HP Probook 450 G9 Options and Accessories

Item Number	Item Name	REMC Bid Price	Education List Price	REMC SKU
22229940	16GB (2x8GB) DDR4 3200	\$71.44	\$290.00	4D432AV
22229940	HP IDS UMA i7-1255U Realtek USBC 450 G9 Base NB PC	\$194.46	\$880.00	674N1AV
22229940	UPGRADE TO 32GB	\$172.64	\$560.00	4D434AV
22229940	UPGRADE TO 512GB SSD	\$91.80	\$310.00	4E472AV
22229940	HP USB External DVDRW Drive	\$31.20	\$83.00	F2b56ut
22229940	HP 45W Smart AC Adapter (4.5mm)	\$20.80	\$65.00	H6Y88UT
22229940	HP USB-C Dock G5 with Power Adapter	\$145.60	\$229.00	5TW10AA
22229940	Asset Tag System (Minimum 40 systems)	\$6.00	\$12.00	MI Asset
22229940	Load Image (Minimum 40 Systems)	\$8.00	\$15.00	Mi Image
22229940	Windows 11 Pro 64 Downgrade Win 10 Pro 64	\$96.74	\$218.00	4S310AV
22229940	Upgrade to 1 year NBD On Site Provided by HP	\$10.50	\$19.00	UK701E
22229940	Upgrade to 2 year Pickup and Return Provided by HP	\$18.90	\$55.00	UK727E
22229940	Upgrade to 2 Year NBD On Site Provided by HP	\$32.55	\$69.00	UQ877E
22229940	Upgrade to 3 Year Pickup and Return Provided by HP	\$34.65	\$83.00	UK707E
22229940	Upgrade to 3 Year NBD On Site Provided by HP	\$54.60	\$123.00	UK703E
	Upgrade to 3 Year Pickup and Return with Accidental Coverage			
22229940	Provided by HP	\$86.10	\$161.00	UK712E
22229940	HP 3y Absolute DDS Mobile Premium	\$70.00	\$83.00	U9BB5E
22229940	UPGRADE TO 1TB SSD	\$187.20	\$545.00	4E469AV
	Can't find the options or accessories you're looking for? Cheo	k the REMC estale	a or contact the yonder	-1

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[®] processor², multiple graphics options³, and fast, upgradeable dual channel SODIMM memory⁴, the HP ProBook 450 drives performance with long battery life and highspeed 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.⁵
- 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.⁵
- 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.²
- Customize charging options and manage battery performance with the easy-to-use HP Power Manager dashboard. $^{\rm 6}$
- 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.^{7,8}
- Driving support towards increasing sustainability, we use ocean-bound plastics in the speaker enclosure and display bezel on the EPEAT[®] Gold registered and ENERGY STAR[®] certified HP ProBook with 50% recycled stamped aluminum.^{9,10}
- 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.¹¹
- 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, highspeed CAT16 WWAN with an external SIM card.^{12,13}
- 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.¹⁴

