



# HP ProBook 650 G4 Notebook PC

The flexible PC for demanding business

The all new modern slim design of the HP ProBook 650 delivers enterprise-grade performance, security, and manageability while working with today's technology and continuing to support connectivity to legacy devices.



HP recommends Windows 10 Pro.

## Updated slim design

- The precision-crafted slim chassis in a modern natural silver finish is designed to pass MIL-STD 810G testing<sup>2</sup> and supports several HP docking options<sup>3</sup> for gradual transitions to modern docking solutions.

## High performance

- Help speed up demanding business applications with an optional 8th Gen hexa-core or quad-core Intel® Core™ processor<sup>4</sup> and optional discrete graphics<sup>5</sup>.

## Built on a secure foundation

- Protect your PC against the evolving malware threats of the future, with self-healing, hardware-enforced, and manageable security solutions from HP. From the BIOS to the browser HP Sure Start Gen4<sup>6</sup> and HP Sure Click<sup>7</sup> help secure your PC.
- Power through your day with Windows 10 Pro<sup>1</sup> and the powerful security, collaboration and connectivity features from HP.
- Take on demanding graphics and video tasks using high resolution 4k displays with optional AMD Radeon™ RX540 Discrete Graphics<sup>5</sup>.
- Never wonder if someone is watching you with the added peace-of-mind that comes from the integrated HP Privacy Camera<sup>8</sup>, with a physical shutter to protect from malicious surveillance.
- Protect your PC with the hardware-enforced self-healing protection of HP Sure Start Gen4<sup>6</sup> that automatically recovers the BIOS.
- Help protect your PC from websites and in-browser .pdf files infected with malware, ransomware, or viruses with HP Sure Click<sup>7</sup>.
- Fortify your security with up to three authentication factors including passwords and optional fingerprint recognition<sup>9</sup>.
- The HP Manageability Integration Kit<sup>10</sup> helps speed up image creation and management of hardware, BIOS, and security through Microsoft System Center Configuration Manager.
- Stand up to the workload with a ProBook that is designed to pass MIL-STD 810G testing<sup>2</sup>.

