



2014 IPAD/IPHONE/IPOD
BUYERS' GUIDE
BY ILOUNGE.COM



melt™

for iPhone 5 / 5s / 5c



Welcome To Our 2014 Buyers' Guide

Where Apple Is Today

Heading into 2014, Apple might appear to be on autopilot, following a course laid out years ago by late CEO Steve Jobs - yet major changes are taking place behind the scenes. Chief hardware designer Jonathan Ive has taken over the look and feel of software. Fitness and fashion experts have been hired from companies including Burberry, Nike, and Yves Saint Laurent. And key long-time employees are working on semi-mysterious new products.

The Innovation Debate

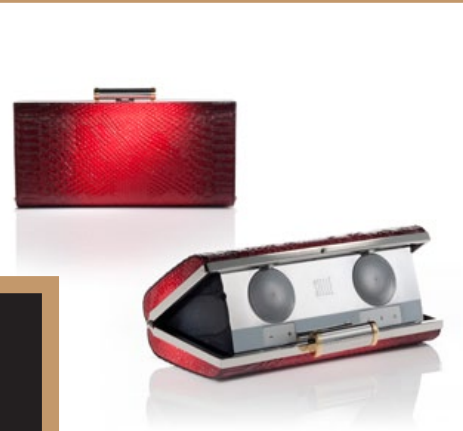
Dogged by accusations that the company has run dry on innovation, Apple's executives have used recent keynote events to underscore the importance of large tweaks to existing products: 64-bit iPhones and iPads, fingerprint scanners, and the substantially overhauled iOS 7, just to name a few. On the other hand, the list of truly big changes is short, with smaller tweaks - thinner bezels, slightly better cameras, and more battery-efficient sensors - reminding users that Apple hasn't released anything hugely different since the first iPad debuted in 2010. The last two years have been rough for Apple fans and investors alike, but we expect this to change in 2014; there's clear pressure and desire to move boldly.

Is It Safe Or Smart To Buy Apple Products And Accessories Now?

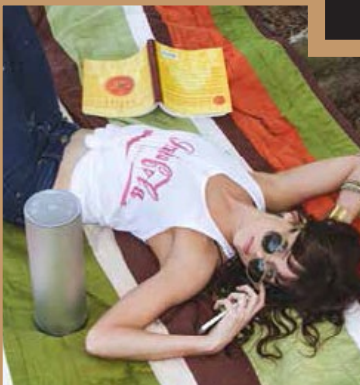
Despite predictions to the contrary, Apple's actual product releases have been bright spots in an otherwise dreary year. September's iPhones are certainly the company's best yet, and the new iPads are impressive, too, even if all of these devices were substantially leaked well before their releases. That said, we've been unsettled by the rapid pace at which Apple has discontinued the last two flagship iPads and the iPhone 5, as well as its odd decisions on keeping older, far less capable models such as the iPad 2 and iPhone 4S around; these choices have created resale value uncertainty, and called into question the long-term viability of new purchases. The latest collections of Bluetooth, USB, and Lightning accessories covered inside have the best chances of being good long-term investments going forward.

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SOUND *WITH* STYLE



STELLÉ
AUDIO COUTURE



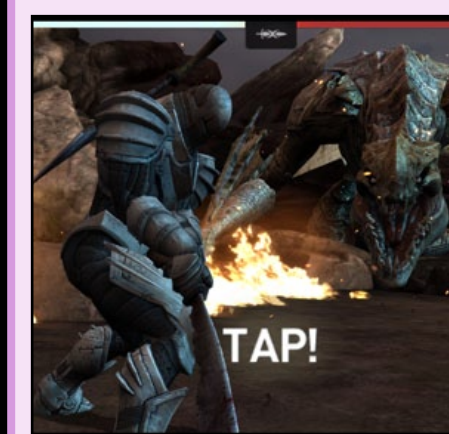
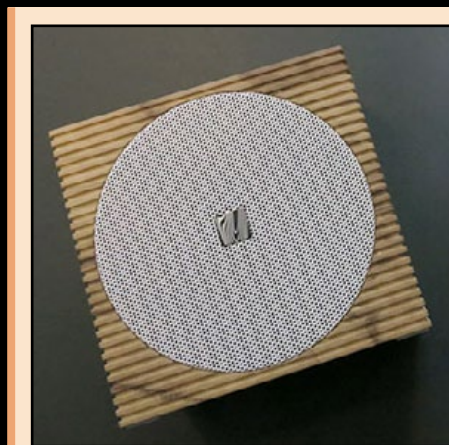
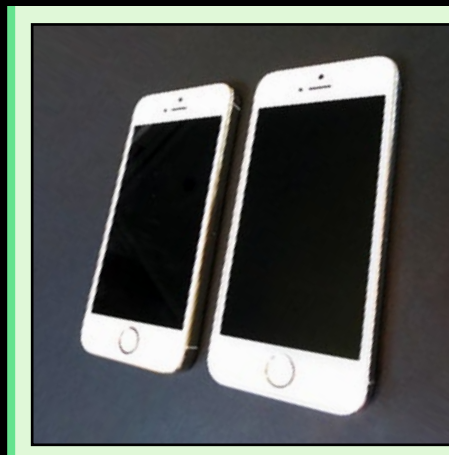
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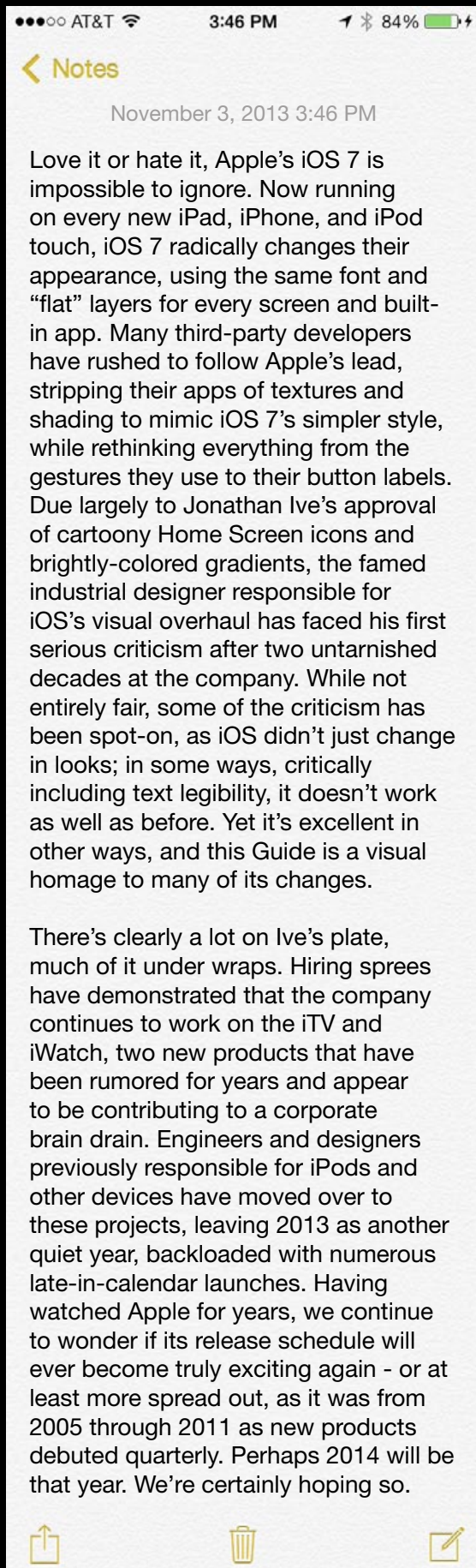
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Dennis Lloyd
Publisher

A long-time Apple fan, Dennis Lloyd (Twitter: @iLounge) was a graphic designer and DJ before creating iLounge, which remains the world's most popular resource dedicated to iPads, iPhones, iPods, and iTunes. Dennis lives in Irvine, CA with his wife and daughter.



Jeremy Horwitz
Editor-in-Chief

Author and journalist Jeremy Horwitz (Twitter: @horwitz) has edited iLounge and its publications since 2004, when he paused his intellectual property law practice to focus on Apple products, accessories, and software. He lives with his wife, two daughters, and a museum of iPad, iPhone, iPod, and Apple TV products in East Amherst, NY.



Nick Guy (@thenickguy) is iLounge's Accessories Editor. With years of iPod, iPhone, iPad, and Mac experience, he worked for Apple before joining iLounge. He lives in Buffalo, New York.



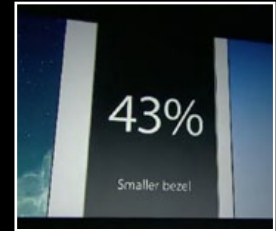
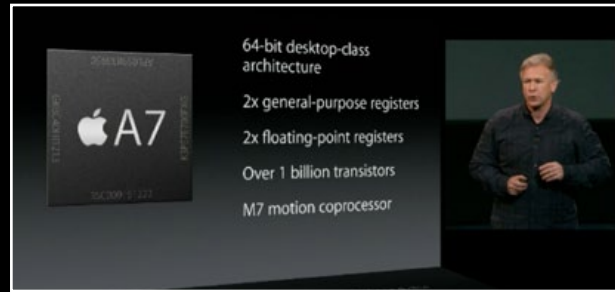
Jesse David Hollington (@jhollington) is iLounge's Applications and Social Media Editor, responsible for Ask iLounge, all things iTunes, and the Apple TV. He lives with his wife and daughter in Toronto, Canada.



Phil Dzikii (@phildzikii) is iLounge's News Editor. Switching off between a 13" MacBook Air, iPad 2, and iPhone 5s, Phil lives in Williamsville, New York with his wife and son.



Bob Levens is iLounge's Chief Forum Administrator. Married and based outside of Cambridge, U.K., he enjoys music, travel, photography, computers and historic aviation, and is wrestling with moving on from Apple products.



Clockwise from left: In October, Apple CEO Tim Cook glows after the iPad Air and Retina iPad mini are introduced by marketing SVP Phil Schiller (above), who touts their Apple-developed A7 processors and the Air's thinner, smaller-bezeled design. One month earlier, the iPhone 5c and 5s debuted to a small crowd in Apple's lowest-capacity event venue, its Town Hall in Cupertino.

Iterative New iPhones, iPads End 2013 Drought

Apple debuts 64-bit A7 in September iPhone and October iPad special events

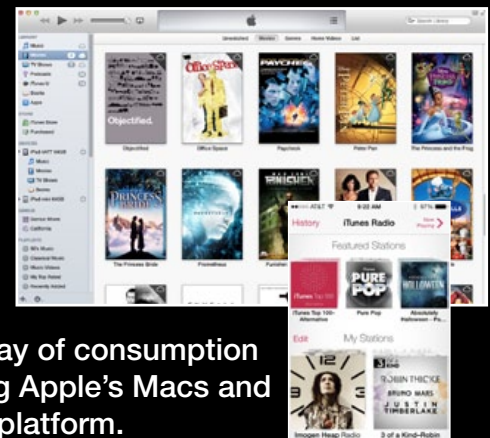
No one would have guessed that the latest iPhones and iPads would all be so similar under the hood, but separate September and October events virtually equalized the two product lines. Apple's new flagship iPhone 5s (\$199-\$399/16-64GB) debuted the Apple A7 processor, a 64-bit chip with power equivalent to 2010-vintage entry-level desktop and laptop Macs - still a major jump over the A6 chip inside the new mid-range plastic iPhone 5c (\$99-\$199/16-32GB). One month later, Apple debuted the iPad mini-styled iPad Air (\$499-\$929/16-128GB) and iPad mini

with Retina display (\$399-\$829/16-128GB), which were virtually identical to one another in appearance and A7 chip-powered specs, differing mainly in screen size. While the new models were both expected and welcome, Apple confusingly left relatively ancient iPhone 4S and iPad 2 models in both lineups as not particularly impressive options, while also leaving iPods untouched in 2013, except for swapping "slate" with lighter "Space Gray" versions. For the first time in years, and perhaps by design, Apple's lineups are confusing - except for the highest-end models.

iOS 7, iTunes Radio, iLife + iWork Broaden Apple's Software Story

While 2013 will largely be remembered for iterative hardware, Apple's software saw radical changes this year. Beyond the debut of the redesigned iOS 7, discussed earlier in this Guide, Apple introduced iTunes Radio - a competitor to Pandora and similar streaming music services - integrated into all iOS 7 devices, iTunes

11.1, and Apple TVs. It also redesigned all six iLife and iWork applications to resemble iOS 7 and add full iCloud integration - then made all of them free with the purchase of any iOS device. As a result, iPads, iPhones, and iPod touches now include an incredible array of consumption and creative software, rivaling Apple's Macs and outstripping any rival mobile platform.



Far more information on these and other topics of interest to iPod and iPhone users is available from the iLounge.com news archives at ilounge.com/index.php/news/archives/.

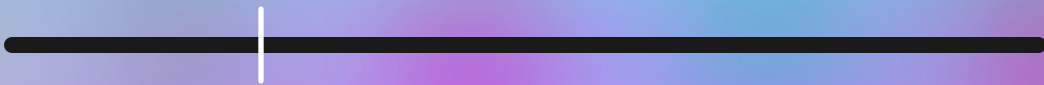


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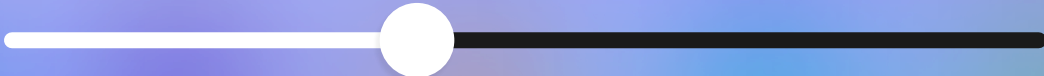
2001



2013

iPad/iPhone/iPod Buyers' Guide

All Models - Past and Present



Where To Shop



Buy Or Sell



Let's Figure Out What Fits Your Needs.

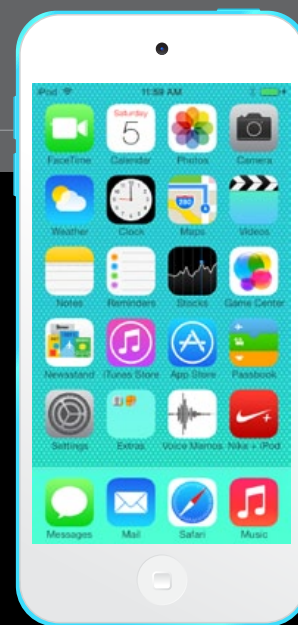
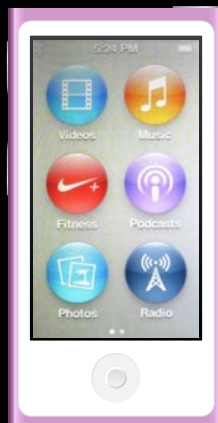
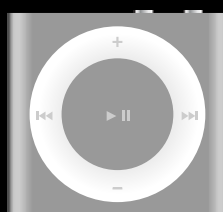
Are you looking for a tablet? A smartphone? Or a media player? Over the past year, the lines between Apple's iPad, iPhone, and iPod families have been blurring, as iPod nanos began to look more like iPod touches, iPod touches and iPhones grew bigger to resemble small iPads, and iPad minis created Apple's first halfway point between tablets and phones. At the core of most of these devices is iOS 7, the latest and (arguably) greatest version of Apple's original iPhone operating system, which today powers everything from media players to computers. Only three remaining iPod models lack iOS, and as it continues to grow and improve, they're markedly worse off for its absence. iOS now enables even iPod touches to make free voice or video calls over Wi-Fi, and gives every supported device amazing wireless broadcasting power. Without iOS, the iPod classic, nano, and shuffle feel like laggards.



As of today, the choice between Apple devices comes down to three primary considerations: pricing, screen size preferences, and one's need for cellular data access. Highly budget-conscious users can look towards iPods, which offer relatively inexpensive media players designed for the masses. Users needing larger screens, Wi-Fi Internet access, and app/game support should consider the iPod touch if price is a factor, or more powerful iPhones with better cameras if long-term data contracts are acceptable for cellular access. For even larger screens, iPads are the way to go: Wi-Fi-only versions now start at \$299 and climb upwards as screen sizes and capacities grow. Cellular versions sell at \$130 premiums for those who need them. With that background in mind, we'll take a deeper look at Apple's lineup, product by product.

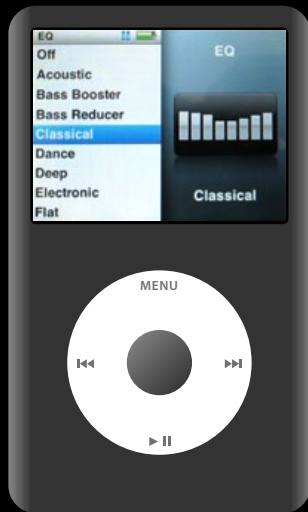
01 AN OVERVIEW

THE COMPLETE 2014 LINEUP



2014 IPOD FAMILY

MODEL	IPOD SHUFFLE	IPOD NANO	IPOD TOUCH
PURPOSE	Ultra-Small Music Player	Sport-Ready Media Player	Touchscreen Media Player
SIZE	1.14" x 1.24" x 0.34"	3.01" x 1.56" x 0.21"	4.86" x 2.31" x 0.24"
PRICE	\$49	\$149	\$229-\$399
STORAGE	2GB	16GB	16GB-32GB-64GB
COLORS	8	8	6
WEIGHT	0.44 Oz.	1.1 Oz.	3.04-3.1 Oz.
SCREEN	No	2.5" / 432 x 240 / 202ppi	4.0" / 1136 x 640 / 326ppi
MUSIC	14-15 Hour Battery	30-35 Hour Battery	40-44 Hour Battery
PHOTOS	No	Yes	Yes
GAMES	No	No	App Store Downloads
VIDEOS	No	3.5-Hour Battery	8 Hour Battery
PHONE	No	No	No
RATING	B	B	B+ (32/64GB) / B- (16GB)
SUMMARY	This colorful, audio-only model lacks for a screen, storage capacity, and battery life versus a nano. But it's cheap, supports multiple playlists, and can speak playlist names.	Twice the prior version's height, Apple's small-screened player restores video playback and adds Bluetooth, but falls 75% short of the iPod touch at 65% of the same price.	The iPod touch was built with a tall screen, very good cameras, and great wireless chips; its performance is akin to the iPhone 4S and iPad mini. An entry-priced \$229 model (B-) lacks one camera.



2014 IPOD FAMILY

MODEL	IPOD CLASSIC
PURPOSE	High-Capacity Media Player
SIZE	4.1" x 2.4" x 0.41"
PRICE	\$249
STORAGE	160GB
COLORS	2
WEIGHT	4.9 Oz.
SCREEN	2.5" / 320 x 240 / 163ppi
MUSIC	36-42 Hour Battery
PHOTOS	Yes
GAMES	No
VIDEOS	6-8 Hour Battery
PHONE	No
RATING	C+
SUMMARY	Unchanged since 2009, the iPod classic is still Apple's highest-capacity media player, and retains a Click Wheel controller. Unless you need to store lots of music, skip it; it's very limited.



Hey, What's An iPod?

Once the top-selling Apple device family, the iPod has continued to decline in popularity since the iPhone and iPad arrived, particularly as lower-cost versions were introduced. iPods are primarily media players; every one plays music, and most also play videos. Only the iPod touch - the priciest model - runs iOS apps and games. None has cellular functionality.













Why Buy An iPhone Instead?

If you're willing to sign up for a two-year cellular phone contract, you'll pay less up front for any iPhone than for the \$229 base model iPod touch. You'll gain phone calling, anytime/anywhere Internet access, GPS and compass functionality, and typically much more horsepower than the touch. iPhones are thicker than iPods, though, and the lower-end iPod shuffle or nano are far smaller, if you're willing to give up all of the app, gaming and Internet features.



2014 IPHONE FAMILY

MODEL	IPHONE 4S	IPHONE 5C	IPHONE 5S
PURPOSE	Touchscreen Media Phone	Touchscreen Media Phone	Touchscreen Media Phone
SIZE	4.5" x 2.31" x 0.37"	4.90" x 2.33" x 0.35"	4.87" x 2.31" x 0.30"
PRICE	\$0 + Contract	\$99-\$199 + Contract	\$199-\$399 + Contract
STORAGE	8GB	16GB-32GB	16GB-32GB-64GB
COLORS	2  	5     	3   
WEIGHT	4.9 Oz.	4.65 Oz.	3.95 Oz.
SCREEN	3.5" / 960 x 640 / 326ppi	4.0" / 1136 x 640 / 326 ppi	4.0" / 1136 x 640 / 326 ppi
MUSIC	40-41 Hour Battery	40-43 Hour Battery	40+ Hour Battery
PHOTOS	Yes	Yes	Yes
GAMES	App Store Downloads	App Store Downloads	App Store Downloads
VIDEOS	10 Hour Battery	9-10 Hour Battery	9-10 Hour Battery
PHONE	7-8 Hour Battery	6-10* Hour Battery	4-10* Hour Battery
RATING	B+	B+	A-
SUMMARY	With support for almost all iOS 7 features, the iPhone 4S is a good entry-level phone. Durability, the 3.5" screen, cameras, and storage capacity are all weaker than the iPhone 5c.	All-plastic except for its 4" glass screen, the iPhone 5c comes in five colors and performs almost identically to 2012's excellent iPhone 5. While the 5s is superior, the differences aren't huge. Yet.	Packing a super-fast CPU with enhanced cameras and a fingerprint sensor, the iPhone 5s is Apple's best iPhone, but needs yet-to-be-updated software to shine. Battery life is iffy under iOS 7.



2014 IPAD FAMILY

IPAD MINI

Tablet Computer

7.87" x 5.3" x 0.28"

\$299/\$429

16GB

2 ● ●

0.68-0.69 Pounds

7.9" / 1024 x 768 / 163ppi

Photos: Yes

Games: App Store DLs

Battery: 9-11 Hrs. (Tested)

B+ (Wi-Fi) / B (Cellular)

Offered in a single capacity as a budget-priced entry model iPad, the 16GB mini received only a \$30 price drop and new gray chassis for 2013. While it lags behind rival 7" tablets in specs and price, its software is a huge selling point.

IPAD MINI RETINA

Tablet Computer

7.87" x 5.3" x 0.29"

\$399-\$829

16GB-32GB-64GB-128GB

2 ● ●

0.73-0.75 Pounds

7.9" / 2048x1536 / 326ppi

Yes

App Store Downloads

9-10 Hours (Stated)

UNRATED

Not yet available as this Buyers' Guide is published, the iPad mini with Retina display could well be the iPad family's best overall balance of size and performance, though we're concerned about real-world battery life. Consult our full review on iLounge.com.

IPAD 2

Tablet Computer

9.50"x7.31"x0.37"

\$399/\$529

16GB

2 ● ●

1.44-1.46 Pounds

9.7"/1024x768/132ppi

Yes

App Store DLs

10-11 Hrs. (Tested)

B- (Both Versions)

Kept around far too long, the iPad 2 is so old that it may not fully run iOS 8 and lags behind the \$299 iPad mini in several ways. Consider it solely if you need a bigger, same-res screen.

IPAD AIR

Tablet Computer

9.4" x 6.6" x 0.29"

\$499-\$929

16GB-32GB-64GB-128GB

2 ● ●

1.0-1.05 Pounds

9.7" / 2048 x 1536 / 264 ppi

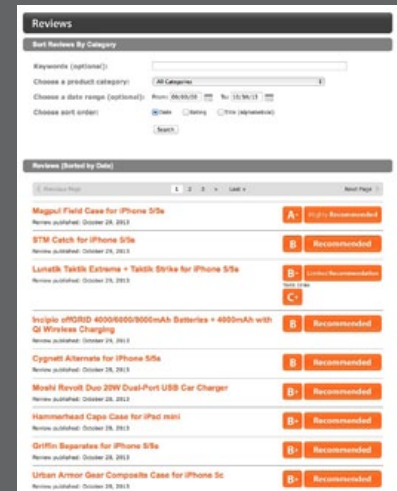
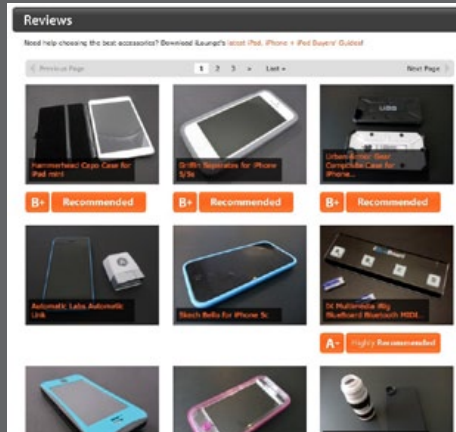
Yes

App Store Downloads

10-13 Hours (Tested)

A- (Both Versions)

Although the iPad Air is just a larger Retina iPad mini, with identical features plus a 9.7" but same-resolution screen - it's a very good balance of size and performance. If you need the larger screen, consider it, particularly models with 32GB or more of storage.



02 HERE'S HOW WE WORK

THIS IS HOW WE RATE HARDWARE + ACCESSORIES

iLounge has covered Apple's portable media devices since 2001, and has offered in-depth reviews of more iPod, iPhone, and iPad add-ons than any other publication on the planet. Because we've been testing these devices since their inception - and because of our unique editorial independence from Apple and third-party developers of accessories and software - our reviews and ratings are based on deep, extensive experience, and free of the taints that arise from cozy relationships between writers and the companies they cover. Whether you agree or disagree with our conclusions, you can always trust that they've been reached honestly, with our readers' interests and needs foremost in our minds.

On the pages that follow, you'll find every current iPod, iPhone, and iPad model, plus the very best recent accessories designed to work with them. Our editors hand-select each Buyers' Guide's accessories from thousands we've covered over the years, focusing on top recent picks and nuggets of useful information that will help you make smarter purchases. Below each first page, you'll find iNtelligence, a smart "bottom line" pointer to help you save time and money. If you want additional information on any these products, use the Reviews & Accessories button on the orange navigation bar at the top of the iLounge.com home page.

iLounge has used the same letter grade rating system for years, issuing A to F ratings to Apple hardware, accessories, and apps - strictly on the basis of merit. Very few products receive our A ratings, so the ones that do are true standouts. On the next page, we explain our rating system and philosophy so you can understand our buying advice for each Apple device and accessory in this Guide.



Our iNtelligence summary provides a simple sentence with our best, most current advice.

Understanding Our Ratings

iLounge's letter grade ratings break down into "excellent" (A), "good" (B), "okay" (C), and "bad" (D) marks, with two ratings (D- / F) reserved for products with serious defects. A grades are reserved for the very best products we highly recommend to our readers. Fewer than 2% of all products we review receive flat A grades, while A- ratings indicate small issues that limit otherwise universal appeal. B grades are issued to products we generally recommend to our readers, with caveats. These products are almost universally well-made and useful, but have one or more large issues that will likely bother most users. Products receiving B- grades qualify only for our limited recommendation, which means "think seriously about this before buying." C grades are for products that we consider to be decent, but wouldn't recommend given other, better options, while D grades are for products that we would pass on no matter what. If you see a rare D- or F rating for an accessory, that means our testing uncovered something seriously wrong with its core functionality (D-), or potentially dangerous to users (F). For apps, these low ratings typically signal junk-level value or seriously screwed-up programming.



The iLounge Difference

Over the years, the distinctions between true "reviews" and marketing hype disguised as analysis have become harder to spot. Our reviews are written by hard-working specialists who have covered Apple for years, yet don't have clandestine relationships with Apple or its developers. We review every item from the consumer's perspective - yours - but with an advantage: we've covered thousands of products from thousands of companies, so when we say something's the "best," we can say so with industrial-strength authority.

Because of a strict separation between our business and editorial sides, and our strong belief in the value of an objective resource for Apple customers around the world, our reviews are in no way influenced by advertising or outside concerns. We have no agenda other than the promotion of a happy and well-informed global community of Apple users.



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Our Buyers' Guide is designed to be a convenient summary of the comprehensive reviews we publish online, all of which are archived at ilounge.com/index.php/accessories/. We spotlight new reviews on our main page several times each week, and with only limited exceptions, make an effort to review products by as many different developers as possible.

In response to an ever-increasing number of new products - and a world in which "instant reviews" from anonymous and/or inexperienced users have become more common - we continue to take the time to properly evaluate the good and bad points of each product we review. Our goal isn't to be the fastest; we want to be the most reliable.

Please address any questions regarding editorial policy to Jeremy Horwitz (jeremy@ilounge.com), with requests for new product reviews to Nick Guy (nick@ilounge.com).



03 IPOD SHUFFLE

2GB - 15 HOUR BATTERY - MUSIC - \$49



Now entering its fourth year on the market, Apple's fourth-generation iPod shuffle remains the company's simplest media player - a device only slightly larger than a stack of four coins, capable of playing audio through a top-mounted headphone port. It is a smaller retread of 2006's second-generation model, adding only two features: multiple playlists and device-spoken VoiceOver menus. A five-button Control Pad on front is the size of a U.S. quarter, providing track and volume controls, while a dedicated VoiceOver button on top tells the shuffle to speak artist, song, and playlist names, as well as battery status. There's just enough aluminum on all sides to make the device easy to hold, and a shirt clip on the back lets you wear it. For 2013, Apple preserved seven of 2012's sandblasted aluminum colors, swapping out the black model for a new Space Gray version identical to the tone recently introduced for the iPod nano, iPod touch, and iPhone 5s.

The iPod shuffle is a good \$49 music player, with a 15-hour battery, solid sound quality, and simplicity on its side. But it doesn't do much else. Sold only in a 2GB capacity, it has too little storage for a full music library, and no screen, so you load it with small batches of tracks that can be played in order or in random "shuffle" mode. It's also incompatible with the many docking, car, and speaker accessories that work with other iPods, requiring a special packed-in charging and sync cable. The shuffle is hard to love, though it remains a solid value for its very low price. Refurbished iPod nanos sell for twice the price through the Apple Store, adding video playback and FM radio.



Pick the nearly disposable iPod shuffle only if the nano is too expensive for your budget.



In the Box + Design

An iPod shuffle is packaged with short-cabled, remote-less Apple Earphones. A tiny USB-to-headphone port charging and syncing cable, comically small instructions, and an Apple sticker are also in the box.



As with the last two iPod shuffles, this model has a firm rear shirt clip that can be used to attach the device to your clothing. On the top is a VoiceOver button, located between the three-position (off/ordered/shuffled playback) power switch, a status indicator light, and a standard, highly compatible 3.5mm headphone port. The Space Gray version is shown between silver and black.



Colors

In 2012, purple, yellow, and red joined new takes on 2010's blue, pink, silver, and green. For 2013, Space Gray replaced 2012's black.

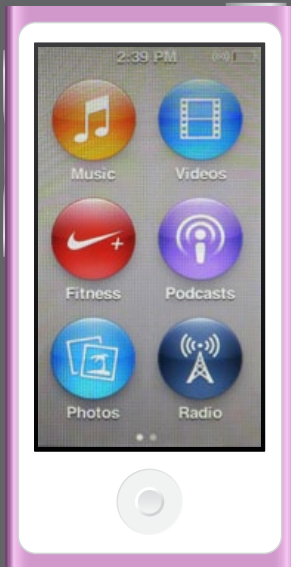


Compared With Past Models

The fourth iPod shuffle lost virtually nothing besides size compared with the 2005 original. While the first shuffle included a built-in USB connector, subsequent versions have required users to carry a little cable around, or wait to sync and charge at home. A first-generation lanyard necklace was replaced with rear clips on the last three models. Otherwise, the \$49 metal 2GB iPod shuffle offers better sound, capacity, and features than the original plastic \$99 512MB model, while building upon the second-generation shuffle's controls, and taking the VoiceOver/multiple playlist features from the third.

Apple's aluminum changed in 2012. Historically, shuffles had sandblasted matte finishes, but this model debuted with a reflective shine that became slippery with moist fingers, a possible issue when handling the device after a workout. In 2013, Apple went back to a classic matte texture that's easier to grip. However, the headphone port may still be susceptible to sweat intrusion; wearing the shuffle upside down may help limit the port's exposure to moisture.





04 IPOD NANO

16 GB - 35 HR. BATTERY - MEDIA - RADIO - \$149



Halfway between its two predecessors in size and features, the seventh-generation iPod nano has fallen from grace over the years: once the most frequently-updated member of the iPod family, it's now an obvious laggard behind the iPod touch. Instead of running iOS apps, it does the same old things nanos have been doing for years: music, grainy photos, Nike+ features, and FM radio tuning, rejoined in 2012 by video playback, which the prior nano lost. The new 2.5" screen is low-resolution and washed out like earlier nanos - not up to snuff with the iPod touch - and while the audio battery life is better than its watch-sized predecessor, there's only enough juice inside for 3.5 hours of video playback. Many features take a step back from the fifth-generation nano Apple released in 2009, except for the touchscreen and the slightly fancier, beveled metal body; we'd trade these features for the earlier model's speaker, rear video camera, and vibrant body colors.

On the other hand, the nano is much smaller than the iPod touch, and now includes Bluetooth 4 to communicate wirelessly with audio gear; it can also pair with Nike+ Sensors without requiring a dongle. Best suited to athletes who will appreciate the 1.1-ounce weight, it can be used easily with wireless headphones (such as Plantronics' BackBeat GO 2) for workouts. It's 25% as appealing as the iPod touch at 65% of the price, so it's not as smart of a choice for kids, but good enough for a small, budget media player. The only change to this model for 2013 was replacement of a previously dark slate color with a lighter Space Gray matching the iPod shuffle, iPod touch, and iPhone 5s.



A refurbished iPod touch is more likely to be useful than this nano, unless size is critical.



Pack-Ins + Accessory Compatibility

The iPod nano includes Apple's EarPods - improved earbuds, minus the remote control and mic of the iPhone, iPod touch, and standalone retail versions - and a Lightning to USB Cable, matching the Lightning port on the bottom. Note that this nano only works with past iPod add-ons if you purchase one of Apple's Lightning to 30-Pin Adapters.



Body Colors

Eight colors are offered, including silver, blue, space gray, purple, a red-like pink, a blue-hinted green, and a slightly green yellow. The rich red version is an Apple

Store exclusive, with some proceeds going to the Global Fund to fight AIDS in Africa. Each is matte aluminum with polished metal accents; most have white fronts.



Screen Size + Quality

Now measuring 2.5" on the diagonal and 432x240 in resolution, the new screen is a step backwards in sharpness from the prior models, but spreads more dots over a wider area. It's not as nice as the screen on any iPod touch or iPhone.



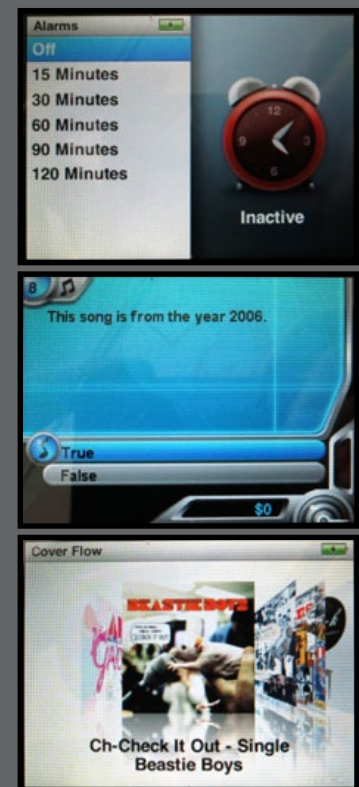
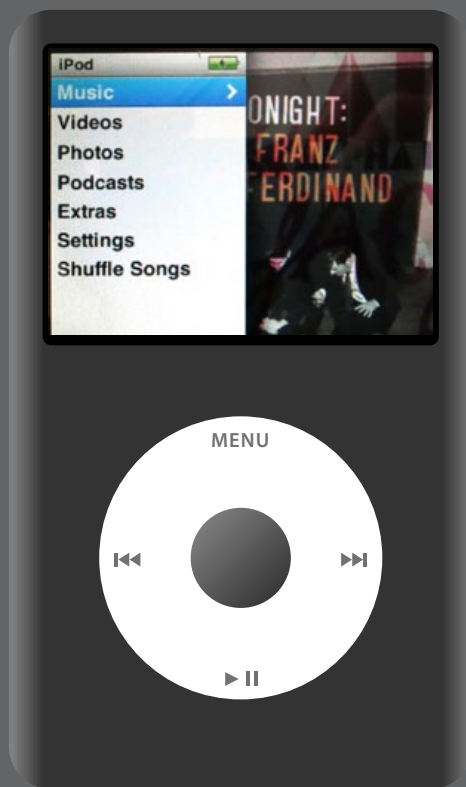
Size + Colors Compared With Past Models

Twice the height of the sixth-generation nano and nearly the same width, the seventh-gen model is thinner, and dominated by its front touchscreen. Directly compared against the earlier fifth-generation model, it's only a little smaller, losing 0.6" of height while gaining a tiny bit in width and shrinking roughly the same amount in thickness. The new colors have improved from the square version, but regressed from earlier tall nanos.



Bluetooth Support

Capable of pairing with most Bluetooth accessories, including headphones, this model can stream music to many wireless speakers and some newer car stereos. Headphone options are growing in number; some are small and workout-friendly.



05 IPOD CLASSIC

160 GB - 42 HR. BATTERY - MUSIC - VIDEOS - \$249



Every year, we take bets on whether Apple will kill the iPod classic, but it hasn't happened: the company never mentions it, doesn't change the price, and has left its features entirely unchanged for four years. Today, it's the only remaining iPod with a Click Wheel controller and hard disk inside, sporting a 2.5" screen that's lower in resolution than the iPod nano's and not touch-controlled. The iPod classic plays music, photos, and videos, but not apps or games - unless you count three simple built-in games, or 50 titles that Apple stopped selling years ago. Its single virtue is the 160GB of storage, which is over twice as capacious as the most expensive iPod touch or iPhone. Serious audiophiles may appreciate the extra space for storing lots of high-bitrate music, but the iPod classic can hardly do more with audio than play it through its top or bottom ports, the latter an old but compatible Dock Connector.

It's hard to recommend the iPod classic now as even a marginally good investment. Heavy, with an antiquated interface and a ridiculous price given its features, it's now worthy of a C+. Apple's lack of interest suggests it will fade when iPod touches hit 128GB.



This stale model has only raw storage capacity as a reason to exist; we'd generally skip it.



Two Faceplates, One Rear Shell

The iPod classic's chassis consists of a silver or dark gray metal faceplate, a glass screen, plastic Click Wheel, and a mirror-polished steel back. As shown below, the back casing tarnishes very easily - so easily that it needs to be covered with film or a case straight out of the box or will start to show marks within minutes. The top has a headphone port and Hold switch, while the bottom has a Dock Connector that works with thousands of pre-2012 accessories, though fewer recent add-ons have been tested with it. Headphones with built-in microphones and three-button remote controls work fully with this model, which can play roughly 7 continuous hours of video or 42 hours of audio. Notably missing from the classic is wireless audio streaming support, so special dongles are needed to use wireless headphones or speakers, and have become harder to find. If you want to record audio, you'll have to self-supply an add-on microphone.



The Stats

The 160GB hard drive in iPod classic can hold 200 hours of SD video, 40,000 low-bitrate (128kbps) songs, or 20,000 high-bitrate (256kbps) songs.



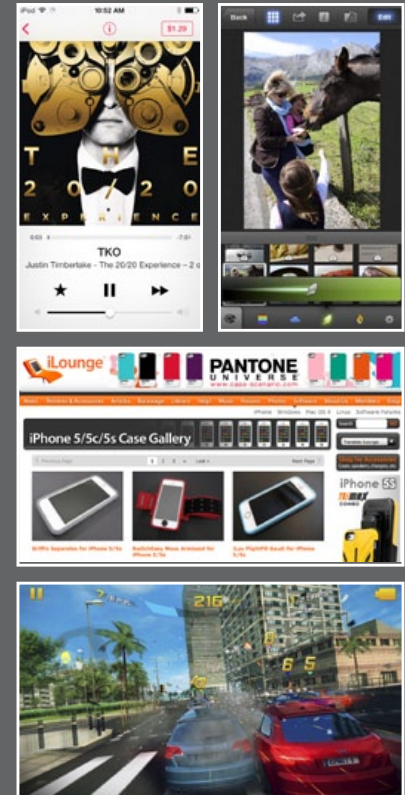
Pack-Ins and Package

In addition to a pair of older Apple Earphones and a Dock Connector to USB cable, Apple includes a simple plastic Dock Adapter, helping the iPod classic to fit inside pre-2012 "universal" iPod docks and speakers. It's the only iPod model that's still sold in a cardboard box; all of the others are boxed in see-through plastic.



Old User Interface

The iPod classic's interface hasn't changed since 2007, when it was introduced for this model and the third-generation iPod nano. It largely displays black text on white backgrounds, like the earliest iPods, and relies upon Apple's touch-sensitive Click Wheel for scrolling up and down lists of choices. Artwork flows on the right of the screen as you navigate.



06 IPOD TOUCH

16-32-64 GB - 40 HR. BATTERY - MEDIA - APPS - \$229-\$399



Now available in two versions - a \$229 16GB model without a rear camera (B-), versus \$299 32GB and \$399 64GB models with 5MP iSight cameras (B+) - Apple's iPod touch combines iPhone 4S-caliber hardware with an iPhone 5 screen, while losing cellular features, GPS, and bulk. The 4" Retina screen has the same 1136x640 resolution and colors of the iPhone 5s/5c, and both cameras are huge upgrades over prior iPod touch models. Apart from low-light photography, you can now capture good photos with the 32/64GB iPod touch, somewhere between the iPhone 4S and 5c in overall quality. Videos are solid, too: the front camera records 720p HD video, and the rear does 1080p. With no cellular chip to eat power, run time remains very comparable to the iPhone 5c/5s, despite this model's much thinner chassis. It's a very good do-it-all device for its size.



But despite these features, the iPod touch lags behind recent iPhones and iPads - old technology in a small package. The \$229 entry price is iffy, particularly given the missing rear camera. Consider it akin to a metal but phoneless iPhone 5c, or a pocket iPad mini.



The iPod touch will sate kids, but many adults will prefer the more powerful iPhone 5c.



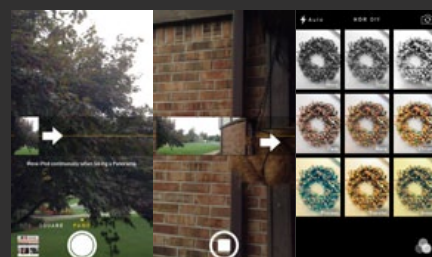
Pack-Ins + Accessory Compatibility

The iPod touch includes a Lightning to USB Cable, Apple's EarPods (notably without a remote or mic), two Apple logo stickers, and small manuals. Apple's 32/64GB models have an iPod touch loop wrist strap, too. While the touch supports AirPlay and Bluetooth speakers, it won't work with old Dock Connector-based accessories without a Lightning Adapter.



