

# BUSINESS STYLE

HP ProBook 4510s Notebook PC



HP recommends Windows Vista® Business

## HP ProBook 4510s Notebook PC

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

An impressive combination of mobile office features makes the newly-designed HP ProBook 4510s Notebook PC an excellent price-for-performance package.

### Technology to get the job done

The HP ProBook 4510s Notebook PC boasts a sleek design that packs an array of features normally reserved for more expensive notebooks. Available in a new glossy Noir finish with a more spacious keyboard layout and separate numeric keypad, it delivers refined simplicity with a clean design and the latest Intel® Core™2 Duo processors.<sup>3</sup>

The low-profile 15.6-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 help you focus on your business

*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. File Sanitizer for HP ProtectTools<sup>10</sup> can permanently delete individual files, folders and personally identifiable information from your notebook.

*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.* HP 3D DriveGuard helps protect your notebook's hard drive against impact, bumps, or drops using a three-axis accelerometer which detects any sudden movement and initiates protective action, so your critical information is protected while you are on the move.

*Built to conserve.* HP Business Notebook PCs are designed to reduce their impact on the environment by eliminating or reducing substances of concern, using fewer resources, reducing energy consumption, and designing for recyclability.



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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® with downgrade to Genuine Windows® XP Professional custom installed <sup>1,2</sup> SUSE Linux	<b>Supported:</b> Genuine Windows Vista® Business 64 <sup>1</sup>  <b>Certified:</b> SuSE Linux Enterprise Desktop 10
<b>Processor</b>	Intel® Core™2 Duo <sup>3</sup> (up to 2.8 GHz, 6 MB L2 cache), Intel® Celeron® Dual-Core (up to 1.83 GHz, 1 MB L2 cache), Intel® Celeron® (up to 2.20 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>	DDR2 SDRAM, 800 MHz, two slots supporting dual channel memory, 1024/2048/4096 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>	160/250/320/500 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, <sup>5</sup> DVD+/-RW SuperMulti DL LightScribe Drive <sup>4</sup>	
<b>Display</b>	15.6-inch diagonal LED-backlit HD <sup>6</sup> (1366 x 768), 15.6-inch diagonal LED-backlit HD <sup>6</sup> (1366 x 768) BrightView	
<b>Graphics<sup>9</sup></b>	Mobile Intel GMA X4500 HD or ATI Mobility Radeon™ HD 4330, with 512 MB dedicated video memory (1024 MB HyperMemory*) <small>*Indicates dedicated video memory and shared system memory. 512 MB dedicated video memory.</small>	
<b>Audio/Visual</b>	High Definition Audio, stereo speakers, stereo headphone/line out, stereo microphone in, integrated microphone; 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™ 2.0, 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, Media Card Reader	
<b>Ports and connectors</b>	(4) USB 2.0 ports, VGA, HDMI, stereo microphone in, stereo headphone/line out, power connector, RJ-11/modem, RJ-45/ethernet	
<b>Input device</b>	Full-sized keyboard with separate numeric keypad, 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 drives)	
<b>Security</b>	HP ProtectTools, Device Access Manager, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, <sup>14</sup> Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP ProtectTools, <sup>14</sup> Kensington Lock slot, McAfee Security Solution <sup>18</sup>	
<b>Dimensions</b>	1.24 (at front) x 14.6 x 9.83 in / 31.5 (at front) x 371.8 x 249.6 mm	
<b>Weight</b>	Starting at: 5.7 lb / 2.59 kg (or 5.2 lb / 2.36 kg with no optical drive; weight will vary by configuration)	
<b>Power</b>	8-cell (63 WHr) Lithium-Ion battery, 6-cell (47 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	
<b>Warranty</b>	Limited 1-year warranty; 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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