

Overview

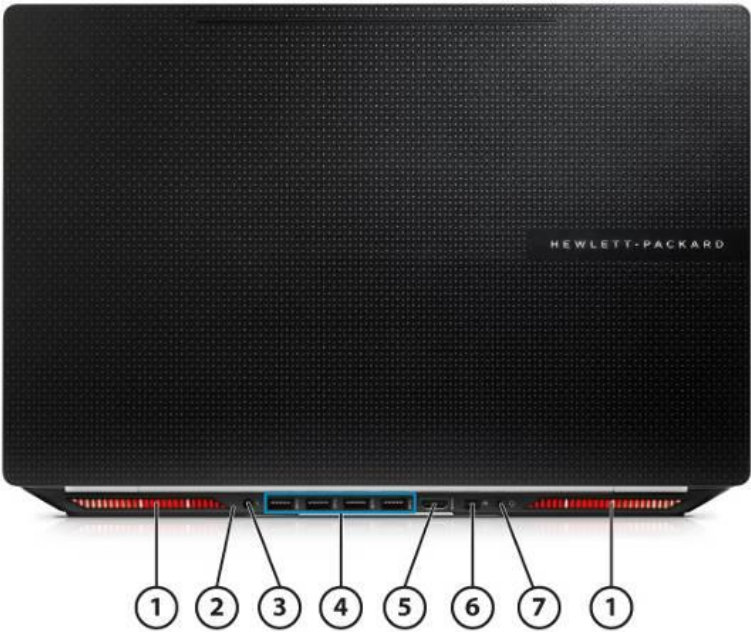
HP OMEN Pro 15 Mobile Workstation



Front Open View

Component	Description
1. Internal microphones (2)	Record Sound
2. Webcam light	On: the webcam is in use.
3. Webcam	Records video and captures photographs.
4. Power button	Powers Mobile Workstation On/Off
5. Programmable Keys	Shortcut keys for favorite functions
6. Speakers (2)	Reproduce Sound

Overview



Rear Open View

Component	Description
1. Vents (2)	Enable airflow to cool internal components.
2. AC Adapter light	On: the AC adapter is connected and the battery is charged. Off: the mobile workstation is using battery power.
3. Power Connector	Connects an AC adapter.
4. USB 3.0 ports (4)	Connect optional USB devices.
5. HDMI port	Connects an optional video or audio device.
6. Mini DisplayPort	Connects an optional digital display device.*
7. Audio-out (headphone)/Audio-in (microphone) jack	Connects optional powered stereo speakers, headphones, ear buds, headset, or television audio cable. Also connects an optional headset microphone. **

\*You can connect up to 2 optional display devices with a Mini DisplayPort splitter (purchased separately)

\*\*This jack does not support optional microphone-only devices.

Warning: To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset.

**NOTE:** When a device is connected to the jack, the mobile workstation speakers are disabled.

**NOTE:** Be sure that the device cable has 4-conductor connector that supports both audio-out (headphone) and audio-in (microphone).

### Overview



### Right Side (Left Facing)

#### Component

1. Memory card reader

#### Description

Reads optional memory cards that store, manage, share, or access information.

### Overview

#### At A Glance

- Windows 7 Professional 64-bit
- Intel® Core™ i7-4870HQ with Intel Iris™ Pro Graphics 5200 or Intel® Core™ i7-4720HQ with Intel HD Graphics 4600
- 8 or 16 GB 1600 MHz DDR3L SDRAM (onboard)
- 256 or 512 Gb HP Z Turbo Drive (PCIe SSD)
- Integrated Intel® HD Graphics or Intel Iris™ Pro Graphics 5200
- NVIDIA® Quadro® K1100M (2 GB dedicated GDDR5)
- 15.6" (39.6 cm) diagonal full HD WLED backlit touch screen display (1920 x 1080)
- Intel® Dual Band Wireless-AC 7260 802.11ac (2x2) WiFi + Bluetooth® 4.0 Combo Adapter
- 1 multi-format SD Media Card Reader
- HP TrueVision Full HD WVA Webcam (front-facing) with integrated dual digital microphones.
- Audio by Bang & Olufsen. Dual front-facing speakers with dual array digital microphones with beam forming, echo cancellation and noise suppression. Support for voice recognition.
- USB Ethernet Adapter Included

**NOTE: See important legal disclosures for all listed specs in their respective features sections.**

### Features

#### OPERATING SYSTEM

**Preinstalled OS** Windows 7 Professional 64\*

**Supported** Windows 8.1 Pro 64\*

\*Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. See <http://www.microsoft.com>.