## HP ProBook 650 G4 Notebook PC Specifications Table



<b>Available Operating Systems</b>	Windows 10 Pro 64 – HP recommends Windows 10 Pro. <sup>1</sup> Windows 10 Pro 64 (National Academic only) <sup>1,2</sup> Windows 10 Home 64 <sup>1</sup> Windows 10 Home Single Language 64 <sup>1</sup> FreeDOS 2.0
<b>Processor family<sup>5</sup></b>	8th Generation Intel® Core™ i7 processor (i7-8850H); 8th Generation Intel® Core™ i7 processor (i7-8650U); 8th Generation Intel® Core™ i7 processor (i7-8550U); 8th Generation Intel® Core™ i5 processor (i5-8350U); 8th Generation Intel® Core™ i5 processor (i5-8250U); 8th Generation Intel® Core™ i3 processor (i3-8130U); 7th Generation Intel® Core™ i5 processor (i5-7300U); 7th Generation Intel® Core™ i5 processor (i5-7200U)
<b>Available Processors<sup>3,4,5,6,10,44</sup></b>	Intel® Core™ i7-8850H with Intel® UHD Graphics 630 Graphics (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores); Intel® Core™ i7-8650U vPro™ processor with Intel® UHD graphics 620 (1.9 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores); Intel® Core™ i7-8550U with Intel® UHD graphics 620 (1.8 GHz base frequency, up to 4 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores); Intel® Core™ i7+ 8850H vPro™ processor (Core™ i7 and 16 GB Intel® Optane™ memory) with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores); Intel® Core™ i7+ 8850H vPro™ processor (Core™ i7 and 118 GB Intel® Optane™ SSD) with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores); Intel® Core™ i5-8350U vPro™ processor with Intel® UHD Graphics 620 (1.7 GHz base frequency, up to 3.6 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores); Intel® Core™ i5-8250U with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores); Intel® Core™ i5-7300U vPro™ processor with Intel® HD Graphics 620 (2.6 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores); Intel® Core™ i5-7200U with Intel® HD Graphics 620 (2.5 GHz base frequency, up to 3.1 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores); Intel® Core™ i3-8130U with Intel® UHD graphics 620 (2.2 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores)
<b>Display size (diagonal)</b>	15.6" <sup>15,17,20</sup>
<b>Maximum memory</b>	32 GB DDR4-2400 SDRAM <sup>6</sup> Transfer rates up to 2400 MT/s. Both slots are customer accessible/upgradeable. Supports dual channel memory.
<b>Memory slots</b>	2 SODIMM
<b>Internal storage</b>	500 GB up to 1 TB 7200 rpm SATA <sup>8</sup> up to 500 GB 7200 rpm SATA FIPS 140-2 SED <sup>8,9</sup> up to 118 GB Intel® Optane™ SSD <sup>8,10</sup> 256 GB up to 1 TB PCIe® NVMe™ M.2 SSD <sup>8</sup> 128 GB up to 512 GB PCIe® M.2 SSD <sup>8</sup> up to 256 GB M.2 SATA SED SSD <sup>8</sup>
<b>Optical drive</b>	DVD-ROM; DVD-Writer <sup>11</sup>
<b>Display</b>	15.6" diagonal FHD IPS eDP LED-backlit touch screen, 220 cd/m <sup>2</sup> , 45% sRGB (1920 x 1080); 15.6" diagonal FHD IPS eDP anti-glare LED-backlit, 220 cd/m <sup>2</sup> , 45% sRGB (1920 x 1080); 15.6" diagonal HD SVA eDP anti-glare LED-backlit, 220 cd/m <sup>2</sup> , 45% sRGB (1366 x 768) 39.6 cm (15.6") diagonal FHD IPS eDP LED-backlit touch screen, 220 cd/m <sup>2</sup> , 45% sRGB (1920 x 1080); 39.6 cm (15.6") diagonal FHD IPS eDP anti-glare LED-backlit, 220 cd/m <sup>2</sup> , 45% sRGB (1920 x 1080); 39.6 cm (15.6") diagonal HD SVA eDP anti-glare LED-backlit, 220 cd/m <sup>2</sup> , 45% sRGB (1366 x 768) <sup>15,17,20</sup>
<b>Available Graphics</b>	Integrated: Intel® HD Graphics 620; Intel® UHD Graphics 620; Intel® UHD Graphics 630 <sup>17</sup> Discrete: AMD Radeon™ RX 540 (2 GB GDDR5 dedicated) <sup>18</sup>
<b>Audio</b>	HD audio, dual speakers, dual array microphone
<b>Wireless technologies</b>	HP lt4132 LTE/HSPA+ Mobile Broadband Module; Intel® Dual Band Wireless-AC 3168 802.11 a/b/g/n/ac (1x1) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™; Intel® Dual Band Wireless-AC 8265 802.11 a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™; Realtek 802.11 ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo; Intel® Dual Band Wireless-AC 8265 802.11 a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, vPro™; Intel® XMM™ 7360 LTE-Advanced; Realtek 802.11 ac (1x1) Wi-Fi® and Bluetooth® 4.2 Combo; Intel® Dual Band Wireless-AC 9560 802.11 a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, vPro™ <sup>12,13,14,15</sup>
<b>Expansion slots</b>	1 microSD
<b>Ports and Connectors</b>	2 USB 3.1 Gen 1 (1 charging); 1 VGA; 1 USB 3.1 Type-C™ Gen 1 (Power delivery, DisplayPort™); 1 serial; 1 RJ-45; 1 headphone/microphone combo; 1 HDMI 1.4; 1 docking connector; 1 AC power <sup>43</sup> (Cables are not included.)
<b>Input devices</b>	HP Advanced Keyboard with numeric keypad; Clickpad with multi-touch gesture support, taps enabled as default;
<b>Communications</b>	HP Module with NXP NFC Controller NPC300 I2C NCI; Intel® I219-LM GbE, vPro™; Intel® I219-V GbE, non-vPro™ <sup>15,16</sup> ;
<b>Camera</b>	720p HD camera <sup>15,17,19</sup>
<b>Available Software</b>	HP 3D DriveGuard; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP JumpStart; HP LAN Protection; HP MAC Address Manager; HP Noise Cancellation Software; HP Recovery Manager; HP Support Assistant; HP Velocity; Native Miracast support; Buy Office (Sold separately) <sup>21,22,23</sup>
<b>Security management</b>	Absolute persistence module; HP BIOSphere Gen4; HP DriveLock and Automatic DriveLock; HP Fingerprint Reader; HP Password Manager; HP Secure Erase; 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; HP Sure Start Gen4; Windows Defender <sup>28,29,30,31,32,33,34,35,36,37,45</sup>
<b>Management features</b>	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>25,26,27</sup>
<b>Power</b>	90 W USB Type-C™ adapter; HP Smart 65 W External AC power adapter; HP Smart 65 W USB Type-C™ adapter; HP Smart 45 W External AC power adapter; HP Smart 45 W USB Type-C™ adapter; HP Smart 90 W External AC power adapter; HP Smart 45 W 2-prong External AC power adapter <sup>39,40</sup>
<b>Battery type</b>	HP Long Life 3-cell, 48 Wh Li-ion <sup>39</sup>
<b>Battery life</b>	Up to 14 hours and 30 minutes <sup>38</sup>
<b>Dimensions</b>	37.7 x 25.7 x 2.39 cm
<b>Weight</b>	Starting at 2.18 kg (non-touch); Starting at 2.41 kg (touch) (Weight will vary by configuration.)
<b>Energy efficiency compliance</b>	ENERGY STAR® certified and EPEAT® Gold registered configurations available <sup>36</sup>
<b>Warranty</b>	HP Services offers 3 year and 1 year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1 year or 3 year limited warranty as the platform. 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: <a href="http://www.hp.com/go/cpc">http://www.hp.com/go/cpc</a> .