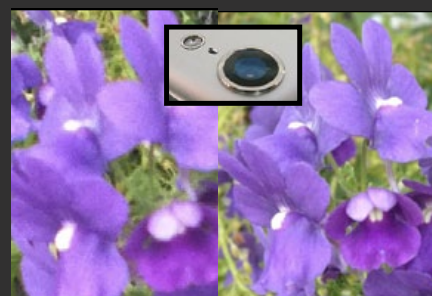
An Aluminum Body, Now In Six Colors

The fifth-gen iPod touch was the first to feature an aluminum back, as well as six matte color choices. Oddly, only the Space Grey and 16GB silver iPod touches have a black glass bezel; all the others are white on the front. On 32/64GB models, both the rear camera lens and a "loop" button stick out of the otherwise flat back; the loop button attaches to the included wrist strap if you want, or becomes flush with the rear shell when you're not using it. In addition to an LED camera flash and a rear-mounted microphone hole, a pill-shaped antenna compartment lets the new touch connect to 802.11a/b/g/n wireless networks - both 2.4Ghz and 5Ghz - as well as Bluetooth 4 accessories. On the bottom are a five-dot speaker grille, a headphone port, and the Lightning port for accessories. Sleep/Wake and volume buttons are thin, just like the 0.24"-thick touch itself. The new body thankfully doesn't scratch as easily as earlier touches.



iOS 7

This iPod touch runs the latest iOS, supporting Siri, 3-D Maps, Panorama still photos, 1080p video recording, and AirPlay Mirroring for Apple TV screen sharing - the latter handy for HDTV FaceTime calls. It also includes support for realtime Camera still photo filters.



Quality Cameras

The 5-Megapixel/1080p rear camera (above right) focuses quickly, with better accuracy, color, and detail than its fourth-gen iPod touch predecessor (left); the front 720p camera produces solid self-portraits and works well for FaceTime video calling.

COMPARING IPOD COLORS

Today's iPod shuffles and iPod nanos come in the same eight colors; six are shared by the iPod touch, and one is new for 2013. Here's how the current iPod tones compare with earlier colors. Older "slate" versions look close to black, and are still available for purchase used or refurbished.



Red has been fairly consistent between iPod generations, except for the darker brick-like third-gen nano and a similar fifth-gen model. Most others have been a rich, saturated red, and today's is close to the strongest tones Apple has offered: just a hint darker, but still nice. It's offered for the iPod touch, too.



Pink tones have varied wildly since the iPod mini debuted with the color back in 2004, ranging from faded to vibrant shades, sometimes skewing red or close to purple. Also offered for the iPod touch, this year's pink looks almost like a failed, muted red, oddly close to strong red iPods. iPhone 5c has a salmony pink.



Blue has differed between generations since the iPod mini days, most often resembling tones from jeans. Available for the iPod touch as well, this year's blue is in the middle of the brightness scale, with a little green. It's better than the bland prior nano, and similar to the iPhone 5c tone, plus metallic sparkle.



Purple changes the most between years, when it's offered at all; Apple debuted the color with the second-gen iPod shuffle, then increased its saturation and blue tint for two iPod nano generations before it disappeared. Today's nano and shuffle have a purple tint with so much red that it nearly looks pink.

Red iPods	
N/A	N/A
iPod mini (1st-Generation)	iPod nano (1st-Generation)
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
iPod nano (6th-Generation)	iPod nano (7th-Generation)

Pink iPods	
	N/A
iPod mini (1st-Generation)	iPod nano (1st-Generation)
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
iPod nano (6th-Generation)	iPod nano (7th-Generation)

Blue iPods	
	N/A
iPod mini (1st-Generation)	iPod nano (1st-Generation)
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
iPod nano (6th-Generation)	iPod nano (7th-Generation)

Purple iPods	
	N/A
iPod shuffle (2nd-Generation)	iPod nano (1st-Generation)
N/A	N/A
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
N/A	
iPod nano (6th-Generation)	iPod nano (7th-Generation)



Green has been around since 2004, but the tones have changed so many times that there's clearly a debate within Apple as to what's green. Colors selected for the fourth- and fifth-generation nano were as close to reference green as Apple came; today's shuffle and nano version is so blue that it's nearly aqua - only a little richer than the pale third-gen model.



Yellow is an odd color for Apple. It debuted as gold in the first-generation iPod mini, which was yanked due to low demand. It re-emerged with strong yellow tones for the fourth- and fifth-gen iPod nano, disappeared for the sixth, and showed up again with a slightly green tint for the current iPod shuffle, nano, and touch. iPhone 5c got a faded yellow, 5s has gold.



Space Gray is Apple's latest color, and the brightest non-silver metal it has used in years. This gray continues Apple's shift away from black, which began with "graphite," "slate" and other dark gray alternatives. It replaced the nearly black slate versions of the iPod shuffle, iPod nano, and iPod touch in September 2013, barely meriting a mention from Apple.



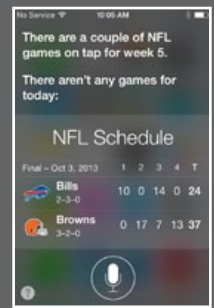
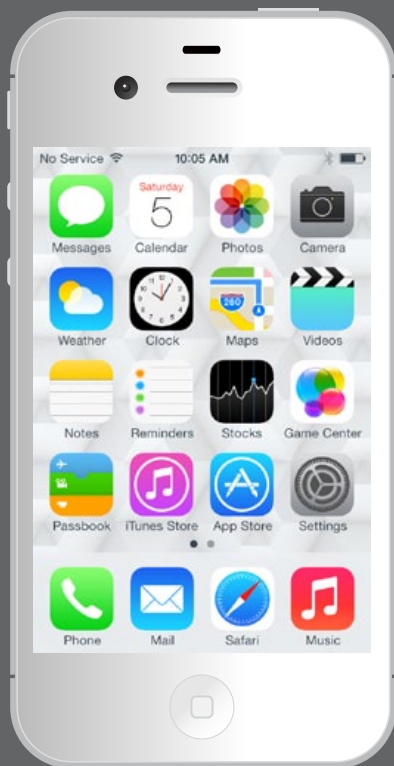
Silver is the standard and nearly unchanging color for Apple's devices - it varies more due to changes in metal or finish than anything else. The current silver is back to a matte texture after prior glossy finishes on stainless steel iPod touches and aluminum nanos and shuffles. It looks slightly brighter than before, due to the use of darker Apple logos; it's lighter than the Space Gray color.

Green iPods	
	N/A
iPod mini (1st-Generation)	iPod nano (1st-Generation)
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
iPod nano (6th-Generation)	iPod nano (7th-Generation)

Yellow iPods	
	N/A
iPod mini (1st-Generation)	iPod nano (1st-Generation)
N/A	N/A
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
N/A	
iPod nano (6th-Generation)	iPod nano (7th-Generation)

Gray iPods	
N/A	
iPod mini (1st-Generation)	iPod nano (1st-Generation)
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
iPod nano (6th-Generation)	iPod nano (7th-Generation)

Silver iPods	
iPod mini (1st-Generation)	iPod nano (1st-Generation)
iPod nano (2nd-Generation)	iPod nano (3rd-Generation)
iPod nano (4th-Generation)	iPod nano (5th-Generation)
iPod nano (6th-Generation)	iPod nano (7th-Generation)



07 IPHONE 4S

8 GB - 3G/4G PHONE - MEDIA - APPS - \$0*



Once Apple's flagship iPhone, the iPhone 4S today is offered only in a low-capacity 8GB version, sold free with a 2-year cellular contract, or \$450 unlocked. Built with a beautiful but fragile glass body, the iPhone 4S has a 3.5" Retina display that's as sharp as any iPhone 5/5c/5s, but not as tall or as color-saturated. Similarly, its cellular antennas work with established 3G/4G GSM and CDMA networks around the world, but do not support faster LTE. A competent rear camera shoots 1080p HD videos and good 8-Megapixel still images; Apple's A5 processor enables it to offer impressive graphics performance, including full support for 3-D maps and many popular iOS games. This was the first Apple device with Siri, and only is missing a handful of iOS 7 features - notably AirDrop and realtime photo filters.

Battery life lags behind newer iPhones, but the dealbreaker for serious users will be the ultra-cramped 8GB of storage space - too little for videos or large apps. If you're looking for a budget smartphone, the iPhone 4S is a really good option relative to non-Apple alternatives, but factoring in the price of a truly necessary 4S case, Apple's \$100 premium for iPhone 5c is worth paying.



Saving \$99 on a 4S versus an iPhone 5c will be offset by a fragile glass body and loss of 8GB.



Packaging, Pack-Ins + Accessory Usability

The iPhone 4S includes a USB to Dock Connector cable, Earphones with Remote + Mic, and 5W USB Power Adapter. Every iPhone 4S includes a micro-SIM card - even the CDMA phones work on international GSM networks. Bluetooth 4 support expands wireless compatibility, and a 30-Pin Dock Connector plugs into most 2007-2012 docking add-ons.



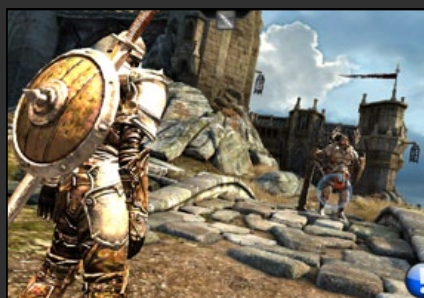
Apple's First 8-Megapixel/1080p Camera

Although the iPhone 5c and 5s both improve upon it, the iPhone 4S's rear camera is comparable to a low-end pocket camera without a zoom lens. Still photos snapped with the 4S offer noticeably greater detail than the iPod touch, and are the same resolution as shots from newer iPhones. Videos use all of the 1920x1080 pixels on high-definition televisions, a jump of more than twice the detail recorded by the prior iPhone 4 video camera. Image stabilization helps wind and hand jitters play less of a role in ruining photos. While you'll get even better results with the more expensive iPhone 5-series rear cameras, the 4S's only major caveats are the storage and battery life required by the new camera system: video recording fills an empty 8GB iPhone 4S in under 40 minutes, and drains a fully charged battery in two hours and 20 minutes. You'll likely run out of space for even still photos rather quickly after installing apps and a little music onto this model.



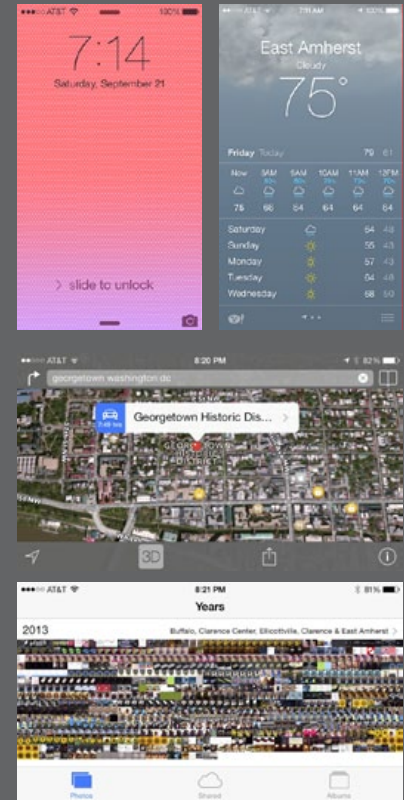
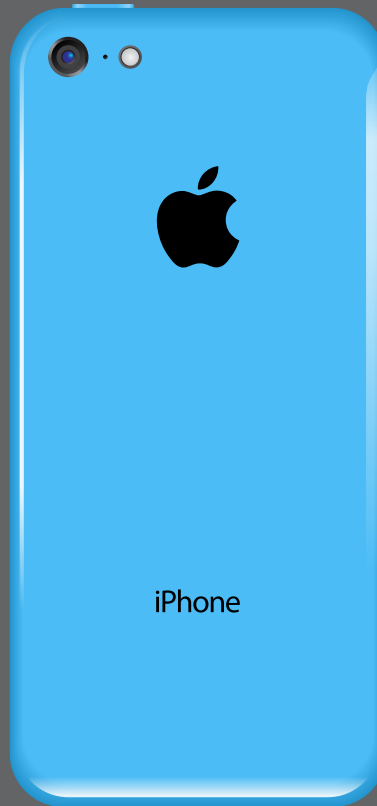
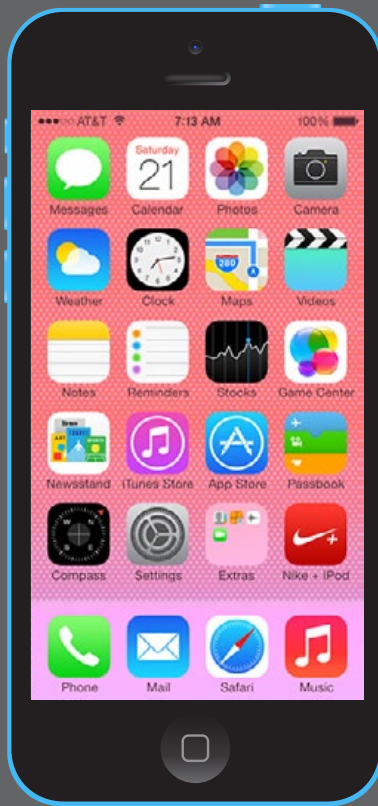
Color Options

Even though it's an entry-level phone, the iPhone 4S is offered in two colors: black or white, each with a silver stainless steel band holding components together between two sheets of painted glass. Cases enable users to pick new colors.



Good For Gaming

Roughly equivalent to the iPod touch for gaming, the iPhone 4S can handle handsome 3-D games on its own screen. It also can display 1080p games on a TV with Apple's Digital AV Adapter, or use AirPlay for wireless 720p to an Apple TV.



08 IPHONE 5C

16-32 GB - LTE PHONE - MEDIA - APPS - \$99-\$199*



Although Apple went overboard in hyping the iPhone 5c's "beautifully, unapologetically plastic" chassis, that part is unquestionably the only major strike against this repackaged version of 2012's groundbreaking iPhone 5. Still armed with a 4", 1136x640 Retina screen, support for LTE cellular networks, and two very good cameras, the iPhone 5c is a highly competent device in a cartoony package. On LTE networks, the 5c gets up to ten times faster data speeds than the iPhone 4S, surpassing typical home broadband service. While LTE is still growing globally - one neighborhood's speeds may be slow while another's are fast - carriers and Apple have expanded the 5c's likelihood of finding LTE somewhere. While 5c's battery life suffers in areas with weak cellular signals, it offers slightly better run times than the iPhone 5 it replaced, and sells for \$100 less.

Unless you strongly prefer the iPhone 4S's glass and metal body to plastic, the iPhone 5c is better in every other way; its added storage capacity and resilience are reasons to pick it for \$99 more. We prefer the iPhone 5s's slightly better camera performance, nicer body, and faster CPU, but 5c is very good.



An excellent compromise between the iPhone 4S and 5s on features, 5c sadly looks cheap.



Inside The Box + Accessory Compatibility

The iPhone 5c ships with Apple's EarPods with Remote + Mic, a Lightning to USB Cable, and a 5W USB Power Adapter. Many users will get a pre-installed nano-SIM card, and some will get a small metal SIM tray removal tool. Notably absent is a Lightning to Dock Connector Adapter; if you want to use old iPhone accessories, you'll need to buy one.



Five Colors To Start

In addition to classic bright white, Apple offers the iPhone 5c in four mild colors: a salmomy pink, weak yellow, middle-of-road blue, and almost-neon green. They're not a great lineup, but Apple could reveal new options - red, maybe? - at any time.



8MP Camera, Take 2

While the iPhone 5c shares 8-Megapixel rear camera resolution with the iPhone 4S, Apple made a variety of tweaks to improve this model. Superior low-light performance, faster speeds, and improved color are all highlights; only 5s is better.



'Beautifully, Unapologetically Plastic?'

The iPhone 5c certainly isn't Apple's first plastic iPhone - that was 2008's iPhone 3G - but it's definitely the most downmarket plastic device Apple has released since the original iPod shuffle in 2005. Stripped of all external traces of the silver metals that adorned the iPhone 3G and 3GS, the iPhone 5c uses plastic buttons, has no metal rings around its screen, rear camera lens, or ports, and has dull-looking Apple logos and text on its back. That said, it feels solid in the hand, highly glossy due to a sophisticated lamination process, and the always black glass front is as iPhone 5-like as could be without the chamfered edges. Our tests suggest that the 5c will be more resistant to the surface scuffs and hairline cracks that plagued the iPhone 3G and 3GS's back, but the front glass is still every bit as shatterable as before.



COMPARING IPHONE 5C COLORS

The iPhone 5c is the first iPhone to come in color options other than silver, white, or black. Here's a quick look at how the initial five colors compare with other pocket-sized Apple devices.

White

Apple's experience in producing bright white plastic devices is legendary, so it's no surprise that the iPhone 5c's white is every bit as intense as earlier iPhones and iPods. While the lacquering process leaves a glossy sheen on the iPhone 5c, it's not as thick as the clear acrylic faces of classic iPods, nor accented with metallic highlights like the iPhone 3G and 3GS. Nearly black icons and text are on the back below the camera, microphone, and flash.



Blue

Inoffensive rather than strong, the iPhone 5c's blue is a middle-of-road tone that's darker than sky blue but much lighter than royal or navy blues - another jeans-like option, but with a flat plastic sheen rather than metallic depth. We suspect it'll do reasonably well.



Pink

Weakly tinted to match the artificial color of farm-raised Atlantic salmon, the pink iPhone 5c isn't terribly different from the pink iPod touch - just far less intense and youthful than the best pink iPod nanos that preceded it. Somewhat faded in the same way as the yellow and blue iPhone 5c models, this pink is the sort of color a woman settles upon after going through an overly large collection of nail polish options.



Green

As the strongest of the iPhone 5c colors in saturation, green is only a little less electric than the neon green highlighters - somewhat muted, but not offensively so. While it lacks the metallic luster of the best green iPod nanos that came before it, it's otherwise in the running with them as a good representation of the color, and far less blue-tinted than the current-generation iPod shuffle and iPod nano.



Yellow

The iPhone 5c's yellow is the sort of faint shade one winds up with accidentally, generally after running out of pigment when attempting to achieve a bright yellow. It's the weakest of the new colors, making the yellow iPod touch look exciting and golden devices look fancy.





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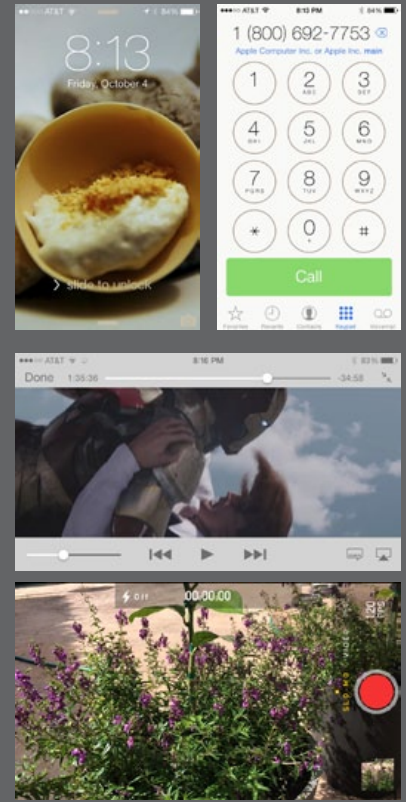
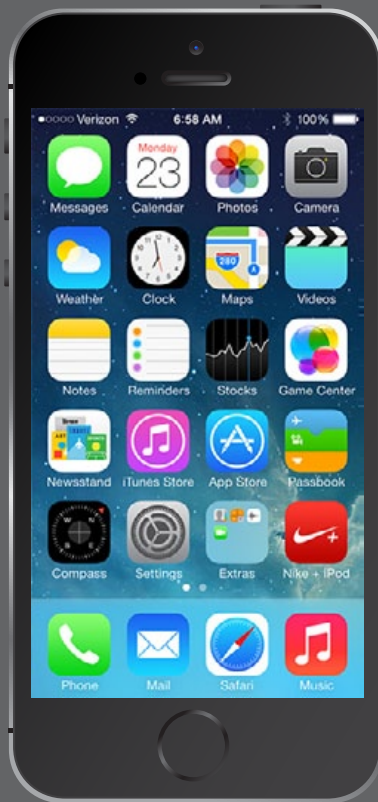
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09 IPHONE 5S

16-32-64 GB - LTE PHONE - MEDIA - APPS - \$199-\$399*



Despite receiving few upgrades from the iPhone 5 it replaced at the top of Apple's smartphone lineup, the iPhone 5s is Apple's best option today. Put aside the speedy, "desktop-class" 64-bit A7 processor, the benefits of which are currently hard to see outside benchmarking apps. Don't rush out for the 5s's new Touch ID fingerprint scanner, hidden beneath the Home Button for users who lock their phones or want to reduce the need for passwords during iTunes purchases. Each of these features has plenty of potential, but modest mainstream appeal. Instead, look to the 5s's two improved cameras, both a bit better in low light, with the rear one adding 10 frame-per-second (FPS) burst shooting, a 120FPS slow-mo video mode, a dual-LED flash, and dynamic white balance adjustments for panorama shooting. Then consider the new gold and Space Gray body colors alongside classic silver. And remember all of the iPhone 5/5c's other features are here, too, including LTE speed and excellent apps.

The iPhone 5s was built to win new iPhone users, and lure iPhone 4/4S users to upgrade. It succeeds, and surely trumps its predecessor without redefining it. Expect bigger things next year.



Pick the iPhone 5s over the other models if you want Apple's best camera and processor.



Inside The Box + Accessory Compatibility

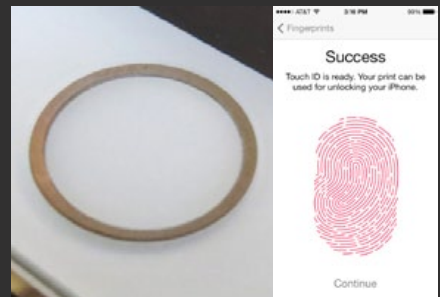
Each iPhone 5s ships with Apple's EarPods with Remote + Mic, a Lightning to USB Cable, and a 5W USB Power Adapter. Many users will get a pre-installed nano-SIM card, and some will get a small metal SIM tray removal tool. Notably absent is a Lightning to Dock Connector Adapter; if you want to use old iPhone accessories, you'll need to buy one.



Three Colors

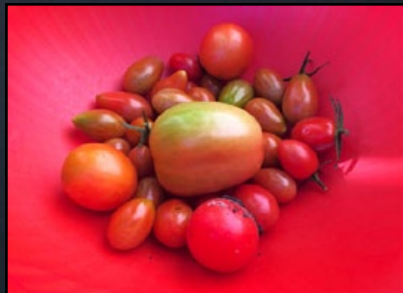
Apple expanded the iPhone 5s color range with gold, a more subdued version of the tone once used for an early iPod mini, and a lighter Space Gray

replacement for last year's slate color. Gold and silver iPhone 5s units have white glass accents; Space Gray instead has black, resembling the original iPhone.



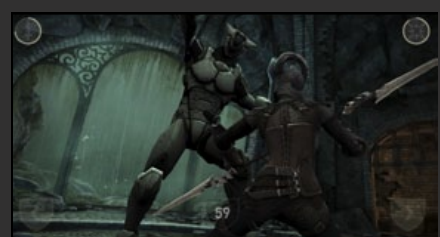
Touch ID Fingerprints

Fast, accurate, and so easy to use that it might as well be completely invisible, Touch ID makes fingerprint scanning painless. Right now, it only can be used to skip the Lock Screen and pay for iTunes/App Store purchases, but over time, it may do more.



Apple's Best 8-Megapixel Camera Yet

Rather than competing in the "megapixel race" to see who can stuff the most dots into a tiny sensor, Apple has kept the same 8 million pixels as in prior iPhones, but improved their ability to gather light and reduced their susceptibility to color-degrading noise. The iPhone 5s has a slightly wider lens and faster aperture than the 5/5c, and snaps very quickly, rivaling good pocket cameras.



Gaming Powerhouse

Differences in 5s and 5/5c graphics are hard to spot in early, underoptimized games, but 5s has twice the raw computational power - enough to beat a powerful handheld console such as the Sony PlayStation Vita. Infinity Blade III looks great on the 5s, but future titles will likely be markedly better.

COMPARING IPHONE SPECS

Some of the iPhones' many hardware specifications look like alphabet soup with numbers mixed in. Here, we look at the critical under-the-hood differentiators between current models.

MODEL	IPHONE 4S	IPHONE 5C	IPHONE 5S
SCREEN	960x640 / 3.5" Diagonal	1136x640 / 4" Diagonal	1136x640 / 4" Diagonal
CAPACITY	Stated: 8GB Actual: 6.3GB	Stated: 16-32GB Actual: 13.3-27.3GB	Stated: 16-32-64GB Actual: 13.3-27.3-56.7GB
PROCESSOR	A5: 2-Core 800Mhz CPU, 2-Core SGX543MP2 GPU	A6: 2-Core 1.3Ghz CPU, 3-Core SGX543MP3 GPU	A7: 2-Core 1.3Ghz CPU, 4-Core G6430 GPU
CELLULAR	UMTS/HSPA, GSM/EDGE, CDMA EV-DO Rev. A	LTE/UMTS/HSPA+/DC-HSDPA/GSM/EDGE. Optional CDMA EV-DO Revs. A + B.	LTE/UMTS/HSPA+/DC-HSDPA/GSM/EDGE. Optional CDMA EV-DO Revs. A + B.
WI-FI	802.11b/g/n (2.4GHz)	802.11a/b/g/n (2.4 + 5GHz)	802.11a/b/g/n (2.4 + 5GHz)
BLUETOOTH	Bluetooth 4.0	Bluetooth 4.0	Bluetooth 4.0
F. CAMERA	640x480 Still/Video	1280x960 Still / 1280x720 Video, Backside Illumination	1280x960 Still / 1280x720 Video, Backside Illumination
R. CAMERA	8-Megapixel Still 1080p Video LED Flash Image Stabilizer	Mid-Range 8-Megapixel Still 1080p Video LED Flash Improved Image Stabilizer	Improved 8-Megapixel Still 1080p Video/720p Slo-Mo Dual-LED Flash Auto Image Stabilizer, 10FPS
EXTRAS	Free iWork + iLife Apps, Dock Connector	Free iWork + iLife Apps, Lightning Connector	Touch ID Fingerprint Scanner, Free iWork + iLife, Lightning
GOTCHAS	Shatterable glass body, so-so battery.	Cheap-looking plastic body, battery/cellular speed issues.	Scratchable aluminum body, battery/cellular speed issues.

EASY ADVICE

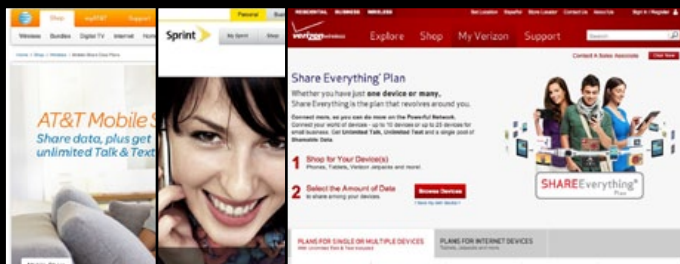
Well behind the iPhone 5c and 5s in wireless speed, 4S will work in virtually any country regardless of where it's bought, and features solid cameras that most users will like. While using the 4S after trying the 5/5c feels like a needless return to a squatter, heavier device, the iOS experience is nearly identical, but for screen size and reduced snappiness.

Though the iPhone 5c's LTE/non-LTE cellular speeds vary between carriers, countries, and neighborhoods, it's otherwise a stronger performer than the 4S, including support for 5GHz Wi-Fi networks, much higher storage capacity, and faster peak Internet speeds. The larger screen is noticeably better in color, and camera improvements are visible.

Identical to the iPhone 5c in all wireless regards, the metal/glass iPhone 5s offers a higher top storage capacity, a much faster processor, and camera enhancements as enticements to pay a \$100 premium; its Touch ID fingerprint sensor may interest some people, too. Our view is that 5s is the most worthy of its price, and will get better over the next year.

COMPARING CELLULAR DATA PLANS

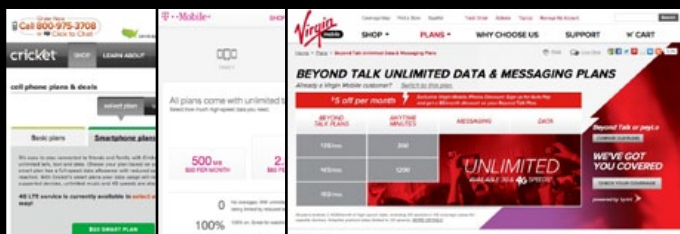
Apple's \$0*-\$399* iPhone prices all come with the same * caveat - they're "contract prices," subsidized by cellular carriers who will expect you to pay service fees for two years.



- Pay \$450 less up front for an iPhone with a 2-year contract.
- Pay an extra \$480-\$720 for data over the contract's life, and get less data each month.

Picking AT&T, Sprint, or Verizon: Contracts, Subsidies + Limited Data

The three largest American cellular carriers offer a variety of two-year contract options. AT&T plans start at \$70 per month with 300MB of included data, versus \$95/month for 2GB. Verizon plans start at \$80 per month for 500MB of data, versus \$100/month for 2GB. Sprint plans start at \$70 per month for 1GB of data, versus \$80 per month for unlimited data. All three carriers offer unlimited minutes and text messaging on these plans; AT&T and Verizon let you tether your iPhone to other devices at no extra charge, while Sprint does not. Sprint's pricing is appealing, but its network lags behind AT&T's and Verizon's in speeds.



- Pay \$350-\$450 more up front for the iPhone device.
- Pay less for data service each month, with caveats.

Cricket, T-Mobile, or Virgin Mobile: No Contract, More But Slower Data

Smaller U.S. carriers sell iPhones at full price, with cheap monthly service and no contracts. Cricket plans start at \$50 per month for 2.5GB of data, versus \$70 per month for 10GB. T-Mobile plans start at \$50 monthly for 500MB of data, versus \$70 per month for unlimited. Virgin Mobile plans start at \$35 per month or 2.5GB of data, rising as talk minutes climb from 300 to 1200 to unlimited; the others offer unlimited talk time. Notably, each of these carriers lets you use more data than the stated number, but cuts the speed down after you reach the limit. They all claim national coverage, but may have slow speeds in some areas. T-Mobile now offers unlimited international data in over 100 countries as a major new perk.

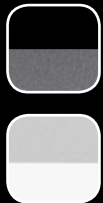
iPad Service Plans and International Considerations

Cellular-ready iPads are sold without contract subsidies, so you're under no obligation to pay service fees - you can turn service on or off as you prefer, paying only for your needs. You can even use your device on foreign networks with a simple SIM card swap. However, different iPad and iPhone models vary wildly in their support for foreign LTE networks; pre-2013 devices may be stuck on pre-LTE networks when traveling. See apple.com/iphone/LTE and apple.com/ipad/LTE for a sense of which models support some international networks.



10 IPAD MINI

16 GB - TABLET - MEDIA - APPS - \$299/\$429



Great by late 2012 standards and still very good as of late 2013, Apple's entry-level iPad is the non-Retina display version of the iPad mini: a shrunken iPad 2 with much-improved cameras and an optional version with LTE cellular data support. Packing a 7.9" display with the same 1024x768 resolution as the iPad 2, it's light enough to be held comfortably in one hand and small enough to type on with two thumbs at once. You give up almost nothing relative to the iPad 2: this mini's roughly 10-hour battery life falls only a little behind under certain conditions, and integrated speakers are modestly less powerful - neither important enough to make a difference to most users. Because the mini's screen is smaller, full-screen photos and text don't look quite as grainy as on the 9.7" iPad 2, though the difference between this version and the upcoming Retina iPad mini should be far more stark.

We've actively enjoyed first-generation minis for a year, finding the 16GB capacity just sufficient for an iPad primarily used by kids and other first-time iPad owners. Capacity aside, the Retina version will likely differ most in screen resolution and color, as well as support for a greater number of international LTE cellular networks.

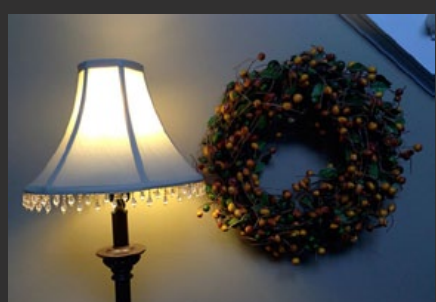


Skip the iPad 2 in favor of this less expensive, better-designed sequel. You won't regret it.



Wi-Fi And/Or Cellular

A \$130 price premium and plastic rear antenna panel are the two obvious differences between the cellular iPad mini and Wi-Fi-only version. Extra antennas let the pricier cellular model work month-to-month on LTE networks; no contract is required.



Reasonable Cameras

Sharing the same front and rear cameras as the iPod touch, the iPad mini is capable of recording 720p front videos and 1080p rear videos, snapping usable and respectably balanced 5-Megapixel rear still photos, similar to the iPad Air.



Small, Medium, Or Large: Which Is Best?

The iPad mini offers almost the exact same experience as the iPad 2, only in an even more portable form factor. With roughly four times the physical real estate of an iPhone 5-series/iPod touch 5G screen, the 1024x768-pixel iPad mini runs iPad apps without modifications, as well as iPod/iPhone titles at full 960x640 resolution in the center of the screen. Under many circumstances, including video and high-speed game playback, fast motion makes it hard to tell the difference between the mini's lower-resolution screen and the Retina displays on full-sized iPads. However, Retina improvements are obvious during web browsing, book reading, and photo editing, where the mini's chunkier pixels and lower color gamut become obvious. iPhone and iPod touch screens are smaller than the mini's, but with a comparable number of pixels and somewhat superior color fidelity.



Pack-Ins + Accessory Compatibility

Wi-Fi versions of this iPad mini ship with only a Lightning to USB Cable and a 5W (1A) USB Power Adapter, which charges this iPad at less than its fastest possible speed of 10W/2.1A. Cellular iPad users will generally find a micro-SIM card pre-installed, and most will get a small metal SIM tray removal tool. No Dock Connector to Lightning adapter is included.



11 **IPAD MINI WITH RETINA DISPLAY**

16-32-64-128 GB - TABLET - MEDIA - APPS - \$399-\$829



Back in January, rumors of a new Retina display-equipped iPad mini were widespread but wholly lacking in specifics: no one had seen a single piece of the device or seemed to know exactly what would power what was arguably Apple's most anticipated upcoming product. By the time Apple officially announced the device in October - with an uncharacteristically distant "later in November" release date - virtually nothing else was known. As it turns out, the new iPad mini mirrors the iPad Air in every way, gaining an iPhone 5s-like A7 processor and a 2048x1536 Retina display, though it looks almost identical to the first iPad mini from the outside. Only a hair thicker and grams heavier, it now sports a second microphone hole on the back below the first one, a change that was left out at the last moment from the original mini, but debuted with great results in the Air.

Since the Retina iPad mini isn't available yet, we're not issuing a rating or officially recommending it. But our experiences with the first mini were so excellent that we'd strongly advise possible iPad Air buyers to wait and try the Retina version first. This is the model we'll likely want for ourselves, and you may well feel the same way.



If you're considering any iPad purchase, wait until this mini is released to make a decision.



96% Charged

What to Expect: Battery Life

Barely mentioned by Apple, the Retina iPad mini's battery is 46% larger than the prior version: just as was the case with third- and fourth-generation iPads, the new screen requires more illumination power and also more processing power to fill the extra pixels with smooth graphics. Despite that, Apple is promising the same 9-10 hour battery life as the first mini.



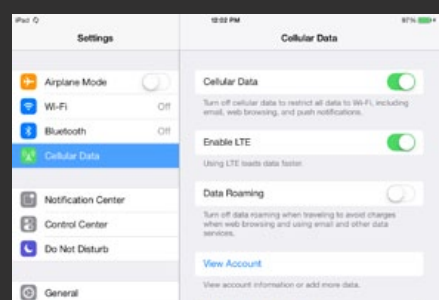
What to Expect: The 326PPI Screen

Certainly the most critical difference between the first- and second-generation iPad minis is the new Retina display - a screen with the same pixel density as the iPhone 5/5c/5s and current iPod touch, yet with over 3.1 million pixels, more than current HDTVs. Photos, art, text, and 3-D graphics will almost certainly look stunning on the new 7.9" screen - roughly the same as on the iPad Air, only packing the same image into a smaller space. It's not yet certain that the Retina iPad mini's screen will have the same nearly perfect color rendition as the iPad Air, but it will certainly improve upon the somewhat underwhelming, old-generation display in the first mini. The photos here were snapped off of a Retina display on a full-sized iPad, and illustrate what the new iPad mini's screen will look like at a distance and up close.



What to Expect: Box

The iPad mini will include a Lightning to USB Cable and instructions; cellular versions should include SIM tray removal tools and SIM cards. Unlike the original iPad mini, the Retina mini will come with a proper 10W (2.1A) USB Power Adapter for charging.



What to Expect: LTE

Apple is loading the new mini with support for more international LTE networks than the original model, which means that the Retina mini you buy in one country should work at top speeds all over the world - a major positive change for travelers.



12 IPAD 2

16 GB - TABLET - MEDIA - APPS - \$399/\$529



Although we never would have expected Apple to keep the 2011-vintage iPad 2 around for another year, it's back - and so old that it's hard to recommend at this price point. Similar in performance and specifications to the \$299 iPad mini, the \$399 iPad 2 benefits from a larger 9.7" screen and slightly better real-world battery life under certain usage conditions. It's also the only current iPad model still equipped with a Dock Connector plug, the older and more widely accessory-compatible standard Apple used for nearly a decade before Lightning debuted last year. Look carefully and you'll note differences, though: markedly worse cameras, no support for the Siri voice-controlled "intelligent assistant," and older Bluetooth 2.1 wireless leave it behind not only the mini but also the \$299 32GB iPod touch. Then there's its huge size and weight, which the iPad Air and both minis put to shame even with better components inside.

Having released the third/fourth-gen iPads as improved sequels to this model, Apple had no reason to keep the iPad 2 around instead - except as a more differentiated \$399 alternative to the iPad Air. Mull it only as a larger-screened alternative to the first-generation iPad mini.



Like the iPhone 4 last year, the iPad 2 will get at most one (likely partial) future iOS update.



Inside The Box + Cellular Performance

The Wi-Fi iPad 2 ships with a USB to Dock Connector cable and a 10W/2.1A wall adapter capable of recharging its battery in 4 hours. Wi-Fi + 3G versions may or may not ship with SIM tray eject tools and SIM cards; AT&T's does, and typically gets faster cellular speeds than Verizon's. Neither can work on LTE networks, which other iPads all support.



A 9.7" 1024x768 Display: What That Means

Basically identical to the screen that shipped in the 2010 original iPad, the iPad 2's display is generations behind the best ones Apple is currently making, but entirely acceptable for basic web browsing, video viewing, and game playing - as well as most kids' apps. Similar to later iPads in brightness, the differences are more noticeable in color accuracy and sharpness; newer models are so much better in both regards that professional users will find the less detailed, grainier iPad 2 screen hard to accept. That said, as the image (and crop) here show, the iPad 2 still looks pretty good when viewed at a distance, even if the pixels are obvious up close. If you supply a stand and are a couple of feet away from the screen, it works very well as a bedside TV for watching streamed or stored videos.



Volume and Weight

The iPad mini fits within the footprint of the iPad 2's screen, and weighs around half as much. While the iPad 2 is more difficult to hand-hold for an hour, it is large enough to nearly replicate a full-sized keyboard for typing when inside a stand or case.



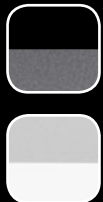
Two Poor Cameras

The iPad 2's front and rear cameras are relics from a time when Apple was iffy on photography, especially in its tablets. In back is a grainy 0.7MP still camera, with a 640x480 camera in front. They're the worst in any current iOS device, by far.



13 IPAD AIR

16-32-64-128 GB - TABLET - MEDIA - APPS - \$499-\$929



Best understood as a 9.7"-screened version of the Retina iPad mini - their bodies are virtually identical save for length and width - the iPad Air is the smaller, nearly twice as fast version of last year's fourth-generation iPad. Functionally, very little has changed between models: the screen looks the same, the cameras are basically the same, and one of the color options has shifted from slate/black to Space Gray/black. But there are some major changes: the new model is only a quarter-pound heavier than the Retina mini - much lighter than the fourth iPad - and despite packing a speedier 1.4GHz A7 processor and a much smaller battery than its predecessor, it achieves longer 11- to 13-hour run times, and charges faster. Like the Retina mini, Air also gets a second microphone for echo-cancellation, as well as a second bottom speaker, and there's now a single LTE version for use across the world.

Like laptops, iPad users will respectfully disagree on the "best" screen size - 9.7" Airs may be better for some users than 7.9" Retina minis, despite the higher price tag. Try both of the new models in person before making a purchase; you may love this, or save \$100 on a mini.



The iPad Air's screen may be better-suited for magazine reading and at-home video viewing.



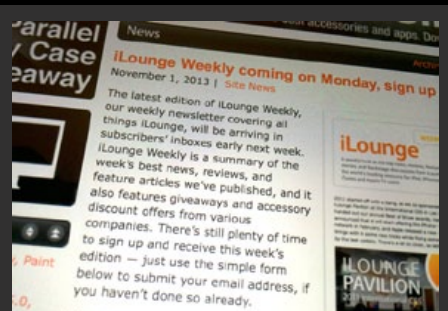
iPad Air: The Larger (But Still Thin) iPad mini

Even though the iPad mini is small enough to fit almost entirely within the borders of the iPad Air's screen, the larger iPad achieves nearly the same impressive reductions in bezel size and thickness we saw in the smaller model last year. Apple appears to have accomplished this by dumping all of the fourth-generation iPad's parts except for the 9.7" screen, switching everything else to the compact components used in the mini: the cameras, the Home Button, and the Wi-Fi + Cellular version's SIM card tray are all smaller, though none of these changes reduces the iPad Air's functionality, performance, or style. To the contrary, the new model actually looks nicer than the fourth-generation iPad it replaces; the side buttons and front edge are fancier, thanks to chamfered metal.



Computer-Like Speed

The iPad Air's 1.4GHz A7 shines when importing photos, rendering videos, and handling other computer-like tasks, often requiring only half the time of the prior iPad. But the iPad's UI and games won't feel faster until they're better-optimized.



The 9.7" Retina Screen

Apple only offers one 9.7" Retina device at this point, and the iPad Air is it. Text and graphics benefit from imperceptibly small pixels, so curves look smooth rather than jagged, and color rendition is accurate. Photos look beautiful on this display.



Pack-Ins and Battery Compatibility

In addition to SIM card and SIM removal tool items included only with cellular iPads, each iPad Air comes with the same Lightning cable and 12W USB Power Adapter of its predecessor. Notably, the Air can be refueled to nearly 50% by 6,000mAh batteries and around 95% by 11,000mAh batteries, markedly higher than the fourth-generation iPad.

