



## The Essential Guide To Buying A Laptop

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By

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## Introduction

Laptops are actually outselling traditional desktop PC's today – prices have dropped continuously over the last few years, making laptops the first choice for consumers these days. There are numerous factors that affect the price: brand, build quality, components and size to name a few. This guide is intended to help buyers who are not familiar with computer jargon, by explaining difficult terms in an accessible way, and helping buyers make an informed choice regardless of previous computer knowledge.

## What to Consider Before Buying a Laptop

The first and most important question facing you as a laptop buyer is what you will be doing with it. Are you the type of computer user who uses it (only reluctantly) to check your email and pay the bills online? In that case you probably don't need an expensive gaming rig with all the add-ons and the fastest graphics card. Save your money for a budget machine that lets you do all those things just as efficiently.

### PC or Mac?

Apple is doing a better job than ever in stealing users from Microsoft Windows to their proprietary Mac platform. Windows Vista on the other hand has received a lot of bad press since its launch. Does that mean everyone should get a Mac? Not really, but it makes sense to at the very least consider and compare the Mac when shopping for a new laptop.



Since Apple switched to Intel processors, Mac hardware will run Windows just as easily as it runs Apple's OS X. Then again, most consumers buy a MacBook for the sake of using

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Apple's operating system OS X, which is currently at version 10.5 "Leopard." It's a very stable, nice-looking, and easy to use operating system, but its software base is not as large as the PC's. This means that finding free program for this or that purpose is a lot harder for Mac users than it is for Windows users.

At the same time, many of the arguments against Windows Vista are exaggerated. Vista is not a "bad" operating system or necessarily problematic. But it does consume more resources than its predecessor XP and requires a more powerful PC to provide a pleasant experience.

Moreover, the fact remains that you have to pay a little bit more for equivalent hardware when you buy a Mac. Although Apple fans would probably argue that it's worth the premium thanks to the excellent build quality of the Mac, and of course to get to use OS X.

With the respective companies' new operating systems on the way – [Microsoft's Windows 7](#) and [Apple's OS X "Snow Leopard"](#) – the Mac vs. PC battle won't be over any time soon.

The choice ultimately boils down to personal preference. If you are inexperienced with both Vista and Leopard, read up on the differences and try them both out to find out which suits you best.

## Key Components in a Laptop

Smaller and less power-hungry components are used in laptops, to make them run cooler and more efficiently than desktop PCs. Other than portability, you will get less noise and heat with a laptop, the downside is that the components are slightly more expensive and less powerful. It can also be difficult or even impossible to upgrade later on, so it's best to choose carefully right from the start. In case you are not that savvy with computers, here are the key parts of the laptop that have the biggest effect on price and performance:



### CPU/Processor



The Central Processing Unit – also known as the CPU or just processor – is the core and "brain" of the computer. This is where all of the essential calculations take place, and therefore it has a significant effect on almost everything you do on the computer.

Its speed is measured in MHz or GHz (1000MHz). This number determines with how fast the processor handles instructions in cycles per second. Not all GHz's are created equal, however. Newer generations or different processor models can handle various amounts of instructions per cycle. Another important aspect of the CPU is its number of cores. Basically, one core equals one processor, so a dual-core processor can (at least theoretically) process twice as much data.

Intel is currently leading the processor competition, with AMD a distant second. Both companies offer powerful and dependable processors, but Intel has the performance lead for now while AMD caters to the lower-end market. Measured in both MHz and power consumption, Intel processors are also more efficient, but for everyday use this shouldn't be too noticeable.

The processor is usually the component with the most noticeable effect on both the laptop's performance and the price tag, and you can't upgrade it later, so choose wisely. Most processors today lie in the range 1.6GHz to 2.5GHz, and prices vary accordingly. Generally speaking, you will get the most performance for your money at CPU speeds around 2.0GHz.

### RAM Memory



RAM stands for Random Access Memory. As opposed to the hard drive, which stores your data, RAM is where your data resides while you're actually using it. Some tasks require huge amounts of RAM, like photo and video editing, but having lots of applications open at the same time (multitasking) while

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running others in the background will also eat lots of RAM.

