# HP ZBook G4 Mobile Workstations

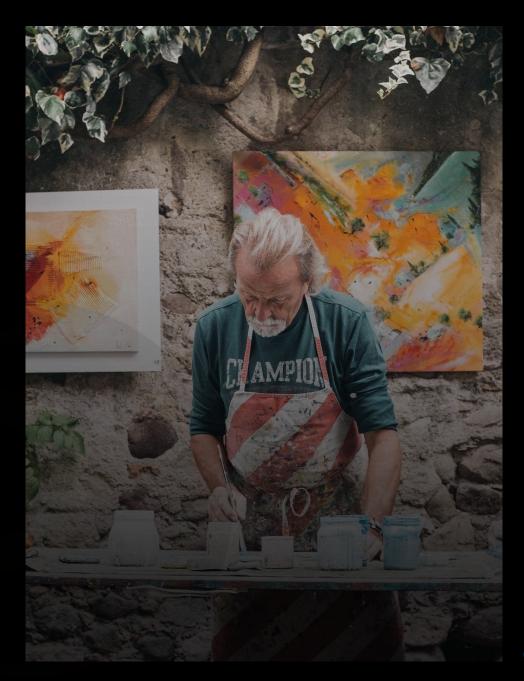
WS/TC GBU, 2017

Product Marketing



### AGENDA

- 1 Customer insights
- 2 Overview
- 3 Meet the family
- 4 Family values
- 5 The details

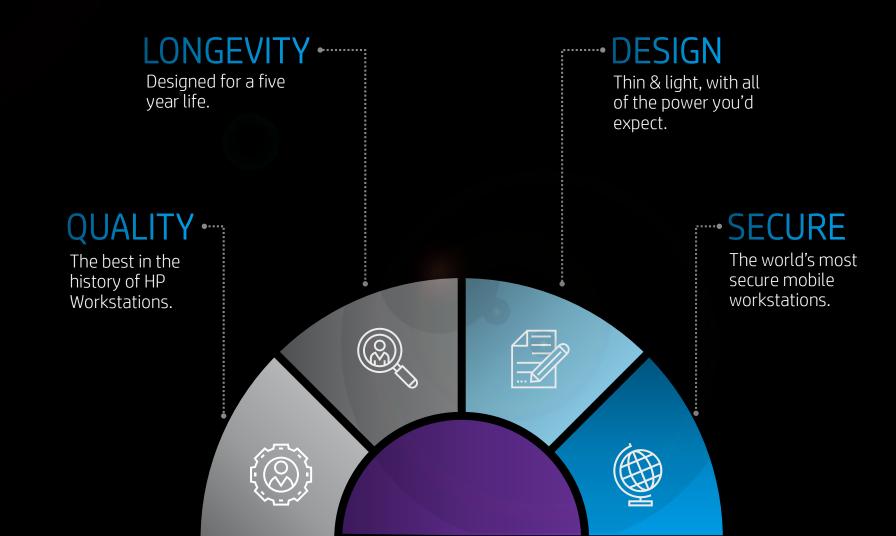


HP ZBook G4 Family
The insights





### Trends

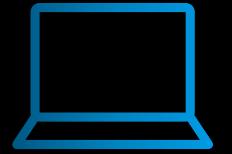


High performance, secure mobility allows me to work seamlessly between the office, and my home office.

Did you know nearly half of US workers, work in both an office and a home office?



HP ZBook G4 Family
The solution









### HP MOBILE WORKSTATION FAMILY

#### THIN/VALUE

#### NO COMPROMISE

#### FULL PERFORMANCE/ EXPANDABILITY



Thin, powerful, affordable

HP ZBook 14u HP ZBook 15u



Looks stunning, works wonders

HP ZBook Studio



Portable powerhouse

HP ZBook 15



Ultimate in mobile performance

HP ZBook 17





HP ZBook 14u/15u G4

# Thin & light value performance



Longer life

51 Whr battery + HP Fast Charge



Encrypted

Secure PCIe NVMe SEDs



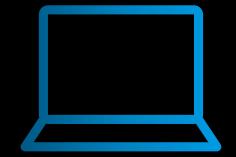
HP SureStart Gen3

BIOS-level protection



HP ZBook 14u G4 details

Streamlined





#### Meet the HP ZBook 14u G4

HP's next generation workstation Ultrabook™



#### Power to perform



- 7th generation Intel® processors
- AMD FirePro™ W4190M (2 GB) professional graphics

#### Innovative, sleek design



- Ultra-slim 22.1 mm Ultrabook™ form factor
- 51Whr Battery with Long battery life (3 year warranty)
- HP Fast Charge Support (0 to 50% charged capacity in only 30 minutes)
- UHD IPS panel; optional FHD touch display

#### Reliability



- ISV certification
- HP Remote Graphics Software (HP RGS) / HP Performance Advisor
- Passes MIL-STD-810G testing
- HP SureStart Gen3

#### I/O ports



- USB 3.1 Gen 1
- Two USB 3.0 (one charging)
- DisplayPort™ 1.2

#### Expandability



- Up to 32 GB of standard memory
- Up to 2 TB of storage
- HP Z Turbo Drive G2 (NVMe PCle SED SSD)



### HP ZBook 14u G4: features and benefits

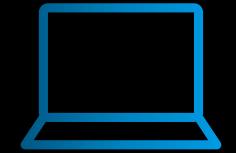
Work confidently with a long life, fast charging battery and extensive reliability testing

Feature	Benefit
Innovative design	Sleek and stylish workstation Ultrabook™ now in a 14.0" diagonal form factor
Professional 3D graphics	Provides high-end graphics processing and rendering
ISV certifications	Tested hardware proven to run demanding applications
7 <sup>th</sup> gen Intel® Core™ i5 and i7 dual-core processors	Next generation processors provide the latest performance
Battery performance	Large battery with HP Fast Charge (0 to 50% charged capacity in 30 min)
HP Performance Advisor and HP RGS	Software designed to enhance workstation performance
Reliability	Designed to undergo MIL-STD-810G testing
Touchscreen display option	Intuitive 10-point multi-touch full HD screen option
Common docking	Use legacy docking stations purchased with previous generation
HP Z Turbo Drive G2	PCIe NVMe SSDs that are even faster than last generation's HP Z Turbo Drive
Large memory configurations	Increases the overall performance of demanding applications



HP ZBook 15u G4 details

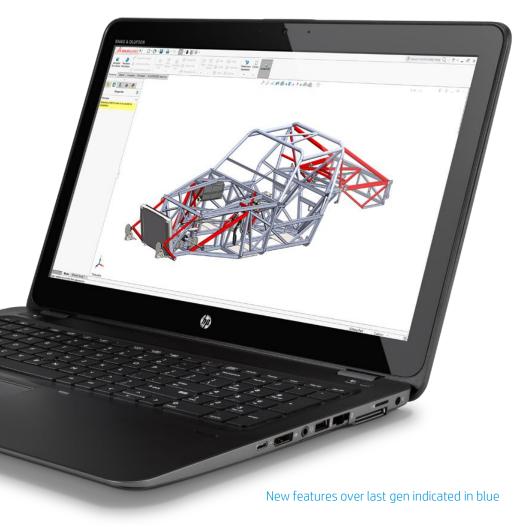
# Road warrior





#### Meet the HP ZBook 15u G4

HP's next generation workstation Ultrabook™



#### Power to perform



- 7th generation Intel® processors
- AMD FirePro<sup>™</sup> W4190M (2 GB) professional graphics

#### Innovative, sleek design



- Ultra-slim 19.9 mm Ultrabook™ form factor
- 51Whr Battery with Long battery life (3 year warranty)
- HP Fast Charge Support (0 to 50% charged capacity in only 30 minutes)
- UHD IPS panel; optional FHD touch display
- Separate numeric keypad

#### Reliability



- ISV certification
- HP Remote Graphics Software (HP RGS) / HP Performance Advisor
- Passes MIL-STD-810G testing
- HP SureStart Gen3

#### I/O ports



- USB 3.1 Gen 1
- Two USB 3.0 (one charging)
- DisplayPort™ 1.2

#### Expandability



- Up to 32 GB of standard memory
- Up to 2 TB of storage
- HP Z Turbo Drive G2 (NVMe PCIe SED SSD)<sup>4</sup>; more configurable options



### HP ZBook 15u G4: features and benefits

Work confidently with a long life, fast charging battery and extensive reliability testing

Feature	Benefit
Innovative design	Sleek and stylish workstation Ultrabook™ form factor
Professional 3D graphics	Provides high-end graphics processing and rendering
ISV certifications	Tested hardware proven to run demanding applications
7 <sup>th</sup> gen Intel® processors	Next generation processors provide the latest performance
Battery performance	Large battery with HP Fast Charge (0 to 50% charged capacity in 30 min)
HP Performance Advisor and HP RGS	Software designed to enhance workstation performance
Reliability	Passed MIL-STD-810G testing
Touchscreen display option	Intuitive 10-point multi-touch full HD screen option
Common docking	Use legacy docking stations purchased with previous generation
HP Z Turbo Drive G2	PCIe NVMe SSDs that are even faster than last gen's ACHI-based HP Z Turbo Drive
Large memory configurations	Increases the overall performance of demanding applications





HP ZBook Studio G4

# Performs in style







Built to last

HP DreamColor

Intel™

92 Whr battery + HP Fast Charge Award-winning color critical display 7<sup>th</sup> generation processing



#### Meet the HP ZBook Studio G4



#### Power to perform



- 7th generation Intel<sup>®</sup> Core<sup>™</sup> and Xeon<sup>®</sup> processors
- Intel HD Graphics 630 available as standalone configurable graphics
- NVIDIA® Quadro® M1200 with 4 GB dedicated GDDR5 memory

#### Innovative, sleek design



- CNC machined out of premium lightweight aluminum
- Ultra-thin 18 mm design (2,0 kg)
- Up to FHD Touch UWVA and UHD DreamColor screen options