UNDERSTANDING APPLE'S CAMERAS

After years of putting “good enough” rather than truly great cameras into iPads, iPhones, and iPod touches, Apple cleaned up two of its product families with front and rear cameras that are reliably good, and sometimes even great. Starting with the iPhone 5, Apple’s rear cameras came within striking distance of pocket point-and-shoot models in image quality - minus optical zoom. The new iPhone 5c matches that mark, while the iPhone 5s exceeds it. By contrast, the 32GB/64GB iPod touch and all of today’s iPads except the iPad 2 have cameras that are nearly as good as the iPhone 5c’s. So what are the key photographic differences between Apple’s devices and standalone cameras? The following pages explain variations between Apple’s current cameras, how they compare with very good pocket cameras and DSLRs, and the value of Apple’s free iPhoto software.

The Big Picture: Lenses and Sensors

The biggest challenge faced by any camera is physical: small lenses and sensors reduce image quality. Lenses gather the light a camera “sees,” so bigger and clearer lenses tend to produce more detailed, color-accurate, and less distorted images; larger sensors generally produce cleaner images. To the right, you can see the actual relative sizes of lenses from a DSLR, a popular standalone pocket camera, and the iPhone 5s. iPhones gather light with roughly 1/6th the glass surface area of a good pocket camera, and the iPhone 5s’s sensor is around 1/4th the size of the pocket camera’s (albeit with fewer pixels). This partially explains why iOS devices struggle to produce comparably impressive images, especially in low light. Recent backside-illuminated sensor technologies are continuing to improve the light-gathering abilities of all sizes of cameras. As a result, new iOS devices can outperform some older standalone camera rivals.



iPad 2



iPhone 5s

The Small Picture: Pixel-Level Details + Colors

In addition to struggling with color accuracy, the 0.7MP rear camera in the iPad 2 has no ability to focus on a specific part of the subject in its frame; it’s set at a single fixed focus point, and close-up objects become blurry. Moreover, it has very limited color range, tending to render blotches of color rather than subtle gradations. The 5MP rear cameras in all other current iPads, the iPhone 4S, and the iPod touch benefit from autofocus



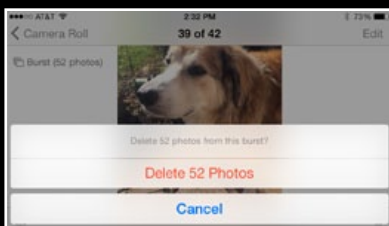
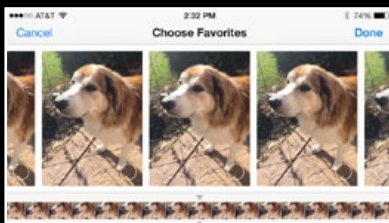
iPod touch 5G

and superior color accuracy. Even better, the iPhone 5s is super-fast at locking onto objects, producing images that are sharper and more detailed. It generally does a better job of balancing highlights, dark and shadow detail, and colors in between. Most of these devices make nice 4” x 6” prints.



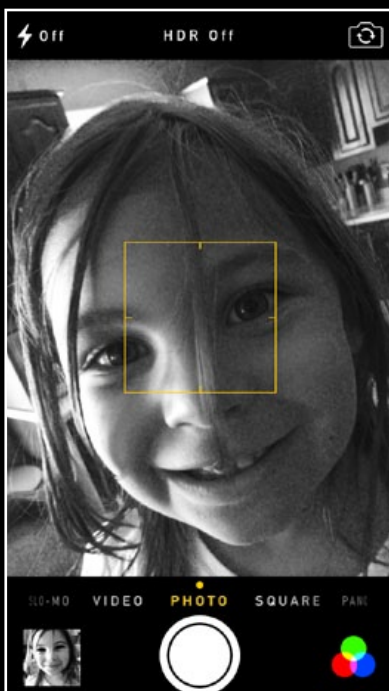
Close-Up and Distance Photography

All of Apple's current devices except the iPad 2 are good for macro shots - pretty close to pocket cameras. While the iPhone 5s has a slightly larger minimum focusing distance than its predecessors (and most current iOS devices), it can produce close-up shots that are very detailed and sharp starting from several inches away. That said, Apple's lenses are really optimized for taking shots of people and objects that are several feet away, as well as the occasional image of a distant landscape; the iPhone 5s has a roughly 30mm lens that's particularly well-suited to landscape photography. Pocket cameras often have lenses that start wider (24-28mm) for landscapes and zoom in to 35-50mm for portraits, stopping at 100mm or more. iOS devices can't optically zoom, and instead rely on "digital zoom," which is artificial and heavily distorted during still photography - somewhat less so during videos.



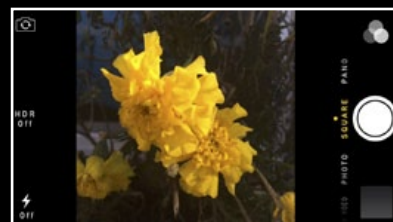
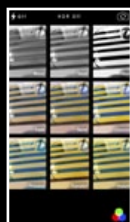
Frames Per Second and Burst Mode

Up until the release of the iPhone 5s, Apple never discussed the number of photos its cameras could snap each second - and still doesn't for most models. The iPhone 5s can snap 10 full 8MP shots per second, versus iPhone 5/5c's ~three 8MP shots per second, and iPod touch's one or two 5MP shots per second. Only the iPhone 5s has "Burst Mode," the ability to continuously snap images at full speed, group them into "bursts" of similar images, and then automatically select the "best" one. You can dig through the photos yourself, too; the bad ones consume a lot of space, so they're best disposed of.



Filters + Square Photos: Integrated Instagram?

The success of Instagram - a simple iOS app for snapping square photos, applying colored filters to them, and sharing them online - led Apple to add both filters and square photos to iOS 7. A set of colored dots on the Camera screen lets you pick from eight filters or neutral; most iOS devices let you choose the various black and white or color-skewed filters before or after you take photos, but older devices can only apply filters to photos that were already snapped. A swipe on the Camera screen activates Square mode, which crops 8MP images down to 6MP, or 5MP images to 3.7MP, each with 1:1 aspect ratios.





iPod touch



iPhone 5s



Canon S100

Low-Light Performance

Because of their small lenses and sensors, iOS devices strain to gather light indoors - and even outdoors at night. Only the iPhone 5-series phones have a special low light mode capable of capturing usable images in dim conditions: the rear camera in the iPod touch (and most other current iOS devices) is barely able to perceive any color or detail at all under the exact same lighting conditions as the iPhone 5s below. By comparison, a very good pocket camera or an excellent DSLR can do markedly better than even the iPhone 5s under the same lighting conditions, but they're exceptions to the rule - most cameras have a very hard time in dark light. Using a flash can help a lot, but you'll have to decide whether blinding your subjects temporarily is worthwhile for "that shot." Using an app such as Apple's iPhoto, low-light photos captured by any current Apple device except the iPad 2 can be manually tweaked to increase the contrast and reveal seemingly lost detail, though the quantity of noise and grain you'll notice will be significant. Switching a low-light image to black and white can produce a more usable edited result.

Optical Versus Digital Zoom

Standalone cameras almost always have zoom lenses capable of focusing on faraway subjects, but iOS devices don't, instead relying on a gimmick called "digital zoom" that merely takes a regular, unzoomed photo, crops off the sides, and blows up the center. Even on the otherwise impressive iPhone 5s, this effect produces blurry details, but it's as close as Apple's devices can get to zoom. Adding optical zoom would require a thicker integrated lens, a considerably larger sensor, or a lens accessory. Zoom and wide-angle lens accessories have been released, with decidedly mixed results; Olloclip's latest are actually pretty good.



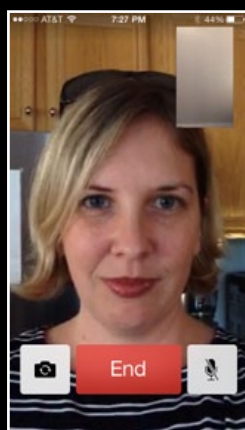
Digital Zoom - iPhone 5s



Optical Zoom - Canon S100



Optical Zoom - Canon 5DM3



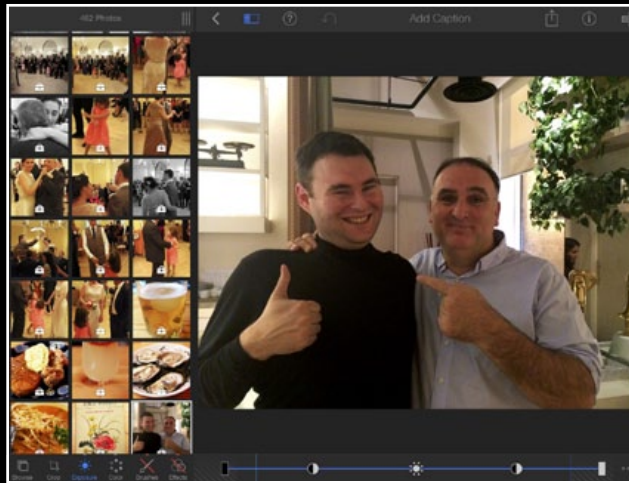
FaceTime or FaceTime HD?

Except for the iPad 2, Apple's front FaceTime cameras are all capable of recording video and photos at detailed 1280x720 "HD" resolution, but due to a recent patent lawsuit loss, Apple says FaceTime over Wi-Fi is currently capped at sending video at a much lower, softer-looking resolution of 480x368 - 1/5th of FaceTime HD.



Video: 1080p + 720p

Most iOS devices can record 1920x1080 (1080p) video at 30 frames per second from their rear cameras, and 1280x720 (720p) from their front cameras; the iPad 2 is an exception, with a 720p rear camera and lower-res front camera. In bright light, these cameras do a very good job of creating camcorder-quality HD video - some can even zoom. Low light performance isn't great.



iPhoto: Now Free With New iOS Devices

iPad, iPhone, and iPod photos frequently benefit from a little post-processing: brighter or dimmer colors, blur effects, cropping, or straightening may improve photos. Apple's iPhoto handles almost all of these editing tasks with ease, allowing you to choose from numerous effects and tools, while acting as an alternate photo library and sharing service for your images. It runs well on all of Apple's devices, and is now free with the purchase of any new iOS device, though the new iOS 7 interface is a bit spartan and confusing.



Slo-Mo Video: 720p (120FPS) On iPhone 5s

The iPhone 5s is the only iOS device that can record 120 frame per second slow-motion videos - a feature Apple calls Slo-Mo. This high-speed recording mode uses up lots of space, but creates videos that can be controlled with a timeline made from blue bars. After recording, you specify which portion of the video you want to watch at 1/4 speed, letting you see hitherto blurred motion become a slideshow of detailed frames.



Gigantic Panoramic Photos Using iOS 7's Pano Mode

Most current iOS devices can record panoramas using the Pano mode built into Apple's Camera app. Swiping to the far right of the Camera interface lets users easily capture massively wide images - over 10,000 pixels across by 2,500 pixels tall. Pano automatically stitches the images together, and on iPhone 5s optimizes the contrast to avoid bright blowouts and dark spots.



12 SAVE MONEY ON GEAR

BUYING AND SELLING IPADS, IPHONES + IPODS

Apple's prices for iPads, iPhones, iPods, and accessories are always high: it offers no discounts, and limits retailers' abilities to do so. If you shop around at the right times, you can save \$20-\$50 on certain devices, and score discounts on add-ons. This table shows late October 2013 prices for different retailers; as iPods are now a year old, iPhones are over one month old, and iPads are new releases, prices will likely fluctuate weekly with availability.

Item	Apple	Amazon	Best Buy	Fry's	Target	Walmart
iPod nano 16GB	\$149	\$149	\$140	\$139	\$145	\$140
iPod touch 32GB	\$299	\$297	\$285	\$299	\$295	\$285
iPod classic 160GB	\$249	\$259	\$250	\$240	\$245	\$229
iPhone 5c 16GB	\$99	N/A	\$100	\$39	\$50	\$45
iPhone 5s 16GB	\$199	N/A	\$200	\$197	\$200	\$189
iPad mini 16GB (first-generation)	\$299	\$334	\$300	\$299	\$299	\$299
iPad 2 16GB (Wi-Fi)	\$399	\$408	\$400	N/A	\$350	\$399
iPad Air 16GB (Wi-Fi)	\$499	\$499	\$500	\$499	\$479	\$499
Jawbone Jambox	N/A	\$126	\$150	\$150	\$180	\$180
Logitech Easy-Switch Keyboard	\$100	\$78	\$100	\$100	N/A	N/A
Free Shipping	\$50+	\$35+	\$25+	No	\$50+	\$50+
Storefronts	Int'l	No	US	US	US/CA	Int'l

Apple Store

Has exclusives on engraved or red-colored iPods, and sells both iPhones and iPads, but charges full MSRP for everything it sells. High prices for accessories.

Amazon.com

Pricing can be aggressive on accessories. Free shipping, sometimes no sales tax. But prices change often, and Apple device prices have gone a bit crazy.

Best Buy

Prices are often \$1 higher than Apple's, generally sells iPhones and iPads at high prices. Accessories are also expensive here, but rarely-held sales can be good.

Fry's

Aggressive iPod and iPhone pricing. Poor in-store service/return hassles, but online's OK; shipping's always extra. Weak accessory stock/brands.

Target

Apple devices sometimes go on brief, impressive sales, as do certain accessories. Returns are easy if you're local, online's good. Always worth a look.

Walmart

Occasionally sells iPads, iPhones, and iPods at discounts, sometimes charges for shipping. Sells too many low-quality accessories. Online's good.



Fry's, Target, and Walmart discount Apple's hardware; Amazon is strong for accessories.

Exclusives

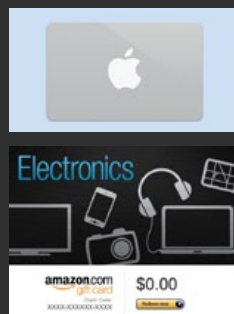
While most of Apple's iPods, iPhones, iPads, and accessories are sold everywhere throughout the world, the company reserves certain iPod colors and Apple-branded accessories solely for sale in its own stores. Each of these items is (PRODUCT) RED-branded, and Apple makes a contribution from each sale to the Global Fund fighting HIV and AIDS in Africa. As the name suggests, the hardware and accessories are red in color, marked with a (PRODUCT) RED logo, and sold by Apple at full retail prices. Currently, iPod shuffles, nanos, and touches, Apple's iPhone 5s Cases, iPad Air/mini Smart Cases, and iPad Air/iPad mini Smart Covers are sold in (PRODUCT) RED versions. Past exclusive devices and add-ons can be found on eBay.

There are few truly retailer-exclusive accessories, and even fewer that can't be found elsewhere after some period of time. A relatively small number of third-party accessories have been stocked only by Apple Stores as six-month exclusives. During that time, they typically sell at a steep premium relative to their value, and are then discounted upon broader availability at other retailers. As a general rule, if an accessory's an Apple Store exclusive, your wallet will be better off if you wait six months and buy it at a discount elsewhere.



AppleCare+ and Gift Cards

The AppleCare+ extended warranty is now sold for iPods (\$59), iPhones (\$99), and iPads (\$99), bringing the warranty to two total years of coverage, while allowing up to two iPod (\$29 each), iPhone (\$79 each), or iPad (\$49 each) accidental damage device replacements. AppleCare+ must be purchased within 30 days of buying the device. If you want to give digital dollars, Apple's Gift Cards (\$15 and up) and Amazon Gift Cards (any value) let you send credit through email.



Apple Product Buying Advice

The best prices are generally found online rather in physical stores, except under two circumstances. When new iPods, iPhones, or iPads first come out, Apple's the place to look; it has the best initial inventory of hard-to-find models. Later, Target or Walmart will offer gift cards or other heavy discounts, enabling you to save cash or get free accessories.

Save by waiting. Early in an iPod's life, \$5-\$10 off the MSRP is great, but months later, you may save more. The iPhone 5c was discounted by \$50 by Walmart shortly after launch; cellular carriers now offer deals after several months.

Consider refurbished units. Defects and changes of heart lead to returns; bad devices have quite likely been fixed and await resale from the Apple Store's Refurbished section at big discounts. iPhones and iPads are often sold here for \$50-\$100 below their new prices, with high-end iPads dropping by \$100-\$140.

13 USED DEVICE PRICES

LEARN THE VALUE OF ANY IPAD, IPHONE, IPOD, OR 

Apple's devices typically hold most of their value for years after purchase - a fact that has made upgrades easier, as used older models could be resold, with cash used towards the purchase of something new. Even today, unlocked year-old iPhones can fetch more than their original prices, as do certain Apple TVs; iPods, however, are seeing fairly steep price declines, and iPads are iffy from model to model. This section will give you a sense of what each old model is worth.



iPods

Historically, Apple's least expensive iPods lost value more quickly than full-sized models, and certain colors may hold value longer. Recently, prices have declined nearly across the board for iPods, with some iPod nano models holding up better than others. The iPhone is killing demand for higher-end iPods.



iPhones

Prices for the iPhone 4S and iPhone 5 continue to be quite strong, as both run the latest version of iOS fully, while iPhone 4 prices are respectable. Prior models have collapsed in value to the point where they're as cheap or cheaper than iPods, a pattern that will likely continue over the next several years.



iPads

iPad prices have been unusually variable due to Apple's unpredictable discontinuation of models. The original iPad lasted only a year, and the third-gen iPad was killed after six months, slashing their resale value. Meanwhile, the iPad 2 stuck around for years. Right now, fourth-gen iPad values remain fairly strong.



Unengraved, unscratched, working devices sell best; 2010 Apple TVs + recent iPhones can sell for premiums over their original prices.

Every Discontinued iPad, iPhone, iPod, and Apple TV: Details + eBay Prices

On the pages that follow, you'll see every discontinued iPad, iPhone, iPod, and Apple TV, along with its storage capacity or capacities, release date, and original price. Since several factors can influence the used value, we've listed each one's new features, pack-ins, and major issues/problems, along with mid-October 2013's average eBay selling price for each specific model number. The original iPod is shown here as an example of what to expect. Different models can denote small or large changes, so check the Apple part number on the back or bottom of your box before buying or selling.



iPod
(1G)

10-2001

5/10GB - 10 Hr Battery
Music - Data
\$399-\$499 US

Breakthroughs: Apple's original cigarette pack-sized 5GB music player uses intuitive five buttons and moving wheel controls plus an easy-to-read white backlit screen, features iconic clear/white plastic and polished steel case design. Works as Mac hard disk.

Pack-Ins: FireWire-to-FireWire cable, original FireWire wall charger, original iPod earphones.

Issues: High price, Mac only, limited battery life. Retrospectively fewer add-ons than newer iPods, in part because of lack of bottom connector and missing USB support.

eBay Values:

5GB (M8513LL/A, M8541LL/A, M8697LL/A)	\$73.58
10GB (M8709LL/A)	\$95.85

Our Advice: Buying Used

Once every two or so years, Apple replaces a popular model with something new that's not as good in some way, letting older models remain viable. The sixth-generation iPod nano lost video and camera features, and the third-generation iPod shuffle lost all buttons, making earlier models valuable. Similarly, 2008's iPods discontinued support for certain accessories, making older models easier to use with prior Apple and third-party gear, and 2012's new iPods, iPhones, and iPads fully replaced the Dock Connector used in most Apple accessories. But before you buy a used device from eBay, factor in the cost of a replacement battery, the warranty, and the cool factor of having something new. You can decide whether a new or used device is best for your needs.

Our Advice: Selling Used

- Sell your old device right before Apple replaces it. "Old" models lose \$\$\$ fast.
- Include the model number in the title.
- Indicate quality in the listing. If you say "as-is," expect to get less.
- Unlock your iPhone before listing it.
- Don't engrave or alter your device.
- Use Apple's official photo on the search page. This oddly helps prices.
- Keep your box and pack-ins. People pay more for the complete package.
- Don't bundle other add-ons. They won't help your price; sell them separately.
- Include photos of all the included items. People want to see what they're getting.
- Don't include "Windows/Mac" in title.
- Charge reasonable shipping. You'll get much less if you overcharge.

iPod (2G)



7-2002

10/20GB - 10 Hr Battery
Music - Data
\$399-\$499 US

Breakthroughs: Moving scroll wheel replaced with touch-sensitive surface. Separate PC versions introduced, enabling PC users with FireWire ports to transfer music with MusicMatch software. Peak capacity upped to 20GB with old 5GB falling to \$299.

Pack-Ins: FireWire cable, wall charger, original iPod earphones, carrying case, remote control.

Issues: High price, FireWire standard isn't PC-friendly, limited battery life.

eBay Values:

10GB (M8737LL/A, M8740LL/A)	\$58.60
20GB (M8738LL/A, M8741LL/A)	\$56.40

iPod (3G)



4-2003

10/15/20/30/40GB - 8 Hr Battery
Music - Photos* - Games* - Data
\$299-\$499 US

Breakthroughs: Touch-sensitive buttons, thinner casings, USB support, top + bottom accessory ports, photo transfer + mic add-ons, big drives, games.

Pack-Ins: FireWire cable, adapter, wall charger, and new earphones. Some inc. dock, case, and remote.

Issues: Weaker batteries, screen backlight variations.

eBay Values:

10GB (M8976LL/A)	\$32.21
15GB (with Dock, M8946LL/A)	\$32.24
20GB (M9244LL/A)	\$29.01
30GB (M8948LL/A)	\$54.75
40GB (M9245LL/A)	\$42.00

iPod mini (1G)



2-2004

4GB - 8 Hr Battery
Music - Games* - Data
\$249 US

Breakthroughs: Microdrive storage creates smallest iPods ever, with 5 new body colors and tiny Click Wheel controller, integrating all buttons into one surface.

Pack-Ins: 2003 iPod earphones, belt clip, USB and FireWire cables, wall charger.

Issues: Low capacity per dollar, limited battery life, not designed for use with photo sync or recorder add-ons.

eBay Values:

4GB (M9160LL/A, M9436LL/A, M9435LL/A, M9434LL/A, M9437LL/A)	\$26.50
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iPod (4G/U2)



7/10-2004

20/40GB - 12 Hr Battery
Music - Photos* - Games* - Data
\$299-\$399 US

Breakthroughs: Replaces separate touch-sensitive buttons and wheel of third-generation iPod with iPod mini's Click Wheel controls, improves battery life, adds USB cable. Black and red U2 iPod debuts for the first time as alternative to the classic white full-sized iPod.

Pack-Ins: 2003 iPod earphones, USB and FireWire cables, wall charger. Dock included with top model.

Issues: Slight cheapening of prior iPods' looks.

eBay Values:

20GB (M9282LL/A)	\$37.30
U2 (M9787LL/A)	\$59.30
40GB (M9268LL/A)	\$44.57

iPod photo (aka iPod 4G with color)



10-2004

20/30/40/60GB - 15 Hr Battery
Music - Photo - Games* - Data
\$499-\$599 US

Breakthroughs: Takes iPod 4G, improves battery, adds color screen for photo display. Higher storage capacity. Originally called iPod photo, later renamed to just iPod.

Pack-Ins: 2003 iPod earphones, USB cable, wall charger. Dock, AV cable, FW cable with certain models.

Issues: Photo sync is slow, display requires add-ons.

eBay Values:

20GB (Color, MA079LL/A)	\$45.64
20GB U2 (Color, MA127LL/A)	\$64.88
30GB (Photo, M9829LL/A)	\$45.86
40GB (Photo, M9585LL/A)	\$48.19
60GB (Photo/Color, M9586LL/A, M9830LL/A)	\$62.23

iPod shuffle (1G)



1-2005

512MB /1GB - 12 Hr Battery
Music - Data
\$99-\$149 US

Breakthroughs: A complete music player in the space of a pack of chewing gum, with simple USB plug. Wearable, using ultra-simplified controls: a large play button surrounded by track skip and volume buttons. "Shuffle" mode plays music out of order.

Pack-Ins: 2003 iPod earphones, lanyard necklace.

Issues: Screenless interface falls below competitors' lowest-end offerings, highly limited storage capacity, no iPod accessory compatibility.

eBay Values:

512MB (M9724LL/A)	\$13.51
1GB (M9725LL/A)	\$15.19

iPod mini

(2G)



2-2005

4/6 GB - 18 Hr Battery
Music - Games* - Data
\$199-\$249 US

Breakthroughs: Radically improved battery life and lower price than prior mini; brighter body colors.

Pack-Ins: USB cable, belt clip, 2003 iPod earphones.

Issues: No longer includes wall charger, value so-so.

eBay Values:

4GB (M9800LL/A, M9802LL/A,
M9804LL/A, M9806LL/A) \$29.56

6GB (M9801LL/A, M9803LL/A,
M9805LL/A, M9807LL/A) \$29.81

iPod nano

(1G)



9-2005

1/2/4 GB - 14 Hr Battery
Music - Photos* - Games* - Data
\$149-\$249 US

Breakthroughs: Thinnest iPod ever, now with mini-besting color screen and photo display feature.

Pack-Ins: USB cable, 2003 iPod earphones, dock adapter, simple carrying case (added late 2005).

Issues: Lower battery life and storage than same-priced minis, scratchable body, no top add-on port.

eBay Values: 1GB Black (MA352LL/A) \$76.68
1GB White (MA350LL/A) \$78.06
2GB Black (MA099LL/A) \$71.00
2GB White (MA004LL/A) \$78.73
4GB Black (MA107LL/A) \$76.59
4GB White (MA005LL/A) \$82.70

iPod

(5G)



10-2005

30/60 GB - 14-20 Hr Battery
Music - Photos - Games - Data
\$299-\$399 US

Breakthroughs: Screen size boosted to 2.5", video and downloadable game playback added. Interface modestly improved. First all-black full-sized iPod model.

Pack-Ins: iPod earphones, USB cable, simple case.

Issues: Short video play time, limited formats. Abandons top-mounted accessories, obsoleting many top add-ons.

eBay Values:

30GB White (MA002LL/A) \$61.59
30GB Black (MA146LL/A) \$65.20
U2 (MA452LL/A) \$65.15
60GB White (MA003LL/A) \$87.47
60GB Black (MA147LL/A) \$82.00

iPod nano

(2G)



9-2006

2/4/8 GB - 24 Hr Battery
Music - Photos - Games* - Data
\$149-\$249 US

Breakthroughs: Thinner and less scratchable nano in 6 colors. Much-improved battery, new voice recording feature, impressive new black and red aluminum versions introduced. Marked the debut of the **PRODUCT (RED)** iPod nano, the first in a series of charitable iPods.

Pack-Ins: USB cable, 2006 iPod earphones.

Issues: Color choices limited by price and capacity, problems with prior nano accessories.

eBay Values: 2GB Silver (MA477LL/A) \$25.15
4GB (MA426LL/A, MA428LL/A, MA489LL/A, MA487LL/A, MA725LL/A) \$26.95
8GB (MA497LL/A, MA899LL/A) \$39.76

iPod

(5.5G)



9-2006

30/80 GB - 14-20 Hr Battery
Music - Photos - Games - Data
\$249-\$349 US

Breakthroughs: Brighter screen, better video battery life, search feature, superior prices for capacities, highest capacity yet in the iPod family.

Pack-Ins: 2006 iPod earphones, USB cable, simple case.

Issues: Limited video formats, screen size still small by comparison with other portable video devices. Almost physically indistinguishable from prior model.

eBay Values: 30GB Black/White (MA444LL/A, MA446LL/A) \$58.83
30GB U2 (MA664LL/A) \$62.00
80GB Black/White (MA448LL/A, MA450LL/A) \$87.76

iPod shuffle

(2G)



11-2006

1/2 GB - 12 Hr Battery
Music - Data
\$79 US (1GB), Later \$49 -\$69

Breakthroughs: Apple's smallest, most wearable iPod to date, available in multiple colors (five per season), each with rear belt clip. Metal replaces earlier plastic.

Pack-Ins: 2003 or 2007 iPod earphones, USB dock.

Issues: Audio distortion and weak accessory support. Can't charge and play audio at the same time.

eBay Values: 1GB (MA564LL/A, MA949LL/A, MA951LL/A, MA953LL/A, MA947LL/A, MB225LL/A, MB227LL/A, MB229LL/A, MB233LL/A, MB231LL/A, MB225LL/A, MB815LL/A, MB813LL/A, MB811LL/A, MB817LL/A) \$20.04
2GB (MB518LL/A, MB520LL/A, MB522LL/A, MB526LL/A, MB524LL/A, MB518LL/A, MB683LL/A, MB685LL/A, MB681LL/A, MB779LL/A) \$28.01

Apple TV

(40GB/160GB)



2-2007

40/160 GB

Music - Video - Photos

\$299-\$399 US,

Later \$229-\$329

Breakthroughs: First standalone high-definition (720p) iTunes video player; first iTunes family device capable of streaming video from a computer, first with on-screen menu UI for browsing media content.

Pack-Ins: Apple Remote, power cable.

Issues: Only useful with HDTVs, limited features, buggy software, user interface clunky in mid-cycle.

eBay Values:

40GB (MA711LL/A)

\$95.41

160GB (MB189LL/A)

\$105.44

iPhone

(1G)



6-2007

4/8/16 GB - 7-24 Hr Battery

Phone - Music - Video - Internet

\$399-\$599 US

Breakthroughs: Apple's first mobile phone, combining a multi-touch widescreen iPod, quad-band GSM phone, and EDGE/Wi-Fi Internet device in a metal and glass enclosure.

Pack-Ins: Stereo headset with microphone, iPhone Dock, USB Power Adapter, USB Cable, cleaning cloth.

Issues: Initially limited storage capacity at high prices, slow EDGE data speeds, and reliability problems. Phones are sold locked, and initially without third-party applications.

eBay Values:

4GB (MA501LL/A - Unlocked)

\$54.20

8GB (MA712LL/A - Unlocked)

\$56.60

16GB (MB384LL/A - Unlocked)

\$58.20

iPod classic

(80GB/120GB/160GB)



9-2007

80/160 GB - 30-40 Hr Battery

Music - Video - Games - Data

\$249-\$349 US

9-2008 120GB Model \$249 US

Breakthroughs: First hard disk iPod with silver or black metal face, new interface with Cover Flow, dramatically better audio, battery life and storage capacity for the prices.

Pack-Ins: iPod earphones, USB cable, Dock Adapter.

Issues: Screen comparatively outdated. Lost compatibility with all prior video accessories.

eBay Values:

80GB Silver (MB029LL/A)

\$90.54

80GB Black (MB147LL/A)

\$91.43

160GB Silver (MB145LL/A)

\$124.89

160GB Black (MB150LL/A)

\$124.59

120GB Silver (MB562LL/A)

\$114.70

120GB Black (MB565LL/A)

\$108.99

iPod nano

(3G)



9-2007

4/8 GB - 24 Hr Battery
Music - Video - Games - Data
\$149-\$199 US

Breakthroughs: First iPod nano with video playback and true game-playing abilities, using same resolution screen and UI as iPod classic.

Pack-Ins: USB cable, iPod earphones, Dock Adapter.

Issues: Color limited by price, body shape a little odd.

eBay Values:

4GB Silver (MA978LL/A)	\$37.10
8GB (MA980LL/A, MB249LL/A, MB253LL/A, MB261LL/A, MB257LL/A, MB453LL/A)	\$41.50

iPod touch

(1G)



9-2007

8/16/32 GB - 22 Hr Battery
Music - Video - Games - Internet
\$299-\$499 US

Breakthroughs: First iPod with Wi-Fi, multi-touch, Internet access, and iPhone OS, gaining ability to download music and games, read e-mail, browse web.

Pack-Ins: Earphones, USB cable, stand, dock adapter, screen cleaning cloth.

Issues: Screen quality issues. Higher price, much lower storage capacity, lower battery life, and lower audio quality than iPod classic. Paid \$10-\$20 software updates required to add new system software.

eBay Values:

8GB (MA623LL/A)	\$45.25
16GB (MA627LL/A)	\$49.82
32GB (MB376LL/A)	\$65.00

iPhone 3G



6-2008

8/16 GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$299 US, Later 8GB \$99 US
With 16GB Model Discontinued

Breakthroughs: Faster second-generation update to original iPhone, adding support for third-party apps, dramatically expanding international distribution and compatibility with 3G cellular networks.

Pack-Ins: Stereo Headset with microphone, USB Power Adapter, USB Cable, cleaning cloth, SIM tool.

Issues: Cheaper-looking and -feeling plastic casing than prior iPhone, weak battery life for 3G calling and data services. Primarily sold locked to specific carriers for \$199/\$299 prices; unlocked retail prices are considerably higher, reflecting a carrier subsidy of roughly \$400.

eBay Values:

8GB Black (MB702LL/A)	\$54.20
16GB Black (MB704LL/A)	\$71.30
16GB White (MB705LL/A)	\$61.40

iPod nano

(4G)



9-2008

8/16 GB - 24 Hr Battery
Music - Video - Games - Data
\$149-\$199 US

Breakthroughs: Nine colors available for each capacity; first nano to include accelerometer.

Pack-Ins: USB cable, iPod earphones, Dock Adapter.

Issues: Dull knife body shape, incompatible with FireWire.

eBay Values:

8GB (MB598LL/A, MB754LL/A, MB732LL/A, MB739LL/A, MB735LL/A, MB751LL/A, MB742LL/A, MB748LL/A, MA745LL/A)	\$51.49
16GB (MB903LL/A, MB918LL/A, MB905LL/A, MB909LL/A, MB907LL/A, MB917LL/A, MB911LL/A, MB915LL/A, MA913LL/A)	\$70.98

iPod touch

(2G)



9-2008

8/16/32 GB - 30 Hr Battery
Music - Video - Games - Internet
\$229-\$499 US, Later \$199 (8GB)
With 16/32GB Discontinued

Breakthroughs: First iPod with integrated speaker, Nike + iPod wireless built-in, free support for third-party apps, new headphone port with mic support.

Pack-Ins: iPod earphones, USB cable, Dock Adapter, cleaning cloth.

Issues: Still relatively low capacity for prices, battery life doesn't rival iPod classic. Incompatible with FireWire accessories. Requires paid software updates from Apple, ranging from \$5-\$10. Almost indistinguishable from late 2009 32/64GB models.

eBay Values:

8GB (MB528LL/A-MC086LL/A)	\$52.80
16GB (MB531LL/A)	\$66.93
32GB (MB533LL/A)	\$68.06

iPhone 3GS



6-2009

16GB/32 GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$299 US / 2010 \$99 US 8GB
As 16/32GB Models Discontinued
Late 2011 8GB \$0 With Contract

Breakthroughs: Faster sequel to iPhone 3G, 3-Megapixel autofocus camera, compass, Voice Control, improved 3-D graphics capabilities.

Pack-Ins: Earphones with Remote + Mic, USB Power Adapter, USB Cable, SIM removal tool.

Issues: Weak battery, most sold locked to specific carriers.

eBay Values:

16GB Black (MB715LL/A)	\$73.90
16GB White (MB716LL/A-MC132LL/A)	\$69.20
32GB Black (MB717LL/A)	\$86.49
32GB White (MB718LL/A-MC138LL/A)	\$92.39

iPod touch

(3G)



9-2009

32/64 GB - 30 Hr Battery
Music - Video - Games - Internet
\$299-\$399 US

Breakthroughs: First iPod with Voice Control, faster CPU and graphics chip for improved 3-D gaming performance, superior battery life.

Pack-Ins: Earphones with Remote + Mic, USB cable, Dock Adapter.

Issues: Still relatively low storage capacity for prices relative to iPod classic. Almost indistinguishable from late 2008 models; camera removed at last minute.

eBay Values:

32GB (MC008LL/A)	\$73.89
64GB (MC011LL/A)	\$107.03

iPod shuffle

(3G)



3-2009

2/4 GB - 10 Hr Battery
Music - Data
\$59-\$99 US

Breakthroughs: Apple's smallest iPod ever, and first to eliminate all buttons in favor of a single switch and remote control headset. Originally introduced in aluminum, later gained first all-stainless steel model.

Pack-Ins: Earphones with Remote, 3.5mm-USB cable.

Issues: Difficult to control, weak battery life, plain design, earphones had moisture failures and a recall.

eBay Values:

2GB (MC306LL/A, MC384LL/A, MC381LL/A, MC323LL/A, MC387LL/A)	\$27.10
4GB (MC867LL/A, MC328LL/A, MC307LL/A, MC331LL/A, MC164LL/A)	\$27.24
4GB Stainless Steel 9/09 (MC303LL/A)	\$52.09

iPod nano

(5G)



9-2009

8/16 GB - 24 Hr Battery
Music - Video - Games - Data
\$149-\$179 US

Breakthroughs: First nano to include video camera, pedometer, and FM radio, new glossy aluminum body.

Pack-Ins: USB cable, iPod earphones, Dock Adapter.

Issues: Mediocre camera quality, weak selection of games, tiny Click Wheel controls. Some color options aren't as impressive as prior year's.

eBay Values:

8GB (MC027LL/A, MC031LL/A, MC037LL/A, MC034LL/A, MC050LL/A, MC049LL/A, MC046LL/A, MC043LL/A, MC040LL/A)	\$56.90
16GB (MC060LL/A, MC062LL/A, MC066LL/A, MC064LL/A, MC075LL/A, MC074LL/A, MC072LL/A, MC070LL/A, MC068LL/A)	\$91.80

iPad

(Original)



4-2010

16/32/64GB - 10 Hr Battery
Wi-Fi
\$499-\$699 US

16/32/64GB - 10 Hr Battery
Wi-Fi + 3G (GSM)
\$629-\$829 US

Breakthroughs: Apple's first tablet computer, featuring a 9.7" multi-touch glass display and an aluminum body, plus 10-hour battery life for video playback and web browsing, with far longer standby time. Comes in three capacities and two different versions, one with 802.11n Wi-Fi, the other with 802.11n and GSM 3G cellular data service.

Pack-Ins: Dock Connector cable, 10W USB Power Adapter, SIM card ejector tool (3G version only).

Issues: No integrated stand, initially little software. Low storage capacity on low-end model. Only 3G version includes GPS; no CDMA version.

eBay Values:

16GB Wi-Fi (MB292LL/A)	\$158.94
16GB Wi-Fi + 3G (MC349LL/A)	\$162.30
32GB Wi-Fi (MB293LL/A)	\$172.00
32GB Wi-Fi + 3G (MC496LL/A)	\$169.17
64GB Wi-Fi (MB294LL/A)	\$182.55
64GB Wi-Fi + 3G (MC497LL/A)	\$192.06

iPhone 4



6-2010

16/32 GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$299 US / 2010 \$99 US 8 GB
As 16/32 GB Models Discontinued

Breakthroughs: First Apple device with Retina Display, 5MP rear camera, and FaceTime camera. First iPhone with 802.11n, and first iPhone with white front bezel. Subsequently released Verizon iPhone 4 is first iPhone with CDMA network support.

Pack-Ins: Earphones with Remote + Mic, USB Power Adapter, USB Cable. Some include SIM card/SIM tool.

Issues: Fragile glass body; signal issues with metal antenna. Introduced later, Verizon/CDMA model needs clear ESN for activation when resold.

eBay Values: 16GB Black (MC318LL/A)	\$164.74
16GB Black, Unlocked (MC603LL/A)	\$224.72
16GB White (MC536LL/A)	\$180.80
16GB White, Unlocked (MC604LL/A)	\$209.50
32GB Black (MC319LL/A)	\$191.00
32GB Black, Unlocked (MC605LL/A)	\$212.78
32GB White (MC537LL/A)	\$189.27
32GB White, Unlocked (MC606LL/A)	\$240.90
16GB Black, Verizon (MC676LL/A)	\$136.50
16GB White, Verizon (MC677LL/A)	\$214.56
32GB Black, Verizon (MC678LL/A)	\$177.50
32GB White, Verizon (MC679LL/A)	\$189.70

iPod nano

(6G)



9-2010

8/16 GB - 24 Hr Battery
Music - Photos - Data
\$129-\$149 US

Breakthroughs: First nano with "multi-touch" screen and rear clip. Smallest nano ever; doubles as a watch.

Pack-Ins: iPod earphones, USB cable.

Issues: Loses all video, camera, and game features of prior model, tiny screen cramps interface. Weak colors.

eBay Values:

8GB (MC525LL/A , MC688LL/A, MC689LL/A, MC690LL/A, MC691LL/A, MC692LL/A, MC693LL/A)	\$70.00
16GB (MC526LL/A, MC694LL/A, MC695LL/A, MC696LL/A, MC697LL/A, MC698LL/A, MC699LL/A)	\$114.60

iPod touch

(4G)



9-2010

8/32/64 GB - 30 Hr Battery
Music - Video - Games - Internet
\$229-\$399 US; 2011 8GB \$199;
2012 16/32GB Models \$199/\$249

Breakthroughs: First iPod with FaceTime camera, first iPod touch with rear camera, first iPod touch sold in white version (introduced 2011).

Pack-Ins: iPod earphones, USB cable.

Issues: Still low storage capacity relative to iPod classic. Poor camera still image quality. Markedly behind iPhone performance, particularly by 2011.

eBay Values:

8GB (MC540LL/A, MD057LL/A)	\$103.10
16GB (ME178LL/A, ME179LL/A)	\$128.49
32GB (MC544LL/A, MD058LL/A)	\$129.50
64GB (MC547LL/A, MD059LL/A)	\$175.46

Apple TV

(2G)



9-2010

8 GB
Music - Video - Photos
\$99 US

Breakthroughs: Dramatically smaller iTunes video streaming device at a considerably lower price than the original version. Originally a dedicated video rental box without purchasing, much-improved user interface relative to prior Apple TV. Software updates added iTunes Store, AirPlay streaming, new channels, many other improvements to keep equal to 3G model.

Pack-Ins: Apple Remote, power cable.

Issues: Only useful with HDTVs. No user-accessible on-board storage, and thus completely Internet connection-dependent for playing back content. Capped at 720p for video output while rivals reach 1080p. No RCA-style connectors for audio or video.

eBay Values:

Apple TV 2G (MC572LL/A)	\$147.50
(Heavily sought for jailbreaking, sold above retail price.)	

iPad 2



3-2011

16/32/64GB - 10 Hr Battery
Wi-Fi Model \$499-\$699 US

16/32/64GB - 10 Hr Battery
Wi-Fi + 3G Model \$629-\$829 US

(Note: 16GB models are still active.)

Breakthroughs: First iPad with cameras and dual core processor. Twice the RAM and up to 9X better graphics. Smaller, lighter body. CDMA version, 2 front colors (white or black) available. Added magnets for Smart Cover lids.

Pack-Ins: USB to Dock Connector cable, 10W USB Power Adapter, SIM ejector tool (GSM 3G ver. only).

