## **HP ProBook 650 G5 Notebook**





Operating System

Windows 10 Pro 64

Windows 10 Pro 64 (National Academic only)

Windows 10 Home 64 - HP recommends Windows 10 Pro for business

Windows 10 Home Single Language 64

Windows 10 Pro (Windows 10 Enterprise available with a Volume Licensing Agreement)

FreeDOS 1

**Processor Family** 

8th Generation Intel® Core<sup>™</sup> i7 processor (i7-8565U); 8th Generation Intel® Core<sup>™</sup> i5 processor (i5-8265U); 8th Generation Intel® Core<sup>™</sup> i3 processor (i3-8145U); 8th Generation Intel® Core<sup>™</sup> i7 processor (i7-8665U); 8th Generation Intel® Core<sup>™</sup> i5 processor (i5-8365U)

**Available Processors** 

Intel® Core™ i7-8565U with Intel® UHD Graphics 620 (1.8 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i7 8665U vPro™ processor with Intel® UHD Graphics 620 (1.8 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i5-8265U with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores); Intel® Core™ i5 8365U vPro™ processor with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores); Intel® Core™ i3-8145U with Intel® UHD Graphics 620 (2.1 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 4 MB L3 cache, 2 cores)

Display size (diagonal)

15.6"

Maximum memory

32 GB DDR4-2400 SDRAM

Both slots are customer accessible/upgradeable. Supports dual channel memory

**Memory slots** 

2 SODIMM

Internal storage

up to 512 GB Intel® PCIe® NVMe™ QLC M.2 SSD with 32 GB Intel® Optane™ memory H10

up to 256 GB Intel® PCle® NVMe™ QLC M.2 SSD with 16 GB Intel® Optane™ memory

H10

256 GB up to 2 TB PCIe® Gen3x4 NVMe™ M.2 SSD TLC 256 GBup to 512 GB M.2 SATA FIPS 140-2 SSD TLC up to 512 GB PCIe® Gen3x4 NVMe™ M.2 SED SSD TLC

up to 512 GB PCIe® M.2 Value SSD



up to 256 GB PCle® NVMe™ Value M.2 SSD

up to 256 GB M.2 SATA-3 SED SSD up to 128 GB M.2 SATA-3 SSD TLC 500 GB up to 1 TB 7200 rpm SATA

up to 500 GB 7200 rpm SATA FIPS 140-2 SED

Storage acceleration

16 GB PCIe® NVMe™ Intel® Optane™ Memory for storage acceleration

**Optical drive** 

DVD-ROM; DVD-Writer

**Display** 

15.6" diagonal HD SVA eDP anti-glare WLED-backlit slim, 220 nits, 45% NTSC (1366 x 768); 15.6" diagonal FHD IPS eDP anti-glare WLED-backlit slim, 250 nits, 45% NTSC (1920 x 1080); 15.6" diagonal FHD IPS eDP WLED-backlit slim touch screen, 250 nits, 45% NTSC (1920 x 1080); 15.6" diagonal FHD IPS eDP + PSR WLED-backlit ultraslim touch screen with HP Sure View Gen3 Integrated Privacy Screen, 650 nits, 72% NTSC (1920 x 1080)

**Available Graphics** 

Integrated: Intel® UHD Graphics 620

Discrete: AMD Radeon™ 540X (2 GB GDDR5 dedicated)

(Support HD Decode, DX12, and HDMI 1.4b.)

Wireless technologies

Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, vPro™; Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, non-vPro™; Intel® XMM™ 7360 LTE-Advanced Cat 9; Intel® XMM™ 7262 LTE-Advanced Cat 6; Intel® AX200 Wi-Fi 6 (2x2) and Bluetooth® 5 Combo, vPro™; Intel® AX200 Wi-Fi 6 (2x2) and Bluetooth® 5 Combo, non-vPro™

**Expansion slots** 

1 microSD

**Ports and Connectors** 

2 USB 3.1 Gen 1 (1 charging); 1 USB 3.1 Type-C<sup>™</sup> Gen 1 (Power delivery, DisplayPort<sup>™</sup>); 1 RJ-45; 1 headphone/microphone combo; 1 HDMI 1.4; 1 docking connector; 1 AC power; 1 VGA or Serial Port (Cables are not included.)

Input devices

HP Advanced Keyboard, Spill-resistant with drain, optional DuraKeys and backlit; Clickpad with multi-touch gesture support

Communications

HP Module with NXP NFC Controller NPC300 I2C NCI; Intel® I219-LM GbE, vPro™; Intel® I219-V GbE, non-vPro™

Camera

Camera 720p HD camera

**Available Software** 

Absolute persistence module; HP DriveLock and Automatic DriveLock; HP Fingerprint Sensor; HP Secure Erase; Power-on authentication; Preboot authentication; Smart card reader; TPM 2.0 embedded security chip shipped with Windows 10 (Common Criteria EAL4+ Certified); HP Sure Click; Windows Defender; HP Sure Start Gen5; HP BIOSphere Gen5; HP Client Security Gen5; HP Sure Sense

Management features

HP Driver Packs; HP System Software Manager (SSM); HP BIOS Config Utility (BCU); HP Client Catalog; HP Manageability Integration Kit Gen3



Power HP Smart 65 W External AC power adapter; HP Smart 65 W EM External AC power adapter;

HP Smart 65 W USB Type-C<sup>™</sup> adapter; HP Smart 45 W External AC power adapter; HP Smart 45 W USB Type-C<sup>™</sup> adapter; HP Smart 45 W 2-prong External AC power adapter

Battery type HP Long Life 3-cell, 48 Wh Li-ion

Battery life Up to 15 hours

specifications

**Dimensions** Dimensions 37.7 x 25.7 x 2.39 cm (non-touch); 37.7 x 25.7 x 2.49 cm (touch)

Weight Starting at 2.18 kg (non-touch); Starting at 2.4 kg (touch) (Weight will vary by configuration.)

Energy efficiency ENERGY STAR® certified; EPEAT® Silver compliance

Environmental Low halogen; TCO 5.0 Certified

Warranty

HP Services offers 3-year and 1-year limited warranties and 90 days software support options depending on country and the SKU selected by the customer. 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 with HP Care Pack Services, optional extended service contracts that go beyond

the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc.

the standard limited warranties. To choose the right level of service for your HP product, use

