o For details visit: http://www.hp.com/go/velocity

#### Windows® Embedded Standard 7P:

- Internet Explorer 11 for genuine browsing and Web-application interfaces
- A 64-bit operating system for improved performance and support for larger memory installations
- Excellent rich multimedia experience and enhanced USB device support in VDI environments
- Latest protocol support from Citrix® On-Line Plug in (ICA) 4.1, RDP 8.1 w/RemoteFX, and VMware® Horizon Client 2.3.3
- Enhanced Write Filter and File-Based Write Filter provide complete flexibility to protect the entire Flash disk, or configure areas of the disk for persistent access by local applications
- Microsoft Firewall for enhanced data security
- Support 802.1x LAN-based authentication for greater security
- HP Universal Print Driver provides instant access to a range of HP print devices without downloading separate
- Improved end user experience with HP Velocity
  - Enables IT managers to monitor network activity and optimize end-user experience
  - Intelligently reduces network retransmissions due to packet loss, providing a better user experience
  - o Built in monitors enable remote debugging and troubleshooting.
  - Available only on HP thin clients.
  - For details visit: http://www.hp.com/go/velocity



## **Overview**

#### Windows® 10 IoT Enterprise for Thin Clients:

- The newest Microsoft embedded software based on Windows® 10
- A 64-bit operating system for improved performance and support for larger memory installations
- Smooth, immersive experiences with technologies like advanced Multi Touch and Windows® 10 applications
- The latest RDP8.1 and Remote FX client software
- Latest Internet Explorer 11 for genuine browsing, HTML 5 support and Web-application interfaces
- Latest protocol support from Citrix®, VMware® and RDP
- · Excellent rich multimedia experience and enhanced USB device support in VDI environments
- Improved end-user experience with HP Velocity
  - o Enables IT managers to monitor network activity and optimize end-user experience
  - o Intelligently reduces network retransmissions due to packet loss, providing a better user experience
  - o Built in monitors enable remote debugging and troubleshooting.
  - Available only on HP thin clients.
  - For details visit: http://www.hp.com/go/velocity
- All Windows® 10 IoT Enterprise devices must be activated. Users have the option via Internet connection, telephone, or indirectly through a proxy for large deployments.

## 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 <a href="http://www.hp.com/go/cpc">http://www.hp.com/go/cpc</a>.



# Technical specifications

### **OPERATING SYSTEMS**

HP Smart Zero Core HP ThinPro Windows® Embedded Standard 7P Windows® 10 IoT Enterprise for Thin Clients

#### **PROCESSOR**

Model	CPU Frequency Max/Base	Cores	GPU CUs	TDP	L2 Cache	GPU Max/Base	Memory
AMD RX-427BB	3.6/2.7 GHz	4	8	35W	4 MB	686/600 MHz	DDR3

### **GRAPHICS**

AMD 2<sup>nd</sup> Generation Embedded R-Series APU delivers graphics performance and power efficiency designed to provide ultraimmersive HD multimedia experiences and parallel processing compute performance with a new graphics core based on the AMD Radeon™ HD 9000 platform.

Native support for up to four (4) displays @ 4096 x 2160 resolution. System provides four (4) DisplayPort 1.2 video output ports at the back of the unit.

#### AMD FirePro™ W2100 2 GB Professional Graphics (optional discrete graphics solution)

#### Introduction

The AMD FirePro W2100 graphics board utilizes state-of-the-art professional GPU technologies to deliver outstanding professional 3D performance in a cost effective low profile package.

