

## HP ProBook 650 G2 i5-6300U Notebook 39.6 cm (15.6") HD Intel® Core™ i5 8 GB DDR4-SDRAM 256 GB SSD Windows 7 Professional Black, Silver

Brand : HP Product family: ProBook Product code: 1AZ98AW

Product name: 650 G2

- Windows 7 Professional 64
- 6th gen Intel® Core™ i5 i5-6300U (3M Cache, 2.4 GHz)
- 39.6 cm (15.6") HD (1366 x 768)
- 8GB (2133 MHz) DDR4-SDRAM (1 x 8 GB) & 256GB SSD
- Lithium-Ion (Li-Ion) battery
- 2.31 kg & 27.4 mm thin, USB C Thunderbolt port

HP ProBook 650 G2 Notebook PC (ENERGY STAR)

HP ProBook 650 G2. Product type: Notebook, Form factor: Clamshell. Processor family: Intel® Core™ i5, Processor: i5-6300U, Processor frequency: 2.4 GHz. Display diagonal: 39.6 cm (15.6"), HD type: HD, Display resolution: 1366 x 768 pixels. Internal memory: 8 GB, Internal memory type: DDR4-SDRAM. Total storage capacity: 256 GB, Storage media: SSD, Optical drive type: DVD Super Multi. Operating system installed: Windows 7 Professional. Product colour: Black, Silver











Design		Ports & interfaces	
Product type *	Notebook	Charging port type	DC-in jack
Product colour *	Black, Silver	Keyboard	
Form factor *	Clamshell	Pointing device	Touchpad
Country of origin	China	Numeric keypad *	<b>√</b>
Display		Spill-resistant keyboard	<b>√</b>
Display diagonal *	39.6 cm (15.6")	Software	
Display resolution *	1366 x 768 pixels	Operating system architecture	64-bit
Touch screen *	×	Operating system installed *	Windows 7 Professional
HD type	HD		
LED backlight	<b>V</b>	Processor special features	
Native aspect ratio Display surface	16:9 Matt	Intel Wireless Display (WiDi) Technology	✓
	Matt	Intel My WiFi Technology	✓
Processor		Intel® Smart Response Technology	✓
Processor manufacturer *	Intel	Intel Identity Protection Technology	<b>√</b>
Processor generation	6th gen Intel® Core™ i5	Intel Hyper-Threading Technology	<b>√</b>
Processor *	i5-6300U	Intel Turbo Boost Technology	2.0
Processor family *	Intel® Core™ i5	Intel® Small Business Advantage	,
Processor frequency *	2.4 GHz	(Intel® SBA)	•
Processor boost frequency	3 GHz	Enhanced Intel SpeedStep	✓
Processor number of cores	2	Technology	,
Processor threads	4	Intel Clear Video HD Technology	<b>4</b>
System bus data transfer rate	4 GT/s	Intel Clear Video Technology	<b>V</b>
Processor cache	3 MB	Intel® InTru™ 3D Technology	<b>V</b>
Processor cache type	Smart Cache	Intel® Insider™	<b>√</b>
Processor socket	LGA 1356 (Socket B2)	Intel® Quick Sync Video Technology	<b>∀</b>
Processor lithography	14 nm	Intel Flex Memory Access	<b>√</b>
Processor operating modes	64-bit	Intel® Smart Cache	<b>√</b>
Processor series	Intel® Core™ i5-6300 Mobile Series	Intel AES New Instructions	<b>√</b>
Processor codename	Skylake	Intel Trusted Execution Technology	<b>√</b>
Bus type	QPI	Intel Enhanced Halt State	✓
Stepping	D1	Intel VT-x with Extended Page Tables (EPT)	✓

