# HP 450 G9 Intel® Core™ i5 i5-1235U Laptop 39.6 cm (15.6") Full HD 8 GB DDR4-SDRAM 256 GB SSD Wi-Fi 6E (802.11ax) Windows 11 Pro Silver

**Brand :** HP

**Product name :** 450 G9

**Product code:** 5Y4B1EA

- 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
- 39.6 cm (15.6") diagonal FHD display
- Intel® Iris® Xe Graphics
- 8 GB memory; 256 GB SSD storage
ProBook 450 15.6 inch G9 Notebook PC, 15.6", Windows 11 Pro, Intel® Core™ i5, 8GB RAM, 256GB SSD, FHD

HP 450 G9 Intel® Core™ i5 i5-1235U Laptop 39.6 cm (15.6") Full HD 8 GB DDR4-SDRAM 256 GB SSD Wi-Fi 6E (802.11ax) Windows 11 Pro Silver:

**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 |
| Introduction year | 2022 |
| 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 |
| 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 * | 8 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 | Odporność na zalanie |
| Pointing device | Clickpad |
| Numeric keypad * | ✔ |
| Spill-resistant keyboard | ✔ |
| Full-size keyboard | ✔ |
| Input device model | Klawiatura 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 |

## Processor special features

| | |
|---|---|
| Intel Flex Memory Access | ✔ |
| Intel Trusted Execution Technology | ✔ |
| Intel VT-x with Extended Page Tables (EPT) | ✔ |
| Execute Disable Bit | ✔ |
| CPU configuration (max) | 1 |

## Memory

| | |
|---|---|
| Internal memory type | DDR4-SDRAM |
| Memory clock speed | 3200 MHz |
| Memory layout (slots x size) | 1 x 8 GB |
| Memory slots | 2x SO-DIMM |
| 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 | ✓ |
| Optical drive type * | ✖ |

## 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 |
| Bluetooth | ✓ |
| Bluetooth version | 5.3 |

## Processor special features

| | |
|---|---|
| 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 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 Software provided | HP Hotkey Support; HP MAC Address Manager; myHP; HP Privacy Settings; Touchpoint Customizer for Commercial; HP Notifications; HPQuickDrop; Tile App; HP Quick Touch; HP PC Hardware Diagnostics Windows |
| HP segment | Business |
| HP GTIN (EAN/UPC) | 196548698516 |

## 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

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

## 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 |

## Weight & dimensions

| | |
|---|---|
| Height | 19.9 mm |
| 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 |
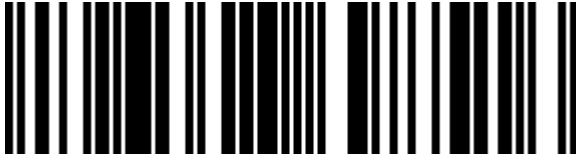
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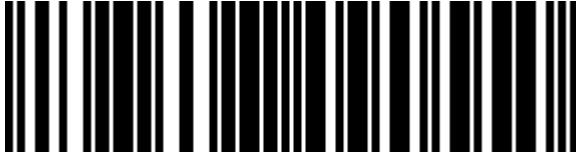
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