Issues: Poor camera performance. Crazy number of models due to separate GSM/CDMA versions. Early production flaws cause screen light leakage. Stand, capacity, and GPS limits.

eBay Values:

32GB Wi-Fi (MC770LL/A, MC980LL/A)	\$286.89
32GB Wi-Fi+3G GSM (MC774LL/A, MC983LL/A)	\$304.01
32GB Wi-Fi+3G CDMA (MC763LL/A, MC986LL/A)	\$306.83
64GB Wi-Fi (MC916LL/A, MC981LL/A)	\$304.55
64GB Wi-Fi+3G GSM (MC775LL/A, MC984LL/A)	\$325.11
64GB Wi-Fi+3G CDMA (MC764LL/A, MC987LL/A)	\$312.22

iPhone 4S



10-2011

16/32 GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$399 US/2011 \$99 US 16 GB
As 32/64 GB Models Discontinued

Breakthroughs: First Apple device with Siri, 8MP rear camera, and support for pre-LTE "4G" networks. First Sprint iPhone.

Pack-Ins: Earphones with Remote + Mic, USB Power Adapter, USB Cable. Some include SIM card/SIM tool.

Issues: Fragile body. Siri limited. Weak low-light cameras.

eBay Values:

16GB AT&T (MC918LL/A, MC920LL/A)	\$235.99
16GB CDMA-VZ (MD276LL/A, MD277LL/A)	\$208.30
16GB Unlocked (MD234LL/A, MD237LL/A)	\$311.09
32GB AT&T (MC919LL/A, MC921LL/A)	\$276.60
32GB CDMA-VZ (MD278LL/A, MD279LL/A)	\$232.30
32GB Unlocked (MD241LL/A, MD244LL/A)	\$310.00
64GB AT&T (MD269LL/A, MD271LL/A)	\$300.71
64GB CDMA-VZ (MD280LL/A, MD281LL/A)	\$256.30
64GB Unlocked (MD257LL/A, MD260LL/A)	\$341.81

iPad

(3rd-Generation, aka New iPad)



3-2012

16/32/64GB - 10 Hr Battery
Wi-Fi Model \$499-\$699 US
Wi-Fi + Cellular Model \$629-\$829 US

Breakthroughs: First iPad with "Retina" screen, LTE option, quad-core graphics, A5X chip, and Siri. Better 5MP camera.

Pack-Ins: USB to Dock Connector cable, 10W USB Power Adapter, SIM card ejector tool (GSM ver. only).

Issues: Long charging time. Heats up in use. Still crazy number of models, no stand, limited capacity. Discontinued rapidly.

eBay Values:

16GB Wi-Fi (MC705LL/A, MD328LL/A)	\$315.55
16GB Wi-Fi+CEL GSM (MD366LL/A, MD369LL/A)	\$358.32
16GB Wi-Fi+CEL CDMA (MC733LL/A, MD363LL/A)	\$357.19
32GB Wi-Fi (MC706LL/A, MD329LL/A)	\$360.77
32GB Wi-Fi+CEL GSM (MD367LL/A, MD370LL/A)	\$420.57
32GB Wi-Fi+CEL CDMA (MC744LL/A, MD364LL/A)	\$383.83
64GB Wi-Fi (MC707LL/A, MD330LL/A)	\$392.55
64GB Wi-Fi+CEL GSM (MD368LL/A, MD371LL/A)	\$427.21
64GB Wi-Fi+CEL CDMA (MC756LL/A, MD365LL/A)	\$439.00

iPhone 5



9-2012

16/32/64 GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$399 US

Breakthroughs: First Apple device with 4" Retina screen, A6 chip, and Lightning connector. Improved color in screen and rear camera. First iPhone with LTE.

Pack-Ins: Newly designed EarPods with Remote + Mic, USB Power Adapter, Lightning to USB Cable. Some include SIM card + SIM tool.

Issues: LTE speeds are highly variable from location to location. High battery drain under some conditions. Second GSM model quietly released for T-Mobile. First iPhone since original model to be discontinued only one year after introduction, replaced with iPhone 5c.

eBay Values:

16GB GSM (MD634LL/A, MD635LL/A)	\$375.40
16GB GSM-TM (ME486LL/A, ME487LL/A)	\$389.00
16GB CDMA-VZ (MD654LL/A, MD655LL/A)	\$401.89
32GB GSM (MD636LL/A, MD637LL/A)	\$387.80
32GB GSM-TM (ME488LL/A, ME489LL/A)	\$478.46
32GB CDMA-VZ (MD658LL/A, MD659LL/A)	\$435.00
64GB GSM (MD644LL/A, MD645LL/A)	\$470.88
64GB GSM-TM (ME490LL/A, ME491LL/A)	\$505.50
64GB CDMA-VZ (MD664LL/A, MD665LL/A)	\$459.00

iPad

(4th-Generation, aka
iPad with Retina Display)



11-2012

16/32/64GB - 10 Hr Battery
Wi-Fi \$499-\$699 US
Wi-Fi + Cellular \$629-\$829 US

128GB - 10 Hr Battery
Wi-Fi \$799 US
Wi-Fi + Cellular \$929 US
Released 2-2013

Breakthroughs: Doubled CPU/GPU performance with A6X. Improved front camera. First iPad with Lightning connector. Expanded international LTE support. Remedied slow recharging with faster power adapter. Sprint versions offered. Later debuted 128GB iPad.

Pack-Ins: Lightning to USB cable, 12W USB Power Adapter, SIM card ejector tool.

Issues: Long recharging, sometimes runs warm. Still crazy number of different GSM/CDMA versions. Same stand and capacity issues as prior iPads. Discontinued after just under one year, replaced with lighter, thinner, and more power-efficient iPad Air.

eBay Values:

16GB Wi-Fi (MD510LL/A, MD513LL/A)	\$371.33
16GB Wi-Fi+CEL GSM (MD516LL/A, MD519LL/A)	\$449.22
16GB Wi-Fi+CEL CDMA-VZ (MD522LL/A, MD525LL/A)	\$444.45
32GB Wi-Fi (MD511LL/A, MD514LL/A)	\$437.84
32GB Wi-Fi+CEL GSM (MD517LL/A, MD520LL/A)	\$478.67
32GB Wi-Fi+CEL CDMA-VZ (MD523LL/A, MD526LL/A)	\$491.11
64GB Wi-Fi (MD512LL/A, MD515LL/A)	\$507.19
64GB Wi-Fi+CEL GSM (MD518LL/A, MD521LL/A)	\$529.44
64GB Wi-Fi+CEL CDMA-VZ (MD524LL/A, MD527LL/A)	\$559.00
128GB Wi-Fi (ME392LL/A, ME393LL/A)	\$717.71
128GB Wi-Fi+CEL GSM (ME400LL/A, ME401LL/A)	\$751.55
128GB Wi-Fi+CEL CDMA-VZ (ME406LL/A, ME407LL/A)	\$773.17

iPad/iPhone/iPod Accessory Guide



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Goodbye, Docks?

Bluetooth speakers surged in popularity during 2013, effectively displacing docking speakers for the first time in a decade. Cables have given way to Wi-Fi syncing. The future of Apple's devices is now unmistakably wireless.



Apple's late 2012 transition to Lightning connectors caught accessory makers by surprise, leaving most developers without compatible products to sell over the all-important holiday season. The company also imposed higher fees and stringent new rules on Lightning accessory manufacturers, at the same time as its AirPlay wireless speaker standard was beginning to fizzle out. As a direct result, developers have drastically cut back on Apple-specific products, releasing more universally-compatible Bluetooth and USB-cabled accessories over the past year than we've ever seen before. Over the following pages, you'll see dozens of products that look great and work properly with iPads, iPhones, and iPods, but can also be used with non-Apple devices.

This year's Accessory Guide is organized differently from its predecessors, as most of the numerous sections now explicitly focus on our top five accessories in each category, ranking the top three for your convenience. Since the just-launched iPhone 5c, new iPad mini, and new full-sized iPad have different form factors than their predecessors, we focus heavily on accessories that are broadly compatible with Apple's devices, as well as the handful of new model-specific items that have already been released. As always, every accessory selected for our Guide was picked solely on merit by our editors, and we hope that you find everything you need inside.

THE BIG ACCESSORY PICTURE

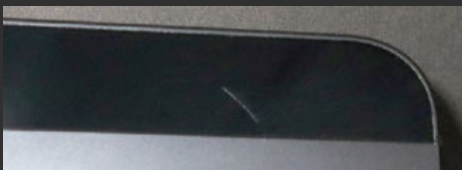
WHAT YOU NEED TO KNOW BEFORE MAKING ANY PURCHASE

Although Apple's products are generally built quite well and work properly out of the box, they're deliberately limited in certain ways - sometimes to encourage near-future upgrades, and at other times to keep their physical size, weight, or features focused on very specific uses. The accessories we recommend are designed to protect or improve your device, not waste money.



Why Do We Recommend Cases and Film?

Apple deliberately chooses attractive but fragile materials for its portable devices, seemingly to encourage new purchases every two or so years. The metal bodies used in most iPods, iPhones, and iPads are durable but scratchable and dentable, while the glass in iPod touches, iPhones, and iPads remains highly susceptible to fingerprints and shattering. Cases and film shields keep Apple's devices looking fresh, reduce the need for cleaning, and improve their resale value. With the right case, any iPhone will look factory fresh after two full years of use; without one, it will likely be cracked or dented.



What's Changed Over The Past Year?

Apple has shifted almost all of its devices over to a common body design: the iPod touch, iPhone 5/5c, iPad mini, and full-sized iPad now look highly similar to each other, differing mostly in size and the placement of controls and sensors. Gold has been re-introduced as a color option for the first time in nearly a decade, and Apple has shifted away from dark black metals.

Lightning has all but entirely replaced Apple's prior 30-Pin Dock Connector as the standard for docking and charging iPads, iPhones, and iPods. Many developers have shunned Apple's Lightning and wireless AirPlay speaker standards, instead embracing USB cables for wired charging and Bluetooth for wireless audio streaming.

The Apple TV has grown slowly but surely in popularity, and remains the sole way to wirelessly display iOS video on HDTVs. It is still very highly recommended.

What's Included And Left Out Of This Guide?

We focus heavily on iPad, iPhone and iPod products introduced over the last year; the best accessories released prior to that are featured in our past Buyers' Guides, all of which are available for download at iLounge.com/library. iPod classic add-ons have completely dried up, so the last of our best picks for that model are found in our 2009-2010 Buyers' Guides. Detailed reviews of all of the products featured in this Guide can be found on iLounge.com.



The choice of whether to buy an accessory is up to you. Our job is to spotlight the best ones.

What Are The “Sweet Spot” Prices For Different Types Of Accessories?

These guidelines can help you budget for quality options; some top picks are more or less.



Cases

\$30-\$35 for a case,
\$15 for screen film.



Headphones

\$100: Good, \$200:
Great, \$400: Wicked.



Batteries

\$60 for a battery, \$80+
for a battery case.



Speakers

\$100-\$200 for solid
Bluetooth systems.

What Types Of Speakers Should I Consider?

Decide first whether you plan to keep your speaker in one place or move it around, then how much you're willing to spend to buy one or more systems for your needs. Go wireless if you don't want to dock your device, otherwise pick a docking speaker with or without a clock.



Docking Audio

Very few pure
docking speakers
have been released
over the last year;
Lightning speakers
are not compatible
with device cases.



Clock Radios

Lightning clock
radios are purely
docking, and case-
unfriendly, but
some earlier models
also have Bluetooth
support built in.



Bluetooth

The most popular
types of speakers
today have support
for the universally-
compatible
Bluetooth audio
streaming standard.



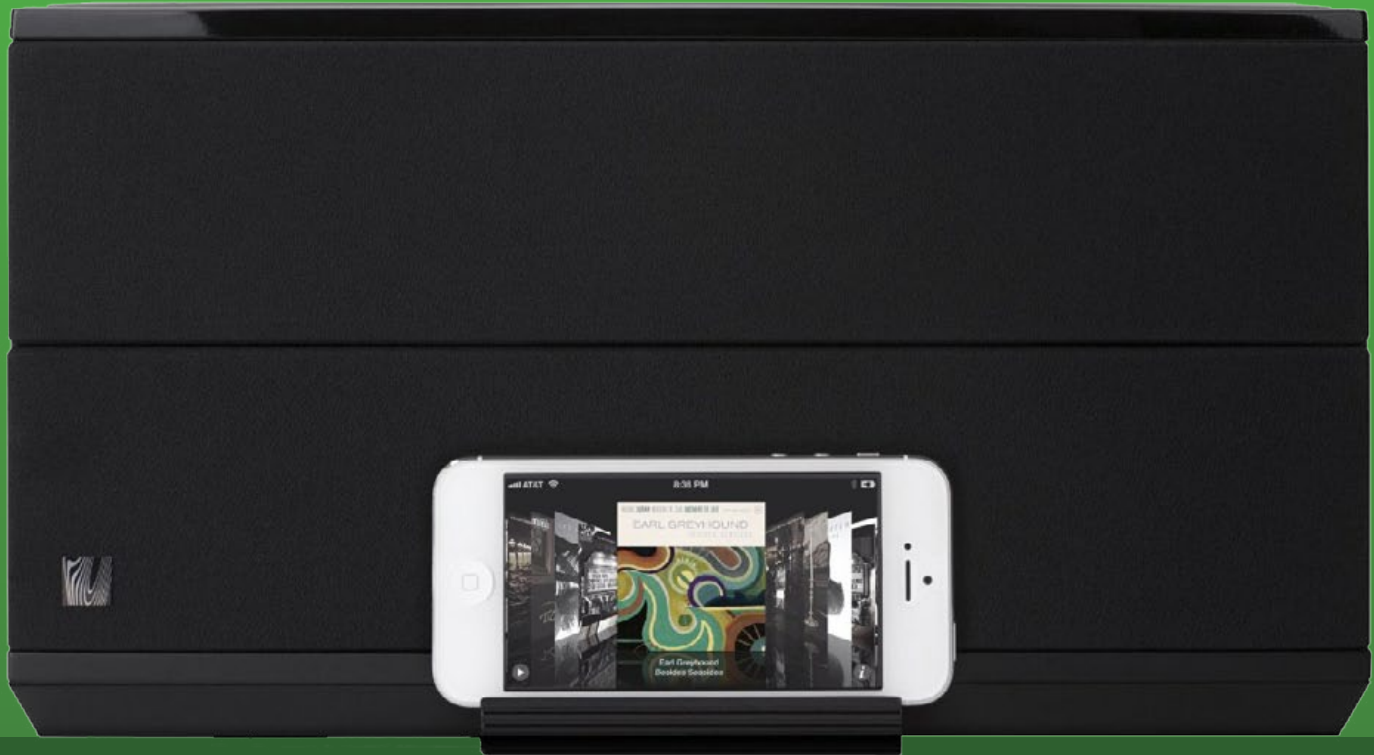
AirPlay

Apple's competitor
to Bluetooth has
been a flop in
speakers; the Wi-
Fi-based streaming
was slow and full of
audio hiccups.



Grab the iPad + iPad mini Buyers' Guide!

Published in March, our 106-page iPad + iPad mini Buyers' Guide focused on Apple's first 7.9" tablet and fourth-generation 9.7" tablet computer, as well as their top accessories, games, and apps. Although plenty has changed since then, the iPad 2 and original iPad mini are still being sold today, so there are many iPad-specific accessories inside that may be of interest if you can't find a certain case or other type of accessory featured in this edition. The iPad + iPad mini Buyers' Guide is a free download from iLounge, so grab your copy today!



THE BEST SPEAKERS

2014'S TOP SMALL, MIDRANGE, CLOCK AND DELUXE SPEAKERS

Over the past year, the transition away from Apple device docking speakers to Bluetooth has been stunningly quick: Dock Connector speakers dried up, few Lightning options replaced them, and Bluetooth speakers really began to shine. Although we contemplated calling this the “Best Bluetooth Speakers” section, every truly great speaker released for Apple users this year had Bluetooth inside, so we went in a different direction: the following pages separately rank the best Small, Midrange, and Deluxe speakers we’ve tested this year, and Bluetooth speakers dominate each category. We’ve also included a page of alarm clocks that vary from wired to wireless. Apple’s wireless speaker standard AirPlay flopped due to pricing and audio issues.

Current Bluetooth speakers operate in predictable ways: once you’ve wirelessly paired them with your iOS device or iPod nano, you can stream music from 33-foot distances - sometimes longer - before the audio begins to break up. Some of the speakers, particularly smaller ones, double as speakerphones for phone calls. Others have support for high-fidelity playback of AAC files, including iTunes downloads. What you generally give up is easy iPod, iPhone, or iPad charging: Bluetooth speakers rarely have docks, and only sometimes have rear USB ports to let you supply your own Lightning or Dock Connector cables. The few Lightning speakers on the market won’t let you charge your device in a case, an Apple restriction.



Start by deciding where you will actually use the speaker, then pick the category that fits.

1: Small

**iHome iBT24**

Competition in the “almost pocketable” speaker market has been fierce for three years, and we’ve finally gotten to the point where an excellent \$80 option both exists and decisively beats Jawbone’s more expensive Jambox. Available in white or black with more options on the way, TouchTone delivers nicely balanced sound, voice-prompted pairing, speakerphone functionality, and a cool capacitive top control panel. A four-hour battery is its only limitation.

\$80

2: Small

**Cambridge/Creative Oontz Angle**

Even less expensive than TouchTone and undeniably influenced cosmetically by the original Jambox, Oontz Angle is an extruded triangle with Jambox-beating treble and superior speakerphone performance. You give up stereo separation and fancier materials, but still enjoy roughly 10-hour battery life from a rechargeable cell. Cambridge often offers it at a shockingly low \$40 price through its website.

\$70*

3: Small

**Bose SoundLink Mini**

Rarely since Bose debuted SoundDock in 2004 have we recommended its speakers as smart purchases, but the fully redesigned SoundLink Mini is its first release in years that rivals same-priced alternatives. Trapezoidal and built with aluminum, it includes a nice charging base for its seven-hour battery, as well as four drivers that collectively deliver louder, richer sound than the Jambox - and slightly better sound than \$80-\$100 rivals. Missing: a speakerphone.

\$200

Runner Up

iHome iBT24

Beyond its unique design - a soft touch rubber-finished abstract of a classic boom box, albeit much smaller - iBT24’s strength is in offering relatively rich sound at a very low price, minus a speakerphone. The battery runs for up to 8 hours.

**\$70**

Runner Up

Logitech UE Boom

Tube-shaped with a mix of rugged fabric and rubber, UE Boom looks great and has the ability to pair with a second speaker for simultaneous wireless streaming. We liked the room-filling, nicely-balanced sound and strong speakerphone mode.

**\$200**

1: Midrange

**G-Project G-Boom**

It's the lowest-priced speaker in this category, but a top performer sonically given its price and size. G-Boom reconceptualizes the classic boombox as a rugged, four-driver Bluetooth streamer that feels strong enough to be used as a weapon. Four total 1" and 3" drivers enable it to sound great indoors or out - it can more than fill a small room with music. If you don't need a nearly pocketable speaker, and you're on a budget, start here.

\$100

2: Midrange

**Soundfreaq Sound Platform 2**

Considerably larger in size than its predecessor and now lacking a powered Apple dock, this attractively boxy speaker pumps out strong, rich, and detailed sound on its own, and offers two USB ports to charge devices. It can wirelessly pair with a second Sound Platform 2 for incredibly powerful dual streaming, the best implementation we've yet seen of this feature. Soundfreaq sells two units for \$250, and they're worth it.

\$150

3: Midrange

**Braven 850 HD**

Borrowing the industrial design of its smaller predecessor Braven 650, this model challenges Jawbone's Big Jambox at the same price, with highly similar sonic and speakerphone performance. You'll trade away colors and textures for a smooth, substantial silver aluminum enclosure, gaining an 8800mAh battery with a USB port that can recharge iPads, iPhones, or iPods with a self-supplied cable. It also supports dual wireless streaming.

\$300

Runner Up

JBL**OnBeat Venue LT**

As the rare speaker with both Bluetooth streaming and a Lightning dock - sadly not case-compatible - OnBeat Venue LT is capable of performing at very loud peak volumes. Clean design and solid build quality are typically JBL.

**\$200****Logitech****UE Boombox**

Repackaging a prior Best of the Year winner in a more expensive metal chassis with noticeably enhanced bass, UE Boombox is gorgeous, highly portable thanks to a metal top handle and six-hour battery, and extremely easy to use.

**\$250**

1: Clock

**iHome iDL100**

iHome's name remains synonymous with clock radios - an association that hasn't changed during the switch to Lightning connectors, even if there have been fewer iHome Lightning systems than we would have expected. The big selling point of this clock radio isn't the familiar chassis, speaker performance, or FM radio/alarm functionality - all nice, and par for the iHome course - but rather its ability to charge up to three devices. One iPad-ready 2.1-Amp dock is on the top, behind an iPhone/iPod-specific 1-Amp dock, while a USB port on the back can handle a third device with a self-supplied cable. The top Lightning ports are case-incompatible, a real miss in an otherwise good design. iHome also sells a less expensive, two-device-only version called iDL95 with a 2.1-Amp dock on top and a USB port in the back; it's entirely black rather than gunmetal and black in color.

\$150

2: Clock

**iLuv TimeShaker**

Compact and blessed with a large clock screen, this Lightning-docking unit sports a vibrating plastic oval designed to be placed under a pillow; coupled with a sonic alarm, it's guaranteed to wake the most sound of sleepers. While the dock isn't case-friendly and is made solely for iPhones and iPods, the speakers sound good, twin alarms are easy to figure out, and the integrated FM radio works well. It's a good budget clock if you're using a bare device.

\$100

3: Clock

**iHome iBN97**

Eschewing a wired dock connection for Bluetooth, iBN97 puts its budget-priced design dollars into an atypically nice metal front grille, a slightly larger clock, and speakers capable of filling a small room with sound. Wireless streaming works from up to a room away, and speakerphone functionality lets iPhone users take and make calls. A 2.1-Amp USB port on the back lets you charge your device with a self-supplied cable, so long as it's laid on its side up top.

\$100

Runner Up

Geneva Lab World Radio

Handsome in a way that less expensive rivals cannot touch, the silver, black, or red metallic World Radio is for users who value portability and industrial design over raw features or performance. The color screen has a clock and FM radio; Bluetooth connects to iOS devices for app-driven Internet radio tuning. One speaker delivers mid/bass-focused sound over 5 hours of battery life.

**\$300**

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1: Deluxe


**Geneva Lab
Model S Wireless**

Based heavily on an earlier iPod/iPhone docking speaker, this gorgeous lacquered wood speaker includes a metal stand, FM radio, and Infrared remote control. Built with two nicely-tuned 3" drivers, it can fill a small room with sound, and operate wirelessly at up to 100 feet from your device - 3 times longer than the typical Bluetooth range. It's a handsome desktop speaker, even without using the stand.

\$300

2: Deluxe


Stellé Audio The Pillar

Aesthetically awesome due to Stellé's use of fantastic materials - brushed or polished metals - and an iconic tube-shaped design, The Pillar offers 15 hours of wireless streaming for relatively bass-focused sound. While you won't hear much stereo separation given its shape, there are two 1.5" drivers and a 3" bass driver inside, designed to create a 360-degree sound field radiating out from the top and bottom. It also includes speakerphone functionality.

\$349

3: Deluxe


**House of Marley
Bag of Riddim**

Great up close but more impressive playing loud at a distance, this wood-finished system packs huge 4.5" bass drivers to offset smaller 1" tweeters. An integrated carrying bag emphasizes the unit's transportability, though you're left to supply and awkwardly change six D batteries to use it on the go; it's best used with the included wall adapter. Note: some users have reported issues after months of use.

\$300

Runner Up

**Bowers & Wilkins
A7 with AirPlay**

Effectively a dockless, bass-boosted remake of the \$600 Zeppelin Air, the AirPlay-based A7 is crazy expensive but has handsome minimalist design on its size - silver metal and black fabric that look far more neutral than the Zeppelin.


\$800

Runner Up

Wren V5AP

Another AirPlay option, V5AP uses a retro wood and fabric cabinet to house four speakers. We really liked the better-than-typical AirPlay sonic balance, the small room-filling volume level, and the design, though AirPlay hiccups persist.


\$399



THE BEST WIRELESS EARPHONES

STEREO BLUETOOTH HEADPHONES + MONAURAL EARPIECES

One year ago, we weren't sure whether the wireless earphone category would finally take off after an extended period of gestation: improvements in Bluetooth chip power efficiency two years ago demonstrated that tiny earphones were possible, but few companies actually released them. Things have picked up a little in 2013: we've finally found some breakthrough small earphones with outstanding sound quality, including the first sub-\$100 pair we've tested that can serve as a complete replacement for Apple's standard earbuds. Our hope is that far more of these become available throughout 2014, as companies such as JayBird Gear and Plantronics have clearly established the right template for other developers to follow.

Today, this category is still dominated by conventional over-the-ear or on-ear headphones that have gone wireless, and there have been at least a dozen major models introduced in the last year that up the ante on that concept. Despite the comparative ease of housing the necessary electronics in huge earcups and headbands, many developers are still struggling with issues such as sound quality - amplifier hiss is a frequent problem - and the question of how to make the headphones useful during flights when wireless operation was historically prohibited. These issues are in the process of being resolved, and the full-sized headphones often leverage their bigger frames to hold larger batteries, a key benefit.



New Bluetooth chips are already improving these earphones; expect many more in 2014.

1



Plantronics BackBeat GO 2

Highly similar to BlueBuds X at half the price, BackBeat GO 2 offers the best overall balance we've found of size, sound quality, and performance in lightweight Bluetooth earphones. Splash-resistant and able to be used for virtually anything except outdoor telephone calls - the mic does poorly in noisy environments - they run for 4.5 hours on their own, with a \$20 battery case adding 10 hours of extra run time.

\$80+

2



Scosche Realm RH1060

Based heavily on RH1056m, a wired model released in 2011, Realm RH1060 takes design cues from the popular Beats line of headphones without cloning them. Powered by an eight-hour rechargeable battery, the over-ear cups each hold one 40mm audio driver, sharing a microphone for phone calling. You can switch between Bluetooth and wired modes as needed, enjoying bass- and midrange-focused sound.

\$200

3



JayBird Gear BlueBuds X

Bundled with a kit full of ear stabilizers and canal-sealing tips, BlueBuds X is pitched as the ultimate lightweight sports earphone, and offers some features not found in BackBeat GO 2. Battery life is longer at 8 hours, the ear mounts keep BlueBuds X firmly in place during workouts, and two different color schemes are available. You can decide which is best for your needs, but athletic users may prefer the added benefits of this model.

\$170

Runner Up

Jabra Revo Wireless

With a 12-hour battery and nice combination of gunmetal and plastic materials, this on-ear model delivers sound comparable to top \$150 wired pairs we've tested, but can switch between Bluetooth and wired modes as needed.



\$250

Runner Up

Blueant Q3

Far fewer monaural Bluetooth headsets are debuting these days, but Q3 is here for users who make frequent phone calls. It features handy voice control - including Siri support - as well as surprisingly good music streaming, and 7-hour talk time.



\$99



THE BEST WIRED EARPHONES

OUR TOP PICKS FOR IN-EAR AND OVER-EAR MODELS

Of all the types of accessories we cover every year, only one has remained consistently compatible with every Apple device released since 2001: wired earphones. The earbuds that shipped with the original iPod will still work with today's models, and the latest headphones work perfectly with the oldest iPods, as well. Apart from small physical and electronic tweaks that make current cables easier to connect and use with all devices - thinner housings on 3.5mm plugs, and remote control/microphone housings to aid with phone calls and Siri use - the differences are all in speaker technology and industrial design, which have changed radically over the years. Today's earphones and headphones sound better than before.

In-ear headphones - also known as canalphones - combine rubber ear canal-sealing tips with one or more tiny speakers per ear, replicating the sound of much larger speakers without surrounding your ears. Two of the three best models we tested this year also include active noise-canceling hardware, using a battery-powered box to reduce ambient sounds around you. Another two models here use large cups to surround your ears, passively isolating sound; one uses active noise-canceling hardware on top of that for further reductions. Our top picks range pretty wildly in price and features, so we'd encourage you to look at the full reviews on iLounge.com to determine which one - if any - is best-suited to your personal needs.



On-ear headphones didn't make our top five this year; check iLounge.com for more picks.

1

**Logitech UE 900**

Bringing Ultimate Ears' famed \$1,150 UE-11 Pro to a more affordable price point has taken Logitech years, but that's what UE 900 accomplishes: four miniature speaker drivers per ear in a universal fit model, at roughly 1/3 the price. Moreover, the drivers deliver a seriously impressive combination of treble, midrange, and enhanced bass - the best we've heard in a quad-driver earphone. The cables need a little tweaking, but the sound is great.

\$400

2

**Audio-Technica ATH-ANC33is QuietPoint**

Nicely balanced sound and aggressive pricing help these earphones to deliver a great sub-\$100 listening experience, aided by an active noise-canceling box that works for 60 hours off one AAA battery. The hybrid earbud/canalphone design isn't as snug in the ear as pure canalphones, but enables ATH-ANC33is to include larger, more dynamic speakers. They work without power, minus the great noise cancellation.

\$80

3

**Bowers & Wilkins P7**

Effectively a tweaked, over-ear version of the on-ear P5, this new premium headphone is one of the most beautiful designs you'll find with Apple-riffed styling. Made from delicate sheepskin leather with a chrome and brushed metal frame, P7 truly looks and feels like luxury on your head; a judicious balance of treble, midrange, and bass proves engrossing with any type of music. You'll want to keep these at home and pamper them; they're not built for travel.

\$400

Runner Up

Beats Electronics Beats Studio 2013

Better known for fashion than sound, Beats headphones haven't been our top picks in the past. But the new Studio offers great noise canceling with 20 hours per recharge, improved but still bassy audio, and better design.

**\$300**

Runner Up

AKG K391 NC

Better than ATH-ANC33is in metal materials and build quality, K391 NC also has a rechargeable battery-backed active noise-canceling box - a rarity. While Audio-Technica's design is better at filtering out noise, K391 NC sounds better.

**\$200**



THE BEST MUSICIANS' TOOLS

CABLES, ADAPTERS, AND WORKAROUNDS

Prior to the release of the iPad, the conventional wisdom was that iPhones and iPods were consumption rather than creation devices, built mostly for watching and listening rather than making new content. Once the iPad came out - and particularly after Apple released the groundbreaking app GarageBand - the perception really shifted, and developers really began to embrace the potential of iOS devices as creative tools. Some have repurposed prior Mac and PC peripherals to work on the iPad, while others have created brand new accessories with iOS-specific connectors and software. There's been a decided movement away from amateur-quality offerings and towards more professional/prosumer options.

Over the past year, studio-grade tools have been making their way to market at relatively affordable prices - and they're becoming a lot more diverse. In the past, we saw a lot of microphones and guitar inputs, but this year, our top five picks are spread across a variety of different products, including studio-quality microphones, MIDI and guitar interfaces, stomp boxes, and a touch pad. Most of the accessories are resilient enough to be carried around, but some are designed to be kept in one place. The only wrinkle worth anticipating is Lightning connectivity: many music accessory developers are still working to add Lightning cables, so you might need to self-supply an Apple Lightning adapter if you have a recent iPad and a cable's not included.



Music accessories often require Apple's iPad USB adapters, but that's beginning to change.

1



IK Multimedia **iRig Pro**

Combining iRig Pre, HD, and MIDI into one accessory, iRig Pro serves as a MIDI, guitar, and microphone interface for iOS - including a high-end 24-bit digital-to-audio converter. Bundled with Lightning, Dock Connector, and USB cables, it connects to pretty much anything, offering phantom power for a mic, gain control for instruments, and MIDI-In, but not MIDI-Out/Thru. The only other limit: one instrument-at-a-time can connect, no surprise for the price.

\$150

2



Blue Microphones **Spark Digital**

Blue is synonymous with cool microphones, known more for desktop offerings than its several small iPod mics. Beyond its high-fidelity cardioid condenser mic and analog-to-digital converter, Spark Digital features a noise-dampening mic stand and a feature called Focus Control, capable of screening out lower frequencies to boost the intelligibility of most voices. You'll need a Lightning adapter.

\$200

3



IK Multimedia **iRig Stomp**

Built from metal with a 3.5mm cable to connect to an iPad's headphone port, iRig Stomp is a guitar/bass stompbox with a large gain adjustment knob, enabling users to easily apply iPad effects to a 1/4" plug-connected string instrument. Powered by a 9V battery or an existing pedalboard, it's activated with a standard switch, applying your chosen effect from IK's free app, or other software of your choice.

\$60

Runner Up

Apogee **MiC**

Now bundled with short Lightning, USB and Dock Connector cables, MiC features a cardioid condenser mic, analog-to-digital converter and gain control knob, as well as a tripod for table use. It's not as fancy-looking as Spark, but works well.



\$199

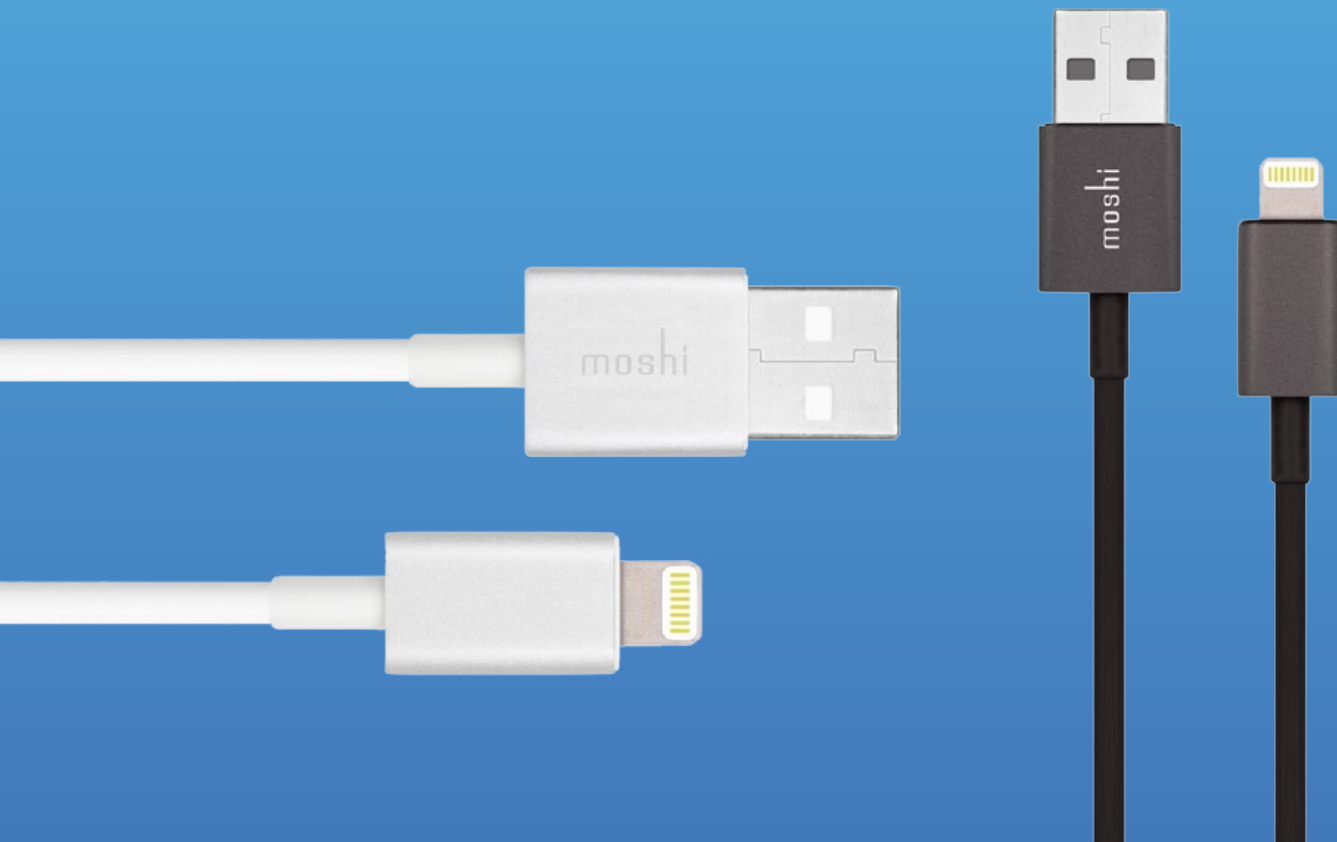
Runner Up

Keith McMillan **QuNeo 3D Pad**

Originally designed for computers, this unique pad controller senses velocity, pressure, and location on its large collection of touch surfaces, enabling you to use it as a MIDI drum pad or as a sophisticated keyboard. An adapter is needed.



\$200



THE BEST **LIGHTNING CABLES**

BUDGET AND DELUXE WAYS TO CHARGE APPLE DEVICES

Lightning debuted in September 2012 as Apple's official replacement for the Dock Connector, premiering first with the iPhone 5 and soon thereafter with new iPod nano, iPod touch, and iPad models. Apple remained the near-exclusive seller of Lightning accessories throughout the end of 2012, requiring developers to pay higher fees, undergo new certifications, agree to new rules, and wait in line for limited supplies of Lightning plugs. The transition was messy, leading many companies to significantly delay or give up on Lightning accessories. Universal Bluetooth and USB standards have won much of what Apple's proprietary standards lost, resulting in fewer new Apple-specific speakers, docks, and car accessories than we've seen in

years. Users of Lightning devices have been left to supply their own cables, and a wide variety of options have been released by third-party developers over the past year. Relatively few are less expensive than Apple's official \$19 version, but all of the options on the following pages are officially licensed, so they're guaranteed to work without problems. Unlicensed Lightning accessories began to experience issues with the release of iOS 7 and the new iPhones, so users are best off with choices that won't stop working due to Apple software changes - or break unexpectedly. Reports of unlicensed Lightning accessories that literally fall apart are unfortunately all too common right now, so spend a little more for quality products.



Cables come in sizes ranging from several inches to ten feet, depending on your needs.

1



Monoprice **Lightning to USB Cables**

If you're looking for nothing more than an Apple-equivalent Lightning cable at a much lower price, Monoprice's cables are the best budget options we've tested. Functionally identical to Apple's cables, these start at 4-inch (\$12) and 3-foot (\$12) lengths and go to 6-foot (\$13) or 10-foot (\$14) versions at modest premiums. Each length is available in white or black versions, and highly case compatible.

\$12+

2



Scosche **SmartStrike**

Spending more for a Lightning cable than Apple's official \$19 version doesn't make sense unless the cable does something special. For a small premium, the 3-foot-long SmartStrike switches from Lightning to micro-USB using an in-line adapter, a convenience that enables you to use a single USB port for Lightning device charging and accessory refueling or a computer peripheral as needed. It comes in black.

\$25

3



Moshi **USB Cable With Lightning**

Certainly one of the nicest-looking Lightning cable designs we've seen, Moshi's silver metal and white plastic or gray metal and black plastic cables are near-perfect cosmetic matches for 2013's iPhone, iPod, and iPad colors. Despite their metal cladding, the USB and Lightning plugs are slender and highly compatible, and a Velcro wrap helps to manage Moshi's 3-foot length of cable.

\$20

Runner Up

Macally **MISYNCABLEL6**

Officially listed at \$25 but available for less than \$20, this 6-foot Lightning to USB cable is a little fancier-looking than Monoprice's. A 10-foot version is sold at a further \$5 premium. Consider it wherever Monoprice isn't available.


\$25

Runner Up

Just Mobile **AluCables**

The coolest-looking Lightning cables we've seen are the 4-inch AluCable Mini (\$20), 3-foot AluCable (\$25), and coiled 6-foot AluCable Twist (\$25), each black with large silver aluminum USB/Lightning plug housings.


\$20+



THE BEST **AUDIO ADAPTERS**

AIRPLAY, BLUETOOTH, AND LIGHTNING

Apple's shift from the classic Dock Connector to Lightning became a pain point for millions of users, who suddenly found their new devices unable to connect to past accessories. Thanks to an Apple decree, licensed third-party developers aren't permitted to create adapters between the old and new standards - Apple reserves that lucrative, overpriced category for itself - so a handful of unlicensed developers have stepped up to the plate with various options. Numerous unlicensed versions of Apple's Lightning to 30-Pin Adapter have been released, but they've suffered so much in quality and compatibility that we wouldn't recommend them to our readers. They're inexpensive, but break and stop working.

Smarter adapters do away with the need for Lightning altogether. Several options either convert old speakers' Dock Connector plugs directly into Bluetooth receivers, or do the same for the 3.5mm audio plugs found in some car stereos and most headphones. There's even an accessory that converts a Dock Connector speaker into an AirPlay receiver, supporting Apple's lossless wireless audio streaming standard. As there's potential for small issues when using these adapters - interface hiccups and rarely audio drop-outs - you'll have to decide for yourself whether to invest fewer dollars in an adapter or spend more to completely replace your old accessory. Each of these options will serve as a good enough bridge for the time being.



Apple's adapters are solely wired; third-party adapters are your only options for wireless.

Wired



Apple **Lightning To 30-Pin Adapter**

Now widely available, this small adapter is the easiest to carry around and attach to old Dock Connector accessories. It enables most old accessories to charge, sync, and play music from new Lightning devices. The Lightning plug sadly is flush with a Dock Connector-sized surface, which makes it incompatible with most iPhone, iPod, and iPad mini cases, but iPad 2/3rd-/4th-gen cases will work with it, as will bare devices.

\$29

Bluetooth



CableJive **DockBoss Air**

Compact and affordable, this small glossy black adapter transforms the Dock Connector plug on most Apple speakers into a Bluetooth receiver, capable of streaming music from the latest iPod nano and all current iPads, iPhones, and iPod touches. Revised late this year, this model can pass through remote control signals from your Apple device. It will work with the vast majority of 2006-2012 speakers, not older models.

\$35

Bluetooth



BlueAnt **Ribbon**

Considerably different from DockBoss Air in execution, this Bluetooth adapter has a 3.5mm audio port rather than a Dock Connector, enabling you to turn wired headphones and car aux-in ports into Bluetooth receivers. You can then stream iOS or iPod nano audio wirelessly to them without a wired connection. Ribbon has a six-hour battery for portable use, and includes a micro-USB cable, wall charger, audio cable, and basic earphones to get you started.

\$69

AirPlay

C4 Electronics **Dolry HiFi Stone**

Pricier than the other options, Dolry is the only one that converts most Dock Connector speakers to receive AirPlay streams from iOS devices and iTunes. Consider it if you need lossless audio and are OK with AirPlay delays/drop outs.


€79

Bluetooth

RadTech **WaveJamr V5**

If you have a 2003-2005 speaker or recent digital audio accessory not supported by the similar DockBoss Air, the latest version of the Bluetooth receiver WaveJamr offers connectivity alternatives, though you'll need to attach cables.


\$40



THE BEST **VIDEO ACCESSORIES**

APPLE AND GOOGLE BATTLE OVER HDTV STREAMING

Years ago, video accessories were common and affordable for iPods: simple video-out cables were cheap enough that developers sometimes included them with speakers. Seeing an opportunity to cash in, Apple locked the video output capabilities of later iPods, iPhones, and iPads, selling overpriced cables and limiting developers' ability to create affordable alternatives. As a result, video accessories virtually dried up, leaving consumers with little choice beyond Apple's own add-ons. This has been a huge problem for wired accessories, as Apple's Lightning to VGA Adapter and Lightning Digital AV (HDMI) Adapter cost \$49 without even including the cables to hook up to TVs or monitors, but on the wireless front, Apple has a great product.

