

# SAVVY STYLE

HP ProBook 4310 Notebook PC



HP recommends Windows Vista® Business

## HP ProBook 4310s Notebook PC

Stylish  
affordability.  
13.3-inch  
diagonal  
high-definition<sup>6</sup>  
display, Intel  
processors

An impressive combination of mobile office features in a small, stylish package makes the HP ProBook 4310s Notebook PC an affordable choice to keep your business moving forward.

### **Business doesn't need to be boring – or expensive**

The HP ProBook 4310s Notebook PC looks great with a sleek, slim design that packs an array of features normally reserved for more expensive notebooks. Available in a new Merlot or glossy Noir finish with a more spacious keyboard, it delivers refined simplicity.

### **Combining the perfect blend of productivity and mobility**

Rely on the latest Intel® Core™2 Duo processor<sup>3</sup> to perform on the job. DDR3 system memory allows you to transfer twice the data rate of DDR2. The low-profile 13.3-inch diagonal, 16:9 LED-backlit HD<sup>6</sup> display gives you improved brightness, contrast and clarity with a screen that is more power-efficient than regular LCD screens. Choose between high-performance ATI discrete graphics, featuring dedicated video memory, or integrated Intel UMA graphics<sup>3</sup> that balances memory usage between graphics and the system. Whether you're across the street or across the country, integrated HP Mobile Broadband powered by Gobi,<sup>19</sup> Wi-Fi CERTIFIED™ WLAN<sup>7</sup> and Bluetooth® help you stay connected.

### **HP Professional Innovations**

*Built to protect.* Integrated, customizable security solutions help defend your network, your applications, and your data. Drive Encryption for HP ProtectTools encodes all information on your hard drive so that your sensitive information is unreadable to an unauthorized person if your notebook is lost or stolen.

*Built to simplify.* HP QuickLook 2<sup>11</sup> provides read capability of email, calendar, task and contact information in seconds at the touch of a button without having to boot up.

*Built to last.* With innovative engineering and HP Total Test Process (a validation process with more than 95,000 hours of testing per platform), you get a reliable and durable notebook. Plus HP 3D DriveGuard helps protect your notebook's hard drive against impact, bumps, or drops.

*Built to conserve.* HP Smart AC Adapters are energy-efficient power adapters with a built-in sensor that alerts the notebook when its power rating has been reached, allowing the notebook to make power adjustments when necessary.



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<b>Operating system</b>	<b>Preinstalled:</b> Genuine Windows Vista® Business 32 <sup>1</sup> Genuine Windows Vista® Home Basic 32 <sup>1</sup> Genuine Windows Vista® Home Premium 32 <sup>1</sup> Genuine Windows Vista® Business 32 with downgrade to Genuine Windows® XP Professional custom installed <sup>1,2</sup> FreeDOS	<b>Supported:</b> Genuine Windows Vista® Business 64 <sup>1</sup> <b>Certified:</b> SUSE Linux Enterprise Desktop 11
<b>Processor</b> (availability depends on chipset)	Intel® Core™2 Duo <sup>3</sup> (up to 2.8 GHz, 6 MB L2 cache), Intel® Celeron® Dual-Core (up to 1.8 GHz, 1 MB L2 cache)	
<b>Chipset</b>	Mobile Intel PM45 Express Chipset, Mobile Intel GM45 Express Chipset, Mobile Intel GL40 Express Chipset	
<b>Memory</b>	DDR3 SDRAM, 1333 MHz, two slots supporting dual channel memory, 2048/3072/4096 MB SODIMMs, up to 8192 MB total (Up to 4096 MB max on GL40 Chipset) <sup>13</sup>	
<b>Internal Storage<sup>14</sup></b>	160/250/320 GB 7200 rpm, 500 GB 5400 rpm SATA HDD (with HP 3D DriveGuard)	
<b>Removable Storage</b>	Fixed 12.7-mm SATA optical drive: Blu-ray ROM DVD+/-RW SuperMulti DL LightScribe Drive*, DVD+/-RW SuperMulti DL LightScribe Drive <sup>4</sup> * Models with integrated graphics require Mobile Intel GM45 Express chipset and Windows Vista to support the Blu-ray DVD drive; models with discrete graphics support it with either Windows Vista or Windows XP.	
<b>Display</b>	13.3-inch diagonal LED-backlit HD <sup>6</sup> (1366 x 768), 13.3-inch diagonal LED-backlit HD <sup>6</sup> BrightView (1366 x 768)	
<b>Graphics<sup>9</sup></b>	Mobile Intel GMA 4500MHD, ATI Mobility Radeon™ HD 4330 with 512 MB dedicated video memory and HyperMemory* support *Indicates dedicated video memory and shared system memory.	
<b>Audio/Visual</b>	High Definition Audio, stereo speakers, stereo headphone/line out, stereo microphone in, integrated dual-microphone array; optional integrated 2 MP webcam	
<b>Wireless support<sup>7,8,19</sup></b>	Optional HP un2400 EV-DO/HSPA Mobile Broadband Module (requires mobile network operator service) with HP Connection Manager; Intel 802.11 a/b/g/n draft 2.0; Broadcom 802.11 a/b/g/n draft 2.0, b/g; Bluetooth™ 2.1, HP Wireless Assistant	
<b>Communications<sup>15</sup></b>	Marvell Ethernet (10/100/1000 NIC), optional 56K v.92 modem	
<b>Expansion slots</b>	(1) ExpressCard/34 slot, Secure Digital slot (SD, MMC)	
<b>Ports and connectors</b>	(3) USB 2.0 ports, VGA, HDMI, stereo microphone in, stereo headphone/line out, power connector, RJ-11/modem (optional), RJ-45/ethernet	
<b>Input device</b>	Full-sized keyboard, touchpad with scroll zone	
<b>Software</b>	HP Recovery Manager, HP QuickLook 2, <sup>11</sup> HP SoftPaq Download Manager, Roxio Creator Business (for optional DVD+/-RW and DVD/CDRW drives)	
<b>Security</b>	HP Fingerprint Sensor (optional), <sup>17</sup> HP ProtectTools, Device Access Manager, Enhanced Pre-Boot Security, HP SpareKey, HP Disk Sanitizer, <sup>10</sup> Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP ProtectTools, <sup>10</sup> Kensington Lock slot, McAfee Security Solution <sup>18</sup>	
<b>Dimensions</b>	1.07 (at front) x 12.79 x 8.97 in / 27.3 (at front) x 325 x 228 mm	
<b>Weight</b>	Starting at: 4.19 lb / 1.9 kg (or 3.69 lb / 1.67 kg with no optical drive; weight will vary by configuration)	
<b>Power</b>	8-cell (73 WHr) Lithium-Ion battery, 4-cell (37 WHr) Lithium-Ion battery, 90W HP Smart AC Adapter (Discrete), 65W HP Smart AC Adapter, HP Fast Charge <sup>16</sup>	
<b>Expansion Solutions<sup>17</sup></b>	HP USB 2.0 Docking Station, HP Essential USB Port Replicator	
<b>Warranty</b>	Limited 1-year warranty options available, depending on country, 1-year limited warranty on primary battery. Optional HP Care Pack Services are extended service contracts which go beyond your standard warranties. For more details visit: <a href="http://www.hp.com/go/lookuptool">http://www.hp.com/go/lookuptool</a> .	

