HP ProBook 450 15.6 inch G10 Notebook PC

Essential, commercial-grade features

The HP ProBook 450 15-inch laptop provides growing businesses with the commercial-grade performance, multi-layered endpoint security, and durability in an easily upgradeable design. Powered by the latest Intel® processor[2] and long battery life, this feature-rich PC is well-equipped for long-term productivity and helps enable hybrid work.

Optimized for hybrid work

Stand out no matter where you work. Enhance communications with lighting adjustments[3] and optional features like Wi-Fi 6E[4,5] and the 88-degree field-of-view 5MP camera.[4] Easily connect accessories with two multi-function USB-C® ports.

Advanced security and durability

Safeguard your business with multi-layered, endpoint security features that help protect your PC from malware and hacking. This PC passes 19 MIL-STD tests[6] for durability and is easily serviceable—helping make the most of your IT investment.

Performance for growing business

Keep up with demanding tasks on this feature-rich HP ProBook 450. Take on the workday with the latest Intel® processor[2,4], NVIDIA RTX2050 Discrete Graphics[4], and long battery life. Easily upgrade memory and storage as needed.

*Product image may differ from actual product

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Featuring

HP recommends Windows 11 Pro for business
Work anywhere without compromising on performance or security with Windows 11, powered by HP collaboration and connectivity technology.[1]

Latest Intel® multi-core processor
Configure your HP ProBook 450's CPU for the perfect combination of power, snappy performance, and value. The latest Intel® processor handles multiple work tasks smoothly and reliably with multiple processing cores to divide up the work.[2]

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.[7]

Capture all the details
Whether on a call, recording video, or taking photos, the HD with IR or optional 5MP camera with Temporal Noise Reduction provides exceptional clarity and increased definition. Keep everyone in view with an 88-degree field of view.[3]

Smooth graphics performance
Boost your laptop's performance with optional NVIDIA® GeForce RTX2050 discrete graphics. Enable fast execution for your computing, multimedia, and AI workloads with enhanced, dedicated next-gen graphics.[3]

Wireless 4G LTE connectivity
Stay connected almost anywhere with the optional embedded CAT16 WWAN. Highly reliable advanced network connectivity helps expand connectivity and enhance security.[8]

A modern universal docking solution
Quickly transition to desktop productivity with two multi-function USB Type-C® ports. Simply connect with USB-C® cables from your laptop to your displays and other peripherals.[9]

Protect your devices and data
Utilize the optional HP Wolf Protect and Trace service with threshold cryptography to find, lock, and erase data from all of your premium HP devices, helping ensure that your sensitive information is protected.[10]

Bright, crystal-clear images
Enjoy vibrant FHD images with 400 nits of brightness, adding a new dimension to digital content. Combined with a Low Blue Light panel, this screen helps provide an enhanced overall viewing experience.[3,11]

Upgradeable DDR4 SO-DIMM slot
Elevate your laptop's performance with up to 32GB dual channel memory. Easily upgrade with an easy-open cover featuring self-capturing screws and maintain memory to meet the growing demands of your business.[12]

A self-healing solution
Firmware attacks can completely devastate your PC. Stay protected with HP Sure Start Gen7, the self-healing BIOS that automatically recovers itself from attacks or corruption.[13]

Help keep it safe
Stop unwanted changes to security settings and help limit the spread of malware with HP Sure Run Gen5 which identifies, quarantines, and provides reporting on attackers trying to kill processes.[14]