#### Performance and Features

- AMD Graphics Core Next (GCN) architecture designed to effortlessly balance GPU compute and 3D workloads efficiently
- Optimized and certified for leading workstation ISV applications. The AMD FirePro™ professional graphics family is certified on more than 100 different applications for reliable performance.
- AMD PowerTune and AMD ZeroCore Power technologies that allows for state-of-the-art dynamic power management of the GPU
- Two (2) native display DisplayPort 1.2 outputs
- PCI Express<sup>®</sup> 3.0 compliant

Technical	Spec	rifica	tions
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Form Factor	Low profile, half length
Graphics Controller	AMD FirePro W2100 professional graphics based on Oland GPU.
	GPU: 320 Stream processors organized into 5 Compute Units
	GPU Frequency: 630 Mhz
	Power: 26W
	Cooling: Active
Bus Type	PCI Express x8, Generation 3.0
Memory	2 GB DDR3
	Bandwidth up to 28.8 GB/s
	Width: 128 bit
Connectors	2 x DisplayPort 1.2



# Technical specifications

	No video cables are provided. Several aftermarket kits are available (see Options and Accessories section at the end of this document).
Maximum Resolution	DisplayPort 1.2: up to 4096 x 2160 x 24 bpp @ 60 Hz  Dual Link DVI-I: up to 2560 x 1600 x 32 bpp @ 60 Hz (requires DP to DL DVI-I adapter)  Single Link DVI-I: up to 1920 x 1200 x 32 bpp @ 60 Hz (requires DP to SL DVI-I adapter)  VGA: up to 1920 x 1200 x 32 bpp @ 60 Hz (requires DP to VGA adapter)
Image Quality Features	Advanced support for 8-bit, 10-bit and 16-bit per RGB color component. High bandwidth scaler for high quality up and down scaling.
Display Output	Maximum of 2 displays supported
Shading Architecture	Shader Model 5.0
Supported Graphics APIs	OpenCL™ 1.2, DirectX® 11.2/12, OpenGL 4.4 OpenGL 4.4 support with driver release 14.301.xxx OpenCL 1.2 conformance expected with drive release 14.301.xxx

### **MEMORY**

Туре:	Dual Channel DDR3L SDRAM
Data Transfer Rate:	Up to 1,600 MT/s
Peak Transfer Rate:	12,800 MB/s
Number of Slots	2 x SODIMM
Capacities:	4 GB (1 x 4 GB) 8 GB (2 x 4 GB) 16 GB (2 x 8 GB)
Reserved for Graphics:	512 MB

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

### STORAGE MEMORY

Туре:	NAND flash memory; non-volatile
Number of Sockets:	1 x M.2
	8 GB MLC (multi-level cell)
	16 GB MLC
	16 GB UMLC (ultra multi-level cell)
Capacities:	32 GB MLC
	32 GB UMLC
	64 GB MLC
	128 GB MLC

Flash-based memory modules (aka solid-state drives), are the primary operating system (OS) 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 thin client environment, data and application files are stored securely in the remote data center and not on the local storage device.

The HP t730 thin client uses two types of flash memory: MLC (2-bits per cell) and Ultra MLC (2-bits per cell, but only 1 is utilized). 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



# **Technical specifications**

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.

Flash Memory Specification	MLC (Multi-level Cell)	UMLC (Ultra MLC)
Bits per cell	2	2 (only 1 is used)
Program/erase cycles (2 x nm)	3,000	15,000
Read time	50 μs	50 μs
Program time	600-900 μs	600-900 μs
Erase time	3-5 ms	3-5 ms

## **INPUT / OUTPUT**

Keyboard	USB or PS/2 (varies by region)
Mouse	USB or PS/2 (varies by region)
Printer	Local and/or network printers (RDP, ICA, LPD)
	All models include four (4) DisplayPort 1.2 digital video outputs supporting up to 4096 x 2160 resolution.
Display / Monitor	Models can be configured with an optional AMD FirePro W2100 discrete graphics solution that provides two (2) additional digital video streams for a system total of six (6) video outputs