#### I/O ports



- (2) Thunderbolt™ 3 (supporting DP 1.2, USB 3.1 Gen 2, PCle) on the new USB-C connector
- HDMI
- Three USB 3.0 (one charging)

#### Expandability



- Optional larger 92Whr Battery with longer battery life (3 year warranty)
- HP Fast Charge Support (0 to 50% charged capacity in only 30 minutes)
- Up to 32 GB of standard or ECC 2400 MHz memory
- Up to 2 TB of storage
- HP Z Turbo Drive G2

#### Reliability



- ISV certification
- HP Remote Graphics Software (HP RGS) / HP Performance Advisor
- Passes MIL-STD-810G testing
- HP SureStart Gen3



### HP ZBook Studio G4: features and benefits

Feature	Benefit
Premium innovative design	Aluminum and magnesium offer high durability with minimum weight
Professional 3D graphics	Provides high-end graphics processing and rendering
ISV certifications	Tested hardware proven to run demanding applications
7 <sup>th</sup> gen Intel <sup>®</sup> Core <sup>™</sup> or Xeon <sup>®</sup> processors	Next generation processors provide higher performance than last gen
Dual Thunderbolt™ 3 ports	Incredibly fast connectivity; 8 times the speed of USB 3.0
HP Performance Advisor and HP RGS	Software designed to enhance workstation performance
Reliability	Passes MIL-STD-810G testing
HP DreamColor Display	Color-critical display now in stunning 4K resolution
HP ZBook Dock with Thunderbolt 3	Highest performance docking solution with the HP ZBook Dock with Thunderbolt 3 dock
HP Z Turbo Drive G2	PCIe NVMe SSDs that are even faster than last gen's Z Turbo Drive
Battery performance	Large battery with HP Fast Charge (0 to 50% charged capacity in 30 min)





HP ZBook 15 G4

## The decathlete



Sleep easy

HP SureStart Gen3 BIOS security



2400 MHz memory

Elevate your multi-tasking





#### Meet the HP ZBook 15 G4

HP's portable high performance mobile workstation



#### Power to perform



- 7th generation Intel<sup>®</sup> Core<sup>™</sup> and Xeon<sup>®</sup> processors
- Refreshed NVIDIA® Quadro® and AMD Radeon™ Pro graphics
- Intel integrated graphics option

#### Innovative, sleek design



- 26mm thin and only 2,6 kg
  - Up to FHD Touch UWVA and UHD DreamColor screen options

#### Reliability



- ISV certification
- HP Remote Graphics Software (HP RGS) / HP Performance Advisor
- Passes MIL-STD-810G testing
- HP SureStart Gen3

#### I/O ports



- (2) Thunderbolt<sup>™</sup> 3 (supporting DP 1.2, USB 3.1 Gen 2, PCle) on the USB-C connector
- HDMI, VGA
- Three USB 3.0 (one charging)
- Smart Card reader, SD Card reader

#### Expandability



- Up to 64 GB of standard or ECC 2400 MHz memory
- HP Fast Charge Support (0 to 50% charged capacity in only 30 minutes)
- Up to 3 TB of storage
- Multiple HP Z Turbo Drive G2 (NVMe PCIe SSD)



#### HP ZBook 15 G4: features and benefits

Feature	Benefit
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Professional 3D graphics Provides h

ISV certifications Tested

7<sup>th</sup> gen Intel<sup>®</sup> Core<sup>™</sup> or Xeon<sup>®</sup> processors

Dual Thunderbolt™ 3 ports

HP Performance Advisor and HP RGS

Reliability

HP DreamColor display

HP ZBook Dock with Thunderbolt 3

HP Z Turbo Drive G2

Large memory configurations

Multiple hard drives

Provides high-end graphics processing and rendering

Tested hardware proven to run demanding applications

Next generation processors provide higher performance than ever before

Incredibly fast connectivity; 8 times the speed of USB 3.0 at 40 GB/s

Software designed to enhance workstation performance

Passes MIL-STD-810G testing and more

Color-critical display now in stunning 4K resolution

Maximum expandability and connectivity in a docking station

PCIe NVMe SSDs that are even faster than last gen's HP Z Turbo Drive

64 GB of RAM increases the performance of demanding applications

Up to 3 TB<sup>11</sup> w/ RAID configuration support, hardware encryption, and SSD





HP ZBook 17 G4
HP VR Ready



Tool-less access

For battery & HDD



**MULTI-TASK** 

Up to 64 GB of ECC or non-ECC memory





#### Meet the HP ZBook 17 G4

HP's most powerful and configurable high performance mobile workstation



#### Power to perform



- 7th generation Intel® Core™ and Xeon® processors
- Refreshed NVIDIA® Quadro® and AMD Radeon™ Pro graphics
- HP VR Ready graphics options
- Intel integrated graphics option

#### Innovative, sleek design



- ◆ 

  ◆ 

  ◆ 

  33mm thin and only 3.1 kg
  - Up to FHD Touch UWVA and UHD DreamColor screen options
  - Quick remove panel for tool less battery and HDD access

#### Reliability



- ISV certification
- HP Remote Graphics Software (HP RGS) / HP Performance Advisor
- Passes MIL-STD-810G testing
- HP SureStart Gen3

#### I/O ports



- (2) Thunderbolt™ 3 (supporting DP 1.2, USB 3.1 Gen 2, PCle) on the USB-C connector
- HDMI, VGA
- Four USB 3.0 (one charging)
- Smart Card reader, SD Card reader

#### Expandability



- Up to 64 GB of standard or ECC 2400 MHz memory
- HP Fast Charge Support (0 to 50% charged capacity in only 30 minutes)
- Up to 4 TB of storage
- Multiple HP Z Turbo Drive G2 (NVMe PCIe SSD)



#### HP ZBook 17 G4: features and benefits

Feature	Benefit
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Provides high-end graphics processing and rendering Professional 3D graphics

Tested hardware proven to run demanding applications

Next generation processors provide higher performance than ever before

Incredibly fast connectivity; 8 times the speed of USB 3.0 at 40 GB/s

Software designed to enhance workstation performance

Passes MIL-STD-810G testing and more

Color-critical display now in stunning 4K resolution

Highest performance docking solution available from HP

PCIe NVMe SSDs that are even faster than last gen's HP Z Turbo Drive

64 GB of RAM increases the performance of demanding applications

Up to 4 TB<sup>11</sup> w/ RAID configuration support, hardware encryption, and SSD

ISV certifications

7<sup>th</sup> gen Intel® Core™ or Xeon® processors

Dual Thunderbolt™ 3 ports

HP Performance Advisor and HP RGS

Reliability

HP DreamColor display

HP ZBook Dock with Thunderbolt 3

HP Z Turbo Drive G2

Large memory configurations

Multiple hard drives



#### It's all in the family

## What's new for G4

- ✓ HP DreamColor display option on the HP ZBook Studio, 15, and 17
- ✓ HP SureStart Gen3, fingerprint readers, & PCIe NVMe SEDs all work across the family to protect users
- ✓ HP Fast Charge is 50% battery life in 30 minutes... and now available on all HP ZBooks
- √ 7<sup>th</sup> generation Intel processing
- ✓ NVIDIA GPU updates, including HP VR Ready graphics on the HP ZBook 17 G4



HP ZBook G4 Family
Family values

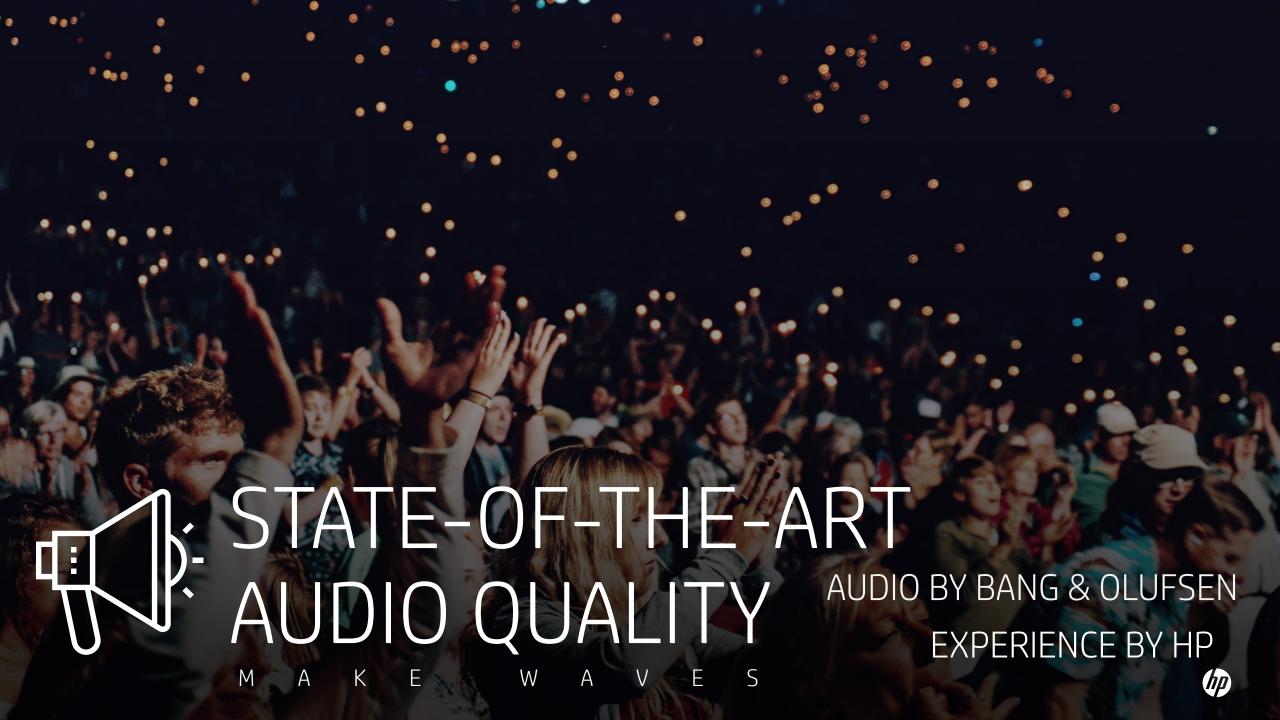




HP DREAMCOLOR

4K RESOLUTION
AMAZING COLOR
MATTE SCREEN







# DIAMOND CUT

B R I L I A N C E

4K DISPLAY OPTION
CNC-MACHINED ALUMINUM
BACKLIT KEYBOARDS
PREMIUM INDUSTRIAL DESIGN



### HP SECURITY LEADERSHIP



HP Sure Start Gen3 BIOS Protection
HP Multi-Factor Authenticate for identity
HP Manageability Integration Kit
HP WorkWise mobile security solution
Physical security
HP RGS