When you are out of available memory, the computer starts swapping memory with the hard drive, which can slow down any system considerably. Basically, the more RAM you have, the better, and memory modules are very affordable at the moment so getting some extra RAM is definitely a good investment.

The bare minimum for running Windows Vista is 512MB, but more is definitely recommended. Try to get a laptop with at least 1GB and preferably 2GB for a smooth Vista experience. If you run XP or Mac OS X you can get away with less, but it's always a good thing to have lots of RAM, especially if you plan to edit photos or videos, or work with lots of active windows at a time.



### Hard Drive

There are two types of storage devices for your laptop – the conventional hard drive with spinning platters, and the Solid State Drive (SSD). SSDs are much faster, completely silent, and consume less power than traditional hard drives. Unfortunately, they are also much more expensive, especially when compared as cost per GB. Consequently most laptops are still equipped with old-fashioned hard drives.

If you plan to use the laptop to store a lot of videos, photos and music, look for as large a hard drive as possible (measured in GBs). However, this is one component that you actually *can* upgrade, so it's not a disaster if it gets full – you can always upgrade or use an external drive. If you'll only use it for work and store documents and spreadsheets, you won't need lots of storage – also consider an SSD in this case.



### Graphics Card

The graphics card, or GPU, is the single most important component if you want to play any modern games. There are different types of graphics: integrated or dedicated, and if you want gaming performance it's absolutely crucial that you get a laptop with dedicated graphics from either ATI or Nvidia. Integrated Intel graphics are more common, but can barely be used for anything that runs in 3D.

Powerful graphics cards generate a lot of heat and use lots of current, and for that reason you'll only find them in larger, desktop replacement-type laptops. If you plan on using your laptop for regular office work, you may actually be better off without dedicated graphics. Otherwise, look for the latest Nvidia or ATI chip for gaming ability.

## Choosing the Right Size

When you go comparison shopping for laptops of different sizes, you'll notice that prices tend to go up as sizes go down (with netbooks being a notable exception). The most common size is around 15 inches. A 14 to 15-inch laptop is usually a reasonable compromise between portability and performance. Smaller, ultraportable laptops are fitted with more expensive and less powerful low voltage processors, which are excellent for having a long battery life when travelling, but less suited for more demanding tasks like games.

### Mainstream/Desktop Replacement Laptops

Most laptops fall into this category; 14, and 15 inches or larger with standard components. The screen is large enough to work in front of for longer periods, while you retain the portability aspect (if it's not much larger than 15 inches). These laptops can be designed for almost any task – business use, home entertainment or gaming – and are available in all price categories. Bigger desktop replacement laptops allow for even more performance, on par with most desktop PCs.

### Ultraportable

Lightweight, thin and ultraportable laptops (excluding netbooks) are designed for mobility from the ground up. Screen sizes range from 11" to 13" and the components are custom made to reduce weight and prolong battery life.

### Netbooks

Netbooks are a category of their own in several ways. It's a relatively new phenomenon, originally inspired by the OLPC (One Laptop per Child) initiative and later by the computer manufacturer ASUS' extremely popular EEE PC series. By netbooks we refer to small, 7" to 10" laptops with less powerful hardware, intended for light usage such as web surfing and simple office tasks.

Most netbooks are built on Intel's Atom – a single-core, small form factor processor with low power draw and less computing power than regular laptop processors. Having only a netbook might be sufficient for some, but it's good to know that they are not even remotely capable of more strenuous tasks like gaming or high definition video playback. Not yet, at least.

### Gaming

Dedicated gaming laptops are usually quite large and heavy, with a 17" or even larger screen. If you can settle for a graphics card that isn't the fastest, you might be able to find some smaller variants too that provide enough power for light gaming.

## Most Popular Laptops – Early 2009

### Apple



#### MacBook 13"

The 13-inch MacBook has been updated with an all-aluminum “unibody” build, new Intel processors, and Nvidia 9400M graphics. The traditional plastic white MacBook is however still available, but only in one, limited configuration.