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Technical specifications

Available Operating Systems	Windows 11 Pro[1] Windows 11 Pro Education[1] Windows 11 Home – HP recommends Windows 11 Pro for business[1] Windows 11 Home Single Language – HP recommends Windows 11 Pro for business[1] Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement)[1] Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade)[1,2] FreeDOS
Processor family[6]	Intel® Pentium® processor 13th Generation Intel® Core™ i7 processor 13th Generation Intel® Core™ i5 processor 13th Generation Intel® Core™ i3 processor
Available Processors[3,4,5,46]	Intel® Core™ i7-1355U (1.2 GHz E-core base frequency, 1.7 GHz P-core base frequency, up to 3.7 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-cores, 12 threads) Intel® Core™ i5-1335U (0.9 GHz E-core base frequency, 1.3 GHz P-core base frequency, up to 3.4 GHz E-core Max Turbo frequency, up to 4.6 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-cores, 12 threads) Intel® Core™ i3-1340P with Intel® UHD Graphics (0.9 GHz E-core base frequency, 1.2 GHz P-core base frequency, up to 3.3 GHz E-core Max Turbo frequency, up to 4.5 GHz P-core Max Turbo frequency, 10 MB L3 cache, 2 P-cores and 4 E-cores, 6 threads) Intel® Pentium® U300 with Intel® UHD Graphics (0.9 GHz E-core base frequency, 1.2 GHz P-core base frequency, up to 3.3 GHz E-core Max Turbo frequency, up to 4.4 GHz P-core burst frequency, 8 MB L3 cache, 1 P-core and 4 E-cores, 6 threads) Intel® Core™ i7-1360P (1.6 GHz E-core base frequency, 2.2 GHz P-core base frequency, up to 3.7 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, 18 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads) Intel® Core™ i5-1340P (1.4 GHz E-core base frequency, 1.9 GHz P-core base frequency, up to 3.4 GHz E-core Max Turbo frequency, up to 4.6 GHz P-core Max Turbo frequency, 12 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads) Intel® Core™ i5-1334U (0.9 GHz E-core base frequency, 1.3 GHz P-core base frequency, up to 3.4 GHz E-core Max Turbo frequency, up to 4.6 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-core, 12 threads)
Maximum memory	32 GB DDR4-3200 MHz RAM; (Transfer rates up to 3200 MT/s.); [7] 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 PCIe® NVMe™ M.2 SSD TLC[8] 128 GB up to 512 GB PCIe® NVMe™ Value SSD[8]
Display size (diagonal, metric)	39.6 cm (15.6")
Display[14,15,16]	39.6 cm (15.6") diagonal, FHD (1920 x 1080), narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), narrow bezel, anti-glare, 400 nits, low power, 100% sRGB; 39.6 cm (15.6") diagonal, QHD (2560 x 1440), anti-glare, narrow bezel, 300 nits, 72% NTSC
Available Graphics	Integrated: Intel® UHD Graphics; Intel® Iris® Xᵉ Graphics[14,42] Discrete: NVIDIA® GeForce RTX™ 2050 Laptop GPU (4 GB GDDR6 dedicated)[43] (Support CUDA, Optimus, PhysX, GPU Boost 2.0.)
Audio	Dual stereo speakers, dual array microphones
Ports and connectors	2 USB Type-A 5Gbps signaling rate (1 charging, 1 power); 1 AC power; 1 HDMI 2.1; 1 stereo headphone/microphone combo jack; 1 RJ-45; 2 USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1) ; (HDMI cable sold separately.); Optional Ports: 1 External Nano SIM slot for WWAN[41]
Input devices	HP Premium Keyboard – spill-resistant, full-size, optional backlit keyboard with numeric keypad[13]; Clickpad with multi-touch gesture support
Communications	(Compatible with Miracast-certified devices.); ; Realtek RTL8111HSH-CG 10/100/1000 GbE NIC[40] ; Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card, non-vPro®; Realtek Wi-Fi 6E RTL8852CE 802.11a/b/g/n/ax (2x2) and Bluetooth® 5.3 wireless card ; Intel® XMM™ 7560 LTE Advanced Pro Cat 16 ; (Support on S3 AC mode only.)
Camera	720p HD camera with temporal noise reduction (select models); IR Camera (select models) [14]
Software	HP Connection Optimizer; HP Hotkey Support; HP Support Assistant; HP Power Manager; myHP; HP Privacy Settings; HP Notifications; HP QuickDrop; HP PC Hardware Diagnostics Windows; HP Services Scan; HP Smart Support (download)Microsoft 365 sold separately and requires Internet access for activation.[17,18,19,38,44,45]
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; HP Client Security Manager Gen7; 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; HP Sure Run Gen5; Secured-Core PC Enable
Security Software Licenses	HP Wolf Pro Security Edition[56]
Fingerprint reader	Fingerprint sensor (select models)

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Management features	HP Client Management Script Library (download); HP Driver Packs (download); HP Client Catalog (download); HP Manageability Integration Kit Gen4 (download); HP Image Assistant Gen5 (download); HP Cloud Recovery[20,21]
Power	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[37]
Battery type	HP Long Life 3-cell, 42 Wh Li-ion polymer; HP Long Life 3-cell, 51 Wh polymer[36]; Battery is internal and not replaceable by customer. Serviceable by warranty.
Dimensions	35.94 x 23.39 x 1.99 cm; 6.9 x 48.3 x 30.5 cm (Package)
Weight	Starting at 1.79 kg; (Weight will vary by configuration. Does not include power adapter.)
Ecolabels	CECP; IT ECO Declaration; EPEAT® Gold registered in the U.S.; SEPA; Taiwan Green Mark; Japan PC Green Label; KOECO; TCO Certified[39]
Energy star certified	ENERGY STAR® certified
Sustainable impact specifications	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[44]
Warranty	1-year and 3-year limited warranties 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 .

