# HP ProBook 450 G6 Notebook PC



Power, style, and value-just what your growing business needs.

Full-featured, thin, and light, the HP ProBook 450 lets professionals stay productive in the office and on the go. Stylish design plus optional quadcore<sup>2</sup> performance and long battery life make this HP ProBook essential for today's workforce.



HP recommends Windows 10 Pro for business

#### Affordable and stylish ultraslim design

 The HP ProBook 450 delivers stylish design to every business. An ultraslim chassis with crisp lines, clean edges, and a refined natural silver finish holds the near borderless display that opens 180°, making it easy to share content.

#### Security, durability, connectivity.

• Your growing business requires a PC with business-class features. The secure HP ProBook 450 is enhanced with a range of security features and built with a durable chassis and connectivity options that can be specifically tailored to your needs.

### Powerful processing

- Get through your deadline-driven, multi-tasking day using the HP ProBook 450, available with the latest optional 8th Gen quad-core Intel<sup>®</sup> Core<sup>™</sup> processor<sup>2,3</sup>, optional NVIDIA<sup>®</sup> GeForce<sup>®</sup> discrete graphics<sup>4</sup>, and a long battery life.
- Be productive in any situation. Experience the new features of Windows 10 Pro on the thin, light, touch-optional HP ProBook 450.
- The HP ProBook 450 delivers design, quality, and durability to every business. An ultraslim chassis in a refined, new, natural silver finish includes a 3D forged aluminum keyboard deck and durable stamped aluminum top cover.
- Keep productivity high and downtime low with HP BIOSphere Gen4 firmware-level automation. Your PCs have extra protection thanks to automatic updates and security checks.
- Fortify your security by using multiple factors of authentication including fingerprints and facial recognition.
- Get the best of both worlds with dual solid-state and hard drive storage options from HP.
- Stay connected with HP Connection Optimizer self-healing wireless driver technology and support for the latest global 4G LTE wireless broadband technology.
- Quickly transition to your desk on the HP ProBook 450 with support for one cable docking via a USB-C<sup>™</sup> data connection to optional docks.