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Processor		Processor special features	
Thermal Design Power (TDP)	15 W	Intel® Secure Key	<b>V</b>
Configurable TDP-up frequency	2.5 GHz 25 W	Intel TSX-NI	<b>4</b>
Configurable TDP-up Configurable TDP-down	7.5 W	Intel Stable Image Platform Program (SIPP)	✓
Configurable TDP-down frequency	0.8 GHz	Intel® OS Guard	✓
Tjunction	100 °C	Intel Software Guard Extensions	<b>√</b>
Maximum number of PCI Express	12	(Intel SGX) Intel Clear Video Technology for MID	
lanes		Intel 64	,
PCI Express slots version PCI Express configurations	3.0 1x4, 4x1	Execute Disable Bit	<b>V</b>
ECC supported by processor	X	Idle States	✓
Memory		Thermal Monitoring Technologies	✓
Internal memory *	8 GB	Processor package size	42 X 24 mm
Internal memory type	DDR4-SDRAM	Supported instruction sets Processor code	SSE4.1, SSE4.2, AVX 2.0
Memory clock speed	2133 MHz	CPU configuration (max)	SR2F0 1
Memory form factor	SO-DIMM	Embedded options available	<u>,</u>
Memory layout (slots x size)	1 x 8 GB	Graphics & IMC lithography	14 nm
Memory slots	2x SO-DIMM	Intel Virtualization Technology for	1
Maximum internal memory *	16 GB	Directed I/O (VT-d)	*
Storage		Intel Identity Protection Technology version	1.00
Total storage capacity * Storage media *	256 GB SSD	Intel Smart Response Technology version	1.00
Total SSDs capacity  Number of SSDs installed	256 GB 1	Intel Stable Image Platform Program (SIPP) version	1.00
Solid-state drive capacity	256 GB	Intel Secure Key Technology version	1.00
Solid-state drive interfaces Optical drive type *	SATA DVD Super Multi	Intel Small Business Advantage (SBA) version	1.00
Card reader integrated	✓ Super Multi	Intel TSX-NI version	1.00
Compatible memory cards	SD, SDHC, SDXC	Intel Virtualization Technology (VT-x)	✓
Graphics		Processor ARK ID	88190
Graphics  Discrete graphics card model *	Not available	, '	88190 ✓
Graphics Discrete graphics card model * On-board graphics card *	Not available	Processor ARK ID	
Discrete graphics card model *		Processor ARK ID Conflict-Free processor	
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family	X Intel® HD Graphics	Processor ARK ID Conflict-Free processor Special features	1
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model *	×	Processor ARK ID Conflict-Free processor Special features HP ePrint	1
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base	X Intel® HD Graphics	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant	✓ ✓ ✓
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model *	✓ Intel® HD Graphics Intel® HD Graphics 520	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager	1 1 1
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card	Intel® HD Graphics Intel® HD Graphics 520 300 MHz	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools	✓ ✓ ✓ HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-lon (Li-lon)
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-Ion (Li-Ion) 3
Discrete graphics card model * On-board graphics card * Discrete graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-lon (Li-lon)
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Discrete graphics card model * On-board graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL version On-board graphics card ID	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB 12.0 4.4	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells Battery capacity *	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-Ion (Li-Ion) 3
Discrete graphics card model * On-board graphics card * On-board graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL version On-board graphics card ID  Audio	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB 12.0 4.4 1916	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells Battery capacity * Energy Management	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-lon (Li-lon) 3 48 Wh
Discrete graphics card model * On-board graphics card * On-board graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL version On-board graphics card ID  Audio Number of built-in speakers	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB 12.0 4.4 1916	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells Battery capacity * Energy Management AC adapter power	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-lon (Li-lon) 3 48 Wh
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Discrete graphics card model * On-board graphics card * On-board graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL version On-board graphics card ID  Audio Number of built-in speakers Built-in microphone  Camera  Front camera  Network	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB 12.0 4.4 1916	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells Battery capacity * Energy Management AC adapter power  Security Cable lock slot Trusted Platform Module (TPM) Password protection Password protection type  Sustainability Sustainability certificates	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-Ion (Li-Ion) 3 48 Wh
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Discrete graphics card model * On-board graphics card * On-board graphics card * On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL version On-board graphics card ID  Audio Number of built-in speakers Built-in microphone  Camera Front camera  Network Wi-Fi Wi-Fi standards	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB 12.0 4.4 1916 2    802.11b, 802.11g, Wi-Fi 4 (802.11n), 802.11a, Wi-Fi 5 (802.11ac)	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells Battery capacity * Energy Management AC adapter power  Security Cable lock slot Trusted Platform Module (TPM) Password protection Password protection type  Sustainability Sustainability certificates Weight & Dimensions Width	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-Ion (Li-Ion) 3 48 Wh  45 W  Power on  ENERGY STAR
Discrete graphics card model * On-board graphics card * On-board graphics card amily On-board graphics card family On-board graphics card model * On-board graphics card base frequency On-board graphics card dynamic frequency (max) Maximum on-board graphics card memory On-board graphics card DirectX version On-board graphics card OpenGL version On-board graphics card ID  Audio Number of built-in speakers Built-in microphone  Camera Front camera  Network Wi-Fi Wi-Fi standards  Ethernet LAN connection	Intel® HD Graphics Intel® HD Graphics 520 300 MHz 1000 MHz 1.74 GB 12.0 4.4 1916 2    802.11b, 802.11g, Wi-Fi 4 (802.11n), 802.11a, Wi-Fi 5 (802.11ac)	Processor ARK ID Conflict-Free processor  Special features HP ePrint HP Support Assistant HP Touchpoint Manager HP Security tools HP Software provided HP segment  Battery Battery technology Number of battery cells Battery capacity * Energy Management AC adapter power  Security Cable lock slot Trusted Platform Module (TPM) Password protection Password protection type  Sustainability Sustainability certificates Weight & Dimensions	HP Client Security, HP BIOSphere HP Client Management Solutions, HP Mobile Connect Pro, HP Noise Reduction Software Business  Lithium-lon (Li-lon) 3 48 Wh  45 W  Power on  ENERGY STAR

USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *  USB 3.2 Gen 1 (3.1 Gen 1) Type-C ports quantity *  Ethernet LAN (RJ-45) ports quantity 1 3D compatibility X  DisplayPorts quantity 1 Intel segment tagging Enterprise  VGA (D-Sub) ports quantity 1  Microphone in X  Combo headphone/mic port   Weight *  2.31 kg  Other features  AC adapter bundled  Intel segment tagging Enterprise  Enterprise	Ports & interfaces		Weight & Dimensions	
USB 3.2 Gen 1 (3.1 Gen 1) Type-C ports quantity *  Ethernet LAN (RJ-45) ports quantity 1 3D compatibility X  DisplayPorts quantity 1 Intel segment tagging Enterprise  DVI port X  VGA (D-Sub) ports quantity 1  Microphone in X		2	Weight *	2.31 kg
ports quantity * AC adapter bundled   Ethernet LAN (RJ-45) ports quantity   DisplayPorts quantity   DVI port   VGA (D-Sub) ports quantity   Microphone in   AC adapter bundled    Intel segment tagging   Enterprise   Enterprise   Enterprise    Microphone in   X	USB 3.2 Gen 1 (3.1 Gen 1) Type-C	1	Other features	
DisplayPorts quantity 1 Intel segment tagging Enterprise  DVI port X  VGA (D-Sub) ports quantity 1  Microphone in X			AC adapter bundled	✓
DVI port X VGA (D-Sub) ports quantity 1 Microphone in X	Ethernet LAN (RJ-45) ports quantity	1	3D compatibility	×
VGA (D-Sub) ports quantity 1 Microphone in X	DisplayPorts quantity	1	Intel segment tagging	Enterprise
Microphone in X	r· ·	×		
		1		
Combo headphone/mic port	•	×		
Docking connector	' ' '	4		







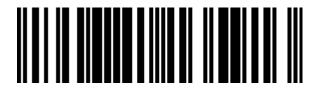




































































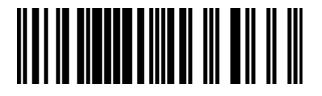




















































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