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## Informacije o proizvodu (EN)

HP laptop ProBook 450 G9 512GB (724Q0EA)



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## HP ProBook 450 15.6 inch G9 Notebook PC



## Essential features in a modern design

The lightweight, compact design of the HP ProBook 450 laptop delivers commercial performance, security, and durability for professionals who move from desk, to meeting room, to home. Easily upgrade this laptop to keep up with your growing business.



\*Product image may differ from actual product

HP recommends Windows 11 Pro for business

#### Designed for hybrid workstyles

Whether in the same room or miles apart, bring your teams together with tools to keep interactions open and
productive. The ultra-narrow bezel maximizes screen size while lightweight aluminum materials provide an
easy-to-carry, sleek design.

#### Everyday business performance

• Equipped with the latest Intel<sup>®</sup> processor<sup>2</sup>, multiple graphics options<sup>3</sup>, and fast, upgradeable dual channel SODIMM memory<sup>4</sup>, the HP ProBook 450 drives performance with long battery life and high-speed solid-state drives.

#### Protected by HP Wolf Security

- HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.<sup>5</sup>
- Easily carry your lightweight ProBook with confidence. The durable chassis made with aluminum materials has an appealing design with a small footprint. The narrow bezel allows a larger screen with 87% screen-to-body ratio.
- Enable hardware and software innovations from HP with the myHP application. This single app houses access to settings for audio, video, programmable key, and more.
- HP Wolf Pro Security Edition PCs provide enterprise-level security packaged for small and medium sized businesses.<sup>5</sup>
- Optimized for video calls in low-lighting conditions. The HD camera provides visual clarity, while Temporal Noise Reduction lowers the effects of visual noise and pixelation, allowing increased definition so you can capture all the details.
- Get fast and efficient data transfer and internet access over wired Ethernet networking. Simply connect your ProBook directly to your company's network with an included RJ-45 port—no dongles or docking station needed.
- Configure your laptop's CPU for the perfect combination of performance, power consumption, and value. The
  latest Intel® processor handles multiple work tasks smoothly and reliably with multiple processing cores to
  divide up the work.<sup>2</sup>
- With two battery options, you can choose the right battery size for your business and budget needs. Customize
  charging options and manage battery performance with the easy-to-use HP Power Manager dashboard.<sup>6,15</sup>
- Never fear bumps with the thin and light HP ProBook that endures 120,000 hours of the HP Total Test Process and undergoes MIL-STD 810 tests.<sup>7,8</sup>
- The HP ProBook 450 uses ocean-bound plastics in the speaker enclosure and display bezel. This EPEAT<sup>®</sup> registered and ENERGY STAR<sup>®</sup> certified notebook PC also contains 50 percent recycled aluminum in both the top and bottom covers.<sup>9,10</sup>
- Require a supervisor password to be used to unlock a PC anytime optional tamper detection sensors located on the bottom cover of the PC and on internal storage are triggered with HP Tamper Lock.<sup>11</sup>
- Work almost anywhere, even in crowded wireless networks, with a fast, reliable wireless connection, supporting
  up to Wi-Fi 6E. For expanded connectivity and enhanced security, add optional, high-speed CAT16 WWAN with
  an external SIM card.<sup>12,13</sup>
- HP Long Life Battery gets you through a day of meetings without plugging in. When the day goes longer, you can
  quickly recharge your PC with HP Fast Charge. You'll get up to 50% battery life in just 30 minutes of charging.<sup>14</sup>