# THE WORLD'S MOST SECURE & MANAGEABLE MOBILE WORKSTATIONS

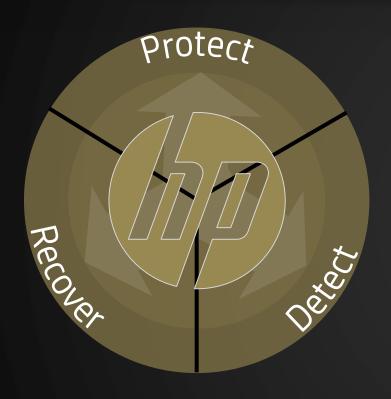


HP ZBOOK MOBILE WORKSTATIONS G4 WITH INTEL 7<sup>TH</sup> GENERATION PROCESSORS





# INDUSTRY'S FIRST and ONLY SELF-HEALING BIOS WITH RUN-TIME INTRUSION DETECTION



### HP SURE START GEN3

Runtime Intrusion Detection detects BIOS attacks in runtime memory (SMM) while OS is running & restores BIOS to custom state

BIOS Configuration & Policy Protection protects & restores BIOS setup variables, policies & data

Microsoft SCCM Integration manages HP Sure Start setup & monitors through HP MIK plug-in





Tested for a higher number of cycles

INTEL® XEON® PROCESSORS

Improved multi-tasking with

UP TO 64 GB OF ECC MEMORY

Be a local with

DUAL 1 TB HP Z TURBO DRIVES



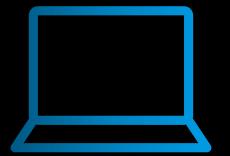
# THINNER, LIGHTER, EASIER TO MANAGE

HP ZBOOK SLEEK 150W POWER ADAPTER

- ✓37% SMALLER
- ✓50% LIGHTER
- ✓ Better Cable Management
- ✓ Thinner DC Cable
- ✓ More manageable AC Cable



HP ZBook G4 Family
The details





### ZBook G3 to G4 processor transition

Quad-core

vPRO™ and

non-vPro options

Get powerful performance from new 7th Gen Intel® Core™ Processors

2017 2016 Intel 6<sup>th</sup> gen Intel 7<sup>th</sup> gen Chipset integrated with processor Chipset integrated with processor Xeon E3-1575M v5 - 2.90G (3.80G)/4C/8M/2133/45W Xeon E3-1535M v6 – 3.10G (4.20G)/4C/8M/2400/45W ..... Xeon E3-1535M v5 - 2.80G (3.70G)/4C/8M/2133/45W Xeon E3-1505M v6 – 3.00G (4.00G)/4C/8M/2400/45W ..... i7-6820HQ - 2.70G (3.60G)/4C/8M/2133/45W i7-7820HQ - 2.90G (3.90G)/4C/8M/2400/45W ....... i7-6700HQ - 2.60G (3.50G)/4C/6M/2133/45W i7-7700HQ - 2.80G (3.80G)/4C/6M/2400/45W i5-6440HQ - 2.60G (3.50G)/4C/6M/2133/45W i5-7440HQ - 2.80G (3.80G)/4C/6M/2400/45W i5-7300HQ - 2.50G (3.50G)/4C/6M/2400/45W i5-6300HQ - 2.30G (3.20G)/4C/6M/2133/45W

Highlighted in Purple – only available with discrete graphics



### Graphics transitions

Featuring NVIDIA, AMD, and Intel Integrated Graphics

High End

63 ZBook H

63

 $\Box$ 

ZBook

Η

2016

NVIDIA® Quadro® M5000M (8 GB) NVIDIA® Quadro® M4000M (4 GB) NVIDIA® Ouadro® M3000M (4 GB) NVIDIA® Quadro® M2000M (4 GB) NVIDIA® Quadro® M1000M (2 GB) AMD FirePro™ W6150M (4 GB) Intel integrated graphics (GT2 and GT4e)







64 17 ZBook

Η

2017

NVIDIA® Ouadro® P5000 (16 GB) NVIDIA® Quadro® P4000 (8 GB) NVIDIA® Quadro® P3000 (6 GB) NVIDIA® Quadro® M2200 (4 GB) NVIDIA® Ouadro® M1200 (4 GB) AMD RadeonPro™ WX4170 (4 GB) Intel integrated graphics (GT2)





(intel)

**NVIDIA®** Optimus™ and AMD Enduro™ Technology

Mid Range

NVIDIA® Quadro® M2000M (4 GB) AMD FirePro™ W5170M (2 GB) NVIDIA® Quadro® M1000M (2 GB) NVIDIA® Ouadro® M600M (2 GB) Intel integrated graphics (GT2 and GT4e)







 $\Box$ ZBook H

64

NVIDIA® Quadro® M2200M (4 GB) AMD RadeonPro™ WX4150 (4 GB) NVIDIA® Quadro® M1200M (4 GB) NVIDIA® Quadro® M620 (2 GB) Intel integrated graphics (GT2)



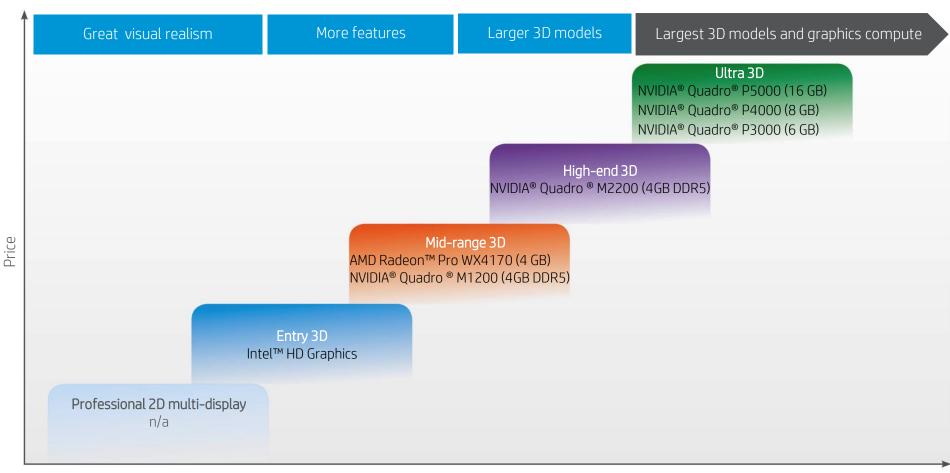




**NVIDIA®** Optimus<sup>TM</sup> and AMD Enduro™ Technology



### HP ZBook professional graphics range









Performance Note: Graph not to scale



# HP ZBook storage offerings

Increase performance with the optional HP Z Turbo Drive G2

		HP ZBook 14u G4	HP ZBook 15u G4	HP ZBook Studio G4	HP ZBook 15 G4	HP ZBook 17 G4
Storage bays		Choose up to 2: (1) 2.5" 7 mm storage bay (1) M.2	Choose up to 2: (1) 2.5" 7 mm storage bay (1) M.2	Choose up to 2: (2) M.2	Choose up to 3: (1) 2.5" 7 mm storage bays (2) M.2	Choose up to 4: (2) 2.5" 9 mm storage bays (2) M.2
Max storage		Up to 2 TB	Up to 2 TB	Up to 2 TB	Up to 3 TB	Up to 4 TB
M.2 storage bays (can also be selected as	HP Z Turbo Drive G2 (NVMe PCIe SSD)	256 GB TLC 256 GB MLC 512 GB SED TLC 512 GB MLC 1 TB MLC	256 GB TLC 256 GB MLC 512 GB SED TLC 512 GB MLC 1 TB MLC	256 GB TLC 256 GB MLC 512 GB SED TLC 1TB MLC	256 GB TLC 256 GB MLC 512 GB SED TLC 1TB MLC	256 GB TLC 256 GB MLC 512 GB SED TLC 1TB MLC
primary and only drive)	SATA SSD	256 GB SED 512 GB SED FIPS	256 GB SED 512 GB SED FIPS	128 GB SSD 256 GB SED	256 GB SED	256 GB SED
2.5" storage bays	SATA 2.5" HDD	500 GB 7200 SED 500 GB 7200 500 GB 7200 SED FIPS 1 TB 5400 500 GB Hybrid (8 GB)	500 GB 7200 SED 500 GB 7200 500 GB 7200 SED FIPS 1 TB 5400 500 GB Hybrid (8 GB)		500 GB 7200 SED 500 GB 7200 500 GB 7200 SED FIPS 1 TB 5400 500 GB Hybrid (8 GB)	500 GB 7200 SED 500 GB 7200 500 GB 7200 SED FIPS 1 TB 7200 500 GB Hybrid (8 GB)
	SATA 2.5" SSD				256 GB 1 TB	256 GB 1 TB



## HP ZBook docking compatibility

Connect quickly without the wires

	HP ZBook 14u & 15u	HP ZBook Studio	HP ZBook 15	HP ZBook 17
Full featured docking stations				
HP 2013 UltraSlim Docking Station	•			
HP ZBook Dock with Thunderbolt 3 (15	50W)	•	•	
HP ZBook Dock with Thunderbolt 3 (20	00W)	•	•	•
Port replicators (no power)				
HP USB-C Travel Dock	•	•	•	•
HP USB Travel Dock	•	•	•	•
HP Elite USB-C Dock	•	•	•	•