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### Recommended Accessories and Services

#### HP USB-C Universal Dock



Transform your HP notebook or tablet into a complete desktop experience with the HP USB-C Universal Dock, which delivers USB-C™ charging<sup>1</sup> and connections for your network, dual 4K displays, and accessories with one cable connection.

**Product number: 1MK33AA**

#### 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 lockable<sup>1</sup> zippers, a secure RFID pocket, and room for your device up to 17.3" diagonal, phone, accessories, and so much more.

**Product number: 25C67AA**

#### HP UltraSlim Docking Station



Designed exclusively for ultraslim HP EliteBook Notebook PCs, the HP UltraSlim Docking Station expands display, network, and device connectivity so you can be more productive throughout the day—all through a simple one-click slide-in dock.

**Product number: D9Y32AA**

#### HP 65W Smart AC Adapter



Feed your notebook with controlled servings of electricity. HP's new 65W Smart AC Adapter regulates power and offsets electrical spikes, is designed to reduce cable stress, and includes a special dongle to support current and prior HP models – perfect for replacing your notebook's power adapter or as a needed back-up.

**Product number: H6Y89AA**

#### HP Slim Wireless Keyboard and Mouse



Boost productivity and maximize your workspace with the stylish and compact HP Slim Wireless Keyboard and Mouse, designed to complement the 2015 class of HP Business PCs.

**Product number: T6L04AA**

#### HP 3-year Travel Next Business Day Low End Notebook Only Hardware Support



This HP services offers notebook users on the go prompt, reliable coverage in major geographies of the world, for 3 years. For more information on Care Pack services, please visit [www.hp.com/go/cpc](http://www.hp.com/go/cpc).