## HP ProBook 450 15.6 inch G9 Notebook PC Specifications Table



#### \*Product image may differ from actual product

Windows 11 Pro <sup>1</sup> Windows 11 Pro Education <sup>1</sup> Windows 11 Home – HP recommends Windows 11 Pro for business <sup>1</sup> Windows 11 Home – HP recommends Windows 10 Enterprise available with a Volume Licensing Agreement) <sup>1</sup> Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement) <sup>1</sup> Windows 11 Pro (Dereinstalled with Windows 10 Pro Downgrade) <sup>1,2</sup> FreeDOS         12th Generation Intel® Core™ i3 processor; 12th Generation Intel® Core™ i5 processor; 12th Generation Intel® Core™ i5-1235U (1.3         GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel® Core™ i5-1240P (1.7 GHz base frequency, up to 4.4 GHz with Intel®         Turbo Boost Technology, 12 MB L3 cache, 12 cores, 16 threads); Intel® Core™ i7-1255U (1.7 GHz base frequency, up to 4.4 GHz with Intel®         Turbo Boost Technology, 12 MB L3 cache, 12 cores, 16 threads); Intel® Core™ i7-1255U (1.7 GHz base frequency, up to 4.7 GHz with Intel® Purbo Boost Technology, 18 MB L3 cache, 12 cores, 16 threads); Intel® Core™ i7-1260P (1.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 12 cores, 16 threads); Intel® Core™ i7-1260P (1.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 5 cores, 6 threads); Intel® Cerem i7-305 with Intel® UHD Graphics (1.2 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Cerem i7-305 with Intel® UHD Graphics (1.1 GHz base frequency, 8 MB L3 cache, 5 cores, 6 threads); Intel® Cerem i7-305 with Intel® UHD Graphics (1.1 GHz base frequency, 8 MB L3 cache, 5 cores, 6 thre
Intel <sup>®</sup> Core <sup>™</sup> i3-1215U with Intel <sup>®</sup> UHD Graphics (1.2 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 10 MB L3 cache, 6 cores, 8 threads); Intel <sup>®</sup> Core <sup>™</sup> i5-1235U (1.3 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel <sup>®</sup> Core <sup>™</sup> i5-1240P (1.7 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel <sup>®</sup> Core <sup>™</sup> i5-1240P (1.7 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel <sup>®</sup> Core <sup>™</sup> i7-1260P (1.6 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel <sup>®</sup> Core <sup>™</sup> i7-1260P (1.6 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 13 MB L3 cache, 12 cores, 16 threads); Intel <sup>®</sup> Durbo Boost Technology, 8 MB L3 cache, 12 cores, 6 threads); Intel <sup>®</sup> Durbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup> UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup> UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup> UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup> UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup> UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB L3 cache, 9 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup> UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB L3 cache, 9 cores, 6 threads); Intel <sup>®</sup> Celeron <sup>®</sup> 730S with Intel <sup>®</sup>
GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel® Core® "IS-1240P (1.7 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel® Core® "IS-1240P (1.7 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel® Core® "I7-1260P (1.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 13 MB L3 cache, 12 cores, 16 threads); Intel® Core® "I7-1260P (1.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 13 MB L3 cache, 12 cores, 16 threads); Intel® Pentium® Cold B5O5 with Intel® UHD Graphics (1.2 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Celeron® 730S with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Celeron® 730S with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Celeron® 730S with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Celeron® 730S with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Celeron® 730S with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 5 cores, 6 threads); Intel® Celeron® 730S with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® UHD Graphics (1.1 GHz base frequency, up to 4.4 GHz with Intel® UHD Graphics (1.2 GHz base frequency, 0.2
Both slots are accessible/upgradeable by IT or self-maintainers only. Supports dual channel memory.
2 SODIMM
up to 1 TB PCle® NVMe™ M.2 SSD TLC <sup>8</sup> 128 GB up to 512 GB PCle® NVMe™ Value M.2 SSD <sup>8</sup> 128 GB up to 256 GB PCle® NVMe™ Value M.2 SSD <sup>8,9</sup>
39.6 cm (15.6°)
15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 400 nits, Iow power, 72% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 150 nits, 45% NTSC; 150 nits, 45\% NTSC; 150 nits,
nits, 45% NTSC; 39.6 cm (15.6°) diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC <sup>16,20,21</sup>
Integrated: Intel® UHD Graphics; Intel® (Inis % Caphics <sup>16,17</sup> Discrete: NVIDIA® GeForce® MX570 (2 GB DDR6 dedicated); NVIDIA® GeForce® MX570A (2 GB DDR6 dedicated) <sup>18</sup> (Support HD decode, DX12, HDM12.1b.)
Dual stereo speakers, dual array microphones
(Compatible with Miracast-certified devices.)
1 USB Type-C <sup>®</sup> 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 3 USB Type-A 5Gbps signaling rate (1 charging, 1 power); 1 AC power; 1 HDMI 2.1b; 1 stereo headphone/microphone combo jack; 1 RJ-45; (HDMI cable sold separately.); Optional Ports: 1 External Nano SIM slot for WWAN <sup>15</sup>
HP Premium Keyboard – spill resistant, optional backlit keyboard with drain and DuraKeys <sup>19</sup> ; Clickpad with multi-touch gesture support;
Realtek RTL8111HSH-CG 10/100/1000 GbE NIC <sup>14</sup> ; Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card, non-vPro®; Realtek Wi-Fi 6 RTL8852BE 802.11a/b/g/n/ax (1x1) and Bluetooth® 5.3 wireless card <sup>10,11,12,13</sup> , Intel® XMM™ 7560 LTE Advanced Pro Cat 16 ;
720p HD camera with temporal noise reduction (select models); IR Camera (select models) <sup>16</sup>
HP Connection Optimizer; HP Hotkey Support; HP MAC Address Manager; HP Support Assistant; myHP; HP Privacy Settings; Touchpoint Customizer for Commercial; HP Notifications; HP Quick Touch; HP PC Hardware Diagnostics Windows; Buy Office (Sold separately) <sup>23</sup>
HP Smart Support <sup>57</sup>
Absolute persistence module; HP DriveLock and Automatic DriveLock; HP Secure Erase; HP Sure Click; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; TPM 2.0 embedded security chip (Common Criteria EAL4+ and FIPS 140-2 Level 2 Certified); HP Sure Start Gen7; HP Wake on WLAN; HP Tamper Lock; <sup>28,29,031,32,33,34,35</sup>
HP Wolf Pro Security Edition <sup>56</sup>
Fingerprint sensor (select models)
HP Client Management Script Library (download); HP Image Assistant (download); HP Driver Packs (download); HP Client Catalog (download); HP Manageability Integration Kit Gen4 (download); HP Power Manager <sup>26,27</sup>
HP Smart 65 W External AC power adapter; HP Smart 65 W EM External AC power adapter; HP Smart 45 W External AC power adapter; HP Smart 65 W USB Type-C® adapter; HP Smart 45 W USB Type-C® adapter; HP Smart 45 W USB Type-C® adapter?
HP Long Life 3-cell, 42.75 Wh polymer; HP Long Life 3-cell, 51.3 Wh polymer <sup>36</sup>
14.14 x 9.2 x 0.78 in; 35.94 x 23.39 x 1.99 cm
Starting at 3.83 lb; Starting at 1.74 kg; (Weight will vary by configuration.)
EPEAT® registered configurations available; IT ECO Declaration; TCO Certified configurations available; EPEAT® Gold registered in the U.S.; SEPA; Taiwan Green Mark; Japan PC Green Label; KOECO <sup>39</sup>
ENERGY STAR® certified
CECP
Low Halogen; Bulk packaging available; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; Outside box and corrugated cushions are 100% sustainably sourced and recyclable; 10% post-consumer recycled plastic; Ocean-bound plastic in speaker enclosure(s) <sup>40,41,42,43,44</sup>
HP Services offers 1-year and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. 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.