Accurate color powered by the Award-winning HP DreamColor technology

Expanded HP DreamColor HP ZBook portfolio

Super high resolution

Experience millions of calibrated colors

User color calibration

Exceptional color

Longer battery life w/ Increased brightness





- 17.3" diagonal (HP ZBook 17) and 15.6" diagonal (HP ZBook 15 and HP ZBook Studio)
- UHD 4K IPS panels for crisp images and 4K video workflow
- Consistent color accuracy right out of the box
- Calibration software ensures accurate colors at all times.
- 100% coverage of Adobe® RGB and sRGB color gamuts
- UHD panel consumes less power than HP ZBook G2 DreamColor





# HP ZBook Mobile Workstations MIL-STD 810G testing

		HP ZBook	HP EliteBook		HP Pr	oBook
		Mobile Workstations	1000 series	800 /705 series	600 series	400 series
1	Drop	✓	✓	✓	✓	✓
2	Functional Shock	✓	✓	✓	✓	✓
3	Vibration	✓	✓	✓	✓	✓
4	Dust	✓	✓	✓	✓	✓
5	Humidity	✓	✓	✓	✓	✓
6	Altitude	✓	✓	✓	✓	✓
7	High Temperature	✓	✓	✓	✓	✓
8	Low Temperature	✓	✓	✓	✓	✓
9	Temperature Shock	✓	✓	✓	✓	✓
10	Sand	✓	✓	✓	-	-
11	Explosive Atmosphere	✓	✓	✓	-	_
12	Freeze/Thaw	✓	✓	✓	-	_
13	Bench Handling Shock	✓	_	-	-	-
14	Crash Hazard Shock	✓	-	_	-	_



### HP ZBook G4 vertical positioning





# HP ZBook 14u G4 at-a-glance (1 of 2)

• HP 3D DriveGuard (HDD)

Form factor	Processor	Graphics	Display	Memory
<ul> <li>Magnesium frame/aluminum insert, mag bottom case</li> </ul>	<ul> <li>7<sup>th</sup> Generation Intel® processors</li> <li>Intel® Turbo Boost Technology 2.0 support</li> <li>vPro™ Support (optional)</li> </ul>		<ul> <li>14.0-inch diagonal HD SVA/AG</li> <li>14.0-inch diagonal FHD SVA/AG</li> <li>14.0-inch diagonal Touch FHD SVA/AG</li> <li>15.6-inch diagonal UHD UWVA/AG</li> </ul>	<ul> <li>DDR4 - 2133</li> <li>2 SODIMM slots; up to 32 GB dual-channel memory (2 x 16 GB)</li> <li>Standard memory with Intel® Core<sup>TM</sup> processors</li> </ul>

• Starting at 3.61 lbs / 1.64 kg			
Primary storage	Audio	Communications	Expansion slots
<ul> <li>HP Z Turbo Drive G2 (M.2 NVMe PCle SSD)</li> <li>256 GB TLC</li> <li>256 GB MLC</li> <li>512 GB SED TLC</li> <li>512 GB MLC</li> <li>1 TB MLC</li> <li>M.2 SATA SSD</li> <li>256 GB SED</li> <li>512 GB SED FIPS</li> <li>2.5" SATA HDD</li> <li>500 GB 7200 SED</li> <li>500 GB 7200 SED FIPS</li> <li>1 TB 5400</li> <li>2.5" SATA SSHD</li> <li>500 GB Hybrid (8 GB)</li> </ul>	<ul> <li>Integrated dual-microphone array; located in the display</li> <li>2 integrated stereo speakers</li> </ul>	<ul> <li>Ethernet: Integrated Intel® I219-LM Gigabit Network Connection, included with vPro processors; Integrated Intel® WGI219V Gigabit Network Connection, included with non-vPro processors</li> <li>WLAN: Intel Dual band wireless-AC 8265 802.11AC 2x2 WiFi + BT 4.2 Combo Adapter (vPro); Intel Dual band wireless-AC 8265 802.11AC 2x2 WiFi + BT 4.2 Combo Adapter (non-vPro); Intel Dual band wireless-AC 3168 802.11AC 1x1 WiFi + BT 4.2 Combo Adaptor (non-vPro) NFC: Integrated NFC with antenna option</li> <li>WWAN: HP It4120 LTE/EVDO/HSPA+ w/GPS M.2; HP It4132 - LTE/HSPA+ w/GPS M.2</li> </ul>	• SD media reader slot – support SD, SDHC, SDXC



# HP ZBook 14u G4 at-a-glance (2 of 2)

Ports	Input devices/camera	Battery	Power	Security
<ul> <li>(1) USB 3.0 charging</li> <li>(1) USB 3.0</li> <li>(1) RJ-45 (Ethernet)</li> <li>(1) Displayport 1.2</li> <li>(1) Headphone/microphone-in combo jack</li> </ul>	<ul> <li>Full sized chiclet, island-style optional backlit keyboard</li> <li>Spill resistant design with drain, DuraKey Coating</li> <li>Dual pointing devices with 2 buttons</li> <li>Image Sensor touchpad with chemically strengthened glass cover – touchpad On/Off control</li> <li>2 discrete buttons (WLAN On/Off, Vol Mute)</li> <li>720p HD Webcam (optional)</li> <li>Support no camera with single microphone option</li> </ul>	• HP 3-cell 51 WHr Long Life battery with Fast Charge support (0 to 50% charged capacity in 30 minutes)	Adapter	<ul> <li>HP ProtectTools</li> <li>TPM 2.0 module</li> <li>Integrated Smart Card Reader</li> <li>Optional fingerprint reader (Plug for CIS)</li> <li>Security lock slot</li> <li>Full Volume Encryption</li> <li>HP SureStart Gen3</li> </ul>

Operating systems	Key options	Warranty
<ul> <li>Single image/lean</li> <li>Preinstalled: Windows 10 Pro 64; Windows 10 Home High End 64; FreeDOS 2.0</li> <li>Windows10 64-bit</li> </ul>	<ul> <li>256 GB HP Z Turbo Drive G2 NVMe PCle SSD</li> <li>512 GB HP Z Turbo Drive G2 NMVe PCle SSD</li> <li>512 GB HP Z Turbo Drive G2 NVMe PCle SED SSD</li> <li>1 TB HP Z Turbo Drive G2 NVMe PCle SSD</li> </ul>	<ul> <li>Standard: Limited 3-year warranty; On-site service standard for Americas and APJ</li> <li>Optional 1-year warranty via CIS</li> </ul>

# HP ZBook 15u G4 at-a-glance (1 of 2)

Form factor	Processor	Graphics	Display	Memory
<ul> <li>One-spindle full performance design</li> <li>Magnesium frame/aluminum insert, mag bottom case</li> <li>19.9 x 383.3 x 257.7 mm (h x w x d)</li> <li>0.79 x 15.09 x 10.1 in (h x w x d)</li> <li>Starting at 4.18 lbs / 1.93 kg</li> </ul>	<ul> <li>7<sup>th</sup> Generation Intel® processors</li> <li>Intel® Turbo Boost Technology 2.0 support</li> <li>vPro™ Support (optional)</li> </ul>	<ul> <li>Intel® HD Graphics 620</li> <li>AMD FirePro™ W4190M (2 GB)</li> <li>OpenGL support/ISV certifications</li> <li>AMD Eyefinity for multi-monitor support</li> <li>Support for AMD Enduro™ technology</li> </ul>	<ul> <li>15.6-inch diagonal FHD SVA/AG</li> <li>15.6-inch diagonal FHD UWVA/AG</li> <li>15.6-inch diagonal Touch FHD SVA/</li> <li>15.6-inch diagonal UHD UWVA/AG</li> </ul>	<ul> <li>DDR4 - 2133</li> <li>2 SODIMM slots; up to 32 GB dual-channel memory (2 x 16 GB)</li> <li>Standard memory with Intel® Core<sup>TM</sup> processors</li> </ul>
Primary storage	Audio	Comm	unications	Expansion slots
<ul> <li>HP Z Turbo Drive G2 (M.2 NVMe PCle SSD)</li> <li>256 GB PCle (NVMe) TLC</li> <li>256 GB PCle (NVMe) MLC</li> <li>512 GB PCle (NVMe) TLC SED</li> <li>1TB PCle (NVMe) MLC</li> <li>M.2 SATA SSD</li> <li>256 GB SED (Opal 2)</li> <li>128 GB</li> <li>2.5" SATA HDD</li> <li>500 GB 7200 rpm</li> <li>1 TB 5400 rpm</li> <li>500 GB 7200 rpm SED (Opal 2)</li> <li>500 GB 7200 rpm FIPS 140-2 SED (Opal 2)</li> <li>500 GB 7200 rpm FIPS 140-2 SED (Opal 2)</li> <li>500 GB Hybrid (8 GB)</li> <li>HP 3D DriveGuard (HDD)</li> </ul>	<ul> <li>Integrated dual-microphone located in the display</li> <li>2 integrated stereo speaker</li> </ul>	wGI219V Gigabit Network Cor processors  • WLAN: Intel Dual band wireles BT 4.2 Combo Adapter (vPro); 8265 802.11AC 2x2 WiFi + BT Intel Dual band wireless-AC 3	o processors; Integrated Intel® nnection, included with non-vPro s-AC 8265 802.11AC 2x2 WiFi + Intel Dual band wireless-AC 4.2 Combo Adapter (non-vPro); 168 802.11AC 1x1 WiFi + BT 4.2 FC: Integrated NFC with antenna	SD media reader slot – support SD, SDHC, SDXC