Apple TV started life as a wireless streaming device for iTunes Store video rentals, but has evolved to mirror the screens of iOS devices, tune in sports networks, and provide subscription access to Netflix, Hulu Plus, and other channels. Released in March 2012, the current \$99 third-generation Apple TV is virtually identical to the second-generation model debuted in September 2010, but supports 1080p video output; the original was capped at 720p. This July, Google released Chromecast as a smaller and more limited rival to Apple TV, for a staggeringly low price tag of \$35. While Chromecast can't mirror iOS screens or display the same range of content, it can wirelessly stream Netflix, Hulu Plus, YouTube and other videos, amongst others.

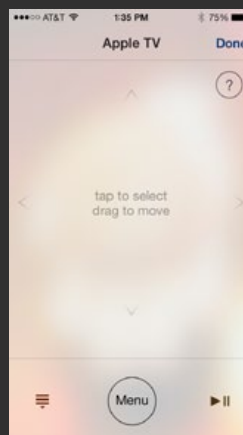


While the Apple TV offers great value for \$99, it is supposedly very close to being replaced.

Apple TV (3rd-Gen)



Used as an iOS accessory, Apple TV plugs into any HDTV and instantly begins streaming whatever's on your iPad, iPhone, or iPod touch as soon as you hit the iOS device's AirPlay button and select the Apple TV. Used alone, the Apple TV is loaded with tons of "channels," and best controlled with Apple's free iOS app Remote 4.0 (right), which lets you navigate through the menus and type on a virtual keyboard. It comes packaged with a wall power cable and silver remote control, leaving you to supply the HDMI cable.



\$99

Chromecast



Small enough to hide behind your HDTV after it plugs into any open HDMI port, Google's Chromecast is wirelessly controlled by your iOS device, displaying whatever you broadcast ("cast") to the TV. As of today, you can cast Google Play movies and music, Netflix, YouTube, and Hulu Plus videos, Pandora music, and Chrome web pages - including pages with Adobe Flash video content. More services are on the way, but iOS screen mirroring won't be among them. Chromecast includes an HDMI extension cable and wall power adapter, neither of which will be needed if your HDTV's HDMI port has the space and integrated power necessary to fuel the device on its own.



\$35



THE BEST **POWER ADAPTERS**

WALL ADAPTERS WITH OR WITHOUT LIGHTNING PLUGS

Historically, Apple's devices charged at the same time as they were connected to computers, but Apple's "PC-free" push towards iCloud and iTunes Wi-Fi Syncing enabled users to charge and sync their devices anywhere. Consequently, wall adapters have become even more useful over the past two years, although they've also become somewhat more confusing. Apple now has four different iDevice charging standards: 12-Watt (12W) for full-speed charging of 9.7" iPads, 10W for iPad minis, 5W for iPhones, and 2.5W for iPods. Very few wall adapters support the newest 12W standard, but every adapter can automatically fall back to support lower power demands of smaller devices, giving them what they need.

The options we're looking at here fall into two categories. Some have Lightning cables permanently attached to the wall adapters - so-called "captured cables" that can only be used for charging. Others arrive with no Lightning cables, so although they tend to be less expensive when viewed on their own, you're required to supply your own device-specific cables at additional expense. There are reasons to consider each option, particularly if you need a multi-device charging solution. Apple's Lightning plug fees have scared many developers away from offering chargers with multiple Lightning connectors, so you can save a lot of money if you already have cables around, or purchase low-cost options from Monoprice or others.



A 5W wall adapter may be cheaper, but you'll probably want to replace it if you get an iPad.

1



Monoprice **Lightning Wall Charger**

If you're only interested in recharging an iPhone or iPod, Monoprice's option is hard to beat on price. For only \$1 more than its Lightning to USB cable, you get a wall adapter capable of outputting 5W/1-Amp power, which recharges Apple's pocket devices at full speed and iPad minis at half speed. The cable is five feet long, providing plenty of length from a low wall outlet, and the connector is case-compatible.

\$13

2



Scosche **StrikeBase 12W Wall Charger**

Conceptually pretty simple, StrikeBase 12W is unique in that it combines a four-foot captured Lightning cable with a wall adapter equivalent to Apple's official 12W option. Capable of recharging any current iOS device or iPod nano at its top speed, this charger is nicely designed for portability thanks to folding wall blades. It's not ideal for international travel, but for home/office/school use, it's a powerful option.

\$35

3



Apple **12W USB Power Adapter**

Apple's official iPad wall charger has several benefits over rivals - despite powering every iOS device and iPod, it's as small and outlet-ready as the lower-powered iPod wall adapters Apple sold almost a decade ago, and has wall blades that can swap for international use. You'll have to supply your own cable, but a standard full-sized USB port works with any Lightning or Dock Connector cable you have.

\$19

Runner Up

Griffin **PowerDock 5**

This is a plastic set of trays with five 10W USB ports built into the side, plus a wall adapter that can fuel everything at once. You'll need to supply the Lightning/Dock Connector cables yourself, but it's better than using 5 outlets.

**\$100**

Runner Up

Bracketron **Twist & Charge**

If you need to add an extra USB port to an existing wall adapter, this small, highly portable accessory will do the trick. You push the adapter's wall prongs through the holes, and it captures 5W of power for iPhone/iPod charges.

**\$18**



THE BEST **LIGHTNING DOCKS**

KEEP IPADS, IPHONES AND IPODS UPRIGHT FOR CHARGING

Due to an unusual Apple design mandate that dock-based Lightning plugs include a supporting surface as large as the old Dock Connector - a requirement that makes the plugs incompatible with most cases - developers have struggled to create Lightning docks that consumers would want. Today's docks consequently come in three primary versions: ones that ship without Lightning plugs and ask you to self-install an Apple cable, versions that arrive with unlicensed Lightning connectors and skirt Apple's requirements, and finally ones that use licensed connectors and follow Apple's guidelines. There are far fewer official docks than we would have expected by this time, and they mostly don't support cases.

Apart from inconveniences of Apple's making, the unofficial docks generally work every bit as well as we'd have hoped. The ones that use Apple's cables have no electronic issues whatsoever, but the ones that don't may have Apple-introduced incompatibilities with post-2012 devices such as the iPhone 5c and 5s. As much as we'd prefer to advise readers to stick to officially licensed solutions, so many people use cases - roughly 80% of iPhone users - that it's hard to enthusiastically recommend accessories that create inconveniences for most people. Here are the best options we've tested across a variety of different design concepts, supported devices, and use case scenarios; most are at least somewhat case-friendly.



Developers hope that Apple will change its Lightning dock design guidelines for 2014.

1



Twelve South **HiRise** for iPhone/iPad mini

Beautiful and affordable, this aluminum dock is primarily for the iPhone 5/5c/5s, but also works with iPod touches, iPod nanos, and the iPad mini. You self-supply an Apple Lightning cable at your own expense, then use included tools to mount the Lightning plug at whatever height your case needs. HiRise leaves enough space for you to use speakerphone mode or attach a bottom-mounted headphone cable, too.

\$35

2



OCDesk **OCDock** for iPhone/iPod touch

Compatible with the iPhone 5/5c, iPod touch 5G and iPod nano 7G, this handsome metal dock is built to fit on the edge of Apple's iMac or Thunderbolt Display stands, positioning your device directly in front of a screen. Using a smart spring-loaded plate to provide just as much device support as is needed, it has a flat USB cable built in for nearly invisible connection. The iPhone 5s has odd issues with the OCDock.

\$80

3



Belkin **Express Dock** for iPad

Built to meet Apple's design mandate while offering aid to some iPad users, Express Dock uses a rear dial to move its Lightning plug up or down, fitting any fourth-gen iPad case with a Dock Connector-sized Lightning port hole. The plug won't work with encased iPad minis or other encased Apple devices, though, including new iPads. It has a USB cable built in, and is solely for charging and syncing, not audio output.

\$60

Runner Up

Apple **iPhone 5c/5s Docks**

Just released, Apple's official docks are so tightly tailored that the 5s version won't fit the 5c; neither works with cases, either. But they are the only Lightning docks released with line-out audio. You'll need to self-supply a Lightning cable.



\$29

Runner Up

Macally **MCDOCKL Dock**

Bundled with a power adapter and USB cable, this Lightning dock has a distinctive C shape for device support, and can be used for syncing or standalone power. The Lightning plug has a large base, but attempts to be case-friendly.



\$50



THE BEST STANDS

METAL AND PLASTIC HOLDERS FOR IPADS, IPHONES + IPODS

As contrasted with docks, which hold Apple's device's upright while charging and/or synchronizing them to a computer, stands are defined by their lack of electronics. You can attach a cable or cables to your device if you want, but the purpose of the stand is mostly to let you choose a viewing angle other than "face directly up" for the iPad, iPhone, or iPod screen. Early stands were primarily designed to let iPod users choose music or photos from an upright device, but as video, web, and typing features were added to later devices, stands evolved to address a wider range of potential applications. Some of our favorite stands are built into iPad cases, but the accessories here are all separate from cases, designed to travel or stay in place.

They are significantly larger than integrated stands, which enables some of them to hold your device on unusual angles or different heights. Due in part to their materials, stand prices can vary dramatically, but there are thankfully quite a few excellent options made from high-quality metal at or under the \$50 point; several of our past best stands of the year have sold for \$35 or less. The options on the following page range from desktop stands to an unusual iPhone wall mount to a flexible arm that can mount on a desk or wheelchair. Some are iPhone- or iPod-specific, and others are iPad-specific or device-agnostic; you can choose something that meets your own needs. We tend to prefer device-agnostic options that will work with future products.



You may be surprised to find that a \$40 stand offers as much versatility as a \$100 option.

1



Cooler Master JAS Mini

Compact, attractively built, and capable of working with iPad minis or smaller Apple devices, JAS Mini is the sequel to Wave - an iPad stand made from sandblasted and swirled silver metal with black rubber accents. JAS mini has all of the same design elements, but costs less and uses a modified support system that provides 30-70-degree adjustability without the prior model's third leg.

\$30

2



Thought Out **PED 4** Coil CH50

Combining a 36-inch-long gooseneck coil with an adjustable iPhone/iPod touch 5G holder, this stand has a few unique features. You can use it to hold your device will above a flat surface, or even wrap the plastic-wrapped coil around objects for photography or videography. The iPhone holder has arms that can be individually tweaked to grab bare or encased devices, using special screws and tools found in each package.

\$40

3



Rain Design **iSlider**

Slender and novel in execution, this metal stand resembles a first-generation iPhone, except that its bottom black plastic compartment slides open to become a support for an iPad or iPhone. Adjustable to your choice of 18 different angles, including video viewing and typing positions, the stand is impressively small given the devices it supports, and comes with a nice carrying case to prevent the aluminum from getting tarnished.

\$50

Runner Up

Just Mobile AluPocket

If you're living in a small apartment or just want your iPhone to stay off your desk at a specific level, this metal and plastic wall mount holds your choice of cables at the bottom and lets you drop a bare or encased iPhone in as needed.



\$30

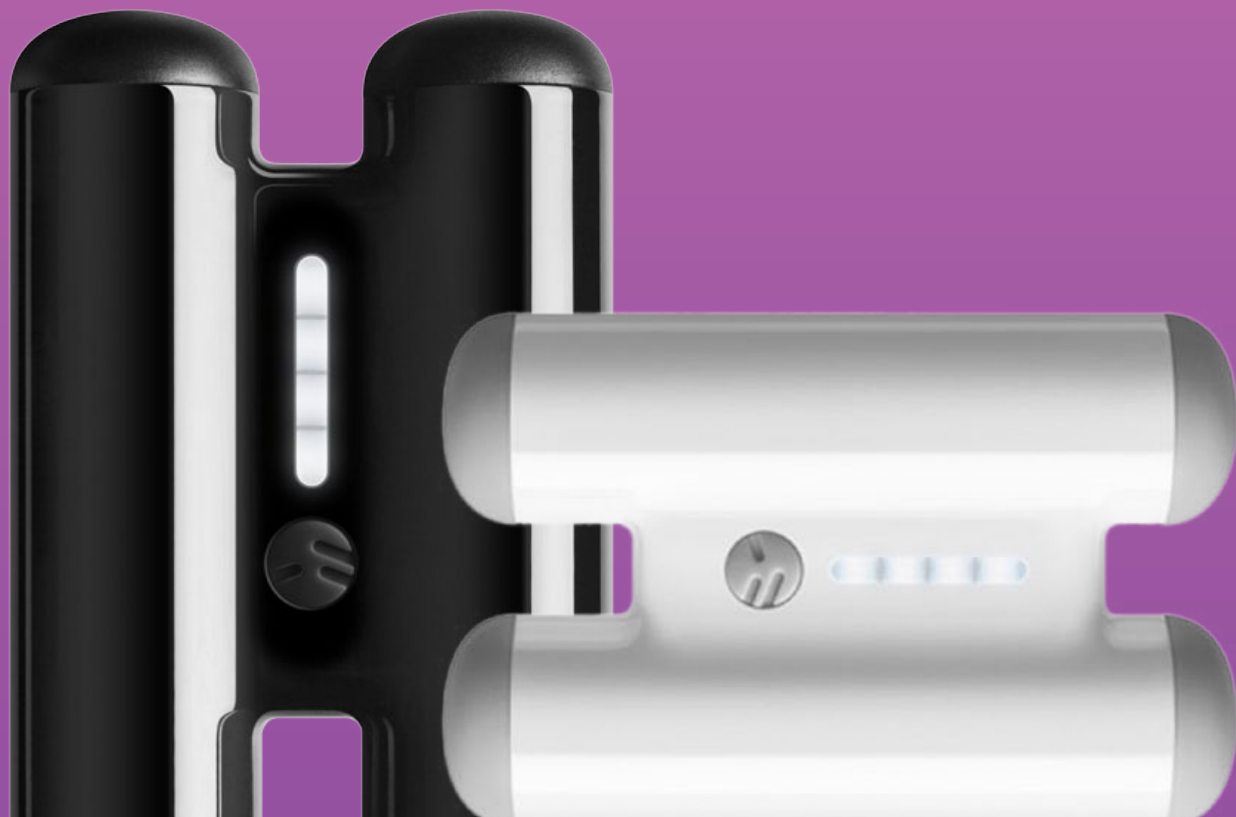
Runner Up

Joy Factory Tournez C-Clamp

Featuring MagConnect to quickly attach an iPad inside an included shell, this carbon fiber adjustable mount attaches to a desk or other flat surface to let you pick your tablet's viewing angle; versions for car and wheelchair use are offered.



\$100



THE BEST **BATTERY PACKS**

DESIGNED TO RECHARGE IPADS, IPHONES, OR BOTH AT ONCE

Despite price and performance advantages, standalone battery packs declined somewhat in popularity as combination battery cases continued to improve - particularly for iPhones. Yet iPads and iPods have seen fewer battery cases in recent years, and Lightning connector challenges delayed the release of many iPhone 5-specific batteries. USB battery packs are the solution to these issues: compatible with virtually every Apple device, they come in a wide variety of different sizes, shapes, and capacities, with prices and power output capabilities designed to appeal to different users. All of the best batteries we're including here have at least 6000mAh of power - enough for over two full iPhone recharges, or nearly a full iPad mini recharge.

Batteries designed for 9.7" iPads have several challenges. They require much higher capacities - approximately 17,000mAh to fully recharge the third- or fourth-generation models - and tend to be large and expensive as a result. Also, iPads can take nearly 6 hours to recharge, even with 12-Watt/2.4-Amp power sources, which are uncommon in batteries. Developers have sought compromises, typically offering less than full iPad recharges from batteries that aren't terribly huge or unaffordable. The options on the following page offer the best tradeoffs we've seen on size, power capacity, design, and frills at various price points. Some are better suited to smaller devices than iPads, and new iPads may do better than old ones.



Consider warranty coverage as a potentially big issue when looking at no-name batteries.

1



New Trent **PowerPak+ NT135T** (13,500mAh)

Remarkably affordable given its huge capacity, NT135T is capable of refueling a full-sized iPad to 80% - better than pretty much anything we've seen, though capped at 10W output, less than full speed. An extra 5W USB port lets you charge an iPhone or iPod at the same time. Bundled with a carrying bag and micro-USB recharging cable, you need to supply the Apple cables and wait a while for it to refuel itself.

\$70

2



MyCharge **Hub 6000 With Lightning**

Although the price tag may be intimidating, Hub 6000 is a turnkey solution with its own Lightning plug, wall adapter, and micro-USB plug built in; there's no need to carry another cable. It runs at 10W speeds and has 6000mAh, enough for an 87% recharge of the iPad mini or around 2.5 full iPhone charges. If you want to charge another device, you can self-supply any USB cable to connect with a 10W port found on the side.

\$100

3



Patriot **Fuel+ 6000/9000mAh Batteries**

Offered in 6000mAh (\$60) and 9000mAh (\$80) capacities, Fuel+ has twin USB ports - one with full 12W iPad charging, the other at 5W for iPhones and iPods. Each is shaped like a block of plastic, using four lights to indicate remaining power. While they're only bundled with micro-USB charging cables, they can be recharged at up to 12W speeds if you connect them to an iPad's included wall adapter.

\$60+

Runner Up

SwitchEasy **Tanks 6000mAh Battery**

Much smaller and visually interesting than most of the 6000mAh cells here, Tanks outputs at 10W speeds and provided a 93% average charge to an iPad mini. You pay a bit of a design premium, but get your choice of white or black.


\$70

Runner Up

Just Mobile **Gum++ 6000mAh**

Offered in white, black, or silver, Gum++ looks like a piece of luggage but packs 12W charging and recharging. It's expensive by comparison with other 6000mAh cells, but faster in both directions. Like Tanks, you self-supply a cable.


\$80



THE BEST **BATTERY CASES**

PRIMARILY FOR IPHONES, RARELY FOR IPADS

Standalone batteries have their advantages - lower prices and wider device compatibility rank high on the list - but the convenience of combination battery cases is undeniable. In one accessory, you get a combination of device protection and spare power, so even if the battery inside is nowhere close to a comparably-priced standalone battery, you needn't worry about carrying around spare cables or an extra block of plastic. On the other hand, there's no guarantee of compatibility between device generations; iPhone 5 battery cases will generally work with the iPhone 5s, but not with the 5c, which is physically larger. There's similarly little chance that the full-sized iPad battery case we feature here will properly fit newer iPads.

The iPhone 5 battery cases we've tested thus far all range from a miserly 1500mAh to an astonishing 2600mAh, delivering between 66% and 142% of extra power. Amazingly enough, those extreme numbers come from two different \$80 cases, neither of which was great enough to make it into this Buyers' Guide. The options that made the cut for the next page offer better balances of performance, pricing, and design, though you may find another battery case that suits your personal needs in the full review section of iLounge.com. By contrast, iPad options are few and far between. Justin Case is one of very few battery cases we've seen for Apple's tablet, and new designs may or may not emerge for its sequel.



Expect iPhone 5c and new iPad battery cases to appear in 2014; use USB batteries for now.

1



iBattz **Mojo Refuel/Aqua/Armor Kit 4400**

Similar to our favorite 4/4S battery case, the \$90 Mojo Refuel uses a smart trick - swappable 2200mAh batteries - to let users achieve up to two full iPhone 5 recharges on the go. For \$100 total, you can get the Armor Kit version with a protective hard plastic and rubber shell; for \$120, an Aqua version offers IPX8 dust, dirt, and waterproof protection - albeit with only one 2200mAh battery.

\$90+

2



Odoyo **Power+Shell EX 2200mAh**

Also for iPhone 5/5s, this nicely designed battery case provides a full recharge and has a video stand built into the back - all at a lower price than Mojo Refuel. Offered in your choice of white or black, Power+Shell EX is nicer-looking and more protective than many of its rivals. But it doesn't include a second 2200mAh battery, so if you're looking for extra juice, you may want to take a step up the ladder in price.

\$80

3



Innovative Tech **Justin Case for iPad (11,600)**

There are so few battery cases for iPads that we can count them on one hand, which makes Justin Case's very existence something special. The simple soft faux leather folio-style design has a passive stand in the back, and offers a 69% recharge for the third-generation iPad; older and newer models will vary a bit. You need to supply your own USB to iPad cable, but a wall charger and micro-USB cable are included.

\$70

Runner Up

Tylt **Energi Sliding Power Case 2500**

We loved the 127% iPhone 5 recharge Energi offers. And although the protection it offers is a bit below ideal thanks to a detachable shell case design, the shells will please users who don't want to tote the battery everywhere.



\$100

Runner Up

Uncommon **Power Gallery (2200mAh)**

As the first photo-customizable battery case we've seen, Power Gallery comes with a plain design for \$100 or with a photo of your choice for \$120. While that's a bit pricey for a 2200mAh battery, photos look great - and unique.



\$100+



THE BEST **INDUCTIVE CHARGERS**

ONE-TOUCH FUELING STATIONS FOR IPHONES AND BATTERIES

One year ago, Apple effectively dismissed inductive charging - the ability to lay an iPhone atop a flat charging surface without connecting a cable - as unnecessarily complicated, suggesting that the initial convenience is offset by the need to have a special charging dock on hand rather than a simple cable. Apple's perspective has been borne out by plenty of evidence: at least ten companies have tried to release inductive chargers for iPods and iPhones, but they've gone nowhere: high prices and questionable usage models have doomed them all to obscurity. We've been reluctant to offer our recommendation to any of them - we haven't even wanted to waste the time reviewing the ones that were particularly nonsensical.

So the very fact that we've created a section this year for the best inductive chargers actually means something. First, some companies are finally hitting a respectable balance of price and performance. Second, wireless media streaming and device syncing make it easier than ever to occupy an iPhone's Lightning port with a charging accessory. Why would you want to do this? In one case, a developer has come up with a legitimately impressive collection of charging accessories that magnetically grip your iPhone for in-car or at-home charging, letting you make an instant connection that can be rotated on 90-degree angles; another has done something similar with a dock for the iPad mini. We expect more in the near future.



We prefer solutions that offer smart secondary features beyond just charging one iPhone.

1



BuQu Tech **Magnetyze Case/Stand/Chargers**

The best inductive charging solution we've yet seen is the Magnetyze system, which begins with a simple case and cable solution (\$60) then expands to include a magnetic car mount and charger (\$60), desk charging stand (\$40), and wall charger (\$35). The key is that none of the pieces is much different in price than buying non-inductive alternatives, yet you get the real convenience of simply touching your iPhone to the car or desk mount and seeing it stick magnetically while charging, with the ability to rotate the iPhone to portrait or landscape as needed. It's seriously cool.


\$60+

2



iPort **Charge Case + Stand for iPad mini**

As impressive for the iPad mini as Magnetyze is for the iPhone 5/5s, iPort's Charge Case + Stand set combines a magnetic inductive charging station and dock with a very good iPad mini case. The dock is capable of charging at 2.4-Amp peak speeds - enough for any iPad, with future cases forthcoming for additional models - and the case adds only a tiny bit of extra bulk to the tablet. Best of all, you can adjust the dock's viewing angle and turn the iPad mini on landscape or portrait orientation during charging. We're anxious to see if other accessories beyond the desktop dock will enhance its utility.


\$100

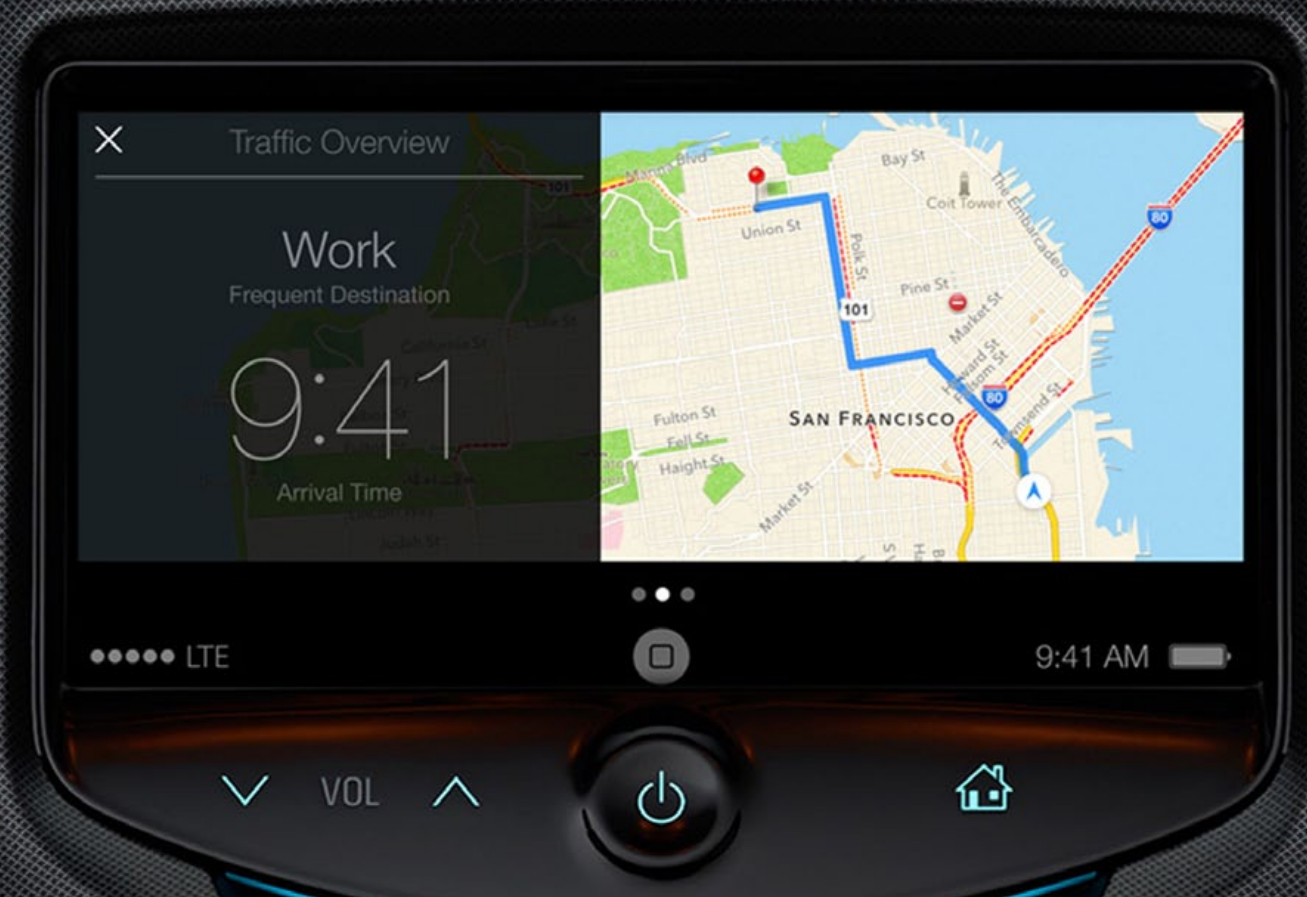
3



Duracell **PowerSnap Kit + PowerMat**

Different from Magnetyze in a few ways, the PowerSnap Kit (\$100) includes AccessCase and SnapBattery, a 1950mAh rechargeable cell that fits onto the case when you want spare power. Either or both pieces can be laid atop your choice of PowerMats, cleanly designed inductive charging surfaces that come in one-device (\$40), two-device (\$50), or three-device (\$70) versions; each device gets 1-Amp/5W power, so you can refuel up to three iPhones at full speed with or without batteries attached. There aren't any fancy magnetic stands here, but the case versatility may be appreciated by some users.


\$100+



THE BEST CAR ACCESSORIES

CHARGERS, SPEAKERPHONES, AND RADAR DETECTORS

The Apple-specific car accessory business has stagnated for years, thanks in part to improvements in cars themselves, but also due to some major changes in iPhones and iPods. Car makers began to add USB and Aux-In ports to their cars, making it easier for users to play music through their car stereos, and with the addition of Bluetooth speakerphone and stereo music streaming support, the need for many previously common accessories began to dry up. Today, FM transmitters are so unnecessary that iPod pioneers no longer make Apple-specific models, and cassette tape adapters are almost as rare as tape decks in new cars. Most car accessories today are designed to do what some cars can't do on their own.

For this year's "best" collection, we've selected an excellent, affordable accessory that adds a Bluetooth speakerphone to cars that don't have that built in, as well as two chargers that offer far more power - iPad-ready power - than the USB ports found in many cars. We've also picked options with Lightning cables, which are rarely if ever found in vehicles, as well as a cutting-edge radar and laser detector that uses a Bluetooth connection to gather live traffic-related information from the Internet. Further developments - a Siri Eyes-Free mode and iOS In The Car (above), which promises to share iOS maps, calls, messages, and music with some in-car displays - have been promised for 2014. We can't wait to see them.



We're hoping that 2014 will bring needed innovation to this long-predictable category.

1



Supertooth **HD Voice**

Based upon a previous and impressive visor-mounted speakerphone, HD Voice has dropped in price and surplus features to become more straightforward. Still voice-controlled, HD Voice enables you to answer incoming calls by merely saying "OK" when the caller's name is spoken aloud; you can press a simple button to make calls or use Siri. Solid incoming and outgoing audio quality, music streaming, and 20 hour battery life are all benefits, too.

\$89

2



Incipio **Dual Auto Charger 3.4A Lightning**

Innovative? No. Useful? Yes. This single car charger combines a 3.3-foot, 2.4A/12W captured Lightning cable with a 1A/5W USB port so that you can charge two devices at once - assuming you supply the second cable. Even with the hardware in the box, you can refuel a full-sized iPad at peak speeds, something that can't be said for most car chargers today. A thin blue ring around the charging bulb indicates power.

\$35

3



Just Mobile **Highway Max**

Based entirely on Just Mobile's earlier Highway Pro, Highway Max is a dual-port USB car charger that's now equipped with twin 2.1A/10W outlets rather than a mix of 2.1A/1A ports. Beautifully machined aluminum is used to cap the otherwise plastic bulb, a design that looks excellent even in high-end cars. A coiled micro-USB charging cable is included in the package, leaving you to supply Apple cables yourself.

\$25

Runner Up

Monoprice **Car Charger Lightning**

Unbeatable on price by the standards of licensed Lightning accessories, Monoprice's Car Charger is - like its Wall Charger - limited to iPhone/iPod-ready 5W/1A output. But it has a Lightning cable built in.


\$12

Runner Up

Cobra **iRadar SPX 7800BT**

As Cobra's top new radar/laser detector, this tiny model packs a color screen and scans all North American bands on its own. With iPhone aid, it can access an online database of realtime police cameras and dangerous intersections.


\$230



THE BEST **IPHONE 5C CASES**

THIS YEAR'S THEMES ARE COLOR AND/OR CLARITY

Historically, the first wave of “good enough” iPhone cases arrived soon after a new device shipped, but plenty of leaks and a rather extended development process made the iPhone 5c’s launch a little different. Case makers knew pretty much exactly what to expect well before the 5c shipped, so their early designs were atypically polished. Predictably, some are nearly identical sequels to previously successful iPhone 5/5s cases, but others are either entirely or substantially new, refocusing familiar enough design elements on the specifics of the 5c’s body. Top developers have attempted to focus on color - often offering multiple bright tones that will resonate with 5c fans - or clarity, letting a 5c’s body show through. Some do both.

However, one of the major potential differentiators between the iPhone 5c and the 5/5s is the former model’s positioning as a midrange or budget iPhone - both the pricing distinction and plastic body have previously made people less likely to buy protective cases at all. Consequently, case makers are challenged to deliver particularly excellent value and atypically low prices for Apple’s less expensive devices, and some developers have done better than others in that regard. We’ve seen early options for as little as \$3, stepping up to \$13 and then only \$20 for particularly well-designed dual-material cases. Many other companies are offering 5c cases at the same (high) prices as 5/5s versions. You can pick what’s best for you.



Many more iPhone 5c cases will be released in 2014, but excellent options are available now.

1



SwitchEasy Numbers

Combining great design and superb value for the dollar, Numbers is a smart pick for budget-conscious iPhone 5c owners. Made from a soft plastic and sold in eight different colors, it's incredibly protective, even including flip-open port protectors and screen film for its all-but-insanely-low price. A frost white version is available if you want to see through to the 5c's body color; otherwise, you can pick from pastels, black, or bright green and pink tones. It's a cool case.

\$13

2



Speck GemShell

Though Speck has three excellent iPhone 5c cases, the one that stands out most for this particular iPhone model is GemShell, which costs a little less and lets you see the body color through a completely clear frame. While there's a bit less drop protection than with Speck's slightly pricier CandyShells, which have rubber interiors, GemShell does have integrated button protection and provides full access to the 5c's ports. You have to supply your own screen film.

\$30

3



SwitchEasy Tones

Based upon an earlier iPhone 5/5s design, Tones has been tweaked with a mix of matte opaque and glossy translucent layers - a seriously handsome touch that recalls the iPhone 5/5s design while enhancing the 5c's color. Five of the six colors match Apple's official 5c picks, while a sixth lets you convert the 5c's body to a stealthy black color matching its front. Each version comes with integrated button and port protection, as well as screen film.

\$20

Runner Up

Monoprice Double Injected TPU

The price isn't a misprint: this is an actual iPhone 5c case for only \$3, and like Speck's famous CandyShell line uses a double-layered process. Available in pink or white, it's thinner than many rivals, but a great no-frills case.



\$3

Runner Up

Tylt Band

Offered in gray with one of three accent colors, Band is another co-molded plastic and rubber case. A little pricier than our other picks, it's accented by a colorful band across the rear, as well as rubber that's visible on the bottom and edges.



\$35

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THE BEST **IPHONE 5/5S** CASES: OUR TOP BUDGET, HEAVY-DUTY, FASHION + BALANCED CASES

While it can be said accurately that there are iPhone and iPad cases to match every taste and need - something that can no longer be said for the iPod - it's certainly true that the iPhone 5 and 5s have the widest variety of different options. Not only is demand for iPhone cases extremely high, with around 80% of iPhone users buying cases, but the last year has given case makers plenty of time to create interesting designs that work with both the iPhone 5 and 5s models. It's now widely understood that cases provide both protection and customization options that Apple's designs lack, letting people have some control over the way their most frequently-used computers look and feel. No single case design is right for every user.

This year, we've broken our top iPhone 5/5s case picks up into four categories. Budget cases are appealing particularly because of their low prices, each possessing a feature or design element that stands out. Fashion cases are picks where price doesn't matter as much as the look and overall quality. Heavy-duty cases are built like tanks and designed to offer serious protection - too much for some people, but great for others. Finally, our Balanced case picks are ones that reach atypically excellent compromises between pricing, looks, protection, and features. We haven't drawn sharp lines between the categories, so you might find affordable cases in any category, but we've picked the best options we've seen this year for each.



Consider heavy-duty cases only if you're really concerned about water or huge drop damage.

1: Budget

**SwitchEasy Numbers**

Highly similar to the iPhone 5c version, Numbers is hard to beat on raw value. The clean design comes in five different colors - all opaque except for frost white - and each provides comprehensive protection, including flip-open port covers, full-time button covers, and a piece of screen film. Three bright colors have iPhone 5c-like tones, alongside white or black; matte-finished TPU material feels better than SwitchEasy's \$15 rubber Colors case.

\$15

2: Budget

**id America Cushi Plus**

Uniquely made from 3-D, cushiony stickers that are applied to the front and back of the iPhone - plus a wraparound bumper - Cushi Plus allows you to completely change the look of your device. Some of the art is just crazy, with dozens of different designs that can reskin your iPhone to look like a camera, knit sock, or an ice cream sandwich, including actual texture and depth. Full screen protection and button coverage is included; port holes are small.

\$25

3: Budget

**Belkin****Grip Candy Sheer**

Straightforward in a way that we've come to expect and appreciate from Belkin, this two-toned soft plastic case comes in 10 different color combinations, mostly bright tones with a couple of gray versions mixed in. Since the plastic is translucent, you can see your iPhone's body through the back; you also get full button coverage and nicely tailored holes, albeit with a very tight Lightning port opening that fits Apple cables.

\$25

Runner Up

Amzer Silicone Skin Jelly Case

Inexpensive to a degree that's appropriate given the silicone rubber material it's made from, this case has some unique assets - extra drop protection in the corners and full Home Button coverage, better for the iPhone 5 than 5s.

**\$10**

Runner Up

NutKase PopLock

Relatively few iPhone cases have integrated stands, and fewer are budget-priced, so the protective, nice-looking PopLock stands out from the crowd. The rear stand pops out like a slap band, forming a curve that enables the iPhone to recline for videos.

**\$23**



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1: Fashion



Twelve South BookBook

Made from genuine leather and suede to resemble a small book from outside, this case doubles as a wallet: four total card slots plus a tall pocket for cash or other flat items. Having been through multiple versions for different Apple devices, BookBook really came into its own for this version, which looks great outside and provides solid functionality inside. Only the top and bottom coverage could stand to be improved.

\$60

2: Fashion



Case-Mate Stylebox

Shipped as sets of four cases individually priced from \$35 to \$150, Stylebox lets you try an assortment of plastic cases with wood, bejeweled, or inlaid accents, keeping only the one(s) you want after seven days. The cases are generally highly protective apart from the iPhone 5/5s screen and bottom - both left largely open - and between the gold metallic plastic, mother of pearl, faux carbon fiber and exotic woods, there's something here for any personal taste.

\$35+

3: Fashion



Skech Kameo Leather

Sold in two versions at the same price, Kameo is a black soft plastic frame that comes either with two interchangeable back panels - one fabric, one plastic - or one panel that's made from leather with a single card slot on the back. While the practicality of a single card slot might be questionable, if you're planning to go out and need to travel light, you can carry an ID or single credit card as needed. Each version comes in multiple colors, with screen film.

\$35

Runner Up

Sena Cases Hampton Wallet

Highly similar to BookBook in concept but a bit more protective, more feminine in leather choices, and with only three card slots, it comes in six versions that vary in both color and texture. iPhone corners are left exposed.



\$60

Runner Up

Miniot Contour

Made in and shipped from Holland, Contour comes in your choice of three wood combinations, one serving as the base material and the other for bevel inlays. Slim and attractive, it's fully wood, which means it's engravable and a bit fragile.



€115

1: Heavy

**Incipio Atlas**

It's not cheap, but Atlas is the best overall heavy-duty case we've tested for an iPhone: relatively easy to assemble and disassemble, with a clear glass screen cover that helps it work as a full-time "anywhere" case, it's fully water-submersible - it can take up to an hour of submersion at depths of 6.6 feet, as well as resisting dust, snow, and dirt. For the price, you even get one year of accidental liquid damage insurance, a bold idea. It's designed specifically for the iPhone 5.

\$90

2: Heavy

**OtterBox Defender**

Now sitting just below the \$100, vault-like Armor case in OtterBox's lineup, Defender gives up water resistance to achieve a more attractive price and greater convenience. Three layers of mixed rubber and plastic come together to offer screen and almost complete body protection, leaving the speakers and microphones open for unimpeded phone calls. You can now build Defenders in your choice of numerous colors; each includes a black belt clip.

\$50

3: Heavy

**LifeProof Fre**

Offered in 10 colors, Fre effectively defined the waterproof iPhone case category - a success that led OtterBox to buy LifeProof earlier this year. Waterproof to 6.6-foot depths and safe from dust, dirt, and snow, Fre is light and easy enough to use that it can be relied upon as a full-time case. While it doesn't include a water insurance policy, you can add one for \$10. Also like Atlas, it's specific to the iPhone 5; we're awaiting a 5s update.

\$80

Runner Up

SwitchEasy FreeRunner

Deliberately priced much lower than competitors and given a funkier dot design, FreeRunner provides roughly the same amount of coverage as Defender, minus some thickness and hard plastic inside. It's a good compromise.

**\$35**

Runner Up

Cygnett WorkMate

As one of the most affordable heavy-duty cases around, WorkMate uses a thick rubber case with a hard plastic back plate that integrates into the sides for a sharp look and plenty of protection. Assembly is a small challenge, as is button tactility.

**\$25**

1: Balance

**ZeroChroma VarioClear**

If you're looking for a deluxe stand to keep on your iPhone at all times, there's no better option than the one inside VarioClear. Also integrated into a nearly identical but opaque case called VarioProtect, the stand rotates and ratchets to prop up your iPhone on any angle. The frame comes in your choice of six colors, including neutrals, while the otherwise clear plastic back lets your iPhone 5 or 5s colors shine through.

\$45

2: Balance

**Incipio StashBack**

Building on Speck's CandyShell without just ripping off the rubber and plastic design isn't easy, but StashBack found a way: it has a flip-open bottom panel that's dock-compatible, holding three credit cards within a rubber recess behind your phone. We've seen many combination wallet-iPhone cases, but this is amongst the very best because it's so inconspicuous and attractively designed. Five colors are available, most largely neutral.

\$40

3: Balance

**Speck CandyShell + FacePlate**

Highly similar to last year's iPhone Case of the Year, the latest version of CandyShell bundles a beautifully co-molded glossy plastic and matte rubber case together with a matching screen protector, adding the only missing part from recent CandyShell models. While the FacePlate part isn't strictly necessary, and some will prefer a sheet of clear film, the total solution here is affordable and very protective. Pick from six colors.

\$45

Runner Up

Spigen SGP Neo Hybrid

SGP has released a boatload of noteworthy cases this year, the highest-rated of which is this interestingly understated soft and hard plastic combination that leaves your iPhone 5/5s's edges looking futuristic. Six colors are offered.

**\$30**

Runner Up

Ballistic Aspira

As a younger, cuter riff on CandyShell, this plastic and rubber dual-layer case uses interesting rear colors and finishes to set itself apart. The slightly bone-like shape has exaggerated corners, improving its ability to survive accidental drops.

**\$35**



THE BEST IPOD TOUCH CASES

PROTECTIVE, WHIMSICAL, FASHIONABLE + ATHLETIC OPTIONS

Unlike the iPod nano - a device that case makers all but abandoned years ago after low prices made them seem nearly disposable to users - the iPod touch is just expensive and fragile enough to remain worthy of protection. Built with a fully glass face and an easily dentable metal body, the iPod touch is comparable to an iPhone or iPad in damage potential. Still, relatively few case makers are still creating options for the iPod touch, as iPod sales have continued to decline and iPhone sales have increased commensurately. The companies on the following page are truly amongst the only major brands creating options, and even then, the perception of the touch as a starter model for kids has led to many wacky-colored, oddball options.