# HP ProBook 450 G6 Notebook PC Specifications Table



Available Operating Systems	Windows 10 Pro 64 – HP recommends Windows 10 Pro for business <sup>1</sup> Windows 10 Home 64 <sup>1</sup> FreeDOS	
Processor family <sup>7</sup>	8th Generation Intel® Core™ i7 processor (i7-8565U); 8th Generation Intel® Core™ i5 processor (i5-8265U); 8th Generation Intel® Core™ i5 processor (i5-8365U); 8th Generation Intel® Core™ i3 processor (i3-8145U); Intel® Celeron® processor; Intel® Pentium® processor	
Available Processors <sup>3,4,5,6,7</sup>	Intel® Pentium® 5405U processor with Intel® HD Graphics 610 (2.3 GHz base frequency, 2 MB L3 cache, 2 cores); Intel® Core™ i7-8565U with Intel® UHD Graphics 620 (1.8 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i7+8565U processor (Core™ i7 and 16 GB Intel® Optane™ memory) with Intel® UHD Graphics 620 (1.8 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i5-8365U processor with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i5-8365U processor with Intel® UHD Graphics 620 Graphics (1.6 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores); Intel® Core™ i5-8265U with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores); Intel® Core™ i5+8265U processor (Core™ i5 and 16 GB Intel® Optane™ memory) with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores); Intel® Core™ i5+8265U processor (Core™ i5 and 16 GB Intel® Optane™ memory) with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 4 MB L3 cache, 2 cores); Intel® Core™ i3-8145U with Intel® UHD Graphics 620 (2.1 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 4 MB L3 cache, 2 cores); Intel® Celeron® 4205U with Intel® UHD Graphics 610 (1.8 GHz base frequency, 2 MB cache, 2 cores)	
Maximum memory	16 GB DDR4-2400 SDRAM <sup>8</sup> Both slots are customer accessible/upgradeable. Supports dual channel memory.	
Internal storage	up to 512 GB Intel® PCIe® NVMe™ QLC M.2 SSD with 32 GB Intel® Optane™ memory H10 <sup>6,9,40</sup> up to 256 GB Intel® PCIe® NVMe™ QLC M.2 SSD with 16 GB Intel® Optane™ memory H10 <sup>6,9,40</sup> 256 GB up to 1 TB PCIe® NVMe™ Value M.2 SSD <sup>9</sup> up to 512 GB PCIe® NVMe™ M.2 SSD TLC <sup>9</sup> up to 128 GB M.2 SATA SSD TLC <sup>9</sup> 500 GB up to 1 TB 7200 rpm SATA <sup>9</sup> up to 1 TB 5400 rpm SATA <sup>9</sup>	
Display	39.6 cm (15.6") diagonal HD SVA eDP LED-backlit touch screen, 220 cd/m², 67% sRGB (1366 x 768); 39.6 cm (15.6") diagonal FHD IPS eDP anti-glare LED-backlit, 220 cd/m², 67% sRGB (1920 x 1080); 39.6 cm (15.6") diagonal HD SVA eDP anti-glare LED-backlit, 220 cd/m², 67% sRGB (1366 x 768) <sup>13,15,16</sup>	
Available Graphics	Integrated: Intel® UHD Graphics 620; Intel® HD Graphics 610; Intel® UHD Graphics 610 <sup>13</sup> Discrete: NVIDIA® GeForce® MX250 (2 GB DDR5 dedicated) <sup>14,38</sup> (Support HD Decode, DX12, and HDMI 1.4b.)	
Audio	Single digital microphone	
Wireless technologies	Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, non-vPro™; Intel® XMM™ 7360 LTE-Advanced Cat 9; Intel® XMM™ 7262 LTE-Advanced Cat 6; Realtek RTL8822BE 802.11a/b/g/n/ac (2x2) Wi-Fi® with Bluetooth® 4.2 Combo <sup>10,11</sup>	
Expansion slots	1 SD (Supports SD, SDHC, SDXC.)	
Ports and Connectors	2 USB 3.1 Gen 1; 1 USB 3.1 Type-C™ Gen 1 (Power delivery, DisplayPort™); 1 USB 2.0 (power port); 1 RJ-45; 1 HDMI 1.4b; 1 headphone/microphone combo; 1 AC power (Cables are not included.)	
Input devices	HP Premium Spill-resistant Keyboard; Clickpad with multi-touch gesture support;	
Communications	Realtek RTL8111HSH-CG 10/100/1000 GbE NIC <sup>12</sup> ;	
Camera	720p HD camera; IR Camera <sup>13,14,39</sup>	
Available Software	HP 3D DriveGuard; HP Connection Optimizer; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP JumpStart; HP LAN Protection; HP MAC Address Manager; HP Noise Cancellation Software; HP Support Assistant; Native Miracast support; Buy Office (Sold separately) <sup>17,18,19</sup>	
Security management	Absolute persistence module; Credential manager; HP BIOSphere Gen4; HP Device Access Manager; HP DriveLock and Automatic DriveLock; HP Fingerprint Sensor; HP Password Manager; HP Secure Erase; HP Security Manager; Power-on authentication; Preboot authentication; TPM 2.0 embedded security chip shipped with Windows 10 (Common Criteria EAL4+ Certified); HP Sure Click; HP Wireless Wakeup; HP Client Security Gen4; RAID configurations; Windows Defender <sup>24,25,26,27,28,29,30,31,32</sup>	
Management features	HP Driver Packs; HP System Software Manager (SSM); HP BIOS Config Utility (BCU); HP Client Catalog; HP Manageability Integration Kit Gen2; Ivanti Management Suite <sup>21,22,23</sup>	
Power	HP Smart 65 W External AC power adapter; HP Smart 45 W External AC power adapterHP Smart 65 W USB Type-C™ adapter; HP Smart 65 W External AC power adapter; HP Smart 65 W EM External AC power adapter; HP Smart 45 W USB Type-C™ adapter; HP Smart 45 W External AC power adapter <sup>34</sup>	
Battery type	HP Long Life 3-cell, 45 Wh Li-ion	
Battery life	Up to 12 hours and 30 minutes <sup>33</sup>	
Dimensions	36.49 x 25.69 x 1.9 cm	
Weight	Starting at 2 kg (Weight will vary by configuration.)	
Ergonomic features	##displaytiltswiv##	
Energy efficiency compliance	ENERGY STAR® certified; EPEAT® Gold <sup>36</sup>	
Environmental specifications	Low halogen; TCO 5.0 Certified <sup>37</sup>	

# HP ProBook 450 G6 Notebook PC

Accessories and services (not included)

HP USB Premium Mouse	Create a sleek, professional workspace with the HP USB Premium Mouse, which integrates seamlessly with your HP notebook. HP's best combination of business features, functionality and value for mainstream business applications HP's extensive range of notebook PCs enable increased productivity and efficiency, by providing the perfect combination of built-in mobility features to match the particular needs of individuals from businesses large and small. <b>Product number: 1JR32AA</b>
HP 17.3 Business Backpack	Keep your hands free and your notebook safe with the HP 17.3 Business Backpack, designed to go with you in and out of the office and on the road. It has lockable1 zippers, a secure RFID pocket, and room for your device up to 17.3" diagonal, phone, accessories, and so much more. HP's best combination of business features, functionality and value for mainstream business applications HP's extensive range of notebook PCs enable increased productivity and efficiency, by providing the perfect combination of built-in mobility features to match the particular needs of individuals from businesses large and small. <b>Product number: 2SC67AA</b>
HP 65W USB-C Slim Travel Power Adapter	Use one adapter to power and charge your notebook or mobile device <sup>1</sup> and a USB accessory at the same time, in the office or on the go, with the surprisingly compact HP 65W USB-C Slim Travel Power Adapter. HP's best combination of business features, functionality and value for mainstream business applications HP's extensive range of notebook PCs enable increased productivity and efficiency, by providing the perfect combination of built-in mobility features to match the particular needs of individuals from businesses large and small. <b>Product number: 3PN48AA</b>
HP 3 year Next Business Day Onsite Hardware Support for Notebooks	Receive 3 years of next business day onsite HW support from an HP-qualified technician for your computing device, if the issue cannot be solved remotely.