# HP ZBook 15u G4 at-a-glance (2 of 2)

Ports	Input devices/camera	Battery	Power	Security
<ul> <li>(1) USB 3.0 charging</li> <li>(1) USB 3.0</li> <li>(1) RJ-45 (Ethernet)</li> <li>(1) Headphone/microphone-in combo jack</li> <li>(1) power connector</li> </ul>	<ul> <li>Full sized chiclet, island-style optional backlit keyboard with separate numeric keypad</li> <li>Spill resistant design with drain, DuraKey Coating</li> <li>Dual pointing devices with 2 buttons</li> <li>Image Sensor touchpad with chemically strengthened glass cover – touchpad On/Off control</li> <li>2 discrete buttons (WLAN On/Off, Vol Mute)</li> <li>720p HD Webcam (optional)</li> <li>Support no camera with single microphone option</li> </ul>	• HP 3-cell 51 WHr Long Life battery with Fast Charge support (0 to 50% charged capacity in 30 minutes)	Adapter	<ul> <li>HP ProtectTools</li> <li>TPM 2.0 module</li> <li>Integrated Smart Card Reader</li> <li>Optional fingerprint reader (Plug for CIS)</li> <li>Security lock slot</li> <li>Full Volume Encryption</li> <li>HP SureStart Gen3</li> </ul>

Operating systems	Key options	Warranty
<ul> <li>Single image/lean</li> <li>Preinstalled: Windows 10 Pro 64; Windows 10 Home High End 64; FreeDOS 2.0</li> <li>Windows10 64-bit</li> </ul>	<ul> <li>256 GB HP Z Turbo Drive G2 NVMe PCle SSD</li> <li>512 GB HP Z Turbo Drive G2 NMVe PCle SSD</li> <li>512 GB HP Z Turbo Drive G2 NVMe PCle SED SSD</li> <li>1 TB HP Z Turbo Drive G2 NVMe PCle SSD</li> </ul>	<ul> <li>Standard: Limited 3-year warranty; On-site service standard for Americas and APJ</li> <li>Optional 1-year warranty via CIS</li> </ul>

# HP ZBook Studio G4 at-a-glance (1 of 2)

Form factor		Processor	Graph	ics		Display		Memory
• Aluminum/mag panel, mag bottom and Intel® Xe		const Technology 2.0	<ul> <li>standalone configurable graphics</li> <li>NVIDIA® Quadro® M1200M with 4 GB dedicated GDDR5 graphics memory</li> </ul>		<ul> <li>graphics</li> <li>15.6-inch diagonal UHD UWVA IPS anti-glare</li> <li>15.6-inch diagonal UHD DreamColor UWVA IPS anti-glare</li> <li>15.6-inch diagonal FHD Touch UWVA IPS anti-glare</li> </ul>		DDR4 - 2400 2 SODIMM slots; up to 32 GB dual-channel memory (2 x 16 GB) Standard memory with Intel® Core™ processors ECC memory with Intel® Xeon® processors	
Primary storage		Audio	0	(	Comm	nunications		Expansion slots
<ul> <li>HP Z Turbo Drive G2 (M.2 NVMe PCle SS)</li> <li>256 GB PCle (NVMe) TLC</li> <li>256 GB PCle (NVMe) MLC</li> <li>512 GB PCle (NVMe) TLC SED</li> <li>1TB PCle NVMe MLC</li> <li>M.2 SATA SSD</li> <li>256 GB SED (Opal 2)</li> <li>128 GB</li> <li>HP 3D DriveGuard (HDD)</li> </ul>		<ul> <li>Bang &amp; Olufsen Audio</li> <li>Integrated dual-micropho the display</li> <li>2 integrated stereo speak</li> </ul>	ne array; located in	<ul> <li>Ethernet: Intel (Iz</li> <li>WLAN: Intel® 802 and non-vPro<sup>TM</sup>)</li> </ul>	2.11 2x	M) Gigabit Network x2ac + BT 4.2 Combo (vPro <sup>TM</sup>	SD UHS-II SDXC	media cards slot – support SD, SDHC,

New features indicated in gold.



# HP ZBook Studio G4 at-a-glance (2 of 2)

combo jack(1) power connector

Ports	Input devices/camera	Battery	Power	Security
<ul> <li>(2) Thunderbolt™ 3 ports (supporting DP 1.2, USB 3.1 Gen 2, PCle) on the new USB-C connector</li> <li>(1) HDMI</li> <li>(1) USB 3.0 charging</li> <li>(2) USB 3.0</li> <li>(1) RJ-45 (Ethernet)</li> <li>(1) Headphone/microphone-in</li> </ul>	<ul> <li>Full sized chiclet, island-style standard backlit keyboard</li> <li>Spill resistant design with drain, DuraKey Coating</li> <li>Large Clickpad w/ Image Sensor and chemically strengthened glass cover – Clickpad On/Off control</li> <li>2 discrete buttons (WLAN On/Off, Vol Mute)</li> <li>720p HD Webcam (optional)</li> <li>Support no camera with single microphone option</li> </ul>	<ul> <li>HP 4-cell 64 WHr (4.21 Ahr) Long Life Prismatic battery</li> <li>HP 8-cell 92.4 WHr (2.7 Ahr) Long Life Polymer battery</li> <li>HP Fast Charge</li> </ul>		<ul> <li>HP ProtectTools</li> <li>TPM 2.0 module</li> <li>Optional fingerprint reader</li> <li>Security lock slot</li> <li>Full Volume Encryption</li> <li>HP SureStart Gen3</li> </ul>

Operating systems	Key options	Warranty
<ul> <li>Single image/lean</li> <li>Preinstalled: Windows 10 Pro 64; Windows 10 Home High-end 64</li> <li>Supported: Windows 10 Enterprise 64-bit</li> <li>Supported: Windows 7/10 Enterprise 64-bit</li> <li>Supported: Red Hat Enterprise Linux 6/7</li> </ul>	<ul> <li>Support for HP ZBook Dock with Thunderbolt 3</li> <li>4096/8192 MB upgrade modules</li> <li>1 TB HP Z Turbo Drive G2</li> </ul>	<ul> <li>Standard: Limited 3-year warranty; on-site service standard for Americas and APJ</li> <li>Optional 1-year warranty via CIS</li> </ul>

New features indicated in gold.



# HP ZBook 15 G4 at-a-glance (1 of 2)

Form factor	Processor	Graphics	Display		Memory
<ul> <li>Full performance design with a sleek design utilizing Aluminum/mag panel and mag bottom case</li> <li>26 x 386 x 264 mm (h x w x d) / 1.0 x 15.2 x 10.4 in (h x w x d)</li> <li>Starting at 5.7 lbs / 2.59 kg</li> </ul>	<ul> <li>Intel® Turbo Boost Technology 3.0 support</li> <li>Mobile Intel® CM238 chipset</li> <li>y Pro™ support (optional)</li> </ul>	<ul> <li>Intel® HD Graphics 630, P630</li> <li>NVIDIA® Quadro® M620, M1200, M2200</li> <li>AMD Radeon™ Pro WX4150</li> <li>UMA option</li> <li>OpenGL support/ISV certifications</li> <li>Support for NVIDIA® Optimus™</li> </ul>	• 15.6-inch diagonal with options of FHFHD UWVA/AG, FHD Touch UWVA, or UDreamColor UWVA/AG	JHD	<ul> <li>8-64 GB DDR4 – 2400 MHz</li> <li>4 dual-sided open SODIMM slots; up to 64 GB memory</li> <li>Standard memory with Intel® Core<sup>TM</sup> processors</li> <li>ECC memory with Intel® Xeon® processors</li> </ul>
Primary storage	Audi	io	Communications		Expansion slots
<ul> <li>HP Z Turbo Drive G2 (M.2 NVMe PCle SS)</li> <li>256 GB PCle (NVMe) TLC</li> <li>256 GB PCle (NVMe) MLC</li> <li>512 GB PCle (NVMe) TLC SED</li> <li>1TB PCle (NVMe) MLC</li> <li>M.2 SATA SSD</li> <li>256 GB SED</li> <li>2.5" SATA SSD</li> <li>256 GB. 1 TB</li> <li>2.5" SATA HDD</li> <li>500 GB 7200</li> <li>500 GB 7200 SED</li> <li>500 GB 7200 SED FIPS</li> <li>1 TB 5400</li> <li>500 GB Hybrid (8 GB)</li> <li>HP 3D DriveGuard (HDD)</li> </ul>	Bang & Olufsen Audio     Integrated dual-micropho     Microsoft Lync Unified Ce Skype)     2 integrated stereo speak	rtification (Lync + Intel ® 8265 8 and non-vPrc WWAN HP lt4	ported 4) Gigabit Network 02.11 2x2ac + BT 4.2 combo (vPro™	supports	d SD flash media slot (RT5237S)- SD, SDHC, SDX d SmartCard reader

## HP ZBook 15 G4 at-a-glance (2 of 2)

combo jack

• (1) power connector

Ports	Input devices/camera	Battery	Power	Security
<ul> <li>(2) USB Type-C (Thunderbolt™ 3 + DP 1.2 + USB 3.1)</li> <li>(1) HDMI</li> <li>(1) USB 3.0 charging</li> <li>(2) USB 3.0</li> <li>(1) RJ-45 (Ethernet)</li> <li>(1) VGA</li> <li>(1) Headphone/microphone-in</li> </ul>	<ul> <li>Full sized chiclet, island-style optional backlit keyboard w/ numeric keypad, spill resistant design with drain, DuraKey coating</li> <li>Dual pointing devices with 3 buttons, Image Sensor touchpad with chemically strengthened glass cover – touchpad On/Off control</li> <li>720p HD webcam</li> </ul>	<ul> <li>90 Whr Polymer battery pack – targeted for up to 14 hours of battery life</li> <li>HP Fast Charge</li> </ul>	• 150W Slim Smart AC adapter	<ul> <li>Smart card reader</li> <li>TPM 2.0 module</li> <li>Optional fingerprint reader</li> <li>Security lock slot</li> <li>Full volume encryption</li> <li>HP Sure Start Gen3</li> </ul>

