![HP logo]

HP ProBook 450 G9 Intel® Core™ i5 i5-1235U Laptop 39.6 cm (15.6") Full HD 16 GB DDR4-SDRAM 256 GB SSD Wi-Fi 6E (802.11ax) Windows 11 Pro Silver

Brand : HP

Product family: ProBook

Product code: 6A295EA

Product name : 450 G9

- Intel® Core™ i5-1235U (up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads)
- Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade)
- 39.6 cm (15.6") diagonal FHD display
- Intel® Iris® Xᵉ Graphics
- 16 GB memory; 256 GB SSD storage

ProBook 450 15.6 inch G9 Notebook PC Wolf Pro Security Edition, 15.6", Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade), Intel® Core™ i5, 16GB RAM, 256GB SSD, FHD

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Essential features in a modern design
The HP ProBook 450 Laptop provides growing businesses with the commercial-grade performance, HP Wolf Security for Business[5], and durability in a compact design. This PC is powered by an Intel® processor[2] and protected with always-on security you can trust.

Design

Product type *	Laptop
Product colour *	Silver
Form factor *	Clamshell
Market positioning	Everyday
Country of origin	China
Original brand name	HP

Display

Display diagonal *	39.6 cm (15.6")
Display resolution *	1920 x 1080 pixels
Touchscreen *	✘
HD type	Full HD
Panel type	IPS
Native aspect ratio	16:9
Anti-glare screen	✔
Display bezel technology	Micro-Edge
Display brightness	250 cd/m²
Display diagonal (metric)	39.6 cm
RGB colour space	NTSC
Colour gamut	45%

Processor

Processor manufacturer *	Intel
Processor family *	Intel® Core™ i5
Processor generation	12th gen Intel® Core™ i5
Processor model *	i5-1235U
Processor cores	10
Processor threads	12
Processor boost frequency	4.4 GHz
Processor frequency *	1.3 GHz
Processor cache	12 MB
Processor cache type	L3
Configurable TDP-down	12 W

Memory

Internal memory *	16 GB

Ports & interfaces

USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	3
USB 3.2 Gen 2 (3.1 Gen 2) Type-C ports quantity	1
Ethernet LAN (RJ-45) ports	1
HDMI ports quantity *	1
HDMI version	2.1b
Combo headphone/mic port	✔
Charging port type	USB Type-C
USB Type-C DisplayPort Alternate Mode	✔
USB Power Delivery	✔

Keyboard

Keyboard special features	Resistente a derrames
Pointing device	Clickpad
Numeric keypad *	✔
Keyboard backlit	✔
Spill-resistant keyboard	✔
Input device model	Teclado HP Premium

Software

Pre-installed software	HP Connection Optimizer; HP Hotkey Support; HP MAC Address Manager; HP Support Assistant; myHP; HP Privacy Settings; Touchpoint Customizer for Commercial; HP Notifications; HP Quick Touch; HP PC Hardware Diagnostics Windows
Operating system installed *	Windows 11 Pro
Bundled software	HP Wolf Pro Security Edition (1 year)

Processor special features

Intel Flex Memory Access	✔
Intel Trusted Execution Technology	✔
Intel VT-x with Extended Page Tables (EPT)	✔
Execute Disable Bit	✔

Memory

Internal memory type	DDR4-SDRAM
Memory clock speed	3200 MHz
Memory form factor	SO-DIMM
Memory layout (slots x size)	1 x 16 GB
Memory slots	2x SO-DIMM
Maximum internal memory *	32 GB
Number of free internal memory expansion slots	1
ECC	✗
Non-ECC	✓

Storage

Total storage capacity *	256 GB
Storage media *	SSD
Total SSDs capacity	256 GB
Number of SSDs installed	1
SSD capacity	256 GB
SSD interface	PCI Express
NVMe	✓
SSD form factor	M.2
Optical drive type *	✗
Card reader integrated	✗
Compatible memory cards	MicroDrive, MicroSD (TransFlash), SD, SDHC, SDXC, SxS

Graphics

Discrete graphics card model *	Not available
On-board graphics card *	✓
On-board GPU manufacturer	Intel
Discrete graphics card *	✗
On-board graphics card family	Intel Iris Xe Graphics
On-board graphics card model *	Intel Iris Xe Graphics

Audio

Built-in speaker(s)	✓
Number of built-in speakers	2
Built-in microphone	✓
Number of microphones	2

Camera

Front camera	✓
Front camera signal format	720p
Front camera HD type	HD
Infrared (IR) camera	✓

Network

Top Wi-Fi standard *	Wi-Fi 6E (802.11ax)
Wi-Fi standards	Wi-Fi 6E (802.11ax)
Mobile network connection *	✗
Antenna type	2x2
WLAN controller model	Intel Wi-Fi 6E AX211
WLAN controller manufacturer	Intel
Ethernet LAN	✓
Ethernet LAN data rates	10,1000,100 Mbit/s
Bluetooth	✓
Bluetooth version	5.3

Processor special features

CPU configuration (max)	1
Embedded options available	✗
Intel Virtualization Technology for Directed I/O (VT-d)	✓
Intel Virtualization Technology (VT-x)	✓

Brand-specific features

HP speaker type	HP Dual Speakers
HP Connection Optimizer	✓
HP Support Assistant	✓
HP Smart AC Adapter	✓
HP front camera	HP Privacy HD IR
HP Security tools	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
HP Management tools	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
HP segment	Business

Battery

Battery technology	Lithium-Ion (Li-Ion)
Number of battery cells	3
Battery capacity *	51 Wh

Power

AC adapter power	45 W
AC adapter frequency	50 - 60 Hz
AC adapter input voltage	100 - 240 V

Security

Fingerprint reader	✓
Trusted Platform Module (TPM)	✓
Trusted Platform Module (TPM) version	2.0
Password protection	✓
Password protection type	BIOS, Power on, User

Certificates

Low halogen	✓

Sustainability

Sustainability compliance	✓
Sustainability certificates	ENERGY STAR
Sustainable technologies and materials	Low Halogen; Bulk packaging available; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; Outside box and corrugated cushions are 100% sustainably sourced and recyclable; 10% post-consumer recycled plastic; Ocean-bound plastic in speaker enclosure(s)

Weight & dimensions

Width	359.4 mm
Depth	233.9 mm
Height	19.9 mm

Weight & dimensions	
Weight *	1.74 kg

Packaging data	
Package width	69 mm
Package depth	520 mm
Package height	305 mm

Packaging content	
Keyboard included	✔
Stylus pen	✘

Logistics data	
Harmonized System (HS) code	8471300000

Other features	
Number of speakers	2

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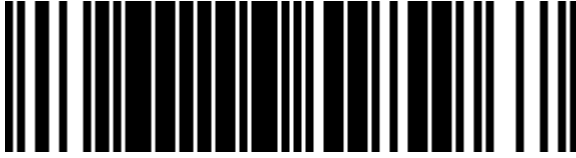
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