

# 2015 Laptop Buying Guide

Whether you're looking to replace your desktop system with a space-saving, portable design, upgrade an older laptop with the latest technology, or purchase your child's first computer, our guide will help you make an educated decision for a laptop that meets all your needs.



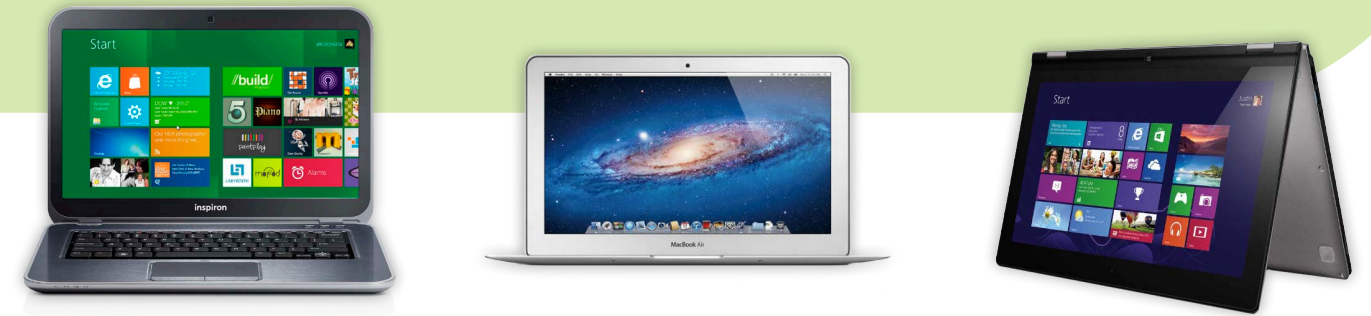
## At a glance

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## Things to consider before you get started

Laptops offer mobile convenience and powerful performance for busy lifestyles, and are a smart choice if you want to stay connected, entertained and productive wherever you go. Today's laptops are faster and more energy efficient with plenty of features for students, families and professionals.



Ready for work or play, laptops are available in different sizes and styles to tackle any task. You'll want to consider all the activities you use a computer for when choosing the best laptop to fit your individual needs. This guide will help you make an informed choice before you buy.

### How will you use your laptop?

**Light use:** Surfing the Web, paying bills online, email and social networking, organizing and sharing digital photos.

**Average use:** Storing and streaming music and movies, tasks like spreadsheet and document creation.

**Demanding use:** Sophisticated graphics and photo editing, video production, high-resolution multi-track audio recording.

More demanding users will want to invest a bit more in a higher resolution screen, a faster processor, more system memory and a larger hard drive.

### How important is portability to you?

Screen size, the type and capacity of built-in storage devices, and the presence or lack of a CD/DVD or Blu-ray drive all affect a laptop's size and weight.

### Do you want even greater versatility?

The latest trend in laptops is the versatile 2-in-1 (also known as "convertible" or "hybrid") laptop. These combine the power and functionality of a touch-screen laptop (including the ability to run standard computer programs) with the added convenience and portability of a tablet.



# Choose your operating system

Before purchasing a laptop, you will first need to decide which operating system you want for your new computer. The operating system, or OS, is the underlying software that the entire machine runs on. This should not be confused with any applications that you use (like your web browser, photo editing tool or favorite game), which all run on top of the OS itself.



## Windows 8

Windows® 10 is the latest operating system developed by Microsoft. The interface is an evolution of Windows 8, which has a tablet-like look and feel. Laptops with a Windows® 8 operating system may be upgraded to Windows 10 with a free downloadable upgrade. It offers faster start-up times, faster transitions between apps and more efficient use of power while maintaining all of the files and programs you used on previous versions of Windows.



## Mac OS X

Installed exclusively on Apple® Mac laptops, OS X is an easy-to-use interface. The most recent version, Yosemite, is quite similar to the iOS platform for Apple iPhones and iPads. It enables your Mac and iOS devices to seamlessly work together. iCloud will sync much of your data between your Apple devices, including apps like iMessage, allowing you to respond to chat messages on both your Apple devices and your MacBook.



## Chrome OS

Developed by Google, Chrome OS runs custom apps and cloud-based programs rather than traditional software. It provides a fast, simple and more secure computing experience for people who spend most of their time on the web. Chrome OS automatically downloads and installs security and software updates. Built-in Google web apps such as Google Docs, Google Music, and Gmail are included. Chrome OS is ideal if you travel frequently and want to browse the web, check email and social networks, and share photos.