	Operating systems	Key options	Warranty
•	Single image/lean Preinstalled: Windows 10 Pro 64 Preinstalled: Windows 10 Home High-end 64 Preinstalled: FreeDOS 2.0 Supported: Windows 10 Enterprise 64-bit	<ul> <li>Support for HP ZBook Dock with Thunderbolt 3; HP Elite USB-C Dock</li> <li>1 TB HP Z Turbo Drive G2</li> <li>UHD DreamColor display</li> </ul>	<ul> <li>Standard: Limited 3-year warranty; on-site service standard for Americas and APJ</li> <li>Optional 1-year warranty via CIS</li> </ul>

# HP ZBook 17 G4 at-a-glance (1 of 2)

• HP 3D DriveGuard (HDD)

Form factor	Processor	Graphics	Display	Memory
<ul> <li>Full performance design with a sleek design utilizing Aluminum/Mag panel and Mag bottom case</li> <li>33 x 420 x 280 mm (h x w x d) / 1.3 x 16.5 x 11 in (h x w x d)</li> <li>Starting at 6.9 lbs / 3.14 kg</li> </ul>	<ul> <li>7th Generation Intel® Core™ quad-core and Intel® Xeon®</li> <li>Intel® Turbo Boost Technology 2.0 support</li> <li>Mobile Intel® CM238 chipset</li> <li>vPro™ support (optional)</li> </ul>		<ul> <li>17.3-inch diagonal FHD SVA/AG</li> <li>17.3-inch diagonal FHD UWVA/AG</li> <li>17.3-inch diagonal FHD Touch UWVA</li> <li>17.3-inch diagonal UHD DreamColor UWVA/AG</li> </ul>	<ul> <li>8-64 GB DDR4 – 2400 MHz</li> <li>4 dual-sided open SODIMM slots; up to 64 GB memory</li> </ul>
Primary storage	Au	dio	Communications	Expansion slots
<ul> <li>HP Z Turbo Drive G2 (M.2 NVMe PCle SS)</li> <li>256 GB PCle (NVMe) TLC</li> <li>256 GB PCle (NVMe) MLC</li> <li>512 GB PCle (NVMe) TLC SED</li> <li>1TB PCle (NVMe) MLC</li> <li>M.2 SATA SSD</li> <li>256 GB SED</li> <li>2.5" SATA SSD</li> <li>256 GB. 1 TB</li> <li>2.5" SATA HDD</li> <li>500 GB. 1 TB 7200</li> <li>500 GB 7200 SED</li> <li>500 GB 7200 SED FIPS</li> <li>1 TB 5400</li> <li>500 GB Hybrid (8 GB)</li> </ul>	<ul> <li>Bang &amp; Olufsen Audio</li> <li>Integrated dual-microp</li> <li>Microsoft Lync Unified (Skype)</li> <li>2 integrated stereo spe</li> </ul>	<ul> <li>Intel (I219-I</li> <li>Intel® 8265</li> <li>and non-vP</li> <li>WWAN HP II</li> </ul>	pported .M) Gigabit Network 802.11 2x2ac + BT 4.2 combo (vPro <sup>TM</sup>	<ul> <li>Integrated SD flash media slot (RT5237S)-supports SD, SDHC, SDX</li> <li>Integrated SmartCard reader</li> <li>Tool less access to HDD and battery</li> </ul>

# HP ZBook 17 G4 at-a-glance (2 of 2)

combo jack

• (1) power connector

Ports	Input devices/camera	Battery	Power	Security
DP 1.2 + USB 3.1)  • (1) HDMI  • (1) USB 3.0 charging  • (3) USB 3.0  • (1) R I-45 (Ethernet)	<ul> <li>Full sized chiclet, island-style optional backlit keyboard w/ numeric keypad, spill resistant design with drain, DuraKey coating</li> <li>Dual pointing devices with 3 buttons, Image Sensor touchpad with chemically strengthened glass cover – touchpad On/Off control</li> <li>720p HD webcam</li> </ul>	<ul> <li>96 Whr Polymer battery pack – targeted for up to 14 hours of battery life</li> <li>HP Fast Charge</li> </ul>	<ul> <li>200W Slim Smart AC adapter</li> </ul>	<ul> <li>Smart card reader</li> <li>TPM 2.0 module</li> <li>Optional fingerprint reader</li> <li>Security lock slot</li> <li>Full volume encryption</li> <li>HP Sure Start Gen3</li> </ul>

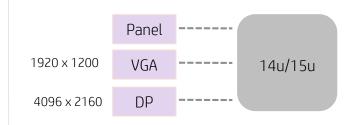
	Operating systems	Key options	Warranty
•	Single image/lean Preinstalled: Windows 10 Pro 64 Preinstalled: Windows 10 Home High-end 64 Preinstalled: FreeDOS 2.0 Supported: Windows 10 Enterprise 64-bit	<ul> <li>Support for HP ZBook Dock with Thunderbolt 3; HP Elite USB-C Dock</li> <li>1 TB HP Z Turbo Drive G2</li> <li>UHD DreamColor display</li> </ul>	<ul> <li>Standard: Limited 3-year warranty; on-site service standard for Americas and APJ</li> <li>Optional 1-year warranty via CIS</li> </ul>

### Hybrid graphics: multi-display

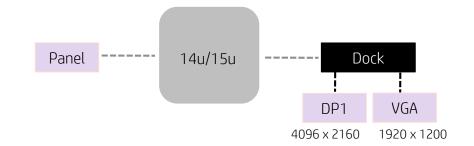
HP ZBook 14u and 15u

#### Reference Diagram

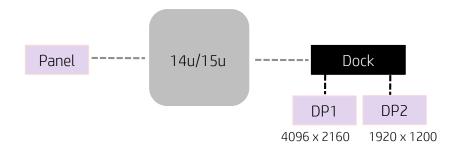
Configuration	HP ZBook 14u/15u
Max displays no dock	3



Configuration	HP ZBook 14u/15u
Max displays with dock	3



Configuration	HP ZBook 14u/15u
Max displays with dock	3





iGPU

### Hybrid graphics: multi-display

HP ZBook Studio, 15, 17



#### Recommended configurations

Configuration	HP ZBook 15/17	HP ZBook Studio
Max displays no dock	4	3

Configuration	HP ZBook 15/17	HP ZBook Studio
Max displays with dock	6	5

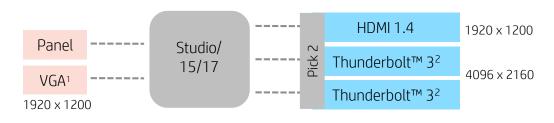
Configuration	HP ZBook 15/17	HP ZBook Studio
Two 4Ks with dock	4	3

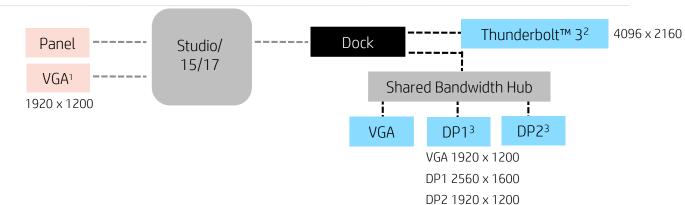


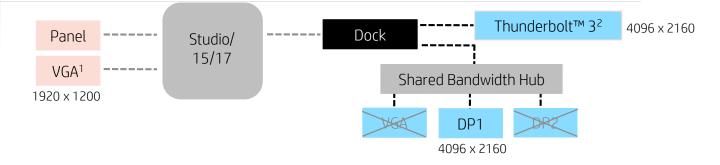
dGPU	<sup>1</sup> Studio does not

- ot have VGA in system. <sup>2</sup> Thunderbolt™ 3 may require USB-C to DP dongle.
- <sup>3</sup> DP1 and DP2 resolutions can be switched.

#### Reference diagram









### dGPU graphics: multi-display

HP ZBook Studio, 15, 17

#### Recommended configurations

Configuration	HP ZBook 15/17	HP ZBook Studio
Max displays no dock	NVIDIA – 4 AMD - 4	3

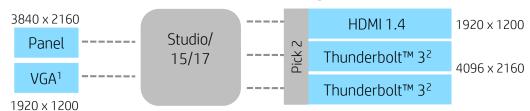
Configuration	HP ZBook 15/17	HP ZBook Studio
Max displays with dock	NVIDIA – Pick any 4 AMD - 6	Pick any 4

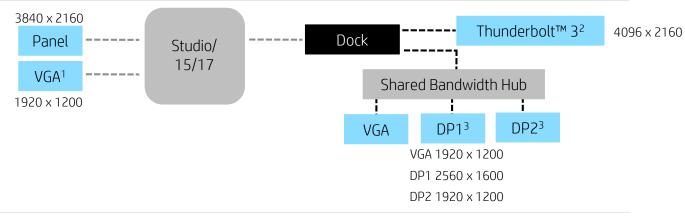
Configuration	HP ZBook 15/17	HP ZBook Studio
Two 4Ks with dock	NVIDIA –4 AMD - 4	3

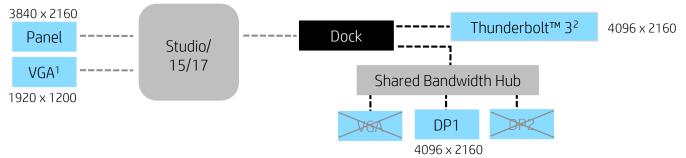


- <sup>1</sup> Studio does not have VGA in system.
- <sup>2</sup> Thunderbolt 3<sup>™</sup> may require USB-C to DP dongle.
- <sup>3</sup> DP1 and DP2 resolutions can be switched.

