



# Buying a Smartphone

Most Americans now own a smartphone, according to Pew Research Center. But all the jargon and features can be confusing if you've never owned one before. This guide will explain what you need to know before you purchase the newest iPhone, Samsung, or LG.

## What is a “smartphone”?

Unlike traditional mobile phones, smartphones have a mobile operating system (OS), which means the inside of the phone contains technology similar to that of a home computer. So smartphones have more innovative features and allow you to perform more sophisticated tasks faster, such as streaming music and video, surfing the Internet, using GPS navigation, and playing games. They also support downloadable software applications, or “apps,” that can be used for organization, communication, and entertainment.

The downside? Generally smartphones and accompanying plans cost more money than a traditional cellphone. So if you only plan to use your phone for calling, texting and basic web features, you are probably better off keeping a traditional cellphone.



A smartphone (pictured left) can perform more sophisticated tasks than a traditional cellphone (pictured right).

## What should I consider when buying a smart phone?

Not all smart phones are created equal. One model might have a better camera, but a low battery life. One might have special voice features, but less memory for storage. Before purchasing your first smartphone, try to prioritize which options matter most to you, and which you can live without. Consider these features:

### *Screen size*

For years, smartphone screens didn't exceed 4.3 inches. However, as tablet and Kindle use increased, so has smartphone screen size. Devices now have screens as big as 6 inches. Larger screens can be especially helpful for watching movies or reading on your phone. However, larger phones can be less comfortable to hold or fit in your pocket.

### *Resolution*

Just as important as the size of the screen, is how clearly you can see it. A phone's resolution is measured in pixels. The more pixels, the crisper your images and text will be. The sharpest displays are 2,960 x 1,440 pixels (Samsung Galaxy S8 and LG G6 have this resolution). Even if you don't need the highest resolution, make sure the display has a resolution of at least 2,880 x 1,440 pixels.

### *Camera*

Consider whether you need a phone with a high-resolution camera. Since so many smart phones nowadays come with high-pixel cameras, you should read reviews and look at sample test photos online before determining the best. Check how the camera performs in low-lighting, as well.

### *Operating system*

Smartphones essentially function like a small computer, with their own operating systems. Similar to choosing between a Mac and Windows for your home computer, you will have to make a choice regarding

which operating system you prefer. Mobile operating systems include the Apple iOS, Android OS (owned by Google), and Windows Phone.. Each operating system has its own advantages and disadvantages. For example, iOS tends to get the newest games and apps before other operating systems. Androids, however, tend to be more customizable and designers can create more apps and widgets because of its “open” operating system.

#### *Battery life*

Battery performance is usually listed in terms of talk time, standby time, or how many hours you can expect your device to perform tasks like playing music or video. You might also want to consider a phone with a replaceable battery, which allows you to replace your old battery whenever it has finally burned out. Read online reviews to gauge how satisfied users are with the battery life.

#### *Internal Storage*

You will need internal storage to hold downloads, games, and media on your phone. Most smartphones have a minimum of 16 GB, but the more internal storage your phone has, the more likely things will run smoothly and quickly on your phone.

#### *Advanced features:*

##### *Processor*

Your phone’s processor, measured in megahertz (MHz) or gigahertz (GHz), determines how fast it will be able to perform tasks, like flipping through menus, downloading updates, opening apps, or browsing the Internet. One 1.2 GHz processor might not equal another, however, so check online rankings that compare processing power.

##### *RAM*

RAM, which stands for “random access memory,” is the room your phone has to store data it is currently using. This is different than the rest of the memory, or storage, on the phone because it can be accessed quicker. RAM lets you perform functions fast, and it is also essential for background practices (things that are running in your phone’s background that you aren’t actively interacting with; for instance, if you didn’t completely close your Facebook app and it continued to run) and switching between apps quickly. While some smartphones now contain 4 GB of RAM, you will likely be satisfied with 2 or 3 GB of RAM. An iPhone, however, usually operates well on 1 GB, because Apple more closely controls which apps your phone can access.

## 5 Helpful Things You Can Do With Your Smartphone

With a smart phone, you can do a lot more than talk and text. Did you know with a smart phone you can...

**Use it as your digital toolbox.** Many smartphones have handy built-in tools. Many have an LED “flashlight.” Some have a compass, and even a “level” tool to help you hang pictures straight. There’s always a calculator, and the stopwatch/timer can serve as your alarm clock.

**Get healthy.** Apps like FitStar Personal Trainer, Fitnet, and Zombies, Run! help you get into shape (or prepare you for the zombie apocalypse). Many newer phones also have step counters and heart rate monitors. And there are apps to track calories and find healthy cooking choices.

**Become an Amateur Photographer.** Smartphone cameras often rival or even exceed the picture quality of a digital camera. Use cool filters and photo editing apps, like VSCO Cam, to perfect your art.