## HP ProBook 450 15.6 inch G9 Notebook PC

### Accessories and services (not included)

HP Z27q G3 QHD Display	Meticulously crafted to surpass every design standard, the HP Z27q G3 QHD Display is composed of authentic aluminum and delivers an impressive, frameless viewing experience. Bring your ideas to life with remarkable color accuracy in precise Quad HD resolution. Refine your work experience and transform your PC into a powerhouse with this 27 inch diagonal screen monitor. <b>Product number: 1C4Z7AA</b> <sup>1</sup> All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. <sup>2</sup> Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 EPEAT standard.
HP USB-C to HDMI 2.0	Collaborate on the fly in conference rooms, team rooms, and more when your project your notebook or mobile device's high-definition video and audio content to an external display, TV or projector with the HP USB-C to HDMI 2.0 Adapter. Product number: 1WC36AA
HP Prelude Pro 15.6-inch Recycled	Commute with a stylish and durable top load thoughtfully designed with the environment in mind and made with recycled fabric <sup>1</sup> . The HP Prelude Pro Recycled Top load comes with safety features for your peace of mind when you carry your devices from work to home and beyond. <b>Product number: 1X645AA</b> <sup>1</sup> Top load external surface made of 65% recycled fabric. <sup>2</sup> Power bank sold separately.
HP 235 Wireless Mouse and Keyboard Combo	Experience a keyboard and mouse combo that's comfortable, sleek and quiet. Now you can be at your most efficient with the least amount of noise. Plus, with keyboard shortcuts and long- lasting batteries, you can stay productive all day long. <b>Product number: 1Y4D0AA</b> <sup>1</sup> Wireless connectivity up to 32.8ft (10m). <sup>2</sup> Actual battery life will vary with use and environmental conditions, and will naturally decrease with time and usage.

### HP recommends Windows 11 Pro for business

## HP ProBook 450 15.6 inch G9 Notebook PC

#### Messaging Footnotes

<sup>2</sup> Multicore 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, branding and/or naming is not a measurement of higher performance.
<sup>3</sup> Intel processor and graphics options must be configured at the time of purchase.