Our recommendations for the iPod touch are effectively a subset of cases we've liked for the iPhone, though notably the ratings for iPod touch versions tend to be a little lower based on protection issues. Apple's odd addition of the "loop" button - a swirled metal circle that popped out to let users attach an included wrist strap - landed with a dull thud, uncharacteristically inspiring few if any developers to create alternatives, while leading many to add a back-of-case hole to support a feature few users seem to actually want to use. Apple pulled the loop and rear camera from the later 16GB version of the iPod touch, adding two awkward differences for case makers to address or ignore. Griffin's Survivor effectively addresses both issues.



We've found very little use for the iPod touch's rear loop button, and prefer cases that cover it.

1



Incipio **Frequency**

Affordable, protective, and intriguingly designed, this slim soft plastic case comes in four opaque colors and one translucent gray version. The back features a unique pattern that looks like an EQ meter, complete with the expected port, camera, and loop attachment holes. In addition to button and front edge protection, screen film is included in the package, enabling you to cover nearly every bit of the iPod touch and add grip for a very fair asking price.

\$25

2



Griffin **Survivor**

If you're looking for a case to protect the iPod touch against virtually anything, Survivor should be your first pick. Featuring everything from a clear integrated screen protector to a three-piece hard plastic and rubber frame with a detachable belt clip, it's easily the most comprehensive case for this iPod - everything's covered, with flip-open protectors for the rear camera and ports. A remarkable and varied 22 different color combinations are offered.

\$40

3



SwitchEasy **Monsters**

Inexpensive and fun, Monsters made its debut last year on the iPhone 5, but seems a better fit for the kid-friendly iPod touch (and new budget-friendly iPhone 5c, which has a same-priced, nearly identical-looking version). Bundled with screen film and removable port protectors, Monsters molds a silly or serious monstrous mouth into a lightly textured rubber case in your choice of five colors, using the rear camera as an "eye," plus a loop hole.

\$20

Runner Up

Speck **CandyShell**

More expensive than the typical iPod touch case while offering a very good combination of protection and style, CandyShell comes in five somewhat polarizing color options. Full button coverage is offered, except for the rear loop button, which is open.



\$35

Runner Up

Griffin **MeshUps**

Very affordable, unique in golf ball-like texture, and made from a mix of plastic and rubber, MeshUps comes in four bright colors that contrast with the wrap-around grid. While the look won't appeal to everyone, the protection is pretty substantial.



\$20



THE BEST IPOD NANO CASES

UNIVERSALLY SMALL CASES, WEARABLE OR POCKETABLE

For many years, low iPod nano prices have all but killed demand for nano-specific cases, leaving very few companies to offer solutions specific to Apple's least-expensive screened device. There was a brief resurgence during the two-year run of the square sixth-generation model, which saw a bunch of new developers materialize to offer watch band accessories, but traditional cases have been flagging for years. Companies have struggled not only to address the way (fewer and fewer) people carry nanos now - do they want to wear them, pocket them, or attach them to bags? - but also to hit price points that make sense to buyers of such budget devices. As such, there are relatively few options, and they're not hugely different from one another.

The key distinctions between nano cases include color options, the method - if any - they use to attach to your clothing or bags, and the degree of protection they offer. Since the new nano is around twice the size of its predecessor, there are relatively few and not particularly great wrist-mounting options for this model, leaving shirt or belt clips, armbands, and hook or loop attachments as the primary ways to wear it. Prices are almost universally under \$25 for nano cases, and often less, though key developers such as Speck no longer even bother to make cases for this model. On the following page, you'll see the best of the slim pickings; you can safely go with any of these top options if the colors or features appeal to your needs.



Internet ordering is your best bet when buying an iPod nano case, due to few in-store options.

1



Incipio **Frequency**

Our go-to case for nearly a year, this soft plastic case mixes matte and glossy textures in an equalizer-like rear pattern. In addition to offering screen film protection and nearly complete body protection, it has a triangular loop at the top that you can connect to a self-provided keychain, key loop, or clip if you want to attach the nano to something else. Five different colors are available, including translucent grey and solid black.

\$16

2



SwitchEasy **Colors**

Offered in eight different colors - each with a contrasting "jelly bean" Home Button protector - Colors is a classic SwitchEasy case that's easy to love on price and protection. Bundled with screen film and detachable port covers, it covers all of the nano when fully assembled, but provides no wearable option and is made from a soft silicone rubber that some people will like more than others. Note: the headphone port hole is very small.

\$15

3



Incipio **Hipster Clip**

Like Colors, the rigid rubber Hipster Clip comes in a range of eight colors, but each includes a rear belt clip made from hard plastic. The clip is notably not detachable, and varies from dark grey to black based on the case color. Additionally, you get screen film to increase the level of nano protection to a nearly complete level, though there aren't port covers and the port holes are on the very small side - an issue with many nano cases, including Frequency.

\$20

Runner Up

Cygnett **Holster Hybrid**

Addressing the wearability issue, Holster Hybrid combines a soft silicone rubber case with a hard plastic belt clip holster. It's notably only offered in the bright green and black combo shown here.



\$20

Runner Up

Griffin **Trainer**

Very few armbands are available for the latest nano, making Griffin's Trainer a standout. The 19-inch neoprene band is large enough for small/medium-sized arms, and a transparent, touch-through front window provides nano access.



\$20

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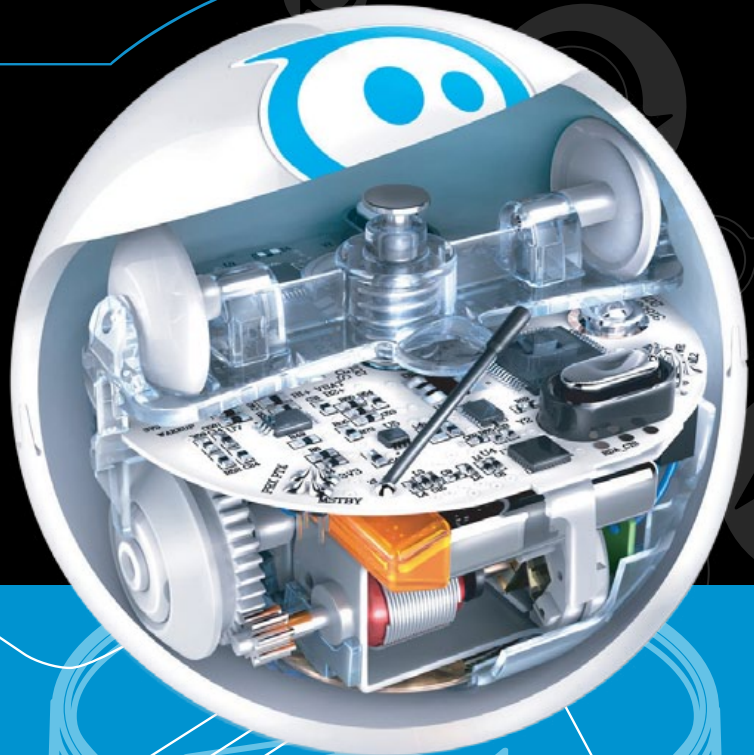
Sphero 2.0 rolls at speeds of up to 7 feet per second. That's only slightly slower than a Lamborghini. Trust us, this thing hauls.

BRIGHTER

With new multicolor LEDs, Sphero 2.0 is 3x brighter. Put your sunglasses on so the awesomeness doesn't blind you.

SMARTER

Every aspect of Sphero 2.0 has been reprogrammed. It's like Einstein and C-3PO had a mutant baby.



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THE BEST **IPAD MINI CASES**

COMPACT AND FREQUENTLY ADAPTABLE DESIGNS

Within weeks after the publication of this Guide, Apple will release the second-generation iPad mini, nearly identical to the still available first-generation model except for an extra rear microphone and a very slight difference in thickness. It's not yet clear how these changes will impact the hundreds of iPad mini cases currently on the market, but you can be sure that we'll have answers in the very near future. Our best guesses are that the Retina mini's top microphone will still work properly for almost everything, but suffer from reduced ambient noise cancellation, and that all but the most tight-fitting prior cases will fit the new, slightly thicker model. Our advice: wait for our Retina iPad mini review before buying any cases.

The cases here are our top picks for the original iPad mini, with some overlap from our March 2013 Buyers' Guide. Our editors remain somewhat divided on whether the ideal iPad case is an open-faced play-through design with an integrated rear stand or a folio-style design with a fold-open front cover that can double as a stand, so we list our favorite picks in each category here. If you're looking for a balanced, open-faced case without a stand, or a case with a detachable stand, we've picked several options to get you started. You'll find many more good to great selections on our web site, as well as in our past publications; we'd strongly recommend reading our full reviews for the specific details of each case.



For more top iPad mini and iPad 2-ready picks, get our 2013 iPad + iPad mini Buyers' Guide.

1 Tie



ZeroChroma **Vario-SC**

Updated for the iPad mini, this sequel to one of our most-used full-sized iPad cases is equally valuable here. The star attraction of the matte black case is the slender, fully-adjustable rear stand that ratchets and rotates to support virtually any viewing, typing, or display angle you prefer. Its only omissions are button coverage and a large side gap, the latter meant to support the iPad mini Smart Cover, which few people will need given this otherwise great design.

\$50

1 Tie



SwitchEasy **Canvas**

Long respected by our editors for its excellent combination of pricing and protectiveness, this folio-style case wisely melds fabric and plastic to create something that straddles the line between fashionable and professional. Capable of holding the iPad mini or full-sized iPad upright for video viewing, it folds closed to provide nearly complete protection for the tablet, now including its buttons and ports. Five colors are available.

\$40

3



Speck **CandyShell**

If you don't need your case to include an iPad stand, our top pick is CandyShell, which continues its uninterrupted reign of awesomeness for iPad minis. The rubber-lined, glossy hard plastic frame provides such excellent anti-drop and anti-scratch protection that we've never had to worry about iPads inside; integrated button protection is superb, with well-tailored port openings. Five colors are available, as well as five additional Grip-added versions.

\$45

Runner Up

Belkin **APEX360**

Easy to grip and made to withstand 6-foot drops, APEX360 splits into a magnetically-attached front lid and a standalone playthrough iPad mini case that can be used separately as needed, or combined to form a portrait or landscape multi-angle stand.



\$70

Runner Up

Modulr **Mini Mobility Pack**

Sold as a plastic case with a detachable lid and three straps (hand, wrist, and shoulder), this is a good enough standalone case to recommend on its own; an optional \$20 stand holds the first-gen mini's power adapter and cable inside.



\$60+



THE BEST EARLY **IPAD AIR** CASES

BRAND-NEW RELEASES WORTH CONSIDERING

Apple has made more changes to the full-sized iPad lineup in the past two years than might have been imagined: the third and fourth iPads were abruptly discontinued, and the iPad Air was introduced as a smaller, lighter alternative to the still-active iPad 2. Because Apple held off on releasing the iPad Air until November, there aren't many options that are actually available to purchase right now. Moreover, Apple made some relatively last-minute changes to the Air's dimensions, so early bird developers who were working on accessories months ago have been stuck with useless, unsellable cases. We wouldn't be surprised to see some of them selling for very low prices at mall kiosks or on eBay, but they probably won't fit iPad Airs properly.

The five cases we've selected here are standouts for different reasons: each comes from a different company and most look very different from one another, although three are in the popular folio style, one is a resilient heavy-duty case with an integrated rear stand, and the last is a particularly nice bag that also happens to be compatible with earlier full-sized iPads. They collectively demonstrate the range of prices and materials we've previously seen in iPad cases, which we don't expect will change radically for the iPad Air. Apple is now actively touting leather cases, but other companies have leaned towards more resilient materials. Full reviews of these cases and many more will be available on iLounge.com in the near future.



Expect a large number of iPad Air cases to go on sale in December 2013 and January 2014.

Leather



Apple iPad Air Smart Case

Certainly Apple's best leather case yet, the iPad Air Smart Case is also available in an iPad mini version for \$10 less. Dyed in your choice of six colors, the leather-covered rear shell is coupled with a permanently-attached front lid that magnetically folds to become a triangle, providing support for the iPad in landscape video viewing or typing positions. Button protection and material quality are spot-on.

\$79

Heavy-Duty



GumDrop Hideaway

Substantial and multi-layered, this hard plastic and rubber case provides comprehensive protection for the iPad Air, as well as an integrated rear stand that folds out as needed for video and typing support. While it's bigger than most cases, it'll withstand a lot more; full screen protection is included in the form of a thin touch-through plastic shield. You can also choose from three color combinations, including jet black, blue/black, and orange/black.

\$70

Budget



Kensington Comercio Hard Folio Case

Combining a hard plastic rear shell with a textured fabric lid and rear coating, this particular version of Comercio has a rear business card window and the ability to recline in your choice of positions. The fact that it's so similar to prior-generation iPad folio cases lets you keep your Air from being particularly conspicuous, while eight different color options and textures including denim let it stand out if you prefer.

\$40

Budget

Speck StyleFolio

One of 14 fabric designs on the outside is bonded to an inner hard plastic iPad Air shell. This folio uses a nice plastic clasp to hold its protective lid shut, and pivots the shell to let you choose your preferred viewing and typing angles.



\$40

Shoulder Bag

Brenthaven Collins Tech Pack

With a central compartment for full-sized iPads, this handsome fabric bag has a zippered accessory pocket in the top flap, a Velcro-sealed front supply pocket, a notepad-sized rear pocket, and a durable nylon arm strap.



\$50



THE BEST **SCREEN PROTECTORS**

PLASTIC FILM AND GLASS SCREEN SHIELDS

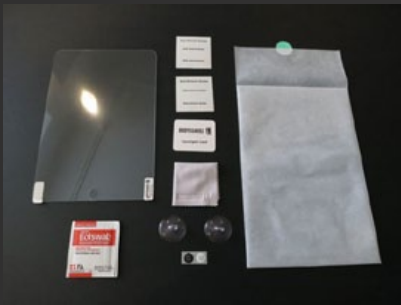
Proponents of bare iPhones, iPads, and iPods accept the daily risk that an accidental drop might shatter their screens, or one encounter with a key might leave a scratch or three in the glass. Screen protectors can help. Over the past decade, inexpensive pieces of film have saved more of our Apple devices from damage than we'd prefer to recall; conversely, the lack of protection has been the most common thread in the shattered or scratched screen stories we've heard. Due to Apple Store requirements, case developers only rarely include screen film with their cases these days - a sad state of affairs - but many companies specialize in producing higher-quality protective options. They're not all the same, varying in price, concept, and value.

Once written off as crazy but now increasingly common, glass screen protectors are ultra-thin panes of touch-through glass that stick to an iPhone or iPad screen, absorbing the brunt of typical scratches and drops. They're typically crystal clear and do not perceptibly reduce touchscreen sensitivity, but they're a lot more expensive than plastic film, and rarely if ever reduce fingerprints. By comparison, plastic film comes in three variations - crystal clear, anti-glare, and with white or black bezel-matching borders. Most of the plastic film sold or given away with cases today is crystal clear, but anti-glare film trades pure optical clarity for very useful fingerprint and glare reduction. The bezel-matched film can be removed and reused.



We no longer actively review screen film, but the picks here represent the best we've seen.

iPad Glass

**BodyGuardz Pure Glass ScreenGuardz**

Bolstered by helpful tools for installation and a warranty policy that reduces the price of replacements, this 0.4mm glass protector comes in iPhone (\$40), iPad mini (\$60), and full-sized iPad (\$80) sizes, each with two Home Button covers. While it's crystal clear, Pure has an anti-fingerprint coating that may cut down on smudges; notably, however, the edges aren't tapered and can chip if it's used without a device case.

\$60+

iPad Glass

**Spigen SGP GLAS**

Offered in two versions for the iPad mini (\$58) and four confusingly similar versions for the iPhone 5/5c/5s (\$30-\$40), the GLAS series varies from 0.2mm to 0.4mm thick based on the version you choose. The 0.4mm iPad versions are recommended for use with a case, while some of the thinner, rounded-cornered iPhone versions can be used with bare devices. Discount replacements are offered if you send your old, broken protector back at your own expense.

\$58

iPhone Glass

**Belkin TrueClear InvisiGlass for iPhone**

Currently available only for iPhones and not iPads or iPods, this 0.2mm protector is so thin that it feels like a rigid piece of plastic rather than glass. It's the rare glass protector to actively promise shock-absorbency, and is optically clear, with only above-screen sensor holes providing obvious evidence of its installation. Notably, you can replace a damaged unit at no charge beyond your cost to ship the old glass back to Belkin.

\$40

iPhone Plastic

Trü Protection Anti-Glare/Trü-Fit

Sold with (\$20) or without (\$15) an easy installation kit, Trü's plastic film markedly reduces fingerprints - a huge benefit - while offering protection, with only modest reduction in the sharpness of the Retina display. We love it.

**\$15+**

iPad Plastic

Moshi iVisor XT/AG

iPhone (\$25) and iPad mini (\$30) versions of this unique plastic film are offered, each with two choices. Pick clear (XT) or anti-glare (AG), then white or black to match or change your device's front bezel. You can peel iVisor off and re-install it as needed.

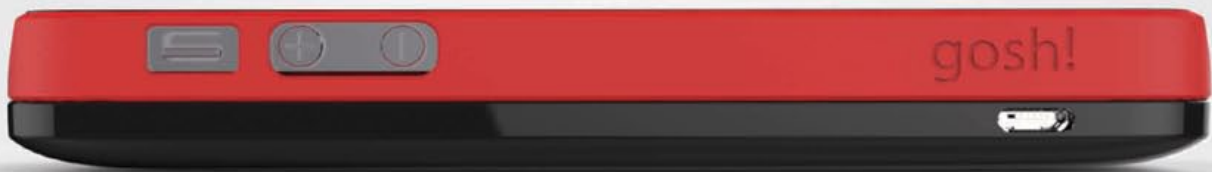
**\$25+**



reddot design award
winner 2013



Perfect fit for the perfect look.



125.8
Length (mm)

17.7
Depth (mm)

2500
Capacity (mAh)

JOULE SURGE

Portable battery with Intuitive Vibration
6000mAh



PARALLEL

Detachable Battery Case
for iPhone 5



TRANSPIRE

Interchangeable Duo Color Flip Cover
for iPad Air



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Rocking the World

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THE BEST KEYBOARDS

STANDALONE KEYBOARDS AND IPAD KEYBOARD CASES

Although we're expecting big changes in this category for 2014 due to Apple's redesign of the full-sized iPad, users of iPad minis and prior-generation 9.7" iPads can choose from a robust collection of keyboards right now. Our editors tend to prefer the less compromised typing experiences of standalone keyboards, which are equivalent to good desktop or laptop keyboards, but if you're looking for something more compact, a keyboard case might suit you better. Almost every keyboard case reduces the size of the keyboard to match the width of the iPad it's made for, which has proved extremely challenging for the smaller iPad mini - keeping all the keys forces developers to make them too small, while cutting keys clips punctuation marks.

The keyboards featured here come the closest to perfectly balancing key size, number, and other features while offering you a choice between form factors and price points. Many past full-sized iPad keyboard cases have been left out here, and we've skipped dozens of not-great iPad mini versions, focusing primarily on options that work well for different needs. Our number one pick is a safe choice regardless of the Apple device you want to use it with, and ideally paired with a case that contains its own stand. Several other options have cases and stands built in, a convenience if you plan to hold onto the same iPad for years but a potential issue if you plan to switch iPads or use the keyboard with different devices.



All of these keyboards use Bluetooth wireless; there are several wired iPad keyboards, too.

1



Logitech **Bluetooth Easy-Switch**

Very few keyboards eclipse Apple's Wireless Keyboard in our view, but this is one of them, including all of the features Apple hasn't added over the years. You get one full year of battery life on a charge of its rechargeable cell if the backlight is turned off, or ten days of two-hour-per-day use with the keys illuminated. Switch between three different devices - iPad, Apple TV, and Mac - at will. And enjoy both portability and excellent typing.

\$100

2



Belkin **Ultimate Keyboard Case**

We don't blindly repeat the word "ultimate" when it comes to new products, but Belkin's iPad case and keyboard is the best such combination we've tested for the full-sized tablet. Smart compromises make the typing surface feel as close as can be to standalone keyboards, and the handsome metal-clad folio hits the right balance of thinness and sturdiness. A rechargeable battery runs for 160 hours of constant use.

\$100+

3



New Trent **Airbender Mini**

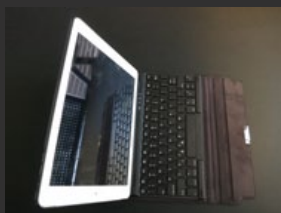
So inexpensive that it must be discussed, this iPad mini keyboard case has one of the best typing surfaces we've tested for the 7.9" tablet, as well as a full plastic and rubber case roughly equivalent to OtterBox's Defender Series. They attach to one another with a metal hinge, or split into two pieces if you don't want to carry or use them together. While you can find better keyboards, there's no better combo for iPad minis.

\$40

Runner Up

Kensington **KeyFolio Exact**

New for the iPad Air, this Bluetooth 3 keyboard detaches from the hard plastic and leatherette folio case for separate use. The island-style keys feel Apple-quality, and are backed by a 960-hour rechargeable battery.



\$130

Runner Up

Kanex **Multi-Sync Keyboard**

Switching between USB wired or three Bluetooth wireless devices, this plastic keyboard includes AAA batteries for wireless mode and a cable for your computer. It's quite large due to its included numeric keypad, a rarity today.



\$69



THE BEST **STYLUSES**

BLUETOOTH 4.0 WIRELESS INPUT TOOLS FOR IPADS

Styluses began to appear for the iPhone and iPod touch despite Apple's suggestion that they were pointless, and for the most part, Apple was right: early models were little more than rubber-tipped metal or plastic tubes that you could use to interactively touch the screen when fingers seemed inadequate. They rarely helped with writing or art, but that began to change after the iPad debuted in 2010. Developers began to release better styluses, including some with finer tips, and electronic versions weren't far behind. After two years of fits and starts - notably including the release of early Bluetooth and Infrared options that were on the fine edge of acceptability - several companies have come up with bona fide worthwhile digital styluses.

All of the new styluses use Bluetooth 4, enabling them to enjoy a month or more of fairly active use between battery charges. Only one stylus is rechargeable; the others force you to buy disposable cells when they run out of juice. Each stylus supports enough pressure sensitivity that apps can easily tell whether you're applying a little or a lot of force, resulting in lighter/thinner or darker/thicker input. And they can all also detect the location of the pen's tip on the screen, reducing accidental inputs from your palm. Unfortunately, every Bluetooth stylus relies on third-party app support, which is limited even on the best of them. If an app doesn't support the stylus, it's no better than using your finger. We're hoping for more app support in 2014.



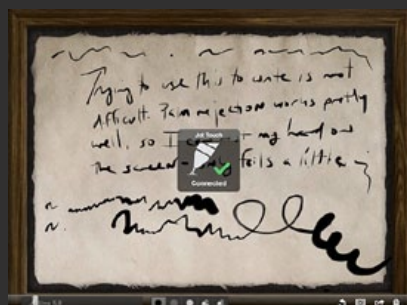
Bluetooth styluses really began to take off in early 2013; more new options are coming soon.

1



Adonit **Jot Touch 4**

Even though Adonit is on the cusp of releasing an even finer-point Bluetooth stylus called Jot Script, its current-generation model is mighty impressive. As the only digital stylus in this bunch with a rechargeable battery and included charging dock - features Jot Script will leave out - it runs for a month on a single charge. With a 2,048-level pressure sensor in its disc-shaped tip, it tells apps how much digital ink or paint to spill at a given moment, and uses two buttons for undo/redo commands, brush size changes, or other features. Jot Touch 4 also supports palm rejection, keeping the edge of your hand from registering as writing input.



\$90

2



Ten One Design **Pogo Connect + Tip Packs**

A little shorter and thicker than Jot Touch 4, Pogo Connect ships with a 7.3mm magnetic tip attached and one AAA battery included. The battery is designed to last for months between replacements, and the tip can be pulled off to swap with 4.5mm (\$10), 6.0mm (\$10), or two paintbrush-style alternatives (\$25 as a set). Like Jot Touch 4, it features palm rejection and a pressure sensor, here with hundreds of levels of sensitivity - the number of levels here is a meaningless difference. On the other hand, it has only one button built in, and comes in one color. That said, many apps support Pogo Connect.



\$80+

3



Wacom **Intuos Creative Stylus**

Although it's the most expensive of the bunch and has one serious oddity - the use of a not particularly common AAAA battery that lasts for 150 hours before replacement is necessary - Intuos is the fanciest of these styluses. Offered in all black or black with blue, it looks and feels like a premium writing tool with a 6mm tip, two buttons, and tilt recognition as its major features; it also ships with a nice carrying case and two extra tips. Just like the others, it features palm rejection - especially good here - and 2,048 levels of pressure sensitivity. App support is limited but seemingly growing.



\$100



THE BEST **CAMERA ADD-ONS**

TRANSFER PHOTOS AND TAKE BETTER PICTURES OR VIDEOS

The cameras inside Apple's devices continue to improve for general-purpose photography, but accessories can radically expand the devices' capabilities. Add-on lenses - once a laughingstock add-on category due to cheap plastic or glass attachments - have actually become worthwhile thanks to increased use of higher-grade glass and developer interest in optical quality. While Apple's continued evolution of its own cameras has complicated matters for accessory makers - the iPhone 5s's lens is just a little larger and wider-angle than the iPhone 5 and 5c's, adding black vignetting to the corners of add-on lens-assisted images - there's no question that photos taken with or without accessories look way better on iOS devices today than before.

Pro photographers, however, still covet the superior image quality offered by cameras with larger sensors and lenses. Apple caters to them with the Lightning to SD Card Camera Reader and Lightning to USB Camera Adapter, now sold separately for \$29 each as means to import photos from standalone cameras to iPads. Third-party developers have come up with wireless iPad and iPhone-compatible alternatives, including excellent Eye-Fi SD cards and wireless SD card readers such as the ones on the next page. Pictures can now be snapped on your choice of cameras and shared over the Internet in seconds. Video accessories, such as action sport-ruggedized fisheye lenses, are also gaining in popularity. Here's what's best.



See our 2013 iPad + iPad mini Buyers' Guide for more on Apple Lightning camera adapters.

1



Kingston MobileLite Wireless

Compact, battery-powered and versatile, this 802.11g/n device has an SD card reader and USB port, enabling you to add vast amounts of wireless storage to your iOS device - or wirelessly transfer photos from your favorite camera's SD cards. To add storage, just supply an inexpensive SD card, micro-SD card, or USB flash drive, placing music, photos, and videos on it to stream. A micro-SD adapter is packed in.

\$70

2



Macally WIFISD

Steps beyond MobileLite Wireless in features and pricing, WIFISD's integrated USB port can share the contents of both flash drives and hard drives over 802.11b/g/n Wi-Fi, a non-trivial feat. It also includes an SD card reader capable of streaming content in the same manner. If you need something even more capacious, a same-priced version called WIFHDD loses the SD and USB support in favor of housing a 2.5" hard drive you can self-supply.

\$80

3



Olloclip Telephoto Lens + Circ. Polarizer

Though it's better suited to the iPhone 5 or iPod touch 5G than the iPhone 5s, and doesn't fit the iPhone 5c, this beautiful and substantial 2X lens is bundled with a circular polarizing filter - two tools that can seriously improve the zoom capabilities and image quality of supported cameras. The mount requires either a bare device or Olloclip's Quick-Flip Case, but the results are seriously impressive.

\$100

Runner Up

Hitcase Hitcase Pro

Designed to transform an iPhone 5 into a GoPro-style action camera, Hitcase Pro is a protective hard case with a 170-degree fisheye lens attached to the back, plus simple mounting tools. Car and chest mounts are \$50 each.



\$130+

Runner Up

Olloclip Quick-Flip Case/Pro Adapter

Designed specifically for the company's add-on iPhone lenses, this case provides a pop-open left corner protector that lets you quickly mount any lens, plus a detachable bracket to attach a self-supplied tripod and/or standalone flash.



\$50



THE BEST **ADD-ONS** FOR KIDS

TOYS, CREATIVE TOOLS, HEADPHONES, AND MORE

Not too long ago, the idea of a cool iPhone toy for kids was a stuffed animal with a clear iPhone-sized window in front - a marginal concept at best, too often made ridiculous with offensively high pricing. Boy, has that changed: thanks to much-improved apps, iOS devices have become controllers for next-generation RC vehicles, including everything from gyrocopters to cars, tanks, and even spheres. Between the toys themselves and the integrated features of iPads, iPhones, and iPods, kids can get access to vehicle-mounted cameras, or watch through an iOS device's screen as the toys are replaced with augmented reality avatars. Developers aren't just using iPads to let kids steer model cars; they're offering legitimately new ways to play.

In addition to toys, there are other accessories designed as much for children as for their parents' peace of mind. Headphones specifically built for young children combine fun designs with volume-limiting hardware, following audiologist guidelines that prevent kids from damaging their hearing. Numerous baby monitoring cameras have been introduced over the past couple of years with a variety of different features, leveraging iOS devices to let parents see what's going on in their kids' rooms, and in some cases even speak with their kids from afar. Some are purely accessible from the home, while others offer security camera-like access over cellular networks - a nice feature when one parent's traveling and needs to check in.



We're expecting a major iOS toy debut in early 2014 - one that will redefine app-ready vehicles.

1



Orbotix **Sphero 2.0**

This considerably improved version 2.0 of the motorized “rolls anywhere” ball is 2x as fast and glows 3x as bright, running for an hour per charge on its dock. It's bundled now with two ramps, or if purchased from Brookstone, four ramps, a case, and a nubby sleeve. The star feature is app support: two dozen mostly free apps range from fun steering games to golf and augmented reality. It's a lot of fun.



\$130

2



iSuper **Battle Tank**

Even better looking in person than in photos, this mechanized tank offers a twist on classic radio-controlled vehicles. Armed with a rechargeable battery, Battle Tank can be steered with dual joysticks or tilt controls - no huge surprise - but can also fire Infrared light bursts from its swiveling turret, enabling multiple tanks to shoot at each other; getting “hit” four times forces a tank into a spin-out, losing the game. A wall adapter is included for the battery.

\$79

3



Philips **InSight HD Baby Monitor**

The sophisticated InSight HD combines 1280x720 video and Infrared night lighting with the ability to communicate back and forth with the child you're seeing - a microphone and speaker can be turned on and off if needed. Philips also includes a thermometer, hygrometer, ambient noise and motion sensors to let you know quickly if something's happening. You can view video over Wi-Fi or cellular.

\$170

Runner Up

Griffin **Kazoo MyPhones**

Budget-priced and super cute, these over-ear headphones for kids come in frog or penguin versions similar to cases Griffin has released for iPods and iPhones. They can sound at 85 decibels - the point at which ears can be damaged.



\$20

Runner Up

Griffin **Crayola Digitools Packs**

Sold in bundles with up to 7 tools (\$60), the Digitools packs let kids use rubber-tipped toys akin to styluses - but with multiple tips exploiting iPad multi-touch sensors to create art. Some sets even have 3-D glasses for special effects.



\$20+



THE BEST OF THE REST

WEARABLES, WIRELESS STORAGE, AND HOME AUTOMATION

At the end of each year's accessory guide, we always include a catchall category to feature good and great items that don't fit neatly into other sections - or are the best products in categories that didn't merit extra coverage. The items here are actually important in that they represent nascent but growing categories that we think will become more relevant in the future. Fitbit Force is just one of many new wearable health accessories - a category established by Nike fitness trackers, and likely to be challenged by Apple's iWatch. They track your motion and typically promise to help you improve your sleep or exercises. In a similar vein, iHealth Lab has offered a large collection of wireless health monitors, scales, and fitness devices.

In a completely separate category, Seagate's Wireless Plus is the best of a new breed of wireless hard drives, capable of storing a terabyte of media that you want to carry around without filling your iOS device. Thanks to Wi-Fi and a rechargeable battery, it can be used anywhere - except on most airplanes.

iOS home automation will grow markedly in the next year. Logitech's Harmony Smart Control affordably expands your device's ability to control home entertainment systems, including HDTVs, A/V receivers, and speakers. Philips' Hue is a Wi-Fi-controlled lightbulb system that lets you control the brightness, color temperature, and even the raw colors of multiple lightbulbs at once.



We expect wireless storage, fitness, and health accessories to make big jumps in 2014.

1



Seagate **Wireless Plus**

Impressively multifunctional, Wireless Plus combines a 1TB hard disk with a 10-hour rechargeable battery, 802.11b/g/n Wi-Fi, and a USB 3.0 adapter. Using the included parts, you can load it quickly with tons of videos, music, and photos from your computer, then wirelessly stream media to up to three iOS devices at once. It can join your existing network or create its own, and even use its app to stream content to AirPlay speakers or the Apple TV.

\$200

2



Fitbit **Force**

New fitness trackers are appearing at a rate of one per month, and although none has the ideal mix of features and design, Force comes close. Built into a nice-looking and comfortable wristband, it tracks steps, calories burned, distance travelled and sleep/active time using an OLED display; it also tells time. Data is synced to your iOS device over low-energy Bluetooth 4.0, which enables it to run for around 11 days per USB recharge of its battery.

\$130

3



iHealth Lab **Wireless Blood Pressure Wrist**

We've liked several of iHealth Lab's health-monitoring accessories, and Wireless Blood Pressure Wrist Monitor is amongst its best: on a single battery charge, it can make up to 80 measurements, using an integrated pneumatic pump to inflate itself on your wrist and provide systolic, diastolic, and pulse readings, plus optional brief text-based explanations. All of your data is stored in a free app for easy reference.

\$80

Runner Up

Logitech **Harmony Smart Control**

iOS-reliant universal remote controls have had mixed results, which is why this option works. It includes a Harmony remote, plus a hub and app to convert iOS Wi-Fi commands to Infrared, controlling your A/V setup.



\$130

Runner Up

Philips **Hue**

Expensive but cool, this Wi-Fi/app-controlled LED system transforms any three regular light sockets into sources of color-adjustable, 600-Lumens light. All three can be controlled at once or separately, letting you set any mood. Extra bulbs are \$60 each.



\$200

Best of the Year Awards



Judged from November 1, 2012 through November 1, 2013 - a small tweak this year - our Best of the Year Awards recognize the products and developers that most improved the way users enjoy their iPads, iPhones, and iPods. In addition to iLounge's editorial selections, based on testing of hundreds of new products, our Readers' Choice Awards tallied thousands of reader votes for the year's top third-party accessory, application, and game developers, as well as the best Apple device. Congratulations to all of the winners and runners up!

iPad Case of the Year



Tie: ZeroChroma Vario-SC and SwitchEasy Canvas

Regardless of whether you prefer an open-faced case or a folio, this year's two best cases have you covered. The nearly perfect Vario-SC (\$50) offers full-time screen access and your choice of multiple video or typing angles with an amazingly compact stand, while Canvas (\$40) provides comprehensive protection with great style and a front flap.

Runners Up: Belkin Ultimate Keyboard Case (\$100) and Speck CandyShell mini (\$45).

iPhone Case of the Year

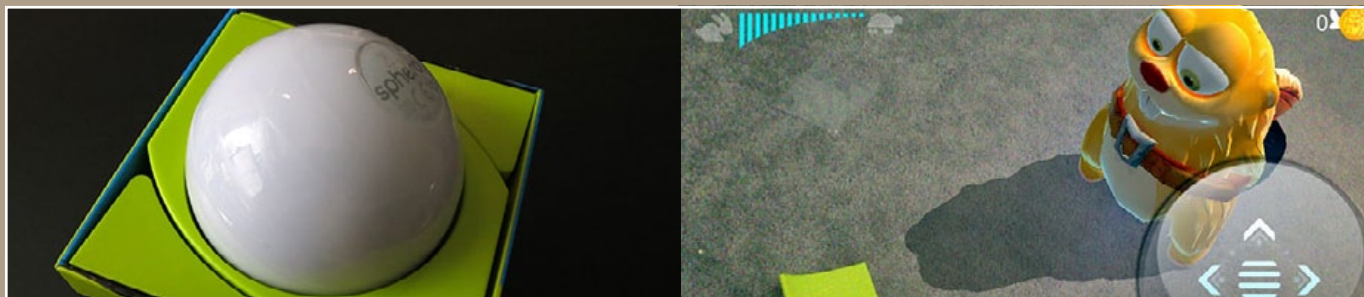


SwitchEasy Numbers

Although we're hesitant to issue Best of the Year Awards to budget cases, Numbers is a nearly unimpeachable option: available for the iPhone 5c (\$13) and 5/5s (\$15), it combines the great looks and resilience of matte-finished TPU plastic with full iPhone body protection. The screen is covered by included film, the ports by flip-open covers, and the buttons by integrated protectors. Each version is available in multiple colors, with extra options for the 5c.

Runners Up: BuQu Tech Magnetyze (\$60) and ZeroChroma VarioClear (\$45).

Innovation of the Year



Orbotix Sphero 2.0

Even though Sphero 2.0 (\$130) looked identical to its predecessor, Orbotix's little mechanized ball became a seriously viable iOS toy thanks to an amazing collection of fun new apps and under-the-hood tweaks. Runners Up: Seagate Wireless Plus (\$200) + Withings Pulse (\$100).

iPod Case of the Year



Incipio Frequency

Sold in versions for the iPod nano (\$16) and iPod touch (\$25), Frequency is an appealing iPod case in an ever-shrinking sea of forgettable alternatives. Simple but attractive and properly tailored to each device, it uses two-toned TPU plastic with a distinctive rear design, providing either a triangular top loop for the iPod nano or a hole for the loop button on the iPod touch. For the low prices, it's hard to go wrong with either version.

Runners Up: Griffin Survivor (\$40) and SwitchEasy Colors (\$15).

Keyboard of the Year



Logitech Easy-Switch Keyboard

Finding a keyboard that definitively beats Apple's well-established Wireless Keyboard isn't easy, but the Bluetooth Easy-Switch Keyboard (\$100) is better on almost all counts: thinner, rechargeable, and compatible with up to three devices at once, it's an ideal pick for users who want to use one keyboard for a computer, an iPad or iPhone, and/or an Apple TV. Great backlit keys and a small profile have made it essential in our offices.

Runners Up: Belkin Ultimate Keyboard Case (\$100) and New Trent Airbender Mini (\$40).

Headphone of the Year



Logitech UE 900

Rarely do \$400 earphones merit Best of the Year Awards, but UE 900's performance is worth the price. Sonically clear, dynamic, and powerful thanks to four speakers per ear, it's a step forward. Runners Up: Plantronics BackBeat GO 2 (\$80) and Audio-Technica ATH-ANC33is (\$80).

Speaker of the Year



G-Project G-Boom

Unlike speakers that are optimized for close-distance listening, boomboxes need to be heard over outdoor ambient noise - power that often comes at the expense of sonic quality. Thanks to four properly-tuned drivers, the Bluetooth wireless G-Boom (\$100) sounds great at low and high volumes alike, while featuring a tank-like, carryable chassis. G-Project delivers better sound here than in some speakers sold for twice the price.

Runners Up: id America TouchTone (\$80) and Soundfreaq Sound Platform 2 (\$150).

Car Accessory of the Year

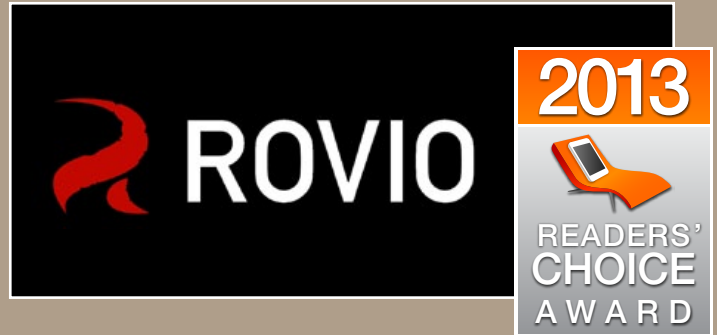


SuperTooth HD Voice

The iOS car accessory market has stagnated as auto makers have integrated everything from Bluetooth streaming to cables and USB chargers into vehicles, but SuperTooth HD is here for owners of older cars - a great-sounding visor-mounted speakerphone that can double as a wireless music streamer when needed. So fully voice-controlled that button presses are nearly unnecessary, it's the handiest tool we've seen for cars this year.

Runners Up: Incipio Dual 3.4A Lightning Charger (\$35) and Just Mobile Highway Max (\$25).

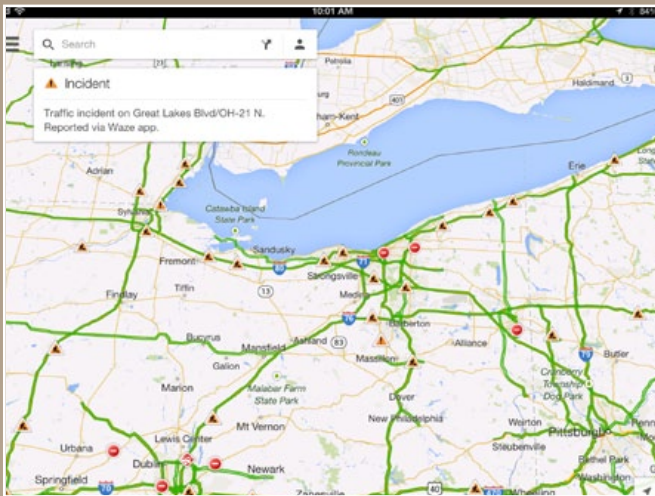
Game Developer of the Year - Editors' + Readers' Choice



Gameloft and Rovio

Our editors picked Gameloft, which debuted the amazing Asphalt 8 and many other titles in 2013. Readers gave Angry Birds developer Rovio top marks, most certainly because it always updates its apps with new free content - a great idea. Runners Up: EA + Epic Games.

iOS App of the Year



Google Google Maps

All but necessary after the disastrous debut of Apple Maps, Google Maps (Free) restored the car, subway, and walking directions iOS users had come to depend upon on iPhones, adding realtime driving guidance and an improved design. Then Maps debuted an iPad interface, and added realtime traffic advisories from Waze - a company Google outbid Apple to acquire. It's still better than Apple Maps, and improves more frequently.

Runners Up: Evernote Corp. Evernote (Free) and Silvio Rizzi's Reeder 2 (\$5).

iOS Game of the Year



Gameloft Asphalt 8: Airborne

Spectacular on any iOS device but particularly impressive on A6 or A7 processors, this free jump- and crash-heavy driving game shares DNA with some of the best console and arcade racers ever released - yet has the real-world cars and international venues we've come to expect from the Asphalt series. Every element from cinematics to races to music shows the swagger of a confident developer, and the tracks beg to be replayed repeatedly.

Runners Up: Electronic Arts Plants vs. Zombies 2 (Free) and Epic Games Infinity Blade III (\$7).

App Developer of the Year - Editors' + Readers' Choice


2013

**READERS'
CHOICE
AWARD**

Google

Although Apple had a big October with updates to many old apps, we and our readers agreed that last year's winner Google had a great 12 months: the reliable new Maps, enhanced YouTube, free phone calling in Hangouts, and many others. Runners Up: Facebook + Nosy Crow.