#### PROCESSOR\*

Intel® Core™ i7-4870HQ with Intel Iris™ Pro Graphics 5200  
(2.5 GHz, up to 3.7 GHz with Intel Turbo Boost Technology, 6 MB cache, 4 cores)

Intel® Core™ i7-4720HQ with Intel HD Graphics 4600  
(2.6 GHz, up to 3.6 GHz with Intel Turbo Boost Technology, 6 MB cache, 4 cores)

\* Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.

#### CHIPSET

Intel HM87 Express

#### GRAPHICS

##### Integrated

Intel HD 4600 Graphics\*

Intel® Iris™ Pro Graphics 5200

##### Discrete

NVIDIA® Quadro® K1100M (2 GB dedicated GDDR5)\*\*

\*HD content required to view HD images.

\*\*Integrated graphics dependent on processor

### Features

#### DISPLAY

**Internal**

15.6" (39.6 cm) diagonal full HD WLED backlit touch screen display (1920 x 1080)

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#### STORAGE AND DRIVES

**Primary Storage Bay**

256 or 512 Gb HP Z Turbo Drive (PCIe SSD)

**NOTE:** For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 20 GB of system disk is reserved for Windows 7 and higher system recovery software.

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#### MEMORY

**Standard**

8GB or 16 GB 1600 MHz DDR3L SDRAM (onboard) (Transfer rates up to 1600 MT/s)

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#### NETWORKING/COMMUNICATIONS

**Wireless LAN \***

Intel® Dual Band Wireless-AC 7260 802.11ac (2x2) WiFi + Bluetooth® 4.0 Combo Adapter

\*Wireless access point and Internet service is required and is not included. Availability of public wireless access points limited.

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#### AUDIO/MULTIMEDIA

**Audio**

Audio by Bang & Olufsen. Dual front-facing speakers with dual array digital microphones with beam forming, echo cancellation and noise suppression. Support for voice recognition.

**Webcam**

HP TrueVision Full HD WVA Webcam (front-facing) with integrated dual digital microphones.

**Multimedia**

1 multi-format SD Media Card Reader

\* HD content required to view HD images.

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### Features

#### KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

**Keyboard**

Full-size island-style backlit keyboard

**Pointing Devices**

Touchpad with multi-touch gesture support

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#### SOFTWARE AND SECURITY

HP Performance Advisor

HP Keyboard Control

TPM 1.2 embedded security chip

**HP Performance Advisor**

HP Performance Advisor enables optimal configuration of HP Mobile Workstations delivering stability and best performance. HP Performance Advisor will guide your system setup allowing a "custom" configuration that best matches the workstation to user requirements.

Download at: [www.hp.com/go/performanceadvisor](http://www.hp.com/go/performanceadvisor)

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#### POWER

**Power Supply**

120 W AC power adapter

Power cord is 60 feet (1.8 m)

**Primary Battery**

4-cell, 58 WHr 3.82Ah Lithium-ion polymer battery

**Battery Life**

Battery life up to 5 hours\*

\*Windows 7 MM12 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See [www.bapco.com](http://www.bapco.com) for additional details.

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#### ENVIRONMENTAL

ENERGY STAR® certified and EPEAT® Gold registered\*

Low Halogen\*\*

\*EPEAT® registered where applicable. EPEAT registration varies by country. See [www.epeat.net](http://www.epeat.net) for registration status by country.

\*\*External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

#### WEIGHTS & DIMENSIONS

**Weight**

2.12 kg

4.68 lb (FHD + 4 cell battery + single mSATA)

### Features

**Dimensions** (h x w x d)

24.56 x 38.28 x 1.98 cm

9.67 x 15.07 x 0.78 in

**NOTE:** Weight and dimensions vary by configuration and components.

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### PORTS/SLOTS

**External I/O Ports**

1 HDMI

1 headphone/microphone combo

4 USB 3.0 (charging)\*

1 Mini DisplayPort 1.2

**Expansion**

1 Multi-format SD media card reader

**Adapters**

USB to Ethernet Adapter (included)

\*USB ports allow any connected device to charge while computer is in sleep mode

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### SERVICE AND SUPPORT

HP Services offers a 3-year limited warranty option. Warranty on the battery is the same number of years as the platform warranty. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/cpc>.