## I/O PORTS, EXPANSION SLOTS & CONNECTORS

- 6 x Hi-Speed USB 2.0 ports (two in front, four in rear)
- 2 x SuperSpeed USB 3.0 ports (in front)
- 1 x SuperSpeed USB 3.0 ports (inside chassis)
- 4 x DisplayPort 1.2 digital video outputs (rear)
- 2 x PS/2 keyboard/mouse ports (rear)
- 2 x serial port (rear)
- 1 x parallel port (rear)
- 1 x RJ45 Ethernet port (rear)
- 1 x 3.5 mm headset port (front)
- 1 x 3.5 mm headphone / microphone port (front)
- 1 x 3.5 mm audio line in port (rear)
- 1 x 3.5 mm audio line out port (rear)
- 1 x half height PCI Express expansion slot; x16 physical slot wired as a x8 (rear)

# Technical specifications

# **AUDIO/VIDEO**

Audio Subsystem	<ul> <li>Internal amplified speaker system for basic audio playback</li> <li>3.5 mm headset socket (front access)</li> <li>3.5 mm headphone/microphone socket (front access)</li> <li>3.5 mm line out socket (rear access)</li> <li>3.5 mm line in socket (rear access)</li> </ul>
Audio CODECs	<ul> <li>MP3</li> <li>AAC Stereo</li> <li>HE AAC</li> <li>Includes hardware acceleration support</li> </ul>
Video CODECs	<ul> <li>MPEG-4 part 2 (DivX, Xvid)</li> <li>MPEG-4 part 10 (H.264, AVC)</li> <li>WMV 7/8/9 VC-1 &amp; ASF Demuxer</li> <li>Includes hardware acceleration support</li> </ul>

## **HARDWARE SECURITY**

- Security lock slot (cable lock sold separately)
- Power cord retention clip

# **ETHERNET NETWORKING**

Hardware Networking:	<ul> <li>Realtek Gigabit Ethernet (RJ-45)</li> <li>Wake on LAN (WOL)</li> <li>PXE</li> <li>TCP/IP with DNS and DHCP</li> </ul>
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## **WI-FI NETWORKING\***

Adapter Options:	<ul> <li>Broadcom 802.11a/b/g/n</li> <li>Intel® 802.11a/b/g/n/ac</li> </ul>
	• Intel 802.114/b/g/11/ac

<sup>\*</sup>Wireless access point and internet access required. Availability of public wireless access points limited.

### FIBER OPTIC NETWORKING

Adapter Option:	Allied Telesis AT-27M2/SC Fiber Fast Ethernet Network Interface
Form Factor:	M.2
Connector:	SC; compliant with IEC 61754-4
Features:	<ul> <li>IEEE 802.1p priority encoding/tagging (QoS, CoS)</li> <li>IEEE 802.1q VLAN tagging</li> <li>IEEE 802.3x flow control</li> <li>Buffer/FIFO: 2K transmit and 2K receive</li> <li>Loopback mode</li> <li>Descriptor-Based Buffer Management</li> <li>Wake-on-LAN from S3 (Sleep) and S4 (Hibernate) not supported</li> <li>Link Detection and PHY interface power; the PHY interface, Link detection and Link LED should be enabled by default at power-up</li> </ul>



# Technical specifications

Performance:	<ul> <li>&gt;= 85 Mbit/s receive, &lt;= 30% CPU utilization</li> <li>&gt;= 85 Mbit/s transmit, &lt;= 30% CPU utilization</li> <li>&gt;= 170 Mbit/s total bi-directional, &lt;= 30% C:U utilization</li> <li>The minimum transfer size at 100 Mbit/s is 1 Gbps</li> </ul>	
External Interface:	Complies with IEEE 802.3 1000BASE-X operation	
Power:	<ul> <li>Uses less than 1775 mW of power at full performance</li> <li>Supports all PCI Express bus states L0, L0s, L1 and L2</li> </ul>	
Non-volatile Storage:	The MAC address is unique for each system; assigned from the board assembly manufacturer's IEEE registered allocation.  The PCI subsystem ID is unique to HP and unique to each design to allow Windows® Update to be finely controlled.	