HP ProBook 450 15.6 inch G9 Notebook PC Specifications Table



*Product image may differ from actual product		
	Windows 11 Pro ¹ Windows 11 Pro Education ¹	
	Windows 11 Home – HP recommends Windows 11 Pro for business ¹	
Available Operating Systems	Windows 11 Home Single Language ¹ Windows 11 Pro (Windows 11 Enterprise available with a Volume Licensing Agreement) ¹	
	Windows 10 Pro (available through downgrade rights from Windows 11 Pro) ^{1,2} FreeDOS	
Processor family ⁶	12th Generation Intel® Core™ i3 processor; 12th Generation Intel® Core™ i5 processor; 12th Generation Intel® Core™ i7 processor	
	Intel® Core™ i3-1215U with Intel® UHD Graphics (1.2 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 10 MB L3 cache, 6 cores, 8 threads);	
Available Processors ^{3,4,5,6}	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. GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 12 cores, 16 threads); Intel® Core™ i7-125D (1.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel® Core™ i7-125D (1.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads); Intel® Core™ i7-126DP (1.6 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 12 cores, 16 threads); Intel® Pentium® Gold 8505 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® 7305 with Intel® UHD Graphics (1.1 GHz base frequency, 8 MB L3 cache, 5 cores, 6	
	threads) 32 GB DDR4-3200 MHz RAM ⁷	
Maximum memory	Both slots are accessible/upgradeable by IT or self-maintainers only. Supports dual channel memory.	
Memory slots	2 SODIMM	
Internal storage	up to 1 TB PCle® NVMe™ M.2 SSD TLC ⁸ 128 GB up to 512 GB PCle® NVMe™ Value M.2 SSD ⁸ 128 GB up to 256 GB PCle® NVMe™ Value M.2 SSD ^{8,9}	
Display size (diagonal, metric)	39.6 cm (15.6")	
Dicalau	15.6° diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 400 nits, low 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 ^{16,20,21}	
Display	39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 400 nits, low power, 72% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, 75% NTSC; 39.6 cm (15.6") diagonal, 75	
Available Graphics	Integrated: Intel® UHD Graphics; Intel® Iris® X® Graphics ^{16,17} Discrete: NVIDA® Geforce® MX570 (2 GB DDR6 dedicated) ¹⁸ (Support HD decode, DX12, HDMI 2.1b.)	
Audio	Dual stereo speakers, dual array microphones	
Wireless technologies	(Compatible with Miracast-certified devices.)	
Ports and Connectors	3 SuperSpeed USB Type-A 5Gbps signaling rate (1 charging, 1 power); 1 SuperSpeed USB Type-C [®] 10Gbps signaling rate (USB Power Delivery, DisplayPort [™] 2.1); 1 headphone/microphone combo; 1 AC power; 1 RJ-45; 1 HDMI 2.1b; (HDMI cable sold separately.); Optional Ports: 1 External Nano SIM slot for WWAN ¹⁵	
Input devices	HP Premium Keyboard – spill resistant, optional backlit keyboard with drain and DuraKeys ¹⁹ ; Clickpad with multi-touch gesture support;	
Communications	Realtek RTL8111HSH-CG 10/100/1000 GbE NIC ¹⁴ , Intel [®] Wi-Fi GE AX211 (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Nealtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek Wi-Fi G RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 combo; Realtek RTL8852BE 802.11a/b/g/n/ax (2x2) and Bluetooth [®] 5.2 c	
Camera	720p HD camera with temporal noise reduction (select models); IR Camera (select models) ¹⁶	
Software	HP Connection Optimizer; HP Hotkey Support; HP MAC Address Manager; HP Support Assistant; myHP; HP Privacy Settings; Touchpoint Customizer for Commerci HP Notifications; HP QuickDrop; Tile App; HP Quick Touch; HP PC Hardware Diagnostics Windows; Buy Office (Sold separately) ^{23,24,25}	
Available software	HP Smart Support ⁵⁷	
Security management	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; ^{28,29,30,31,32,33,34,35}	
Security Software Licenses	HP Wolf Pro Security Edition ⁵⁶	
Fingerprint reader	Fingerprint sensor (select models)	
Management features	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 ^{26,27}	
Power	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 ³⁷	
Battery type	HP Long Life 3-cell, 42.75 Wh polymer; HP Long Life 3-cell, 51.3 Wh polymer ³⁶	
Dimensions	14.14 x 9.2 x 0.78 in 35.94 x 23.39 x 1.99 cm	
Weight	Starting at 3.83 lb Starting at 1.74 kg (Weight will vary by configuration.)	
Ecolabels	EPEAT® registered configurations available; TCO Certified configurations available ³⁹	
Energy star certified (series fixed)	ENERGY STAR [®] certified	
Sustainable impact specifications	Low Halogen ⁴⁰	
Warranty	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/ao/cpc.	

HP ProBook 450 15.6 inch G9 Notebook PC

Accessories and services (not included)



HP recommends Windows 11 Pro for business

HP ProBook 450 15.6 inch G9 Notebook PC

Messaging Footnotes

² 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.
³ Intel processor and graphics options must be configured at the time of purchase.

⁴ 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.

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

⁹ HP Word Security for Business requires Windows 10 or higher, includes various HP security features and is available from the Microsoft store.
 ⁶ HP Ower Manager requires Windows 10 or higher and is available from the Microsoft store.
 ⁷ 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.
 ⁸ 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.
 ⁸ 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.
 ⁹ Laptop speaker enclosure and display bezel components made with 5% ocean bound plastic.
 ¹⁰ Based on US EPEAT[®] registration according to IEEE 1680.1-2018 EPEAT[®] status varies by country. Visit http://www.epeat.net for more information.
 ¹¹ UN Demonstrate frame with end to be for a status varies by country. Visit http://www.epeat.net for more information.

¹⁴ Based on US EPEAl¹⁹ registration according to IEEE 1680.1-2018 EPEAl¹⁹. EPEAl¹⁹ status varies by country. Visit http://www.epeat.net for more information. ¹¹ HP Tamper Lock is an optional feature that must be configured at the factory and requires a supervisor password be established by available with three-year warranty. ¹² 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 the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other Wi-Fi 6E is backwards compatible with where Wi-Fi 6E is supported. ¹³ Wi-Fi⁹ supporting gigabit data rate is achievable with Wi-Fi 6E (802.11ax) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels. ¹⁴ 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.