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Footnotes

Messaging Footnotes

[1] 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. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com .

[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] Requires myHP application and Windows OS.

[4] Optional feature that must be configured at the time of purchase.

[5] Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, and Windows 11 to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.

[6] MIL-STD 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. Accidental damage requires an optional HP Accidental Damage Protection Care Service.

[7] HP Wolf Security for Business requires Windows 10 and 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.

[8] WWAN is an optional feature, requires factory configuration and separately purchased service contract. Check with service provider for coverage and availability in your area. 4G LTE not available on all products, in all regions.

[9] USB-C® cables sold separately and not included.

[10] HP Wolf Security Protect and Trace is and optional feature and is available for select HP 400, 600, 800, 1000, Windows based Elite Dragonfly Laptops, select 800 desktops, and Z1 G8 Workstations and will function when the device is powered on and connected to the Internet. HP TechPulse a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements, please visit http://www.hpdaas .

[11] Full high-definition (FHD) content required to view FHD images.

[12] 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.

[13] HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.

[14] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

Specification Footnotes

[1] 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. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com .

[2] 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.

[3] 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.

[4] Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

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

[6] 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 .

[7] 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.

[8] For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

[9] Wi-Fi 6E requires a Wi-Fi 6E router, and Windows 11, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.

[10] Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

[11] WWAN module is an optional feature, requires factory configuration 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.

[12] Gigabit class Category 16 4G LTE 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 100Mhz 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.

[13] Backlit keyboard is an optional feature.

[14] High-definition (HD) / Full high-definition (FHD) content required to view HD /FHD images.

[15] Resolutions are dependent upon monitor capability, and resolution and color depth settings.

[16] Actual brightness will be lower with touchscreen.

[17] HP Support Assistant requires Windows and Internet access.

[18] HP Quick Drop 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 iOS 12 or higher with the iOS HP QuickDrop app.

[19] HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit http://www.hp.com/smart-support .

[20] HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html .

[21] HP Cloud Recovery is available for Z by HP, HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, wired network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Detail please refer to: https://support.hp.com/us-en/document/c05115630 .

[22] 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.

[23] HP Secure Erase: For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.

[24] HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

[25] HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS.

[26] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

[27] HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.

[28] HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.

[29] 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.

[30] HP Client Security Manager Gen7 requires Windows and is available on the select HP Elite and Pro PCs.

[31] HP BIOSphere Gen6 features may vary depending on the platform and configuration.

[32] HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.

[33] HP Fingerprint sensor is an optional feature that must be configured at purchase.

[34] Secured-Core PC Enable requires an Intel® vPro® , AMD Ryzen™ Pro processor or Qualcomm® processor with SD850 or higher and requires 8 GB or more system memory. Secured-core PC is enabled from the factory.

[35] HP Fingerprint sensor is an optional feature that must be configured at purchase.

[36] For new batteries, actual battery Watt-hours (Wh) may differ from the design capacity and may have a full charge capacity that differs by up to 10, which is typical for lithium-ion batteries. Battery capacity naturally decreases over time and with use, depending on several factors such as battery health management settings, shelf life, temperature, environment, loaded apps, features, system configuration, and power settings.

[37] Availability may vary by country.

[38] Microsoft Office sold separately and requires Internet access for activation.

[39] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.

[40] 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.

[41] SIM slot is not user accessible without WWAN configuration.

[42] Intel® Iris® X® Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® X® Graphics with Intel® Core™ i5 or 7 processors and single channel memory will only function as UHD graphics.

[43] Integrated graphics depends on processor. NVIDIA® Optimus™ technology requires an Intel processor, plus an NVIDIA® GeForce® discrete graphics configuration and is available on Windows 10 Pro OS or higher. With NVIDIA® Optimus™ 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).

[44] HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.

[45] HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications. For full system requirements or to disable this feature, please visit https://www.hpdaas.com/requirements . Not applicable in China.

[46] Intel® Core™ i5-1345U processor available only in India.

[56] HP Wolf Pro Security Edition is available preloaded on select SKUs and, depending on the HP product purchased, includes a license with a term length communicated to you at purchase and in your order confirmation email. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Security Software - End-User license Agreement (EULA) that can be found at: https://support.hp.com/us-en/document/ish_3875769-3873014-16 as that EULA is modified by the following: 7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition is effective upon 4 months after the date the HP Product was shipped by HP and will continue for the term communicated to you at purchase and in your order confirmation email ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support. Notwithstanding the foregoing, the license shall expire no later than one year after the fixed term of the subject license ends.

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