Adapter Option:	Allied Telesis AT-29M2/SC Fiber Gigabit Network Interface	
Form Factor:	M.2	
Connector:	SC; compliant with IEC 61754-4	
Features:	<ul> <li>IEEE 802.1p priority encoding/tagging (QoS, CoS)</li> <li>IEEE 802.1Q VLAN tagging</li> <li>IEEE 802.3x flow control</li> <li>Buffer/FIFO: 22K transmit and 40K receive</li> <li>Loopback mode</li> <li>Descriptor-Based Buffer Management</li> <li>Wake-on-LAN from S3 (Sleep) and S4 (Hibernate) not supported</li> <li>Link Detection and PHY interface power; the PHY interface, Link detection and Link LED should be enabled by default at power-up</li> </ul>	
Performance:	<ul> <li>&gt;= 800 Mbit/s receive, &lt;= 30% CPU utilization</li> <li>&gt;= 800 Mbit/s transmit, &lt;= 30% CPU utilization</li> <li>&gt;= 1500 Mbit/s total bi-directional, &lt;= 30% C:U utilization</li> </ul> The minimum transfer size at 1000 Mbit/s is 1500 Gbps	
External Interface:	Complies with IEEE 802.3 1000BASE-X operation	
Power:	<ul> <li>Uses less than 2100 mW of power at full performance</li> <li>Supports all PCI Express bus states L0, L0s, L1 and L2</li> </ul>	
Non-volatile Storage:	The MAC address is unique for each system; assigned from the board assembly manufacturer's IEEE registered allocation.  The PCI subsystem ID is unique to HP and unique to each design to allow Windows® Update to be finely controlled.	

Adapter Option:	Allied Telesis AT-29M2/SC Fiber Gigabit Network Interface	
Form Factor:	M.2	
Connector:	SC; compliant with IEC 61754-4	



# Technical specifications

	IEEE 802.1p priority encoding/tagging (QoS, CoS)
	IEEE 802.1Q VLAN tagging
	IEEE 802.3x flow control
	Buffer/FIFO: 22K transmit and 40K receive
Features:	Loopback mode
	Descriptor-Based Buffer Management
	Wake-on-LAN from S3 (Sleep) and S4 (Hibernate) not supported
	Link Detection and PHY interface power; the PHY interface, Link detection and Link
	LED should be enabled by default at power-up
	<ul> <li>&gt;= 800 Mbit/s receive, &lt;= 30% CPU utilization</li> </ul>
	<ul> <li>&gt;= 800 Mbit/s transmit, &lt;= 30% CPU utilization</li> </ul>
Performance:	<ul> <li>&gt;= 1500 Mbit/s total bi-directional, &lt;= 30% C:U utilization</li> </ul>
	The minimum transfer size at 1000 Mbit/s is 1500 Gbps
External Interface:	Complies with IEEE 802.3 1000BASE-X operation
•	Uses less than 2100 mW of power at full performance
Power:	Supports all PCI Express bus states L0, L0s, L1 and L2
Non-volatile Storage:	The MAC address is unique for each system; assigned from the board assembly
	manufacturer's IEEE registered allocation.
	The PCI subsystem ID is unique to HP and unique to each design to allow Windows® Update to be finely controlled.



# Technical specifications

# **SOFTWARE SUPPORT**

		НР	Microsoft Wind	ows® Embedded
Host Environment	Protocol	ThinPro Smart Zero Core	WES 7P	WE 10 IoT
Microsoft Remote Desktop Services	Remote FX (RFX), RDP	✓	✓	✓
Citrix®	ICA, HDX	✓	✓	✓
VMware® Horizon	RDP, PCoIP	✓	✓	✓