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1. Certain Windows Vista product features require advanced or additional hardware. See [www.microsoft.com/windowsvista/getready/hardwarereqs.mspx](http://www.microsoft.com/windowsvista/getready/hardwarereqs.mspx) and [www.microsoft.com/windowsvista/getready/capable.mspx](http://www.microsoft.com/windowsvista/getready/capable.mspx) for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit [www.windowsvista.com/upgradeadvisor](http://www.windowsvista.com/upgradeadvisor).
2. Windows Vista Business disk may be included for future upgrade if desired. To qualify for this downgrade an end user must be a business (including governmental or educational institutions) and is expected to order at least 25 customer systems with the same custom image.
3. Dual Core is a technology designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations.
4. Double-layer discs can store more data than single layer discs. However, double-layer discs burned with this drive may not be compatible with many existing single-layer DVD drives and players. LightScribe media required and sold separately. LightScribe creates a monochrome image. Note that DVD-RAM cannot read or write to 2.6GB single-sided/5.2 GB double-sided – version 1.0 media. Don't copy copy-right protected materials.
5. As Blu-Ray is a new format containing new technologies, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. HD-DVD movies cannot be played on this device. Models with integrated graphics require Mobile Intel GM45 Express chipset and Windows Vista to support the Blu-Ray DVD drive; models with discrete graphics support it with either Windows Vista or Windows XP.
6. HD content required to view HD images
7. Wireless access point and Internet service is required and is not included. Availability of public wireless access points limited
8. The specifications for the 802.11n WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11n WLAN devices.
9. Shared video memory (UMA) uses part of the total system memory for video performance. System memory dedicated to video performance is not available for other use by programs.
10. For the use cases outlined in the DOD 5220.22-M Supplement.
11. HP QuickLook 2 is accessible when the notebook is off or in hibernation from Windows XP or Vista. Timings may vary depending on the system configuration.
12. Dual Channel is only supported when the system is configured with DDR2 symmetric memory (i.e. 2x256).
13. 32-bit operating systems can only address ~3.2 GB. To fully utilizing memory configurations of 4GB or more, a 64-bit operating system is required.
14. For hard drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 8 GB (for XP) and 10 GB (for Vista) of system disk is reserved for the system recovery software.
15. The term "10/100/1000" or "Gigabit" Ethernet indicates compliance with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/sec. For high speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.
16. HP Fast Charge recharges your primary battery up to 90% within 90 minutes when the system is off.
17. Sold separately or purchased as an optional feature.
18. 60 day trial period. Internet access required to receive updates. First update included. Subscription required for updates.
19. Gobi wireless technology requires separately purchased wireless data service contracts. Check with local service provider for coverage and availability in your area. . Connection speeds will vary due to location, environment, network conditions, and other factors.



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