Kids' App of the Year



Originator Endless Alphabet

First released by Callaway Digital Arts, Endless Alphabet (\$5) has been a fountain of joy all year long: one app charmingly teaches vocabulary words and letters, using funny cartoony animations to show little monsters disassembling words and cheering a child's reassembly. As the name hints, Originator adds new words all the time through automated free downloads. It's a fantastic app.

Runners Up: Nosy Crow Little Red Riding Hood (\$6) and Touch Press The Orchestra (\$14).

Top Apple Product of 2013



Apple iPhone 5s

Although voting was close for both our editors and readers, the iPhone 5s ultimately prevailed over the iPad Air in both camps. While both devices refined older Apple products, we felt that the iPhone 5s's Touch ID and A7 chip were bigger jumps in features, alongside the improved camera, while the iPad Air was a great product with size as its most obvious differentiator from earlier full-sized iPads. Notably, iOS 7 never stood a chance of winning, and the iPhone 5c was the clear loser, racking up a staggeringly low 2% of the vote. The Retina iPad mini missed our cutoff date.

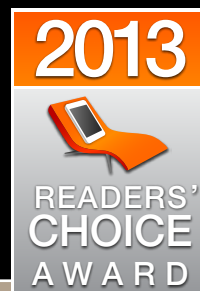
Accessory Developer of the Year - Editors' Choice



Logitech

Excellence across multiple categories - keyboards, earphones, and speakers - helped Logitech to nab our rare Accessory Developer of the Year Award. Even the company's Harmony universal remote controls are improving; it's truly firing on all cylinders. Runners Up: G-Project and Incipio.

Accessory Developer of the Year - Readers' Choice



Belkin

As one of the earliest and most loyal Apple accessory makers, Belkin scored a decisive win with readers this year on the strength of its iPad keyboard cases, increasingly numerous WeMo home automation options, and clean iPhone 5/5s accessories. Runners Up: Logitech and uNu.

Accessory of the Year



Logitech Bluetooth Easy-Switch Keyboard

Was a \$100 keyboard seriously the best accessory of 2013? Yes: Logitech didn't cut corners on designing the best possible typing solution for users of multiple devices, releasing something all of our editors agreed is great. Runners Up: G-Project G-Boom (\$100) + Logitech UE 900 (\$400).

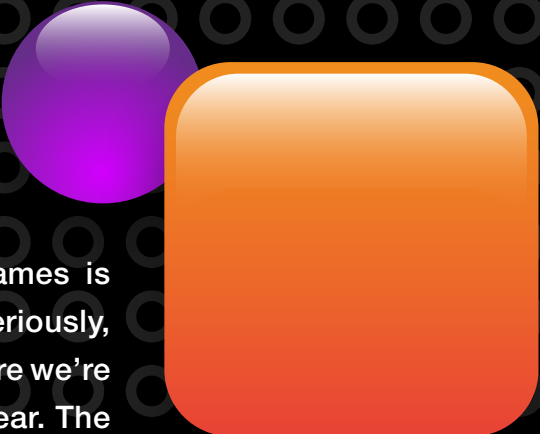
Top

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**iOS
Apps +**

Games





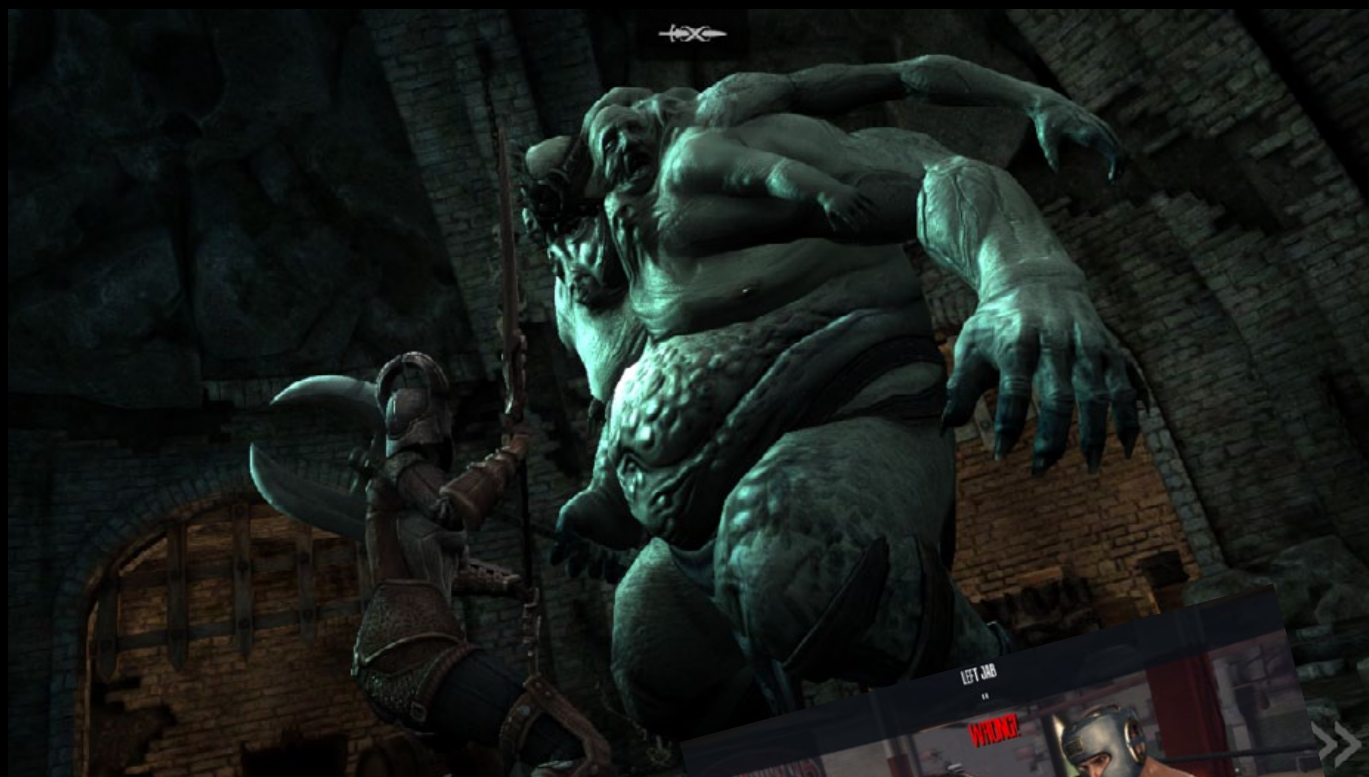


Building each year's list of the best iOS apps and games is never easy, but it's a process our editors always take seriously, combing our devices, minds, and past articles to make sure we're including all of the top titles we've used over the past year. The key criterion for inclusion is that an app was not only impressive, but so worthwhile that it remained on our devices rather than being tossed away after only a brief period of use. Games, which are often only designed to be several-day experiences, need to be far superior to the mass of titles released each year - fun, but also compelling enough to keep picking up over time. That's easier now than ever before, as Apple continues to beef up the processing power of iOS devices, and top games now pack the graphics, audio, and gameplay of their console equivalents.

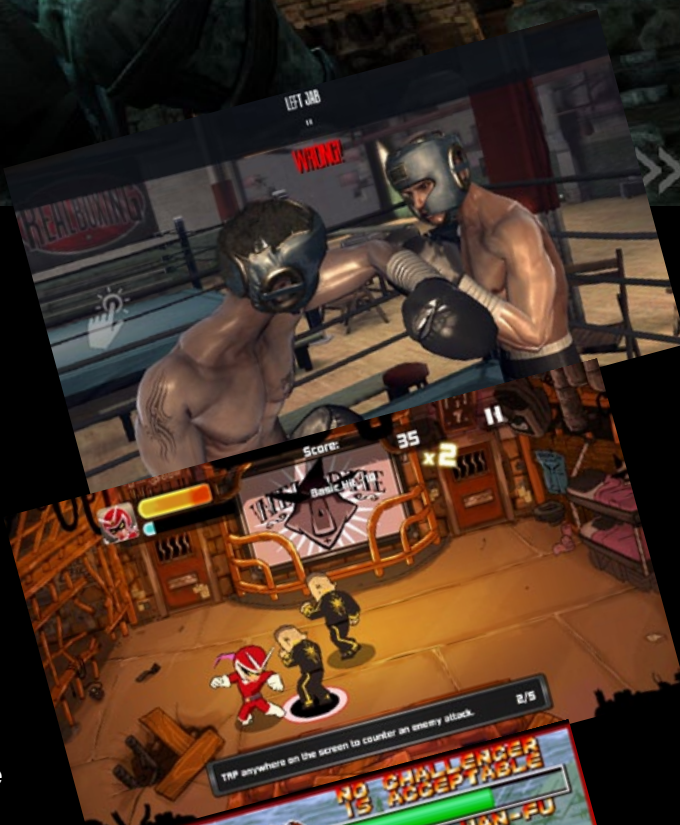


As has been the case in prior years, our Top 100 iOS Apps + Games of 2013 is primarily composed of brand-new releases - titles that were first shipped over the past twelve months - but there are a handful of recently-updated apps that we consider essential, as well. Almost all of the apps are "universal," running on iPads as well as iPhones and iPods, though the release of iOS 7 has introduced some bugs that developers are working to address. We've divided the Top 100 into sections, this year with a roughly 50/15/35 split between apps, childrens' apps, and games. All of the titles here are guaranteed to be excellent examples of their respective genres, and titles we have sincerely enjoyed using.

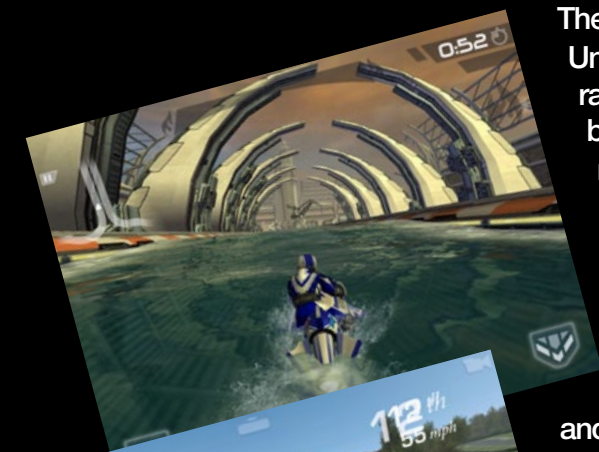


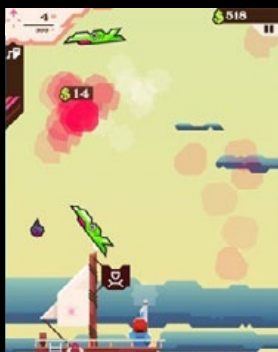


Fighting games stepped forward in graphics from last year, but didn't make equivalent gains in either gameplay or variety. Epic Games' **Infinity Blade III** (\$7, above) ranges from occasionally stunning to familiar in looks, depending on who and where you're battling. Many new enemies and worlds have been added for you to explore, though they're a lot like the ones in prior games with small wrinkles tossed in to diversify the otherwise IBII-like fights and exploration. **Real Boxing** (\$4, upper right) is Vivid Games' highly competent boxing simulator, featuring intuitive controls, detailed character models, and impressive backdrops; the boxers benefit from enhanced shading on the latest iOS devices. In the more traditional brawler category, The Game Bakers' **Combo Crew** (\$2, middle right) lets you take on groups of foes in Double Dragon-like stages, using swipe, tap and hold commands for a new form of control. Capcom's semi-famous cartoony fighting hero Viewtiful Joe is offered as a \$2 unlockable character. And although there were far few noteworthy ports of classic or recent arcade fighting games this year, SNK Playmore's **Samurai Shodown II** (\$4, lower right) delivered a playable and aesthetically complete rendition of the historic Neo-Geo title, enabling you to fight your way through a series of low-res but nicely animated and sonically cool one-on-one battles. Great character designs make it worth seeing.



The last year was the best ever for iOS driving games. Vector Unit's **Riptide GP2** (\$3, top left) is an extraordinary jetski racer, complete with realistic water effects, amazing futuristic backdrops, and silky-smooth frame rates on reasonably recent devices. **Real Racing 3** (Free, second on left) is Electronic Arts' latest and most detailed driving game, frequently updated with new real-world cars such as Porsches and Ferraris, though impeded by annoying pay-to-play gimmicks. Initially buggy, 2K Games' **2K Drive** (\$7, third on left) has seen post-game patches that allow players to enjoy the realistic Project Gotham-style tracks and numerous types of vehicles, including F-1 racecars. But the best of the bunch is Gameloft's **Asphalt 8: Airborne** (Free, bottom), a super-fast, highly polished racer with phenomenal special effects, multiple paths through international courses, real cars and cool music. Rebellion Games' **Joust Legend** (\$2, center right) lets players ride horses in medieval jousting competitions, complete with fantastic 3-D visuals.





Due in part to Electronic Arts' recent decision to destroy its Madden football franchise with freemium "features," it wasn't a fantastic year for iOS sports games. 2K Games' **NBA 2K14** (\$8, above) was a highlight, improving on last year's version with a unique story mode and soundtrack curated by LeBron James. Small developer Speedbump debuted **Kingpin Lanes** (\$2, center left), a bowling game played within

a fully 3-D replicated alley, using nice controls. Vlambeer debuted **Ridiculous Fishing - A Tale of Redemption** (\$3, center right), a heavily stylized 2-D fishing game with fun animation and increasing challenges as you go. Finally, EA partially redeemed itself with the soccer game **FIFA 14** (below), shipped as a limited demo with a \$5 full game unlock. The 3-D stadiums, players, teams and audio are great; you can now pick from joypad or swipe/tap controls.



Like racing games, iOS shooters had a superb last twelve months. On the low-tech side, Punchbox Studios reworked Konami's classic side-scrolling arcade game *Contra* to become **Contra: Evolution** (\$3, top left), with improved aesthetics and touchscreen-friendly controls. Three separate first-person shooter franchises saw major releases this year, including Gameloft's play-as-soldier/play-as-terrorist-themed **Modern Combat 4: Zero Hour** (\$7, second from top left), Square Enix's amber-tinted cyberpunk **Deus Ex: The Fall** (\$7, third from top left), and Activision's **Call of Duty: Strike Team** (\$7, bottom), which alternates between hands-on shooting and strategic overhead sequences. And Psyonix had a last-minute hit with **ARC Squadron: Redux** (Free), a *Star Fox*-like space shooter with great audio, impressive 3-D art, and 60 missions across 20 environments.



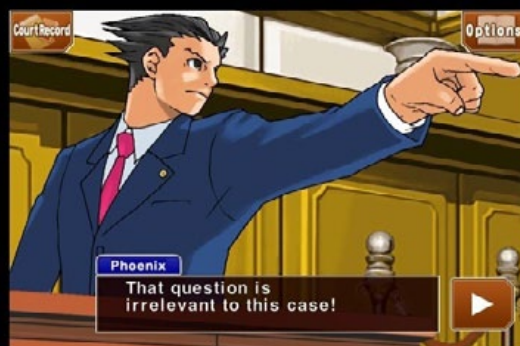


Thanks to several major releases and a handful of noteworthy new additions, 2013 was a good year for puzzle and strategy games. Electronic Arts debuted its long-awaited **Plants vs. Zombies 2** (top left) as a freemium game, notably without an obligation to pay anything - but with later levels missing, and incentives to buy power-ups. Highly similar to the original, it's funnier and includes great new plants and zombies. Firebrand Games debuted the cerebral, sonically relaxing **Solar Flux HD** (\$4, top right) as a collection of space-themed propulsion puzzles, while 2K Games released the PC-quality strategy game **XCOM: Enemy Unknown** (\$20, center) as a fully 3-D, turn-based collection of alien swarm-busting levels.

Angry Birds Star Wars II (\$1, second to bottom) is Rovio's latest slingshot physics puzzler, featuring Imperial/Sith pigs and rebel birds - funny renditions - while Playdead's **Limbo** (\$5, lower right) is a moody, black silhouette on gray backdrop title that uses side-scrolling action as the framework for puzzles.



Role-playing games took such substantial additional steps forward over the last year that Square Enix is actively discussing bringing the famous PlayStation title *Final Fantasy VII* to iOS. Until then, it's offering **Bloodmasque** (\$7, top), a vampire-themed action RPG that lets you use photos to customize the face of your character, and play through the story with other users online - regrettably, a persistent Internet connection is needed. There's also **Final Fantasy V** (\$16, second from top), an enhanced remake of the classic Super Famicom turn-based RPG, now featuring even better graphics, a new dungeon, and a new boss. A faithful port of BioWare's classic **Star Wars: Knights of the Old Republic** (\$10, center) was released by Aspyr Media, bringing the pre-movie Expanded Universe storyline, characters, and lightsaber fights to iPads - not iPhones or iPod touches. Many years after its acquisition of historic computer RPG developer Origin, Electronic Arts released the freemium title **Ultima Forever: Quest for the Avatar** (second from bottom), a questing adventure title that lets you explore towns, dungeons, and a countryside while earning virtue points - a riff on beloved 8-bit and 16-bit RPG classics tainted somewhat by EA's sale of "keys" to unlock portions of the game. Finally, Capcom's **Ace Attorney: Phoenix Wright Trilogy HD** (Free, bottom) aggregates three separate Nintendo DS lawyer-themed role-playing games into one download, though you have to pay \$17 to unlock all of the titles. Benefitting from higher-resolution art, the games are better than the decade-old originals.



Style and depth set 2013's top action games apart from their predecessors. Frogmind's **Badland** (\$4, top) is a one-touch action game featuring a jumping, flying creature who makes his way through a dark forest filled with traps. Gameloft's **Gangstar Vegas** (\$7, center) is the latest in its Grand Theft Auto-alike sandbox action and driving series, this time with a pretty amazing replica of Las Vegas, plenty of music, and the series' trademark odd storyline and acting. It'll do until GTA IV makes its way to iOS devices.



Although we liked Sega's re-release of **Sonic the Hedgehog** for iOS - improved 60FPS graphics and better controls are highlights - the title that made our top 100 list is the new endless runner **Sonic Dash** (Free, left), which looks an awful lot like the Sonic-specific levels from the classic **Sonic Adventure**, minus the ability to turn around and explore. Ring gathering, jumps, dashes, and bopping enemies are entirely for high scoring, and plenty of fun. Warner Bros.' **LEGO**

Batman: DC Super Heroes (\$5, bottom right) includes 80 characters in a light-hearted 3-D exploration, brawling, and puzzle game with tons of levels and novel weapons.





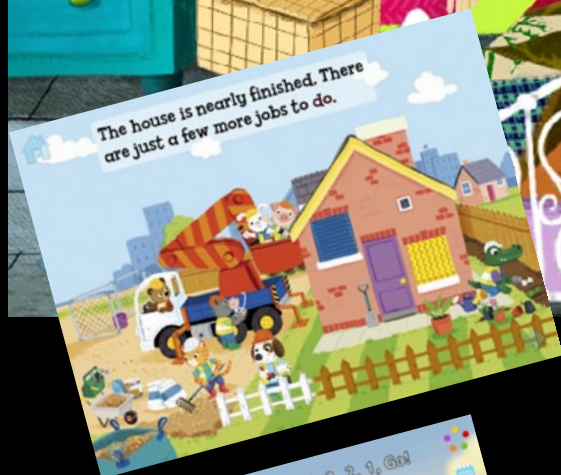
Music and pinball games had another solid year in 2013, including some neat innovations. Sega debuted **Go Dance** (\$2, above), using an iOS device's front camera to track arm motions, moving an on-screen dancer's body if you match the gesture shown on a moving timeline. Colorful background art comes to life as the music plays; it's best-suited to 9.7" iPad screens. Using psychedelic color-shifting graphics and techno music, Double Fine's **Dropchord** (\$1, upper left) has you move two fingers on the outside of a circle to form a line, then move the line to destroy targets inside the circle. Two major pinball releases leaned heavily on in-app purchases this year: FarSight Studios expanded **Pinball Arcade** (\$1) with the classic Williams table **Terminator 2: Judgment Day** (\$5 in-app purchases, center left), an accurate port.

Zen Studios released the exciting **Marvel Pinball** (\$1, bottom), which includes an Avengers table and sells X-Men, Wolverine, Iron Man, Hulk, the Fantastic Four and other tables for \$2 each.



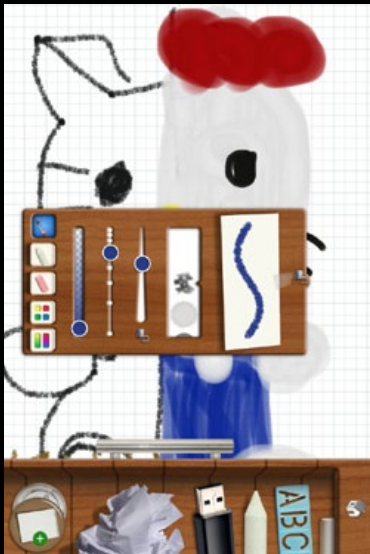
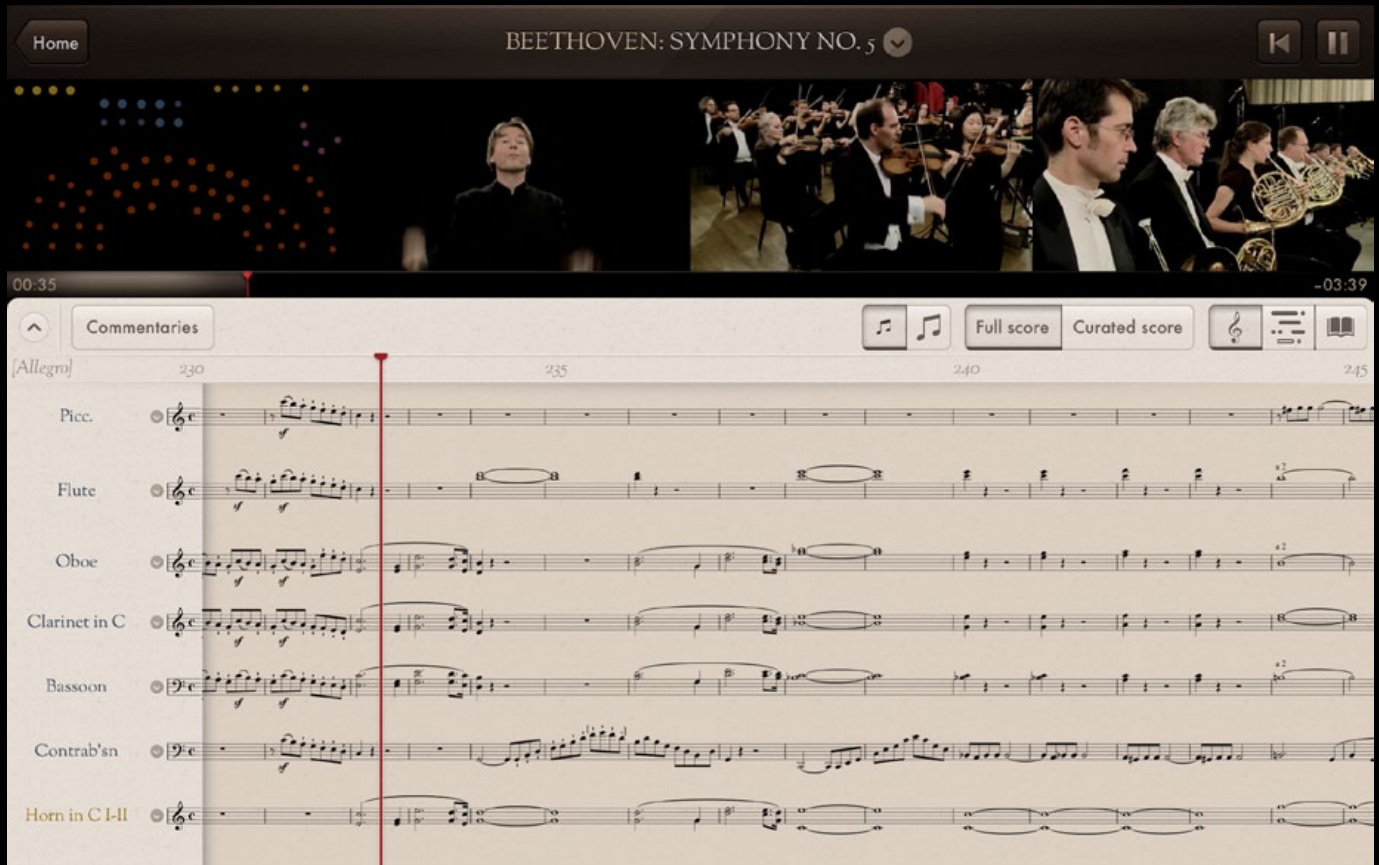
This collection of apps is ideally suited to children aged two to six - right in the zone for learning about letters of the alphabet, basic vocabulary words, and numbers. We've been enthralled all year by Originator's **Endless Alphabet** (\$5, top), which teaches kids letters by scrambling words, speaking each letter as it's placed in sequence, then presenting a beautiful, funny animation for the word. New words and animations are added frequently, encouraging kids to keep learning from the app. Piikea St.'s **Interactive Alphabet** (\$1, center left) jumped to version 3, adding fantastic letter tracing, typing, and customization tools to the already awesome presentation of individual alphabet letters. PlayDate Digital's **Play-Doh Create ABCs** (\$3, center) lets kids make letters and objects from the classic molding material, and Peapod Labs' **ABC Aquarium** (\$3, center right) uses gorgeous photos and YouTube videos of aquatic creatures to teach letters and words. Duck Duck Moose's **Moose Math** (\$2, second from bottom) uses several fun games to teach numbers and counting, and Disney's **Jake's Never Land Shapes and Patterns** (\$5, lower center) teaches shape recognition and drawing, plus patterns.



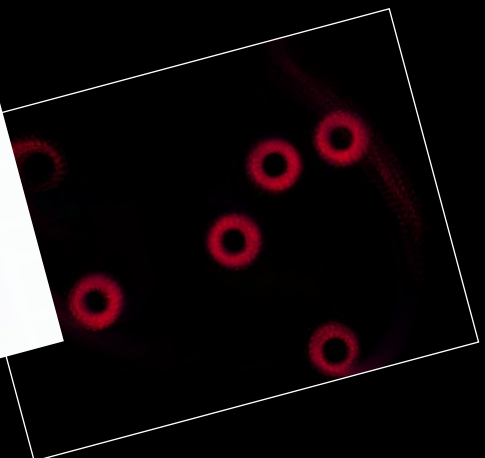
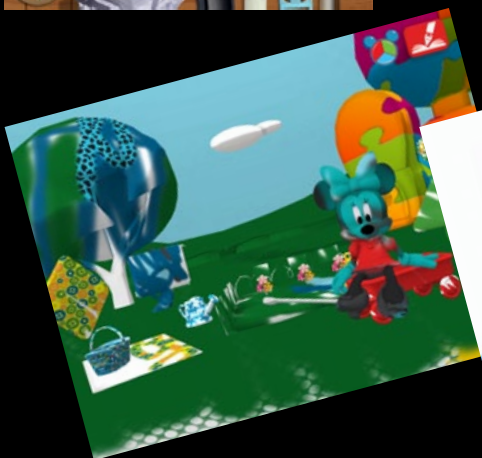


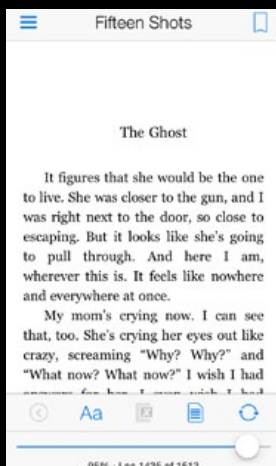
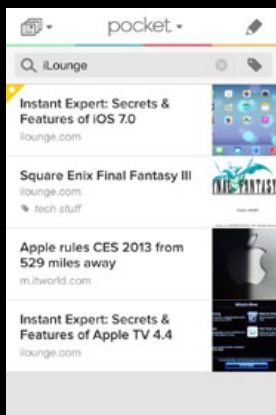
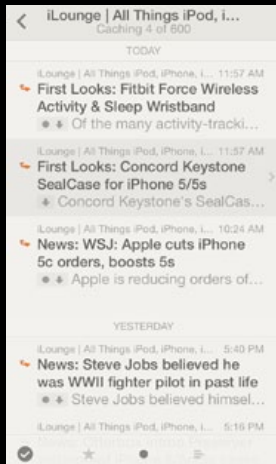
Established developers leveraged earlier apps to tell new and better stories this year. Nosy Crow's **Little Red Riding Hood** (\$6, above) improves upon its prior telling of Cinderella, featuring outstanding art, an extended story, and great voice narration. The company's **Bizzy Bear Builds a House** (\$4, upper left) lets kids participate in the construction of a house with the happy little title character. **Bean Bag Kids Apollo 13** (\$3, middle left) is Mundomono's telling of the famous space exploration story, complete with interactive games during takeoff, orbit, and landing. PBS Kids' **Daniel Tiger's Neighborhood: Play at Home with Daniel** (\$2, lower left) uses Mister Rogers' character to teach kids day and night routines, and StoryToys' **Chug Patrol: Ready to Rescue** (\$5, lower right) uses Chuggington characters in 3-D storybook pages with road rescue activities.





Gigantic but amazing, Touch Press's nearly 2GB **The Orchestra** (\$14, above) lets older children learn about orchestral performances, using taps to select one of several video feeds, isolate individual instruments, and study text or commentaries. Eight classical songs are included, performed by the Philharmonia and conducted by Esa-Pekka Salonen. **Drawing Pad** (\$2, left) by Darren Murtha Design is an oft-updated painting and drawing tool for kids, now with rainbow and fuzzy brushes, text and more. Disney's **Mickey Mouse Clubhouse Paint & Play** (\$4/\$6, lower left) lets kids color 2-D shapes that become 3-D models of Mickey, Minnie, and their house, while Chronicle Books' **Press Here: The App** (\$1/\$2, bottom) is based on Herve Tullet's book, hiding a variety of activities behind colorful dots kids can press. QApps' **Gravitarium2** (\$2, lower right) is a particle generator that responds to multi-finger touches, creating different effects and shapes depending on how many fingers are interacting with the screen at once.





We love using iOS devices for reading, though there are different types of content that best fit tablet- and phone-sized screens. If you want to canvas RSS feeds from multiple web sites, Silvio Rizzi's **Reeder 2** (\$5, top) brings them all into a single app that now works with and synchronizes across all iOS devices. Idea Shower's **Pocket** (Free, second from top) goes a step further, saving whichever web-based articles you prefer for reading at any time - including when you're not online. Fans of library books will love OverDrive's **OverDrive Media Console - Library eBooks and Audiobooks** (Free, third from top), which actually lets users download and "borrow" digital versions of both text-format books and audiobooks. A local library card is required, and 22,000 libraries are already participating. If you prefer to purchase your books, the two most viable options are Amazon's **Kindle** (Free, bottom left) and Apple's **iBooks** (Free, bottom right). Both now have computer, phone-sized, and tablet-sized interfaces, though Kindle is offered on more devices, and iBooks leads the way in adding new features: Apple's books were early to add color images and support for full-color replicas of cookbooks and other heavily graphic publications, as well as textbooks with interactive content.

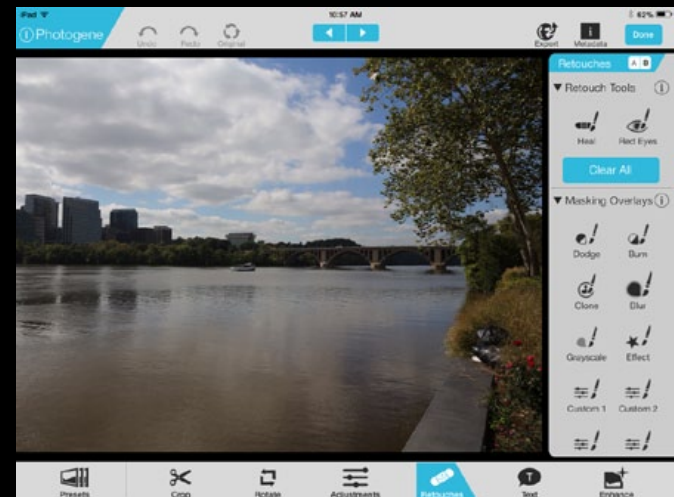
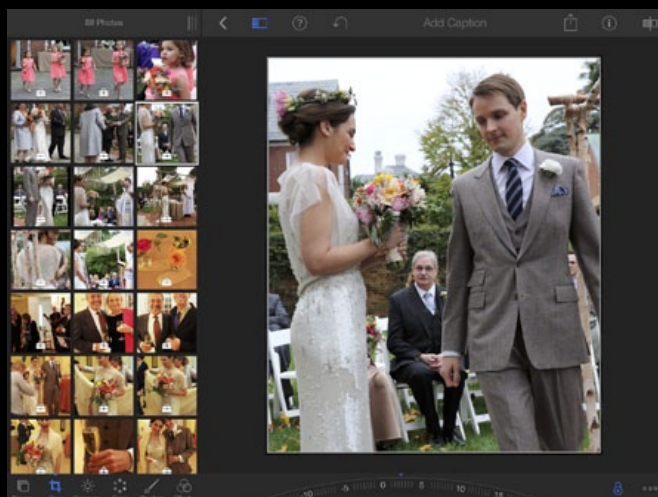
Designed for educational use, Apple's **iTunes U** (Free, right) combines free podcast-like audio and video downloads with class notes, related books, and assignments. Supported by thousands of schools, iTunes U lets students download entire courses worth of materials, while other users can cherry-pick the media they want to learn from. It's very impressive.

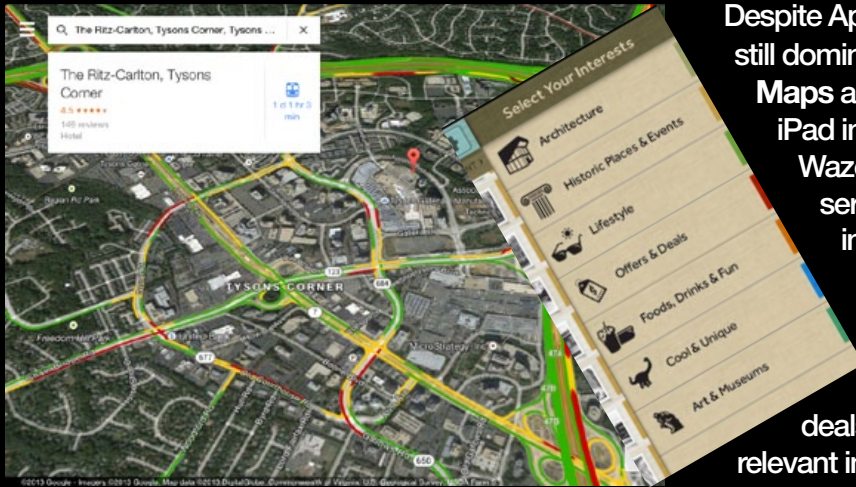




Apple's iOS cameras continue to improve every year, arguably lessening the need for filtering or corrective software, but many apps can transform good photos into great ones - and improve the photography process. Tap Tap Tap's **Camera+** (\$2, above left) is a powerful alternative to Apple's iOS Camera app, making it easier to snap photos with separately locked focus and exposure, up to 6x digital zoom, or specific ISO/shutter information, as well as adding a lightbox for photo processing and multi-image social sharing. **TiltShiftGen2** (\$1, above middle) is Art & Mobile's tool for adding blur and saturation effects beloved by Japanese

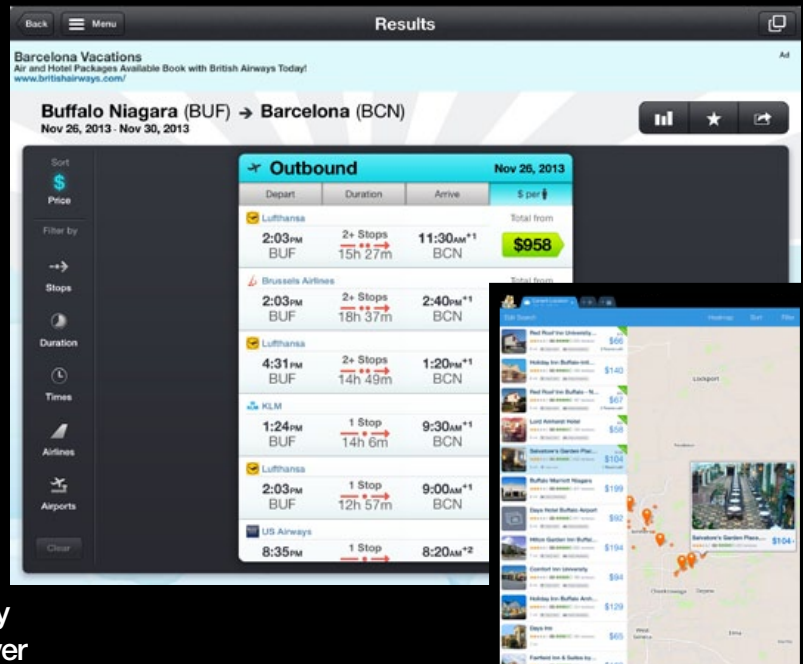
photographers, and Yahoo's **Flickr** (free, above right) is an improved photo sharing and browsing tool for iPhones, now with auto-uploading to a free 1TB online gallery as you snap images. Of course, the iOS photo editing market is dominated by Apple's **iPhoto** (free/\$5, below left), which lets you straighten, recolor, edit, and share images - including ones shot on standalone cameras and synced to your device. If you're looking for Photoshop-like image correction tools without Adobe pricing, Omer Shoor's **Photogene** (\$1, below right) offers a wide collection of retouching, masking, and text tools not found in iPhoto.

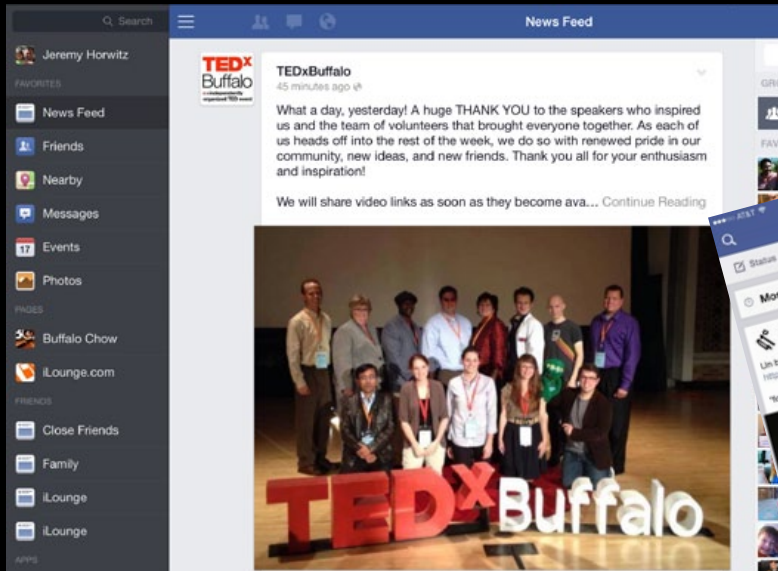




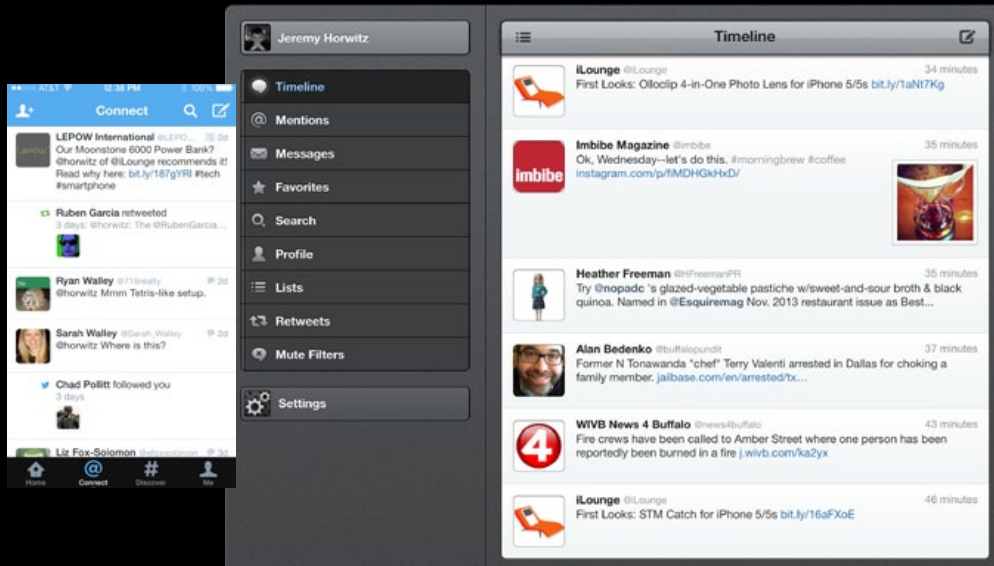
Despite Apple's (best?) efforts last year, Google still dominates mapping on iOS with its **Google Maps** app (Free, far left), now with iPhone and iPad interfaces, as well as integration with **Waze** - a realtime traffic condition reporting service that can alert users to obstacles in realtime. It has leveraged its excellent global map, information, and business database with **Field Trip** (Free, closer left), an app that uses GPS to point out nearby attractions, restaurants, and deals, as well as offering history lessons and relevant information for many destinations.

Other travel apps we rely upon include **Skyscanner's Skyscanner - Flights** (Free/\$2 ad-free, close right), which enables you to quickly canvass the pricing, travel time, and carrier options for point-to-point air travel - including the ability to see alternative pricing for different departure and arrival days. **Hipmunk's Hipmunk Hotels & Flights** (Free, inset right) provides both flight and hotel comparisons within a tabbed interface, using a handy price/time/layover comparison chart for flight options, and a map with a value/price/review-sortable list for hotels. Once you've booked a trip, several other apps can come in handy. **Quest Visual's Word Lens** (Free/\$5 language packs, lower left) magically does foreign language translations of whatever your iOS device's camera is seeing, currently supporting Spanish, French, German, Italian, and Portuguese. **Yahoo's Yahoo Weather** (Free, lower center) offers a fancier version of iOS 7's integrated Weather app for iPhone/iPod touch, capable of being run on iPads. Finally, **Mobiata's TripDeck - Travel Itinerary Manager** (Free, lower right) lets you see flight, rental car, shuttle and hotel itineraries for multiple trips, all just by forwarding emails to Mobiata's server.