	НР	ows® Embedded	
Protocol Clients	ThinPro Smart Zero Core	WES 7P	WE 10 loT
Citrix® Receiver	✓	✓	✓
Microsoft Remote Desktop Client	N/A	✓	✓
VMware™ Horizon View™ Client	✓	TBD	TBD
Remote Graphics Software (RGS)	via add-on	✓	✓
HP TeemTalk Terminal Emulator	✓	via add-on	via add-on
Free RDP	✓	N/A	N/A

	НР	Microsoft Wind	ows® Embedded
Browser Support	ThinPro Smart Zero Core	WES 7P	WE 10 loT
Mozilla Firefox	36	N/A	N/A
Internet Explorer	N/A	11	11

	HP	Microsoft Windo	ows® Embedded
Security	ThinPro Smart Zero Core	WES 7P	WE 10 loT
Smart Card	✓	✓	<b>✓</b>
Log-on Manager	✓	✓	✓
Read only Operating System	✓	✓	✓
802.1x	✓	<b>√</b>	✓
Operating System Write Filter	N/A	EWF, FBWF	UWF
Microsoft Firewall	N/A	✓	✓



# Technical specifications

	НР	Microsoft Wind	ows® Embedded
Management Tools	ThinPro Smart Zero Core	WES 7P	WE 10 loT
HP Device Manager	✓	✓	✓
HP ThinUpdate	✓	<b>✓</b>	✓
HP Easy Tools	✓	via add-on	N/A
HP Smart Zero Client Services	✓	N/A	N/A
Microsoft SCCM/EDM agent	N/A	<b>✓</b>	✓

	НР	Microsoft Wind	lows® Embedded
Additional Components	ThinPro Smart Zero Core	WES 7P	WE 10 loT
HP Velocity	✓	✓	<b>✓</b>
HP Easy Shell	✓	✓	✓
HP Universal Print Driver	N/A	✓	✓
Windows Media Player	N/A	12	12
Microsoft Direct Access	N/A	N/A	✓
Microsoft BranchCache	N/A	N/A	✓
Microsoft AppLocker	N/A	N/A	✓
Microsoft Sideloading	N/A	N/A	✓

**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 CODECs	НР	Microsoft Wind	dows® Embedded
	ThinPro Smart Zero Core	WES 7P	WE 10 loT
MP3	✓	✓	✓
WMA stereo	✓	✓	<b>✓</b>
AAC stereo & HE AAC	✓	N/A	N/A
Microsoft AC3 encoder	N/A	✓	<b>✓</b>
MPEG-1	✓	N/A	N/A
MPEG-4 part 2 (DivX, Xvid, H.263)	<b>√</b>	✓	<b>✓</b>
MPEG-4 part 10 (H.264, AVC)	✓	✓	✓
WMV 7/8/9/ VC-1 & ASF Demuxer	<b>√</b>	✓	<b>✓</b>



# Technical specifications

### **TEXT AND GRAPHICS TERMINAL EMULATIONS**

(provided by HP TeemTalk 7 in HP ThinPro & WES 7 operating systems)

Emulation	Terminal ID
HP 700-92/96	70092, 70094, 70096, 2392A, 2622A
IBM3151	Mod11, Mod31
IBM3270	3278-2 (24x80), 3278-3 (32x80), 3278-4 (43x80), 3278-5 (27x132), 3278-2-E (24x80), 3278-3-E (32x80), 3278-4-E (43x80), 3278-5-E (27x132), 3279-2 (24x80), 3279-3 (32x80), 3279-4 (43x80), 3279-5 (27x132), 3287-1
IBM5250	5291-1, 5292-2, 5251-11, 3179-2, 3196-A1, 3180-2, 3477-FC (27x132), 3477-FG (24x80), 3486-BA, 3487-HA, 3487-HC, 3812-1
VT52, VT100, VT100+, VT500 (7- or 8-bit)	VT100, VT101, VT102, VT125, VT131, VT132, M2200, VT220, VT240, VT320, VT340, VT420, VT510, VT520, VT525
VT HP220, VT UTF8	VT100, VT101, VT102, VT125, VT220, VT240, VT320, VT340, VT420, VT131, VT132, M2200, VT510, VT520, VT525

**NOTE:** Wireless features, performance and support may vary depending on environmental variables such placement, settings and firmware of your access points. Please contact your wireless vendor for support of your wireless environment.