**Product number: UC909E**

## HP ProBook 650 G4 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 and/or software 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> MIL STD 810G testing is pending and 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 Pack.
- <sup>3</sup> Sold separately or as an optional feature.
- <sup>4</sup> Quad-core and hexa-core Intel® Core™ processors are optional. 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>5</sup> Discrete graphics not available with hexa-core processors. Video conferencing requires internet connection and creative applications are sold separately.
- <sup>6</sup> HP Sure Start Gen4 is available on HP ProBook products equipped with Intel® or AMD 8th generation processors.
- <sup>7</sup> HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- <sup>8</sup> HP Privacy Camera only available on non-touch screens equipped with HD camera and must be installed at the factory.
- <sup>9</sup> HP Multi Factor Authenticate requires 7th or 8th Generation Intel® Core™ processor, Intel® integrated graphics, and Intel® WLAN. Three authentication factors requires an Intel® vPro™ processor.

### 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>2</sup> Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- <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> Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- <sup>5</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 Windows 7 drivers on <http://www.support.hp.com>.
- <sup>6</sup> Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.
- <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> Not available with Intel® Optane™ Memory or Intel® Optane™ SSD.
- <sup>10</sup> Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.
- <sup>11</sup> DVD-Writer does not support DVD RAM. Don't copy copyright protected materials.
- <sup>12</sup> Wireless access point and Internet service required and sold separately. 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.
- <sup>13</sup> Dynamic Regulatory Solution will auto-change AC WLAN to abgn by passive scan when entering Indonesia.
- <sup>14</sup> WWAN module 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>15</sup> Sold separately or as an optional feature.
- <sup>16</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>17</sup> HD content required to view HD images.
- <sup>18</sup> AMD Dynamic Switchable Graphics technology requires an Intel processor, plus an AMD Radeon™ discrete graphics configuration and is not available on FreeDOS and Linux OS. With AMD Dynamic Switchable Graphics 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).
- <sup>19</sup> Internet access required.
- <sup>20</sup> Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- <sup>21</sup> Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media.
- <sup>22</sup> HP ePrint Drive 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](http://www.hp.com/go/eprintcenter)). Print times and connection speeds may vary.
- <sup>23</sup> HP Support Assistant requires Windows and Internet access.
- <sup>25</sup> HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
- <sup>26</sup> HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement>.
- <sup>27</sup> Ivanti Management Suite subscription required.
- <sup>28</sup> HP BIOSphere Gen4 requires Intel® or AMD 8th Gen processors. Features may vary depending on the platform and configurations.
- <sup>29</sup> Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
- <sup>30</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>31</sup> HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.
- <sup>32</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>33</sup> HP Fingerprint Sensor sold separately or as an optional feature.
- <sup>34</sup> Windows Defender Opt in and internet connection required for updates.
- <sup>35</sup> RAID configuration is optional and does require a second hard drive.
- <sup>36</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.
- <sup>37</sup> HP Sure Start Gen4 is available on HP Elite and HP Pro 600 products equipped with 8th generation Intel® or AMD processors.
- <sup>38</sup> 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](http://www.bapco.com) for additional details.
- <sup>39</sup> Supports HP Fast Charging.
- <sup>40</sup> Availability may vary by country.
- <sup>41</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](http://www.hp.com/go/pc). 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>42</sup> 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 at [www.hp.com/go/options](http://www.hp.com/go/options).
- <sup>43</sup> Serial port not available if VGA port is selected.
- <sup>44</sup> Some functionality of vPro™, such as Intel® Active management technology and Intel® Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel® vPro™ technology is dependant on 3rd party software providers. Compatibility of this generation of Intel® vPro™ technology-based hardware with with future "virtual appliances" is yet to be determined.
- <sup>45</sup> HP Drive Lock is not supported on NVMe™ drives.

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