- [See it on Apple's website](#)
- [Video tour](#)

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### MacBook Pro

15" MacBook Pro is still the most popular laptop among designers, developers and other professionals. In addition to the MacBook's 9400M graphics, the Pro has a dedicated 9600M GT graphics card from Nvidia.



- [See it on Apples website](#)

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### MacBook Air

Apple's highly desirable ultraportable laptop has also been updated with Nvidia graphics and new low-voltage CPUs from Intel. You may choose between a 120GB traditional hard drive and an SSD with the same storage capacity.



- [See it on Apple's website](#)
- [Watch the official ad](#)

## Netbooks

Nearly all netbooks are built on the same hardware – a 1.6GHz Intel Atom CPU and integrated Intel graphics. The things that differ somewhat are the size of the screen and the hard drive capacity. The following are the most popular netbooks at the moment:



### Dell Inspiron Mini 9

- [Official site](#)
- [See on YouTube](#)

### HP Mini 1000

- [Official site](#)
- [See on YouTube](#)

### Acer Aspire One

- [Official site](#)
- [See on YouTube](#)

### Lenovo S10

- [Official site](#)
- [See on YouTube](#)

### MSI Wind

- [Official site](#)
- [See on YouTube](#)

### Asus EEE PC 901

- [Official site](#)
- [See on YouTube](#)

## Windows Laptops

### Hewlett Packard DV4

A 14-inch laptop available in a wide range of configurations: 2.0GHz-2.66GHz Intel processors and a choice between integrated Intel graphics or Nvidia's low-end 9200M dedicated.



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### Sony Vaio NS Series

Sony's NS series is a budget model available in several configurations. Most are equipped with a dual-core Intel processor and integrated graphics.



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### Lenovo ThinkPad X200

IBM sold the rights to its ThinkPad line to Lenovo a few years ago, and Lenovo has continued in the same tradition. ThinkPads are still robust, professional-looking laptops, including the 12-inch X200.



### Dell Studio 15

Dell uses a built-to-order model and most laptops from Dell are customizable in great detail. The 15-inch Studio 15 can be configured with a choice of Intel CPUs and a midrange dedicated graphics card from ATI.



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### Sony Vaio FW Series

The FW series is geared at home entertainment users, with a 16" 16:9 widescreen display. In terms of hardware, it comes with a dedicated ATI GPU and Intel processors.



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### Hewlett Packard DV5

The popular DV5 is available with both Intel and AMD processors, and a choice of several different graphics cards, including the reasonably powerful Nvidia 9600M GT, which is well suited for gaming.



### Accessories

If you spend your entire workday in front of a laptop, it's also worth considering including a larger external screen in the budget, and other ergonomically correct tools, such as an external keyboard/mouse. There is abundance of different computer accessories available, but for laptop users the most common add-ons revolve around monitors, keyboards/mice, and docking stations. You can get most of these online when purchasing your laptop, or look for them cheaper via comparison shopping sites mentioned below.

### Laptop Reviews and Comparisons Online

Buying a new laptop is a big deal for most people, and it makes sense to read up on opinions from both professionals and other users before you buy. Once you have an idea of what to look for, visit laptop review sites online – there are several good, unbiased websites that are not afraid to warn you off bad products.

Monitor section on price comparison sites such [PriceGrabber](#).

Traditional computer magazines like [PC Magazine](#) and [Laptop Magazine](#) have extensive review databases on their respective websites, but dedicated laptop sites have even more to offer.

The most popular and reputable sites to visit when looking for laptop reviews include [laptoplogic.com](#), [laptopical.com](#), [notebookreview.com](#), and [cnet.com](#)

### Best Places to Buy a Laptop

When it comes to actually purchasing the laptop, you will get great help from comparison shopping websites (unless it's a Mac laptop). Besides price comparison sites, you should also be able to find customer reviews and comments on different online retailers. What kind of support to expect after purchasing a laptop is possibly as important as the price.

The most popular places to visit for comparison shopping are [pricegrabber.com](#) and [bizrate.com](#).



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