#### **Practice energy efficiency**

New technologies, like smart thermostats and smart lighting, can be controlled through apps to help you cut your energy bills. With a tap on your touchscreen, you can manage your home’s temperature and turn the lights off.

**Control your TV:** Your smartphone can turn into your TV remote, or even help you set your DVR when you’re not at home.

**Get Better Sleep.** Apps like Sleep Cycle and Sleepbot track your sleep patterns to naturally help you get better shut-eye.

## What are apps?

An application, or “app,” is any piece of phone software that can perform a function. Apps exist for sending messages, editing documents, tracking fitness, writing notes, engaging on social media, ordering food from your favorite restaurant, playing music, and more. They are part of what make smartphones so useful and fun.

Some apps are free, and some you must pay for. If you have an Android OS, you will download or purchase apps through the Google Play store. If you have an iPhone, you will use Apple’s App Store.

A few words of caution: Apps continue to run on your phone until you close them, which can drain your phone’s battery and data. Furthermore, many apps ask for your location or collect personal data from your phone to sell to marketers. Read the terms and conditions closely before you download an app.

## What is data?

Any time you surf the web, check emails, stream music or post on social media, your phone uses up “data” over your wireless carrier’s network. Data costs can take up a significant portion of your bill, which is why it is important to choose a plan that most closely matches your data needs.

Data is measured in gigabytes (GB). In 2015, North American consumers with smartphones used an average of 3.7 GB of data per month, according to Ericsson’s Mobility Report. To give you an idea of what that means, consider that 1 GB is equal to each of the following tasks:

- Sending or receiving 50,000 e-mails (without attachments)
- Streaming 33 hours of music
- Viewing 1,000 web pages (4 minutes per page)
- Posting 2,800 photos to your Facebook page
- Watching 8 hours of video on YouTube (Higher quality video, like Netflix, uses even more data).

For more advice on how much data you need and how to cut data costs, visit CUB’s Data Guide at [CitizensUtilityBoard.com](http://CitizensUtilityBoard.com).

## Buying a Phone

Features aren’t the only thing you want to think about when purchasing your first smartphone. Also consider:

### *Carriers*

Your carrier is the company responsible for your network and cellphone plan. AT&T, Sprint, Verizon, T-Mobile, Virgin Mobile, Cricket, and Boost are the most common carriers.

Before you buy your phone, check to make sure you can use it with your desired carrier. If you buy a phone that is “locked,” you will have to purchase a plan with a specific carrier (see below for the difference between locked and unlocked phones).

### Examples of Popular Smartphone Brands

- **Apple iPhone**
- **Samsung**
- **LG**
- **HTC**
- **Nokia**

Not all carriers operate in all geographic areas, and not all coverage is the same. Make sure that your carrier offers coverage in your area. PC Magazine yearly ranks mobile network speed regionally, at <http://www.pcmag.com/Fastest-Mobile-Networks/>.

### *Contract vs. No contract*

Many times, carriers offer you a discounted price on a smartphone (which can run anywhere from around \$50 to upwards of \$800) for locking into a year or two-year contract. More and more carriers, however, are dropping this option and charging less for service in exchange for customers bringing in their own device or financing a device in



Download apps either in the Google Play store or Apple’s App Store.

monthly installments. A variety of prepaid options exist for smartphones, as well, where you pay the cost up front for the minutes, texts, and data you plan to use in a given time period (rather than pay a monthly fee). Prepaid phones can be a good money-saving option for certain consumers.

#### *Plan Details*

Each smartphone carrier offers plans with various talk minutes, texts, and data available. Try to assess how much you will be using your phone for various tasks, and then choose a plan that most closely fits. See CUB's Cellphone Shopper's Guide for more information, at **CitizensUtilityBoard.com**.

#### **Advanced options:**

##### *New, used, or refurbished*

The full retail price of a smartphone can cost hundreds of dollars, but buying a used or refurbished phone can avoid the enormous up-front cost. If you buy an older smartphone model, however, you may not be able to enjoy the newest and fanciest features.

A refurbished phone is a used phone that has been inspected, tested, and restored to full working condition. (A used phone hasn't had this restoration.) Look for factory-certified refurbished electronics, which come with the manufacturer warranty and have been carefully tested.

If you're purchasing a used or refurbished phone at an online retailer, like eBay, check out the seller's reviews before you purchase to avoid rip-offs. Also check the phone's retail cost to avoid paying too much. If you buy online, make sure the phone you are buying is unlocked (see below).

##### *Locked or unlocked*

A smartphone may be "locked" so that it only works with a certain carrier, or "unlocked," which means it can be used with multiple carriers. Not every unlocked phone works on every network, however. Certain carriers operate on GSM technology, (AT&T and T-Mobile) and others on CDMA technology (Sprint, Verizon, and U.S. Cellular). Double check before purchasing.