<sup>4</sup> Dual channel memory is sold separately or as an optional feature. Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

<sup>5</sup> HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, Workstation, and RPOS products. See product details for included security features and OS requirements

<sup>1</sup> PP Power Manager requires Mindows 10 or higher and is available from the Microsoft store.
<sup>2</sup> HP Total Test Process testing is not a guarantee of future performance under these test conditions. Any accidental damage requires an optional HP Accidental Damage Protection Care Pack. <sup>8</sup> MIL STD 810 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. Any accidental damage requires an optional HP

Accidental Damage Protection Care Pack.

<sup>9</sup> Laptop speaker enclosure and display bezel components contains 5 percent ocean bound plastic by weight.

 <sup>11</sup> Based on US EPEAT<sup>®</sup> registration according to EEE 1680.1-2018 EPEAT<sup>®</sup> steps as by country. Visit http://www.epeat.net for more information.
 <sup>11</sup> HP Tamper Lock is an optional feature that must be configured at the factory and requires a supervisor password be established prior to use. Only available with three-year warranty.
 <sup>12</sup> Wi-Fi 6E requires a 6GHz router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. The specifications for Wi-Fi 6E are draft specifications and are not final. If Wi-Frie specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other Wi-Fi 6E devices. Only available in countries where Wi-Fi 6E is supported.
<sup>13</sup> Wi-Frie supporting gigabit data rate is achievable with Wi-Fi 6E (802.11a) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.
<sup>14</sup> 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. <sup>15</sup> Battery must be configured at the time of purchase.

#### **Technical Specifications Footnotes**

<sup>1</sup> 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 is automatically updated and

<sup>2</sup> This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

<sup>3</sup> Multicore 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 <sup>4</sup> Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

<sup>5</sup> Intel<sup>®</sup> Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information

<sup>6</sup> 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 7 drivers on http://www.support.hp.com.

<sup>7</sup> Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

<sup>8</sup> 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 <sup>9</sup> Second storage is only available with non-WWAN base unit and Primary M.2 storage.

<sup>10</sup> Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs. Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Whetess access point and interfects ervice required and sold separately. Availability of public wireless access point and interfects ervice required and sold separately. Availability of public wireless access point and interfects ervice required and sold separately. Availability of public wireless access point and interfects ervice required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11 ay) is backwards compatible with prior 802.11 specs.
 <sup>11</sup> Wireless access point and interfects ervice required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11 ax) is backwards compatible with prior 802.11 specs.
 <sup>12</sup> Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

<sup>13</sup> Gigabit Class Category 16 4G UTE module is optional and must be configured at the factory. Module designed for up to 1 Gbps download speeds as carriers deploy 5 carrier aggregation and 100Mbz channel bandwidth, requires activation and separately purchased service contract. Backwards compatible to HSPA 3G technologies. Check with service provider for coverage and availability in your area. Connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions

<sup>14</sup> The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

<sup>5</sup> SIM slot is not user accessible without WWAN configuration.

1<sup>10</sup> Bit Shate Use to calculate transformation to the second transformation transfo <sup>19</sup> Backlit keyboard is an optional feature.
<sup>20</sup> Resolutions are dependent upon monitor capability, and resolution and color depth settings.

<sup>1</sup> Actual brightness will be lower with touchscreen. <sup>22</sup> Windows Wind Datter life will any dependent of the battery will naturally decrease with time and usage. See www.bapco.com for additional details. <sup>23</sup> HP Support Assistant requires Windows and Internet access.

<sup>26</sup> HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanage
<sup>27</sup> HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement .

28 Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited waranty. Certain conditions apply. For full details visit: http://www.absolute.com/company/lega//agreements/ computrace-agreement. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is all mined waranty. Certain conditions apply. For full details visit: http://www.absolute.com/company/lega//agreements/ computrace-agreement. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

<sup>10</sup> HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PtITGA.sureClick for complete details.
 <sup>21</sup> HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PtITGA.sureClick for complete details.
 <sup>22</sup> HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from http://www.hp.com/go/clientmanagement and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.

<sup>33</sup> HP BIOSphere Gen6 features may vary depending on the platform and configuration.
 <sup>34</sup> HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher
 <sup>35</sup> HP Fingerprint sensor is an optional feature that must be configured at purchase.

36 Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors

<sup>37</sup> Availability may vary by country.
<sup>38</sup> HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary begoing with the data of the second pack of the secon HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product. <sup>39</sup> Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.

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<sup>43</sup> Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.

<sup>44</sup> Molded pulp cushions made from 100% recycled wood fiber and organic materials.
<sup>56</sup> HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features and OS requirement

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