## HP recommends Windows 10 Pro for business

# HP ProBook 450 G6 Notebook PC

#### Messaging 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 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com

<sup>2</sup> Quad-core processor solid separately or as an optional feature. <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 hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.

<sup>4</sup> Sold separately or as an optional feature.

<sup>5</sup> HP BIOSphere Gen4 requires 8th generation Intel® or AMD processors. Features may vary depending on the platform and configuration

<sup>6</sup> Multi Factor Authenticate Gen2 requires Windows, 7th or 8th generation Intel® Core<sup>™</sup> processor, Intel® integrated graphics, and Intel® WLAN. Microsoft System Center Configuration Manager is required for deployment.
<sup>7</sup> Storage capacity varies based on type of media and recording format.

<sup>8</sup> Wireless and Bluetooth® may be optional features. Wireless requires separately purchased access point and internet service. Availability of public wireless access points limited.
<sup>9</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.

an optional HP Accidental Damage Protection Care Pack.

#### 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 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com/. <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

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 Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
 Intel® Turbo Boost performance varies depending on hardware; software and overall system configuration. See www.intel.com/technology/turboboost for more information.
 Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system. Requires 8th Gen or higher Intel® Core™ processor, BIOS version with Intel® Optane™ supported, Windows 10 64-bit, and an Intel® Rapid Storage Technology (Intel® RST) driver.
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<sup>7</sup> NOTE: 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 <sup>8</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>9</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>10</sup> WLAN is an optional feature. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11 ac 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.

<sup>11</sup> WWAN module is optional, must be configured at the factory and 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, in all regions.

<sup>12</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>13</sup> HD content required to view HD images.

<sup>14</sup> Sold separately or as an optional feature.
<sup>15</sup> Touchscreen is an optional feature that must be configured at purchase.

<sup>16</sup> Resolutions are dependent upon monitor capability, and resolution and color depth settings.
<sup>17</sup> Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

<sup>18</sup> HP ePrint Driver requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see

www.hp.com/go/eprintcenter). Print times and connection speeds may vary. <sup>19</sup> HP Support Assistant requires Windows and Internet access.

<sup>21</sup> HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanagement.
<sup>22</sup> HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html

 <sup>25</sup> IV and Management Suite subscription required.
 <sup>24</sup> JP BIOSphere Gen4 requires Intel<sup>®</sup> or AMD 8th Gen processors. Features may vary depending on the platform and configurations.
 <sup>25</sup> HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
 <sup>25</sup> HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. <sup>26</sup> 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 warranty. Certain conditions apply. For full details visit: http://www.absolute.com/company/legal/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>27</sup> HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors

<sup>28</sup> HP Password Manager requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
<sup>29</sup> HP Fingerprint Sensor sold separately or as an optional feature.
<sup>30</sup> Windows Defender Opt in and internet connection required for updates.

<sup>31</sup> RAID configuration is optional and does require a second hard drive. <sup>32</sup> HP Sure Click is available on most HP PCs and supports Microsoft® Internet Explorer and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode, when Microsoft Office or Adobe Acrobat are installed.

33 Windows 10 MM14 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 for additional details.

<sup>34</sup> Availability may vary by country. <sup>35</sup> HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit

www.hp.com/go/pc. HP services are governed by the applicable HP terms and conditions of service or volded 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.

36 EPEAT® registered where applicable. EPEAT registration varies by country. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories al w.hp.com/go/options

<sup>37</sup> External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

38 Integrated graphics depends on processor. NVIDIA® Optimus<sup>™</sup> technology requires an Intel processor, plus an NVIDIA® GeForce® discrete graphics configuration and is available on Windows 10 Pro OS. With NVIDIA® Optimus<sup>™</sup> technology, full enablement of all discrete graphics video and display features may not be supported on all systems (e.g. OpenGL applications will run on the integrated GPU or the APU as the case may be).

39 Supports WDR (Wide Dynamic Range). Popular North Memory State System Longer Technology and the System acceleration does not replace or increase the DRAM in your system. Available for HP commercial desktops and notebooks and for select HP workstations (HP Z240 Tower/SFF, Z2 Mini, ZBook Studio, 15 and 17 G5) and requires a SATA HDD, 7th Gen or higher Intel® Core™ processor or Intel® Xeon® processor E3-1200 V6 product family or higher, BIOS version with Intel® Optane™ supported, Windows 10 version 1703 or higher, M.2 type 2280-51-B-M connector on a PCH Remapped PCIe Controller and Lanes in a x2 or x4 configuration with B-M keys that meet NVMe™ Spec 1.1, and an Intel® Rapid Storage Technology (Intel® RST) 15.5 driver.

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