**NOTE:** Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

<http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>



### Technical Specifications

#### SYSTEM UNIT

<b>Stand-Alone Power Requirements (AC Power)</b>	<b>Nominal Operating Voltage</b>	19.5 V dc @ 6.15A
	<b>Average Operating Power</b>	13.18W
<b>Temperature</b>	<b>Max Operating Power</b>	<120W
	<b>Operating</b>	32° to 95° F (0° to 35° C)
<b>Relative Humidity</b>	<b>Non-operating</b>	-4° to 140° F (-20° to 60° C)
	<b>Operating</b>	10% to 90%, non-condensing
<b>Shock</b>	<b>Non-operating</b>	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
	<b>Operating</b>	40 G, 2 ms, half-sine
<b>Random Vibration</b>	<b>Non-operating</b>	200 G, 2 ms, half-sine
	<b>Operating</b>	0.75 grms
<b>Altitude (unpressurized)</b>	<b>Non-operating</b>	1.50 grms
	<b>Operating</b>	-50 to 10,000 ft (-15.24 to 3,048 m)
<b>Planned Industry Standard Certifications</b>	<b>Non-operating</b>	-50 to 40,000 ft (-15.24 to 12,192 m)
	<b>UL</b>	Yes
	<b>CSA</b>	No
	<b>FCC Compliance</b>	Yes
	<b>ENERGY STAR®</b>	Select models*
	<b>EPEAT</b>	Gold target**
	<b>ICES</b>	Yes
	<b>Australia / NZ A-Tick Compliance</b>	Yes
	<b>CCC</b>	Yes
	<b>Japan VCCI Compliance</b>	Yes
	<b>KCC</b>	Yes
	<b>BSMI</b>	No
	<b>CE Marking Compliance</b>	Yes

\* Configurations that are ENERGY STAR certified are identified as ENERGY STAR on HP websites and on [www.energystar.gov](http://www.energystar.gov).

\*\* EPEAT registration varies by country. See [www.epeat.net](http://www.epeat.net) for registration status by country.

EPEAT status listed above applies to U.S.

For accessibility information on HP products, please visit: <http://www.hp.com/accessibility>.

### Technical Specifications

#### Graphics

##### Intel HD 4600 Graphics

##### Form Factor

Integrated in select Intel® Xeon® E3, Intel® Core™ i7, and Intel® Core™ i5 processors.

Check specific platform specifications for selections.

##### Graphics Controller

Intel HD Graphics

##### Memory

Unified Memory Architecture (UMA) frame buffer. Graphics memory is shared with system memory. Size selectable between 64 MB to 512 MB via BIOS setting. Default size is 64 MB. Additional memory is allocated for graphics as needed using Intel's Dynamic Video Memory Technology (Intel DVMT 5.0), to provide an optimal balance between graphics and system memory use.

##### Connectors

Check system platform specifications where Intel HD Graphics are available.

##### Maximum Resolution

Mini Display Port: 3840 x 2160 @ 60hz  
HDMI: 2560x1600@60hz/ 4096x2304@24hz

##### Shading Architecture

Shader Model 5.0

##### Supported Graphics APIs

OpenGL 4.5  
DirectX 11.2

##### Available Graphics Drivers

Windows 7  
Windows 8.1

##### NVIDIA® Quadro® K1100M

##### Form Factor

Discrete

##### Graphics Controller

NVIDIA® Quadro®

##### Memory

2 GB GDDR5

##### Memory Bandwidth

44.8 GB/s

##### Maximum Resolution

VGA: 1920 x 1200  
DVI: 2560 x 1600  
DP: 3840 x 2160  
TBT: 3840 x 2160

##### Shading Architecture

Shader Model 5.0

##### Supported Graphics APIs

DX 11.1

##### Available Graphics Drivers

Windows 7

### Technical Specifications

#### DISPLAY

<b>15.6" (39.6 cm) diagonal full HD WLED backlit touch screen display (1920 x 1080)</b>	<b>Outline Dimensions</b> (W x H x D)	14.17 x 8.83 x 0.15 in (36.0 x 22.43 x 0.32 cm)	
	<b>Active Area</b>	13.55 x 7.62 in (34.42 x 19.36 cm)	
	<b>Weight</b>	< 0.79 lb. (360 g) (max)	
	<b>Diagonal Size</b>	15.6in (39.62 cm)	
	<b>Surface Treatment</b>	Anti-glare	
	<b>Contrast Ratio</b>	600:1 (typical)	
	<b>Refresh Rate</b>	60 Hz	
	<b>Brightness</b>	300 nit (typical)	
	<b>Pixel Resolution</b>	<b>Format</b>	1920 x 1080 (FHD)
		<b>Configuration</b>	RGB Stripe
	<b>Interface</b>	eDP 1.3 (2 lane)	
	<b>LCD Mode</b>	IPS	
	<b>PPI</b>	141 pps	
	<b>Viewing Angle</b>	UWVA 85/85/85/85 (Left/Right/Down/Up) (typical)	