### Reference diagram











HP ZBook Studio, 15, 17

#### Recommended configurations

Configuration	HP ZBook Studio/15/17
Max displays no dock	Pick any 3

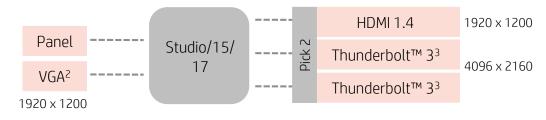
Configuration	HP ZBook Studio/15/17
Max displays with dock	Pick any 3

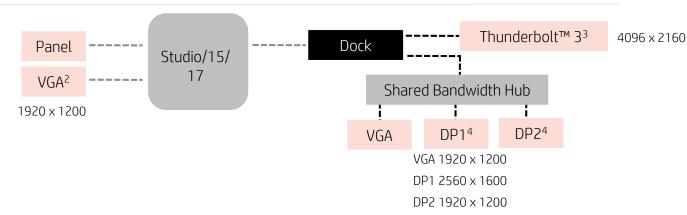
Configuration	HP ZBook Studio/15/17
Two 4Ks with dock	Pick any 3

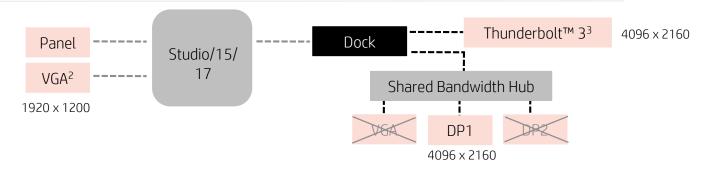


- <sup>1</sup> UMA supports a max of 3 displays.
- <sup>2</sup> Studio does not have VGA in system.
- <sup>3</sup> Thunderbolt<sup>™</sup> 3 may require USB-C to DP dongle.
- <sup>4</sup> DP1 and DP2 resolutions can be switched.

#### Reference diagram









### HP ZBook 17 G4 feature placement (1 of 3)







#### Front view

- 1. Wireless light
- 2. Power light

- 3. AC adapter/battery light
- 4. Hard drive light

#### Left view

- 1. Security lock slot
- 2. RJ-45 (Ethernet)
- 3. USB 3.0 (2)

- 4. USB 3.0 (charging)
- 5. SD UHS-II Flash Media slot

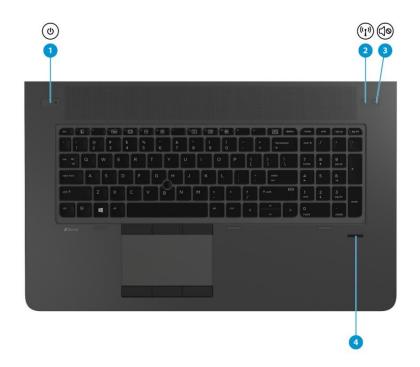
#### Right view

- Smart Card Reader
- Stereo microphone in/
   headphone out combo jack 6.
- 3. USB 3.0

- 4. HDMI
- 5. VGA
- 6. (2) Thunderbolt™ 3
- 7. Power connector

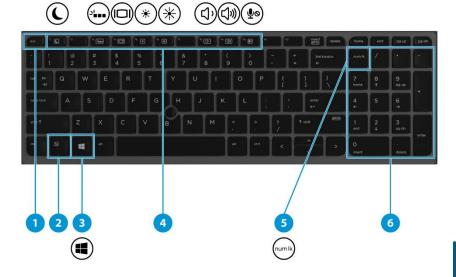


### HP ZBook 17 G4 feature placement (2 of 3)



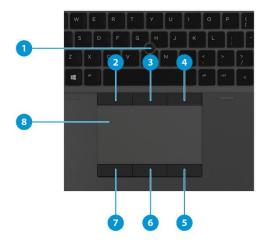
#### Top buttons

- 1. Power button
- 2. Wireless button
- 3. Volume mute button
- 4. Fingerprint reader (select models only)



#### Keyboard buttons

- 1. Escape key
- 2. Fn key
- 3. Windows key
- 4. Function keys
- 5. Num lock light
- 6. Numeric keypad



#### Touchpad buttons

- 1. Pointstick
- 2. Upper left touchpad button
- 3. Upper middle touchpad button
- 4. Upper right touchpad button
- 5. Lower right touchpad button
- 5. Lower middle touchpad button
- 7. Lower left touchpad button
- 8. Touchpad with scroll zone



### HP ZBook 17 G4 feature placement (3 of 3)



#### Bottom view

- 1. Speaker holes
- 2. Easy access latch and back panel



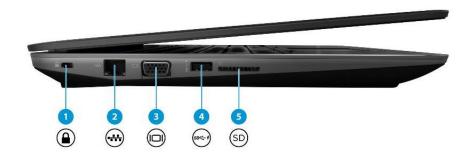
#### Display view

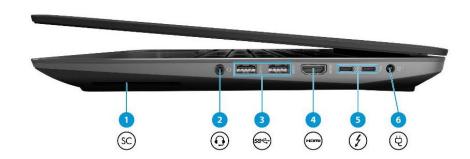
- 1. WLAN antennas (2)
- 2. Internal microphone
- 3. Webcam LED
- 4. Webcam



### HP ZBook 15 G4 feature placement (1 of 3)







#### Front view

- 1. Wireless light
- 2. Power light

- 3. AC adapter/battery light
- 4. Hard drive light

#### Left view

- 1. Security cable slot
- 2. RJ-45 (Ethernet)
- 3. VGA port

- 4. USB 3.0 (charging)
- 5. SD UHS-II Flash Media slot

#### Right view

- Smart Card Reader
- 2. Stereo microphone in/
- headphone out combo jack 6.
- 3. (2) USB 3.0

- 4. HDMI
- 5. (2) Thunderbolt™ 3
- 6. Power connector

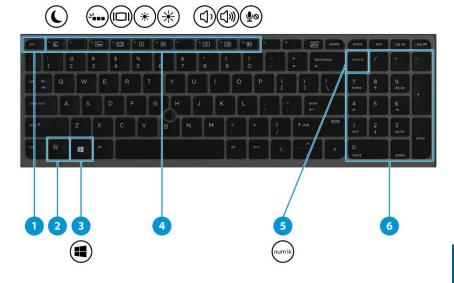


### HP ZBook 15 G4 feature placement (2 of 3)



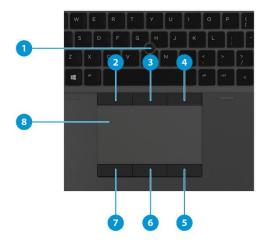
#### Top buttons

- 1. Power button
- 2. Wireless button
- 3. Volume mute button
- 4. Fingerprint reader (select models only)



#### Keyboard buttons

- 1. Escape key
- 2. Fn key
- 3. Windows key
- 4. Function keys
- 5. Num lock light
- 6. Numeric keypad



#### Touchpad buttons

- 1. Pointstick
- 2. Upper left touchpad button
- 3. Upper middle touchpad button
- 4. Upper right touchpad button
- 5. Lower right touchpad button
- 5. Lower middle touchpad button
- 7. Lower left touchpad button
- 8. Touchpad with scroll zone



### HP ZBook 15 G4 feature placement (3 of 3)



#### Bottom view

- 1. Bottom cover vent
- 2. Speakers



#### Display view

- 1. WLAN antennas (2)
- 2. Internal microphone
- 3. Webcam LED
- 4. Webcam



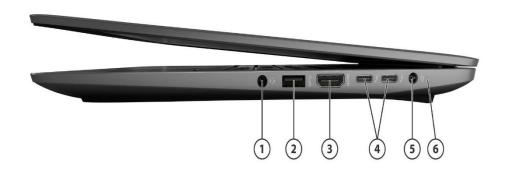
### HP ZBook Studio G4 feature placement (1 of 3)



#### Left view

- 1. Security lock slot
- 2. RJ-45 (Ethernet)
- 3. USB 3.0

- 4. USB 3.0 (charging)
- 5. SD UHS-II Flash Media slot



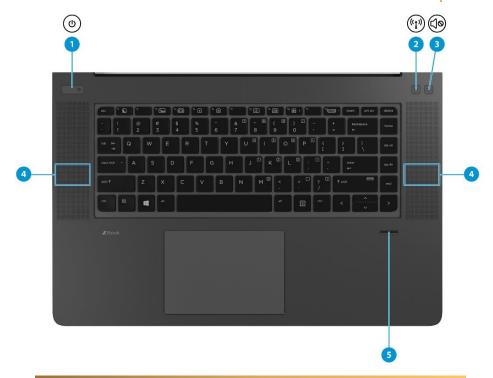
#### Right view

- 1. Audio in (microphone)/Audio out (headphone) jack
- 2. USB 3.0
- 3. HDMI

- (2) Thunderbolt™ 3
- . Power connector

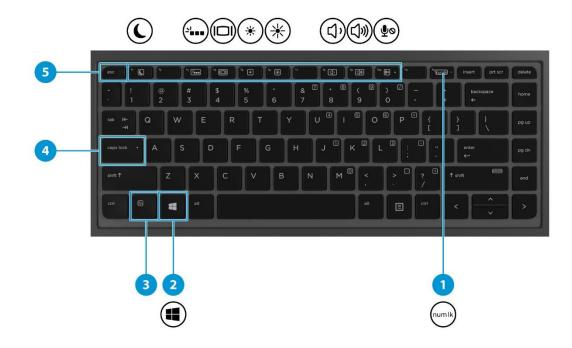


### HP ZBook Studio G4 feature placement (2 of 3)



#### Top buttons

- 1. Power button
- 2. Wireless button
- 3. Volume mute button
- 4. Speakers
- 5. Fingerprint Reader