Technical Specifications Footnotes

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 enabled. High speed internet and Microsoft account required. (SP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com.
 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 unistalled to their version. You must back up all data (files, photos, etc.) before uninstalling operating systems to avoid loss of your data.
 Autore 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® The performance.
 Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
 Intel® Turbo Boost performance waite depending on hardware, software and overall system configurations. See www.intel.com/technology/turboboost for more information.
 Intel® Turbo Boost performance waite depending on hardware, software and overall system on products configured with Intel and AMD 7th generation and forcessors or provide any Windows 8 or Windows 7 drivers on http://www.support.htp.windows.

http://www.support.hp.com.
7
Ue 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.
8
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.
9
Second storage is only available with non-WWAN base unit and Primary M.2 storage.
10
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.
Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs. Wi-Fi 6E router, sold separately, valiability of public wireless access points limited. Wi-Fi 6 (B02.11 ax) is backwards compatible with prior 802.11 specs.
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Wireless access points and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (B02.11 ax) is backwards compatible with prior 802.11 specs.
12
Wir

4G LTE not available on all products, in all regions. ¹⁴ 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

 ¹⁴ The term ¹¹(/10//100° or ¹ugabit 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.
 ¹⁵ SIM slot is not user accessible without WWAN configuration.
 ¹⁶ FHD/HD content required to view FHD/HD images.
 ¹⁷ Intel[®] Infs[®] (K[®] Graphics capabilities require system to be configured with Intel[®] Core[™] IS or 17 processors and dual channel memory. Intel[®] Iris[®] X[®] Graphics with Intel[®] Core[™] IS or 7 processors and single channel memory will only function as UHD graphics.
 ¹⁸ Intel[®] Iris[®] depends on processor. NMDIA[®] Optimus[™] technology requires an Intel processor plus an NVIDIA[®] Geforce[®] discrete graphics configuration and is available on Windows 10 Pro OS. With NVIDIA[®] Optimus[™] technology, full enablement of all threads by leader that OD we had the low for the low for the content of a Content of Content and the low for the content of the low for the l 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).

discrete graphics video and display features may not be supported on all systems le.g. UpenGL applications will run on the integrated GPU or the APU as the case may be).
¹⁹ Backlit keyboard is an optional feature.
²⁰ Resolutions are dependent upon monitor capability, and resolution and color depth settings.
²¹ Actual brightness will be lower with touchscreen.
²³ HP Support Assistant requires Windows and Internet access.
²⁴ HP QuickDrop requires Internet access and Windows 10 or higher PC preinstalled with HP QuickDrop app and either an Android device (phone or tablet) running Android 7 or higher with the Android HP QuickDrop app, and /or an iOS device (phone or tablet) running [S 12 or higher with the iOS HP QuickDrop app.
²⁵ Some Tile features require optional subscription to Tile Premium. Tile application for Windows 10 available for download from the Windows Store, Mobile phone app available for download from App Store and Google Play. Requires IOS 11 and greater or Android 16 audit incrition as long as the PC has abstracy power.

²⁴ Ph Secure Frase for the finations instituted in the mational instituted of statuted as a feature and calculated and solution of the fination institute. Place Frase for solution of the mation institute of the fination institute of the fination institute of the fination institute. Place Frase for solution of the mation institute of the fination institute. Place Frase for solution institute of the fination institute of the fination institute of the fination institute of the fination institute. Place Frase for the fination institute of the fina

⁷ Availability may vary by country. 38 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 http://www.hp.com/go/cpc

^{And} 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 or narware purchase. Restrictions and unitations apply. For details, visit http://www.hp.com/go/cp. 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.
 ⁴⁰ Beternal power supplies, power cords, cables and peripherals are not to w Halogen. Service parts obtained after purchase may not be Low Halogen.
 ⁵⁴ HP Wolf Security for Business requires Windows 10 or higher, includes various HP Security features and to all is available on HP Product. See product details for included security features and OS requirement.
 ⁵⁴ HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and to all ever device-level configuration products. See product details for included security features and OS requirement.
 ⁵⁴ HP Smart Support automatically collects the telemetry necessary upon initial bot of the product a deliver device-level configuration data and health insights and is available preinstalled on select products, thru HP Factory Configuration Service; or it can be downloaded. For more information about how to enable HP Smart Support for download, please visit http://www.hp.com/smart-support.

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