# LANGUAGES (local user interface)

Available for Windows® Embedded: English, French, German, Spanish, Dutch, Norwegian, Korean, Simplified Chinese,

Traditional Chinese, Japanese, Russian, and Arabic

Available for HP ThinPro / Smart Zero Core: English, French, German, Spanish, Korean, Simplified Chinese, Traditional Chinese,

and Japanese



# Technical specifications

## **WEIGHTS & DIMENSIONS**

W x D x H: (vertical orientation)	67 x 221 x 240 mm 2.6 x 8.7 x 9.4 in	
Volume:	3.6 liter	
System Weight	1.8 kg 3.9 lb	
Shipping Weight	4.5 kg 9.9 lb	

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

### **EXTERNAL POWER SUPPLY**

85W external power adapter

Worldwide auto-sensing 100-240 VAC, 50-60 Hz

Energy-saving automatic power-down

Surge-tolerant

External power adapters are sourced from a number of suppliers in order to ensure adequate supply and availability is maintained. The actual dimensions of the power brick will vary by supplier.

Delta 132 x 58 x 31.1 mm LiteOn 146 x 55 x 31 mm

### **ENVIRONMENTAL**

Operating Temperature Range:	<u>Standard</u> 50° to 104° F (10° to 40° C	
	<u>Using Quick Release with a flat panel monitor</u> 50° to 95° F (10° to 35° C)	
	Using PCIe Expansion Card 50° to 104° F (10° to 40° C)	
	t730 with Fiber NIC:	
	50° to 95° F (10° to 35° 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.

### **REGULATORY COMPLIANCE**

Ergonomics:	Approved	
Safety:	UL 1950, CSA 950; TÜV-GS (EN60 950); approved	
RF Interference: FCC Class B; CE Mark; EN55022B; VCCI		



# Options and Accessories (sold separately)

Category	Description	Part Number
Accession	HP Quick Release Kit	EM870AA
Accessories	HP Integrated Work Center Stand	G1V61AA
Memory Upgrade	HP 4 GB DDR3L (PC3-12800) SODIMM Kit	P2N46AA
	HP 8 GB DDR3L (PC3-12800) SODIMM Kit	P2N47AA
Communications	HP USB-to-Serial Adapter	J7B60AA
	Intel® Ethernet I210-T1 GbE NIC	E0X95AA
	Broadcom 802.11n Wi-Fi/Bluetooth® Adapter	N4M64AA
	Intel®Q 8260 802.11ac Wi-Fi/Bluetooth® Adapter	NOS95AA
Input Devices	HP PS/2 Keyboard	N3R86AA
	HP USB Keyboard	N3R87AA
	HP USB CCID Smartcard Keyboard	BV813AA
	HP USB CCID Smartcard Keyboard (bulk pack)	BT824A6
	HP Wireless Keyboard & Mouse (note: function keys do not operate with Smart Zero Core)	N3R88AA
	HP PS/2 Optical Mouse	EY703AA
	HP USB Optical Scroll Mouse	DC172B
Graphics	AMD FirePro W2100 Professional Graphics	J3G91AA
	DisplayPort to DVI-D Adapter	FH973AA
	DisplayPort to VGA Adapter	AS615AA
	Display Port to HDMI adapter	BP937AA
	DisplayPort Cable Kit	VN567AA
Storage	HP 64GB MLC M.2 Solid State Drive	F3V79AA
Security	HP Keyed Cable Lock BV411AA	



# Summary of Changes

Date of change:	Version History:	Type of change	Description of change:
	From v1 to v2		



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