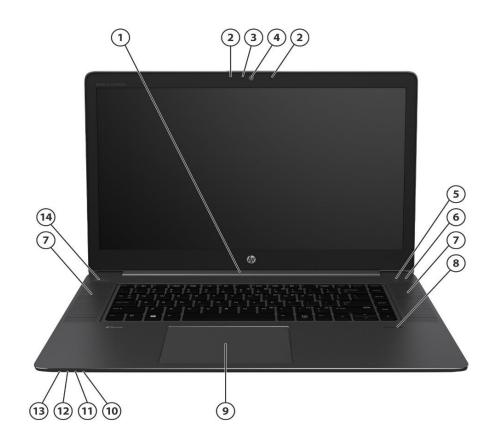


#### Keyboard buttons

- 1. Num lock light
- 2. Windows key
- 3. Fn key
- 4. Caps lock light
- 5. Function keys



### HP ZBook Studio G4 feature placement (3 of 3)



#### Display view

- 1. WLAN antennas (2)
- 2. Internal microphones (2)
- 3. Webcam Light (with webcam)
- 4. Optional 720p HD Webcam
- 5. Wireless button
- 6. Volume mute button
- 7. Speakers
- 8. Fingerprint reader (select models only)
- 9. Clickpad
- 10. Storage light indicator
- 11. Battery light indicator
- 12. Power light indicator
- 13. Wireless light indicator
- 14. Power button



### HP ZBook 15u G4 feature placement (1 of 3)

Save time connecting to peripherals and transferring data



#### Front view

- 1. Wireless light
- 2. Power light

- 3. AC adapter/battery light
- 4. Hard drive light



#### Left view

- 1. Security lock slot
- 2. VGA

- 3. USB 3.0 (charging)
- 4. Smart Card Reader



#### Right view

- 1. USB 3.1 (Gen 1)
- 2. DisplayPort™
- 3. SD UHS-II Flash Media slot
- 4. Headphone/Microphone Combo
- 5. USB 3.0

- 6. RJ-45 (Ethernet)
- 7. Slide docking connector
- 8. SIM module slot
- 9. Power connector



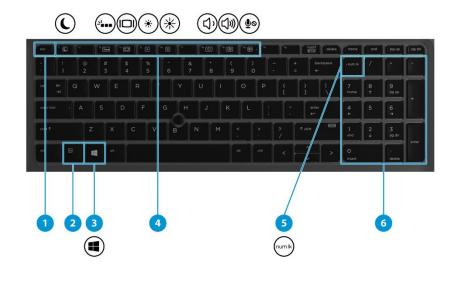
### HP ZBook 15u G4 feature placement (2 of 3)

This mobile workstation offers the features and the price you need



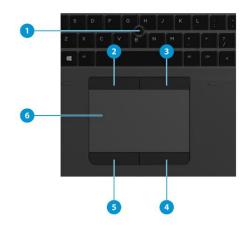
#### Top buttons

- 1. Power button
- 2. Speakers (2)
- 3. Wireless button
- 4. Volume mute button
- 5. Fingerprint reader (select models only)



#### Keyboard buttons

- 1. Escape key
- 2. Fn key
- 3. Windows key
- 4. Function keys
- 5. Num lock light
- 6. Numeric keypad



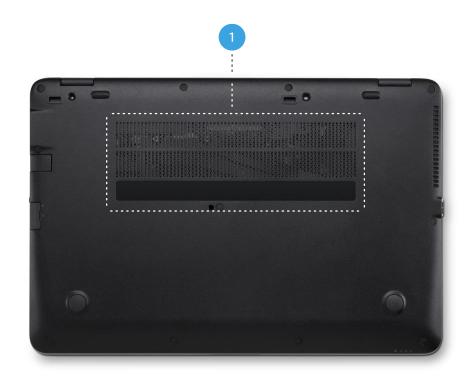
#### Touchpad buttons

- 1. Pointstick
- 2. Upper left touchpad button
- 3. Upper right touchpad button
- 4. Lower left touchpad button
- 5. Lower right touchpad button
- 6. Touchpad with scroll zone



### HP ZBook 15u G4 feature placement (3 of 3)

Pick the right display for the way you work



#### Bottom view

1. Bottom cover vent



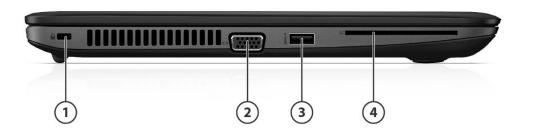
### Display view

- 1. WLAN antenna
- 2. Internal microphone
- 3. Webcam LED
- 4. Webcam



### HP ZBook 14u G4 feature placement (1 of 2)

Save time connecting to peripherals and transferring data



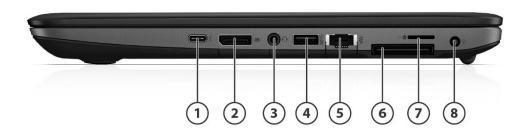
#### Left view

1. Security lock slot

3. USB 3.0 (charging)

2. VGA

4. Smart Card Reader



#### Right view

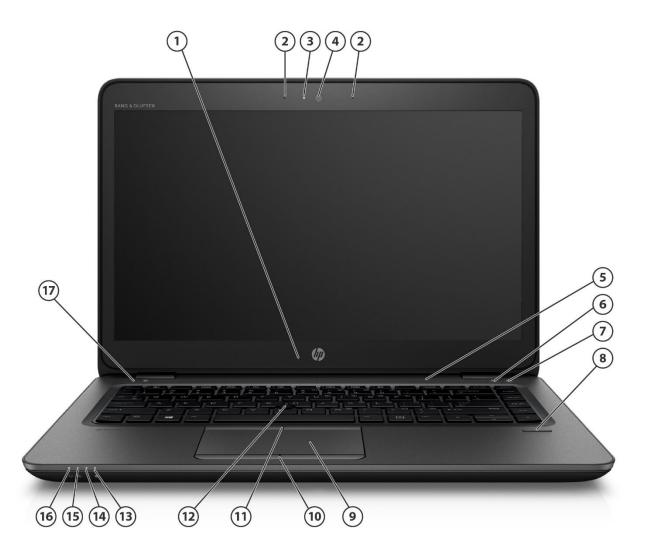
- 1. USB-Type C™ (USB 3.1 Gen 1
- 2. DisplayPort™ 1.2
- 3. Headphone/Microphone Combo
- 4. USB 3.0

- 5. RJ-45 (Ethernet)
- 6. Slide docking connector
- 7. SIM module slot
- 8. Power connector



### HP ZBook 14u G4 feature placement (2 of 2)

Offering the features and the price you need



#### Front

- 1. Wireless LAN antennas
- 2. WWAN antennas (select models)
- 3. Internal microphones (2)
- 4. Webcam
- 5. Speakers
- 6. Wireless On/Off button
- 7. Volume mute button
- 8. Fingerprint reader (select models)
- 9. Touchpad
- 10.Lower Touchpad buttons (right and left click buttons)
- 11.Upper Touchpad buttons (right and left click buttons)
- 12.Point Stick
- 13.Storage light indicator
- 14.Battery light indicator
- 15.Power light indicator
- 16.Wireless light indicator
- 17.Power button



HP ZBook G4 Family
Thank you





#### **Footnotes**

- 1. Based on HP's unique and comprehensive security capabilities at no additional cost among mobile workstation vendors as of Jan. 2017 on HP Mobile Workstations with 7th Gen Intel® Processors.
- HP Megatrends repor
- Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter with a minimum capacity of 65 watts is required. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.
- Sold separately or as an optional feature.
- 5. HP Sure Start Gen3 is available on HP EliteBook and HP ZBook products equipped with Intel® 7th generation processors.
- 6. 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. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
- 7. In accordance with Microsoft's support policy, HP does not support the Windows® 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows®8 or Windows 7 drivers on http://www.support.hp.com
- 8. Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software, and overall system configuration. See intel.com/technology/turboboost for more information.
- HD content required to view HD images.
- 10. Supports up to 3 independent displays via internal LCD Panel, system DisplayPort™, system VGA, or using the HP UltraSlim Docking Station DisplayPort™ and VGA ports (sold separately).
- 11. For storage drives GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.
- 12. Wireless cards are optional or add-on features and requires separately purchased wireless access point and internet service. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
- 13. WWAN is an optional feature. WWAN use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, and in all regions.
- 14. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.microsoft.com.
- 15. Intel® HD graphics 630 is configurable as a standalone graphics option; Intel® HD graphics P630 only used when NVIDIA® Optimus™ Technology is enabled.
- NVIDIA® Quadro® mobile professional graphics support up to four independent displays when using a HP ZBook Dock with Thunderbolt 3 (sold separately) or DP 1.2 hubs with MST. AMD Radeon™ Pro professional graphics support up to six independent displays when using an HP ZBook Dock with Thunderbolt 3 (sold separately) or DP 1.2 hubs with MST.
- 17. Only 2 DIMM configurations run at 2400 MHz and 4 DIMM configurations run at 2133 MHz.
- 18. MIL STD 810G testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care
- 19. HP Multi Factor Authenticate requires 7th Generation Intel® Core™ processor. Intel® integrated graphics, and Intel® WLAN
- 20. HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html
- 21. HP WorkWise smartphone app is available as a free download on the Apple Store and Google Play. For system requirements, see www.hp.com/go/hpworkwise
- 22. HP Remote Graphics Software requires a Windows, Linux®, or Mac®OS X 10.10 and newer operating system and network access.
- 23. Intel® Xeon® E3 can support either ECC or non-ECC memory. Intel® Core™ i3/i5/i7 processors only support non-ECC memory.
- The following applies to HP systems with Intel® 6th Gen and other future-generation processors on systems shipping with Windows 7, Windows 8, 1 or Windows 10 Pro systems downgraded to Windows 7 Professional, Windows 8 Pro, or Windows 8.1: This version of Windows running with the processor or chipsets used in this system has limited support from Microsoft. For more information about Microsoft's Support, please see Microsoft's Support Lifecycle FAO at support from Microsoft.
- 25. Starting weight; weight varies by configuration and components.
- 26. 3 year battery warranty on platforms with 3 year warranty only.
- 27. Not all configurations will qualify as an Ultrabook™.

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