# Laptop designs

With so many portable computing options available, it can be difficult to assess the benefits of each and determine which style will be best suited for your needs. Even within the laptop category, you have a choice between Traditional, Thin & Light and 2-in-1 PCs. Each of them offers distinct benefits, so it really comes down to which features are most important to you.



## Traditional Laptops

All laptops offer portability, yet weights will differ from model to model, as do screen sizes. You'll get more power in a traditional laptop, which is good if you like to perform multiple tasks that are more intense than checking email or surfing the web. Traditional laptops offer superior performance when it comes to doing real work on the computer, and you'll enjoy top-notch graphics and the convenience of internet connectivity.



## Thin & Light Laptops

Known for their ultra-portability, Thin & Light laptops are the ideal mobile companion with a super-slim design and powerful features.

Equipped with flash memory, Thin & Light laptops will wake from sleep almost as soon as you lift the lid to deliver an instant-on experience. These laptops offer an energy-efficient battery life to stay powered longer (typically 5 to 6 hours on a single charge) and weigh less than other laptops (thanks to the solid state drive).



## Chromebooks

Designed primarily for web-based tasks, Chromebooks run web-based apps, (not traditional PC applications), and come pre-installed with the apps you need for work and play. Additional apps are available in the Google Play store. To help make them thin and light, Chromebooks are built without large-capacity drives, so your documents, videos, and photos are securely saved to Google Drive (Google's Cloud-based storage service). Screen size ranges from 11 to 15 inches. For peace of mind, virus protection is built in, and files and photos are automatically backed up. Chromebooks are a

great beginner laptop for children who need to access the internet and complete homework, and a light, second household laptop for web surfing, playing games, video watching and checking email.

## 2-in-1 PCs

Versatile 2-in-1 PCs (also known as convertible or hybrid laptops) combine the power and functionality of a touch screen laptop with the portability of a tablet. Designed to work with or without keyboards, the screen is built with a special hinge design that can swivel around, fold back down, or be detached to convert into a tablet. The PC offers extra ports and a longer battery life along with the convenience and comfort of a physical keyboard and touchpad. Most screens measure 11 to 15 inches. The dual functionality lets you transform the computer to fit your needs and offers a good balance of performance and versatility - appealing for students, families, and professionals.



# Screen features & technology

## Screen Size

Ranging in size from 11 to 17 inches (or larger), laptops are generally categorized by their display size. You should determine your desired screen size based on how portable you want the laptop to be. A larger screen can increase the overall size, weight and power consumption of a laptop.

### 11 to 13 inches:

This ultra-portable size of laptop typically weighs less than 4 pounds and has a slim depth so it can easily fit into a bag or backpack. Ideal for students and anyone on the go, the size is ideal for those that like to keep their computers with them all the time, but the screen and keyboard may be a bit too cramped for some users.

### 14 to 16 inches:

These laptops fall into the general use category. They are small enough to pick up and take anywhere, yet they offer enough power to perform most any task that you want to do.

### 17 inches and larger:

These large-size laptops are considered desktop computer replacements. They are extremely powerful and suited for video games, video editing and more. With their larger size, these machines are generally too heavy and their battery life too short for convenient portability.



## Screen Resolution

Higher resolution equals better picture quality and it affects how much you can fit onto a screen of any size. The more pixels you have, the more content you can fit on-screen with better clarity.

**Laptop screens come in a range of resolutions (measured in pixels, horizontal x vertical):**

### 1366 x 768:

Also known as HD. Standard on mainstream laptops. Good for Web-surfing, email and general computing tasks.

### 1600 x 900:

Also known as HD+. Great for casual gaming and watching DVD movies.

### 1920 x 1080:

Also known as Full HD. Watch Blu-ray movies and play video games without losing any level of detail.

### 2560 x 1600 and 2880 x 1800:

Found in the Apple 13.3 and 15.6 inches Retina display, respectively.

### 2560 x 1440 and 3200 x 1800:

Also known, respectively, as QHD (Quad HD) and QHD+. Extremely high-pixel density creates stunning realism and sharp text, ideal for professional photo and graphics work as well as high-def movies and games.

## Touch-Screen Technology

Touch-screen laptops make computing more intuitive and allow the user to navigate with a tap, touch or swipe of your fingertip. Scroll through long documents and web pages, zoom in and out on images, and get things done quickly by using your fingers to interact with the screen. Touch displays are available on select laptops with the latest Windows operating system.



# Storage, processor & memory

Your computer relies on several components for storage capacity and processing speed. It's important to know the different components and how each affects your computer's performance.

## Internal Storage

Most of your files and data will be stored on your computer's hard drive. As you expand your collection of text documents, photos, videos and music files, it is quite easy to consume the available storage.