#### STORAGE AND DRIVES\*

##### Internal Storage

<b>Z Turbo Drive 256 GB, M.2 PCIe Solid State Drive</b>	<b>Capacity</b>	256 GB SSD	
	<b>Drive Weight</b>	Up to 10g	
	<b>Height</b>	0.14in (3.58mm)	
	<b>Width</b>	0.87in (22mm)	
	<b>Interface</b>	ATA-8, PCIe 2.0	
	<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>
		Up to 730 MB/s	Up to 620 MB/s
	<b>Logical blocks</b>	500,118,192	
	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]	
	<b>Features</b>	ATA Security; TRIM; L1.0	
<b>Z Turbo Drive 512 GB, M.2 PCIe Solid State Drive</b>	<b>Capacity</b>	512 GB SSD	
	<b>Drive Weight</b>	Up to 10g	
	<b>Height</b>	0.14 in (3.58mm)	
	<b>Width</b>	0.87in (22mm)	
	<b>Interface</b>	PCIe 2.0	
	<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>
		Up to 730 MB/s	Up to 620 MB/s
	<b>Logical blocks</b>	1,000,215,216	
	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]	
	<b>Features</b>	ATA Security; TRIM	

### Technical Specifications

### NETWORKING/COMMUNICATION

<b>Intel® Dual Band Wireless-AC 7260 802.11ac (2x2) WiFi + Bluetooth® 4.0 Combo Adapter</b>	<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac
	<b>Interoperability</b>	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 7, Windows Vista and XP (details at: <a href="http://www.hp.com/go/notebooks/WLAN">http://www.hp.com/go/notebooks/WLAN</a> )
	<b>Frequency Band</b>	802.11b/g/n 2.402 - 2.482 GHz 802.11ac 4.9 - 4.95 GHz (Japan) 5.15 - 5.25 GHz 5.25 - 5.35 GHz 5.47 - 5.725 GHz 5.825 - 5.850 GHz
	<b>Antenna Structure</b>	2 transmit; 2 receive (2x2)
	<b>Data Rates</b>	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: card will support rates for NSS=1 and NSS=2 for RX and TX for 20 and 40 MHz channels. Short and long guard interval shall be supported. 802.11ac : MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)
	<b>Modulation</b>	Direct Sequence Spread Spectrum CCK, BPSK, QPSK, 16-QAM, 64-QAM
	<b>Security<sup>1</sup></b>	IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only AES-CCMP: 128 bit in hardware 802.1x authentication WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. WPA2 certification IEEE 802.11i Cisco Certified Extensions, all versions through CCX4 and CCX Lite WAPI
	<b>Sub-channels</b>	Multinational support with frequency bands and channels compliant to local regulations.
	<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	<b>Roaming</b>	IEEE 802.11 compliant roaming between band Access Points
	<b>Output Power<sup>2</sup></b>	2.4G: +13.5dBm minimum 5G: +12dBm minimum
	<b>Power Consumption</b>	Transmit: 2.0 Watts Receive: 1.6 Watts Idle mode <sup>3</sup> : 250 mW (WLAN Associated) Idle mode: 100 mW (WLAN unassociated) Radio off: 75 mW

### Technical Specifications

<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
<b>Receiver Sensitivity<sup>4</sup></b>	<p>802.11g:-90 dBm (6 Mbps), -89 dBm (9 Mbps), -87 dBm (12 Mbps), -85 dBm (18 Mbps), -82 dBm (24 Mbps), -79 dBm (36 Mbps), -76 dBm (48 Mbps), -74 dBm (54 Mbps)</p> <p>802.11b:-95 dBm (1 Mbps), -93 dBm (2 Mbps), -91 dBm (5.5 Mbps), -88 dBm (11 Mbps)</p> <p>802.11g:-90 dBm (6 Mbps), -89 dBm (9 Mbps), -87 dBm (12 Mbps), -85 dBm (18 Mbps), -82 dBm (24 Mbps), -79 dBm (36 Mbps), -76 dBm (48 Mbps), -74 dBm (54 Mbps)</p> <p>802.11n:-69 dBm (150 Mbps), -66 dBm (300 Mbps)</p>	
<b>Antenna Type</b>	2 U.FL type connectors (output impedance of 50 ± 2 ohms)	
<b>Form Factor</b>	M.2 NGFF	
<b>Dimensions</b>	0.87 x 1.18 x 0.09 in (22mm x 30mm x 2.4mm)	
<b>Weight</b>	2.3g	
<b>Operating Voltage</b>	3.3v +/- 9%	
<b>Temperature</b>	Operating	32° to 176° F (0° to 80° C)
	Non-operating	-40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED On - Radio OFF; LED Off - Radio ON	
	<ol style="list-style-type: none"> <li>1. Check latest software/driver release for updates on supported security features.</li> <li>2. Maximum output power may vary by country according to local regulations.</li> <li>3. In Power Save Polling mode and on battery power.</li> <li>4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</li> </ol>	

### Technical Specifications

#### AUDIO/MULTIMEDIA

<b>Hardware</b>	<b>Implementation</b>	Realtek ALC3227
	<b>Function Key</b>	Volume up, volume down, and mute
	<b>Volume Controls</b>	
	<b>Full Duplex</b>	Yes
	<b>Microphone In</b>	Mono
	<b>Headphone</b>	Stereo
	<b>Integrated Microphone</b>	Yes, dual digital microphone array when equipped with webcam
<b>Audio Output Quality</b>	<b>Frequency Response</b>	100Hz – 20kHz
	<b>Signal to Noise Ratio</b>	88 dB
	<b>Total Harmonic Distortion</b>	0.01%
	<b>Noise Floor</b>	<-80 dB
	<b>Play/Record Sampling Rate(s)</b>	44.1k/48k/96k/192KHz
	<b>DAC</b>	16, 20 or 24-bit
	<b>ADC</b>	16, 20 or 24-bit
<b>Integrated Stereo Speakers</b>	<b>Power Rating</b>	2 Watts
	<b>Impedance</b>	4 Ohms

### Technical Specifications

#### Power

<b>HP 120W Smart AC Adapter</b>	<b>Power</b>	120W AC
	<b>Connector</b>	4.5mm(F)-7.4mm(M) dongle
	<b>Cable length</b>	1800mm
	<b>Minimum system requirements</b>	Smart Pin connector
	<b>Dimensions</b>	5.83 x 2.97 x 1.0 in (148 x 75.5 x 25.4mm)
	<b>Weight</b>	1.32 lb (493 g)
<b>4-cell, HP (58 WHr) Lithium-Ion Prismatic</b>	<b>Dimensions (H x W x L)</b>	0.29 x 3.36 x 11.8in (7.4 x 85.3 x 300mm)
	<b>Weight</b>	315 g
	<b>Cells/Type</b>	4-cell Li-Ion Prismatic
	<b>Energy</b>	Voltage 15V
		Amp-hour capacity 3.82 Ah
		Watt-hour capacity 58 Wh
	<b>Temperature</b>	Operating (charging) 32° to 113° F (0° to 45° C)
		Operating (Discharging) 14° to 140° F (-10° to 60° C)
		Non-operating -4° to 140° F (-20° to 60° C)
	<b>Battery Re-Charge Time</b>	<b>System in OFF or Standby Mode</b> 3.5 hours
	<b>Fuel Gauge LED</b>	No
	<b>Warranty</b>	3 years*
	<b>Optional Travel Battery Available</b>	No

\*Battery warranty depends on the platform warranty

#### Country of Origin

China

#### ENVIRONMENTAL DATA

TBD

Options and Accessories (sold separately and availability may vary by country)

Type	Description	Part #
<b>Docking</b>	HP 3001pr USB 3 Port Replicator	F3S42AA
	HP USB 3.0 Port Replicator	H1L08AA
<b>Input/Output - Mice</b>	HP 3-Button Laser Mouse	H4B81AA
	HP Stylish Wireless KB/Mouse	H4B79AA
	HP Stylish USB KB/Mouse	H4B80AA
<b>Adapters</b>	USB Graphics adapter Dual	C5U89AA
	HDMI to VGA Adapter	H4F02AA
<b>Storage - External Storage</b>	HP External USB Optical Drive	F2B56AA



Summary of Changes

Date of change:	Version History:		Description of change:

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