The rule of thumb for memory is to buy with future needs in mind. Try to get enough gigabytes (GB) of storage, or even terabytes (TB), to house all of your current files and extra capacity for several years. A 500GB hard drive will be sufficient for many users, but you can also purchase an external drive or upgrade your internal drive if needed.

## Traditional Hard Disk Drives

These drives offer larger storage capacities, but add to a laptop's weight and thickness. They come in two standard speeds. A 5400 rpm drive is sufficient for most tasks, but a 7200 rpm drive will transfer data more quickly.

## Solid State Drives

Also known as SSDs or flash storage, Solid State drives are becoming more common, especially on Thin & Light laptops and tablets. SSDs are faster, lighter and cooler than traditional hard drives, but they are more expensive per GB so they typically provide less storage space.

## Hybrid Drives

Mixing the standard hard drive with solid state memory to offer SSD-like performance and larger storage capacity, a hybrid drive automatically caches data in the solid state drive for you, offering faster speeds for the files you use most.

## Processors

Your laptop's processor is like its brain. Working in combination with system memory, the processor's power determines the complexity of software you can run, how many programs you can have open at the same time, and how fast they will run. Generally speaking, faster is always better. The more cores you have and the higher the speed (measured in gigahertz or GHz), the better your machine will perform. The more cores your processor has, the more computations it can do at once. Speed refers to how quickly the cores can work.

## Memory

The random access memory (RAM) of your computer is important because it helps your processor tackle multiple tasks at once. It determines the level of performance you will experience when running multiple programs at the same time. Large programs, like video editors and games, usually demand more RAM. Easier tasks, such as checking email or watching a DVD, don't require as much RAM; however, extra power enhances the speed of every task.

Most basic laptops come with 4GB of RAM pre-installed. When using your laptop for creating graphics or gaming, you will want 8GB or more of RAM. If you think you may need more memory later, choose a laptop that allows you to install additional RAM.

# Battery life

Where laptops are concerned, battery life matters. Nobody wants to be chained to a power outlet, even if there's a socket within reach. If you're buying a 15 inch notebook, look for at least 4 hours of endurance. If you plan on being fairly mobile, you'll want more than 6 hours of portable battery life (with 7+ being ideal).

If possible, it is well worth the investment to pay for an extended battery. However, some laptops feature sealed batteries that are not easily upgradable. Please read reviews from objective sources to get an accurate measure of a battery's life, but keep in mind that the actual life will vary based on your screen brightness and what tasks you perform.

# Connectivity & ports

Connectivity is key for all laptops. Bluetooth technology is used for pairing wireless devices. Internet connectivity is delivered with 802.11n WiFi, with the standard 802.11ac being used more in newer models.

USB and other ports work with a broad range of accessories such as an optical mouse, memory stick, smartphone and other peripherals. **Here are the most common types of ports featured on laptops:**

**USB 3.0:** Transfers data quickly when used with USB 3.0 devices

**USB 2.0:** Connects external drives, gaming controllers, MP3 players, smartphones, and other devices

**Thunderbolt:** Ultra-high bandwidth for fast data transfers with devices featuring a Thunderbolt or MiniDisplayPort connection

**HDMI:** Connects a projector or displays HD media on your flat-screen TV

**Media Card Slot:** Transfer photos from your digital camera or camcorder to your computer

# Laptop features summary

These are the important features and specifications that should be considered before making a laptop purchase decision.

<b>CPU (Processor)</b>	Intel or AMD Processors Entry-Level: Intel Core i3 CPU or AMD A4 Series Mid-Grade: Intel Core i5 or AMD A6 & A8 Premium: Intel Core i7 or AMD A10
<b>RAM</b>	Minimum 4GB; 6GB or 8GB is better; 16GB+ for gaming
<b>Hard Drive</b>	Speed: 7,200 rpm (preferred) Space: 500GB to 1TB+
<b>Flash Cache</b>	8, 16 or 32GB flash caches help boost load and boot times
<b>Solid State Drives (SSDs)</b>	More costly with less capacity (usually 128GB to 256GB); Delivers faster boot, resume and application open times; no mechanical drives so less likely to fail
<b>Display Resolution</b>	More pixels equal a better picture quality: 1366 x 768-pixel resolution is standard; 1600 x 900 or 1920 x 1080 is better; 2560 x 1600 (Retina) or 3840 x 2160 (4K Ultra HD) is best
<b>Touch Screen Technology</b>	Touch screens add functionality and ease of navigation
<b>Graphics Card</b>	Dedicated AMD or NVIDIA Graphics Card for better gaming and design work; more RAM is better