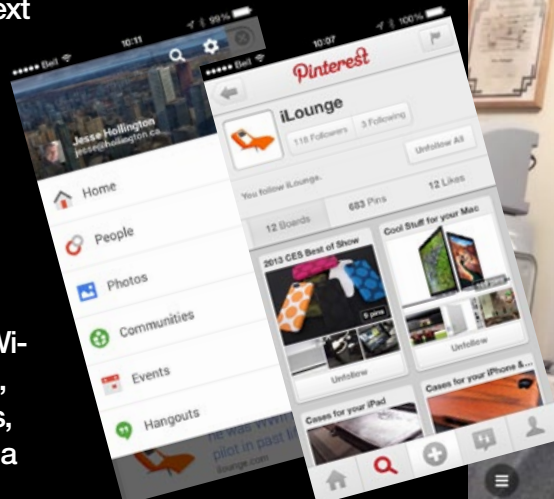


There's no longer any debate that Facebook is the king of social networks, and the official app **Facebook** (free, left) is an ever-improving client for the service, available as a single download with separate iPad and iPhone interfaces. Now capable of sharing text, photos, and videos to your timeline, as well as sending text, photos, and audio recordings as private messages, the app is a lot faster than in prior years, and lacks only Facebook's web-class photo management tools.



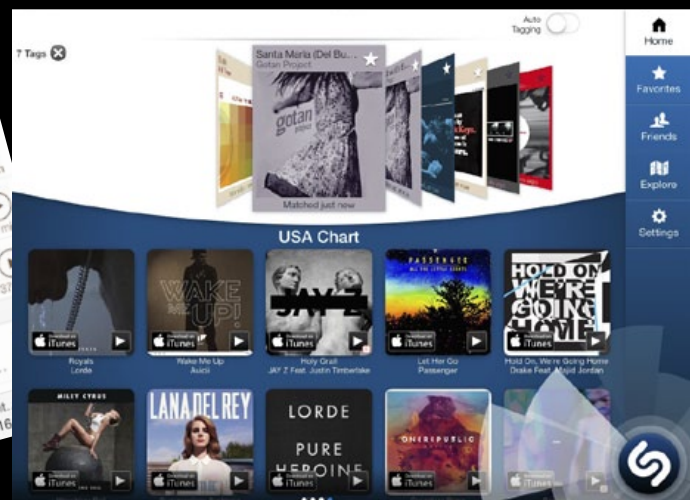
Twitter continues to grow in popularity, too, and its official **Twitter** app (Free, far left) is a very usable iPhone client for posting and reading 140-character messages, including picture and video links. But Tapbots' **Tweetbot for Twitter** (\$3, close left) is superior for iPad users, thanks to a better collection of message sorting tools and other advanced features.

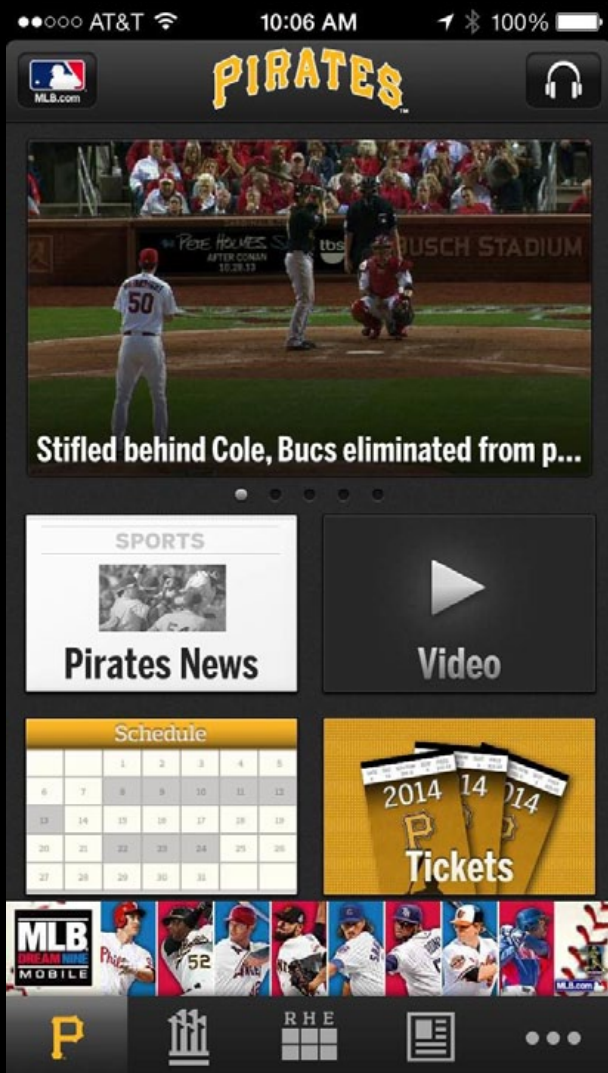
There are other ways to communicate with friends and followers beyond Facebook and Twitter. **Google Plus** (free, below left) is the official and attractively-designed client for Google's social network, supporting up to 10-person video chats in addition to the text and photo sharing found on Facebook. The official app for **Pinterest** (Free, below middle) lets you browse boards of pins - annotated photos - with interfaces optimized for iPhone and iPad screens. Microsoft's **Skype** (Free, far right) lets you made Wi-Fi video and voice calls for free, plus free short video messages, and direct-to-phone calling for a per-minute fee.



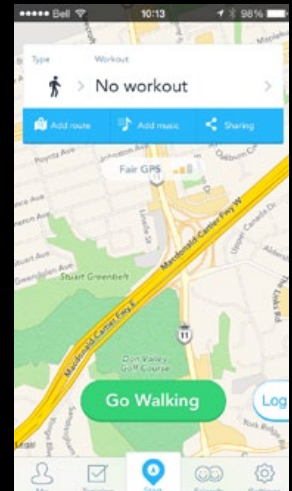


Very few premium-priced apps qualify as must-sees from our perspective, but Algoriddim's **djay 2** (\$2/\$10, above) is one of them - the iOS 7-ready sequel to the acclaimed music mixing and editing app. Still sold in separate iPhone and iPad versions, djay 2 lets you speed up and slow down your device's music, mix two tracks together, and apply special effects in realtime, now with harmonic matching, drumpads, and samples from DJ Qbert and Snoop Dogg. If you buy MP3s from Amazon, you'll love the free **Amazon Cloud Player** (below left), which lets you stream all your music without storing it on your device, or download as desired. ShiftyJelly's **Pocket Casts** (\$4, below middle) provides a beautiful and smart interface for playing, managing, and auto-downloading podcasts - far better than what Apple is offering in its free, all-but-abandoned Podcasts app - and Shazam's **Shazam** (Free, below right) lets you identify virtually any song currently playing nearby, now with a passive background song ID feature that doesn't require you to manually tap each time a new song starts playing.



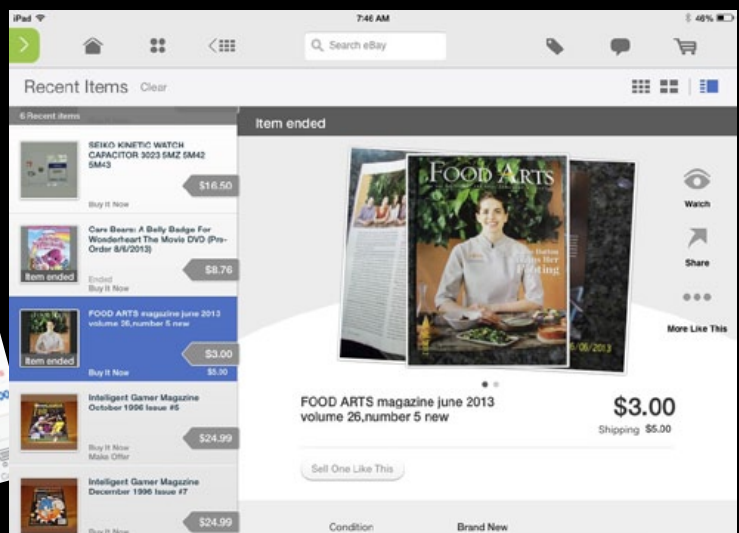
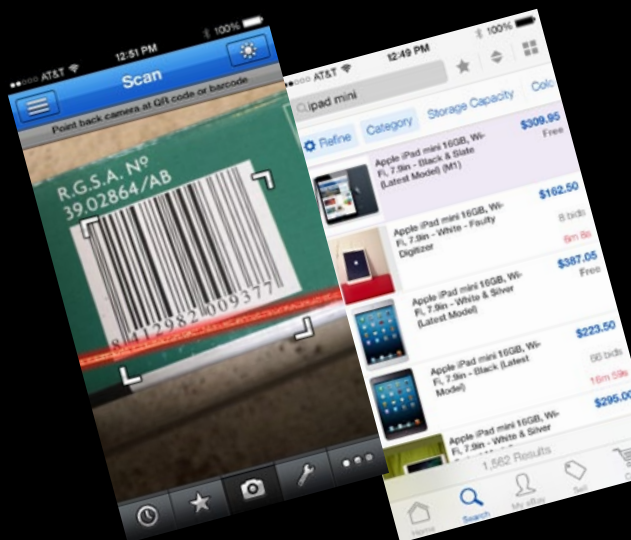


Apps for watching live sports and highlights continue to improve every year, as typified by MLB.com's **MLB At Bat** (Free, left), which provides news, stats, and highlights at no charge, adding live videos as annual subscriptions for a fee. Just need to track scores or news across multiple sports? CBS Interactive's **CBS Sports** (Free, middle right) offers push notifications and a customizable scoreboard for easy reference. Want to burn some calories? FitnessKeeper's often-updated **RunKeeper 4** (Free, right) uses iPhone GPS to track runs without a separate sensor, and can share results with over 70 other apps.

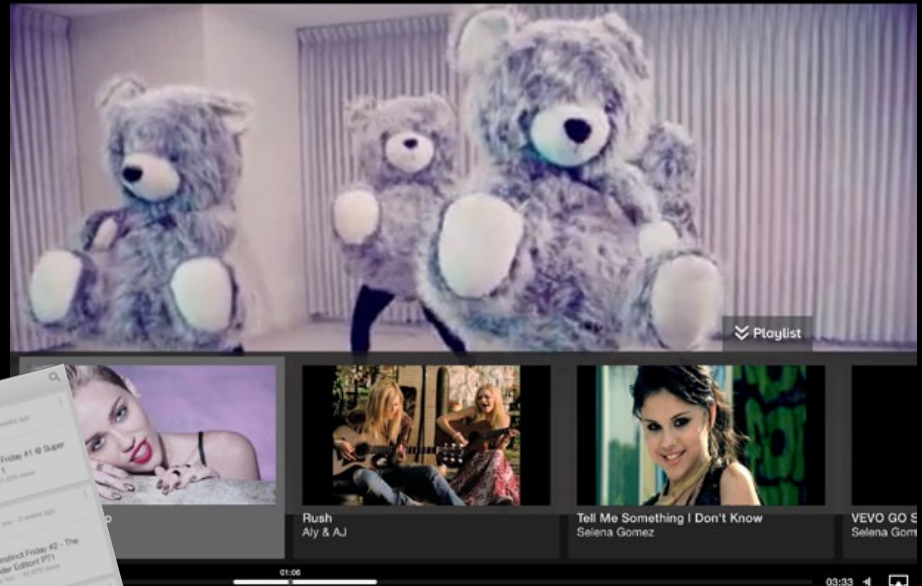
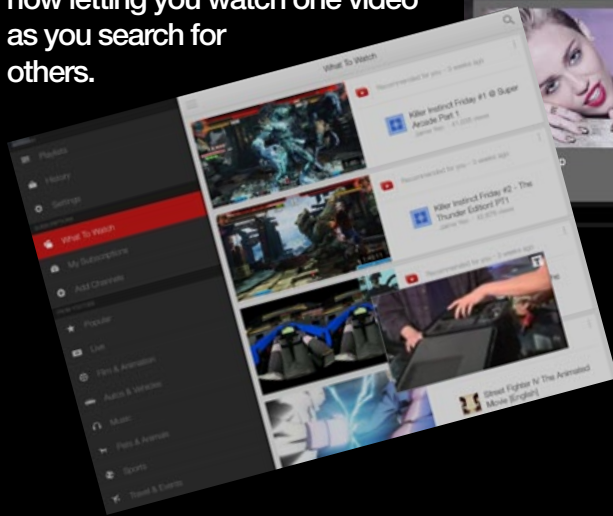


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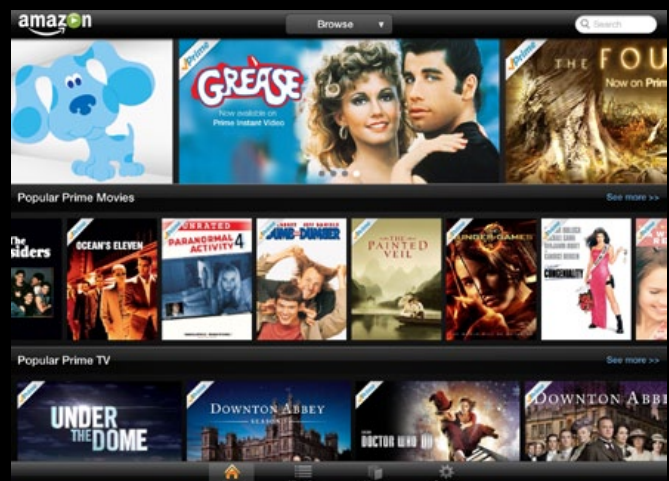
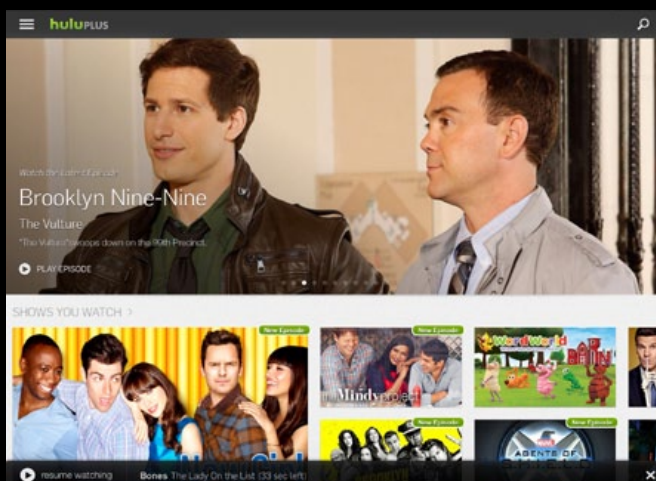
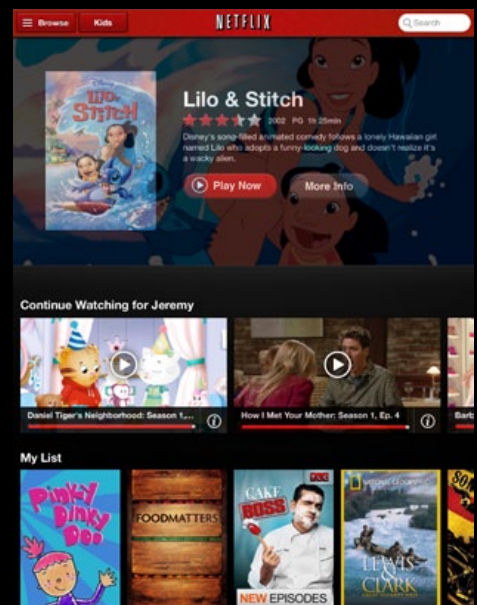
While you can check out individual store-specific shopping apps that may interest you, a couple of “find anything” apps are favorites of our editors. TapMedia's **QR Reader for iPhone/iPad** (Free/\$1 without ads, lower left) lets you scan bar codes, QR codes, and printed URLs, automatically looking up results to find prices of real-world objects on the Internet. eBay's **eBay for iPhone/iPad** (Free, lower middle and right) provide device-optimized interfaces for searching, bidding, selling, and buying from the world's largest online auction site; the separate apps are frequently improved, surprisingly powerful, and easy to use.

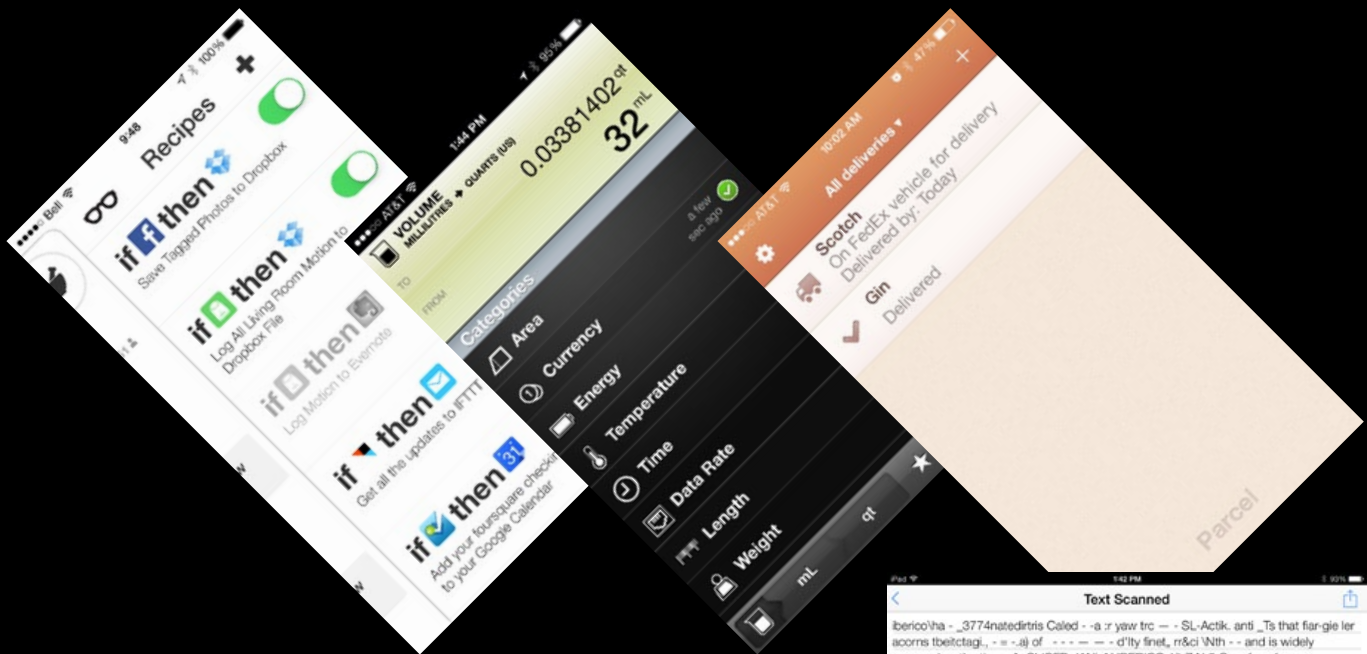


Watching free videos on an iOS device has never been easier - or more compelling - than now. Fans of music videos will love VEVO's **VEVO** and **VEVO HD** (Free, upper right), which includes on-demand videos for thousands of artists and live streams of VEVO channels. Plus, Google's **YouTube** (Free, middle left) offers millions of videos, now letting you watch one video as you search for others.

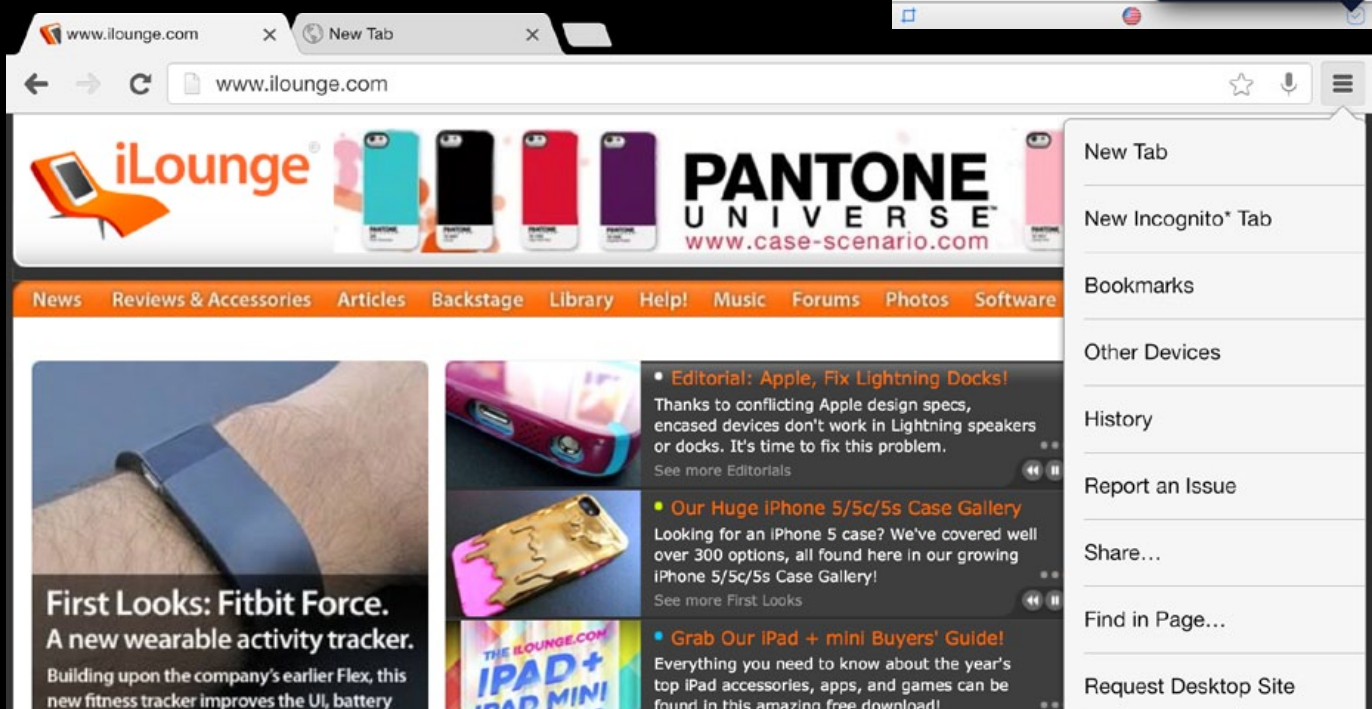
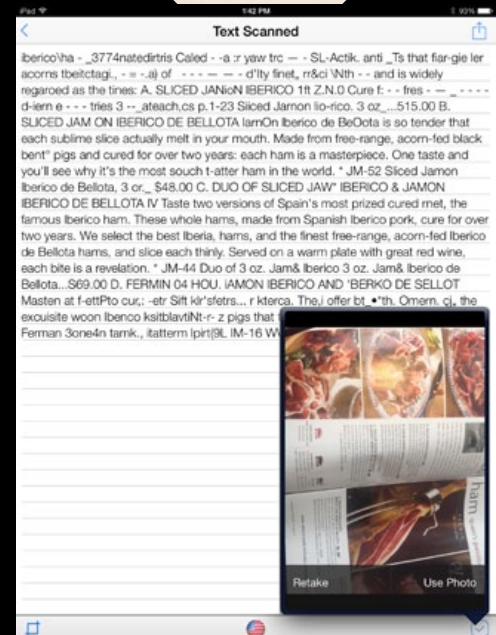


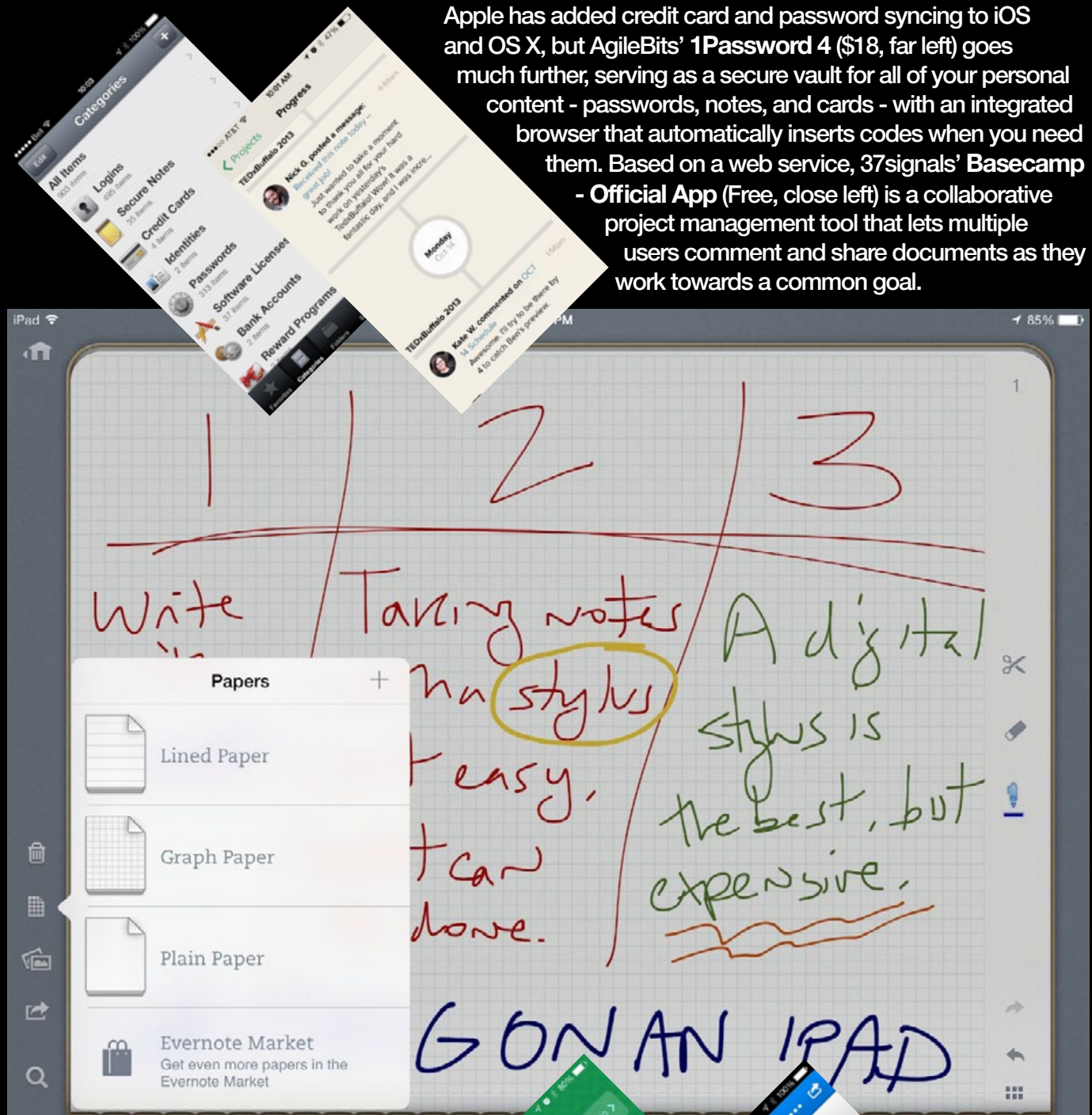
If you're willing to pay subscription fees, you can gain iOS device access to tons of additional content. Netflix's **Netflix** (\$8/month, right) now has a massive archive of TV shows and movies, available for unlimited streaming. For the same price, Hulu's **Hulu Plus** (\$8/month, lower left) offers on-demand viewing of day-old TV shows from some of the major U.S. networks, ideal for TV fans who have cancelled cable TV service. And members of Amazon.com's \$79 Amazon Prime service get access to 40,000 'free' videos on **Amazon Instant Video** (Free, lower right), with 140,000 more available for purchase or rent. It can even stream Amazon's videos to an Apple TV over AirPlay.





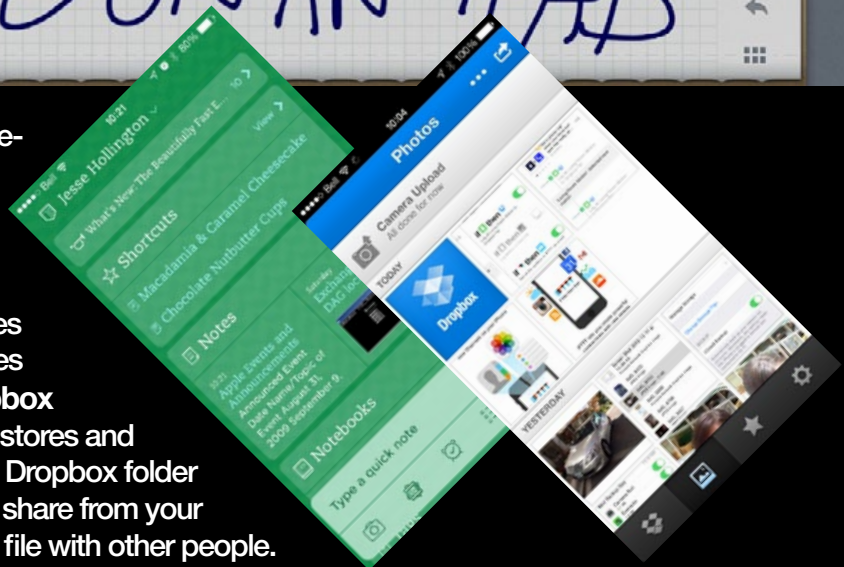
Some of the best tool apps we've tested include IFTTT's **IFTTT** (Free, above left), an Internet-based app that lets you create "if X then Y" rules to automate apps and some home appliances, Crossroad Solutions' **Units - Unit Converter for your iPhone** (\$1, above middle), which easily converts everything from currencies to lengths and weights, and Ivan Pavlov's **Parcel - Delivery Tracking** (Free, above right), which tracks up to three packages at no charge, with a \$2 annual subscription for unlimited tracking. We're also very impressed by Quanticapps' **Pixter Scanner OCR** (\$3, right), which uses your device's camera to scan and recognize text with a high accuracy rate on legible English text, and Google's **Chrome** (Free, below), a Safari web browser alternative with easy access to voice searches, private browsing, and other features Apple has buried.





Apple has added credit card and password syncing to iOS and OS X, but AgileBits' **1Password 4** (\$18, far left) goes much further, serving as a secure vault for all of your personal content - passwords, notes, and cards - with an integrated browser that automatically inserts codes when you need them. Based on a web service, 37signals' **Basecamp - Official App** (Free, close left) is a collaborative project management tool that lets multiple users comment and share documents as they work towards a common goal.

Evernote now makes two of the best note-taking tools we've tested. **Penultimate** (Free, middle) lets you write or draw pages of cloud-synced notes, now with OCR to turn writing into searchable text, while **Evernote** (Free, close right) captures and organizes text, voice, and photo notes across multiple devices. **Dropbox's Dropbox** (Free, far right) is a cloud-based tool that stores and shares files across multiple devices. One Dropbox folder provides access to anything you want to share from your computer to iOS; you can also share any file with other people.



iHistory 2001-2013

The iPod and iTunes helped Apple recover from a bruising personal computer battle, transforming the company into the world's leading designer of pocket and portable electronics. Today, the iPod, iTunes, iPhone, Apple TV, and iPad names are internationally respected; we look at their eleven-year evolution in this iHistory lesson.

2001

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iTunes 1.0 Released

- Apple buys Casady & Greene's SoundJam MP
- Reworks it to become iTunes 1.0, which:
- Turns/rips audio CDs into smaller files,
- Organizes music libraries,
- Plays Internet radio, and
- Runs on Macs. No PC version is planned.



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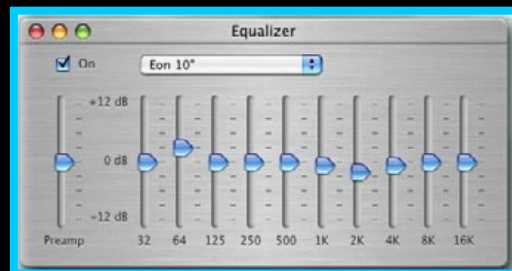
iPod (5GB) Unexpectedly Announced

- Will sell for \$399 when released,
- Is pocket-sized, with a 1.8" hard disk inside,
- Holds 1,000 songs in its 5-Gigabyte capacity,
- Uses a scroll wheel controller + bright screen,
- Works only on Macs, and
- Took only six months to develop.



iTunes 2.0 Released

- iPod support,
- ID3 and metadata support,
- MP3 CD burning, and
- Sound controls such as an equalizer and crossfading.
- Still Mac-only.



The First iPod Ships

125,000 iPods Sold

2002

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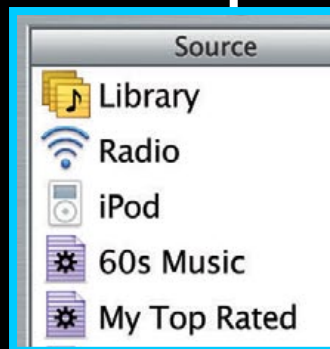
10GB iPod Is Out

- \$499.
- Same design.
- Displays contacts.
- Still Mac-only.
- Iffy PC software.

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iTunes 3.0 Released

- Supports Audible audio books,
- Song ratings,
- Smart playlists, and
- Playlist import/export.
- Still Mac-only.

**Second-Generation iPod Is Out**

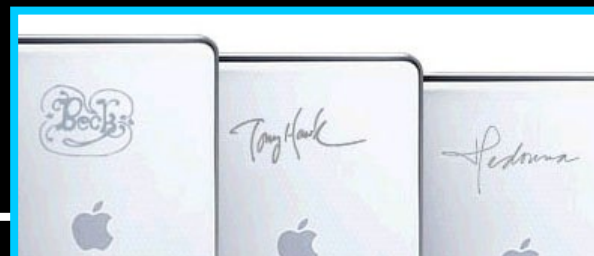
- New \$499 20GB model.
- 5GB now \$299, 10GB now \$399.
- PC-friendly, using MusicMatch software.
- Old moving Scroll Wheel now capacitive touch.

**Big Box Retailers Go iPod**

- Best Buy, Target + Dell all sell iPods, sometimes cheap
- Competitors such as Creative try to squeeze 2.5" hard disks into enclosures more like the iPod's.

**iPod Limited Edition**

- New "limited edition iPods" feature engraved signatures or logos for \$49 each
- Madonna, Tony Hawk, Beck, or No Doubt
- Most expensive iPods now sell for \$548.

**595,000 iPods Sold**

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Microsoft's Plan

- Announces Media2Go.
- Audio/video player.
- Deemed "iPod killer."
- Renamed Portable Media Center for 2004 release, where it flops.

iTunes 4.0 Released

- AAC audio, DVD burning, album art, library sharing.
- New store offers 99c/track, \$9.99/album, 200,000 songs.
- 1M songs sold in 1 week.
- iTunes and iTunes Music Store are both still Mac-only.



Third-Gen iPod Is Out

- It's thinner and smaller.
- Bottom Dock Connector.
- Touch Wheel + buttons.
- 10GB/\$299, 15GB/\$399, 30GB/\$499.
- All support Macs + PCs.
- But initially Firewire only.



iPod Goes USB

- New USB 2.0 cables and drivers are released.
- PC users get an easy way to connect iPods.



Third-Gen iPod Updated

- Only 4 months after release
- 20GB/\$399, 40GB (10,000 songs)/\$499.
- 10GB stays at \$299, earlier models discounted



iPod Adds Recording, iTunes 4.1 Released

- Belkin + Apple release first voice recorder + digital photo reader for iPod.
- iTunes adds PC support, PC iTunes Music Store; MusicMatch phased out.

2,046,000 iPods Sold

2004

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iPod mini Debuts

- \$249, 4GB capacity.
- Comes in 5 colors.
- Anodized aluminum.
- New Click Wheel.
- Critics call Apple crazy.
- 15GB \$299 iPod debuts.

iPod+hp Shown

- Promised for mid-'04 release.
- Blue iPod shown, but never came out.

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iPod mini Ships, Sells Out

- Despite critics, long lines form.
- Quickly popular with females.
- Shortages delay international release until July 2004.

iTunes 4.5 + 3M iPods

- Apple Lossless for Macs/PCs, WMA conversion for PCs.
- 3Mth iPod sold only 4 months after 2Mth, critics begin to deem iPod competitors as cheap, poor designs.

**iTunes 4.6 + EU iTunes**

- iTunes added for AirPort Express wireless access to iTunes music.
- France, Germany, U.K. get iTunes Music Stores, sell 800k songs in first week.

iTunes Music Store: 100 Million Songs Sold**Motorola + Apple / Real's Harmony**

- Motorola promises iTunes-compatible next-gen phones, without specifics.
- RealNetworks releases Harmony so Real RMA songs can play on iPods; Apple implies a lawsuit.

iPod 4G Debuts

- \$299 (20GB), \$399 (40GB) models borrow Click Wheel from iPod mini.
- Thinner bodies, fewer pack-ins.



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iTMS Catalog Hits 1M Songs

Apple Thinks Video

- Begins search for wireless, video experts to join iPod division.

iPod+hp Ships

- Hewlett-Packard ships "Apple iPod from HP," a repackaged iPod 4G with new manuals and HP's tech support.
- HP also announces iPod-compatible printer (never shipped) and "printable tattoo" stickers to cover iPod bodies.



Microsoft Talks

- Attacks iPod at Portable Media Center launch.
- Says iPod unsafe, calls buyers music thieves.



iPod, iTunes Rule

- 4M songs now downloaded from iTunes per week.
- ~6M iPods sold, now 80%+ of U.S. digital music players.

iPod Photo, U2 iPod Debut

- Apple debuts color-screened iPod 4G called iPod Photo.
- \$499 (40GB), \$599 (60GB) models.
- "P" in photo is later decapitalized, matching mini, other models.
- Also releases the iPod U2 Special Edition (\$349), black-bodied B&W-screened iPod 4G, signed by the members of rock band U2.



iTunes 4.7

- Adds photo syncing support for the iPod Photo, and duplicate song search.

Sony Goes MP3

- After failing with ATRAC-based iPod rivals, Sony announces MP3-ready Walkman, plots with Warner to take away iPod's lead in digital music.

10,309,000 iPods Sold

2005

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iPod Shuffle Debuts

- \$99 (512MB) or \$149 (1GB).
- Flash-based.
- No screen or Wheel; button controls.
- In 4 months, Apple has 58% of flash player market.

**#1 Brand: Apple**

- U2 Silhouette ad named smartest ad campaign by Business 2.0.
- By month's end, Apple named top global brand in survey of ad pros.

**iPod Price Drops**

- Apple kills 40GB iPod, 40GB iPod photo.
- New iPod photos: \$349/30GB, \$449/60GB.
- \$29 Camera Connector introduced, allows photo transfers to iPod photo without iTunes.

**shuffle Knocked Off, Battery Suit Settled**

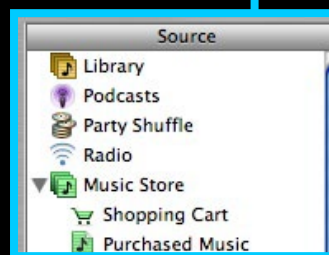
- Clones of the iPod shuffle appear in Taiwan.
- Apple settles massive class action lawsuit over iPod battery defects.

"iPods" Go Color

- Color "iPods" replace "iPod photos:" \$299 (20GB) + \$399 (60GB).
- Apple also drops the price of the 1GB iPod shuffle to \$129.

iTunes 4.9, Podcasts

- New iTunes adds free downloads of radio-like audio "podcasts" to the iTunes music store, plus iPod-ready playback.

**Bush Gets iPod**

- Following Queen Elizabeth II's purchase of an iPod, U.S. President George W. Bush receives one as a gift.

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HP Ends iPod Sales

- After firing CEO, HP abruptly stops iPod sales.
- Claims repackaging iPods didn't fit new plans.
- Retailers sell off HP-badged iPods, some released only weeks earlier.

Apple Can't Patent UI

- Failing in effort to patent iPod's UI, Apple finds itself threatened by Creative, which successfully patented a key aspect of library navigation.

mini Killed, nano and ROKR Debut

- iPod mini, "the most popular iPod", killed without warning.
- Replacement iPod nano is ultra-thin, small color iPod.
- \$199 (2GB), \$249 (4GB), sold in black or white bodies.
- Special edition engraved Harry Potter iPod announced.
- Apple and Motorola unveil first iTunes phone, ROKR E1, billed as an iPod shuffle in a cell phone; instantly reviled.

iTunes 5.0

- Adds staff reviews of music, streamlined look, easier search features, and preference menu changes.

iPod (with video)

- iPod 5G debuts as music player "with video as a bonus."
- \$299 (30GB), \$399 (60GB), black or white bodies.
- 2.5", 320x240 screen, enough battery for 2-3 hours of video.

iTunes 6.0

- Adds videos to the iTunes Music Store.
- Five TV shows, 2,000 music videos: \$1.99 each.
- Videos are 320x240, formatted for iPod's display.
- By month's end, 1 million videos sold.
- Gifting and reader reviews also added.

42M iPods, shuffles Sold Out

- Apple announces huge iPod sales, and that shuffles are sold out through year's end.
- NBC videos come to the iTunes Music Store.

Creative, Microsoft, MTV

- Creative launches iPod-clone called Zen Vision: M
- Microsoft and MTV work to duplicate iTunes with URGE music service

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iPod + FM Radio

- Apple intros iPod Radio Remote.
- Adds FM to iPods and nanos.

Sandisk Now #2

- Memory chip maker surprisingly becomes #2 U.S. MP3 player vendor.
- Distant second to Apple.

1GB iPod nano, Cheaper shuffles

- \$149 (1GB) nano intro'd via press release.
- iPod shuffles now \$69 (512MB), \$99 (1GB).

1B iTunes Songs

- 1 billionth song sold to Alex Ostrovsky, wins iMac, 10 60GB iPods, \$10,000 iTunes credit + name on Julliard Music School scholarship.

1,000,000,000

To every iTunes Music Store customer, thanks a billion.

1 billion songs have been legally downloaded from the iTunes Music Store.

iPod Accessory Day

- Apple unveils iPod Hi-Fi, a \$349 "audiophile" speaker system, and \$99 leather iPod cases.
- Many users are shocked by the prices and skeptical of the value.

**iTunes Season Pass**

- TV shows and sports can now be purchased on discount in advance, with future parts downloading automatically.

PortalPlayer Out, Samsung In iPods

- Longtime iPod chipmaker dumped for Samsung, iPod memory vendor.

Creative vs. Apple

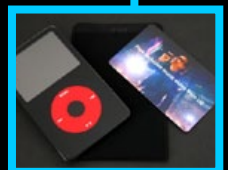
- Creative and Apple sue each other over iPod UI patent violations.

Nike + iPod

- The Nike + iPod Sport Kit is announced.
- \$29 iPod nano add-on lets runners track progress and hear voice prompts
- 450,000 sold in 90 days.

New U2 iPod

- A video-ready version of the U2 iPod debuts, bundled with a U2 video download.



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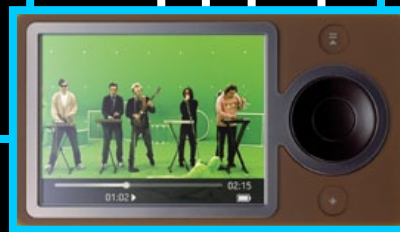
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Chinese Trouble

- iPod maker Foxconn cited for labor issues.
- CEO oddly tells shareholders that Apple is working on a "none-touch" iPod.

Microsoft's Zune

- Having failed to beat Apple earlier, Microsoft plans iPod and iTunes clones for late 2006.



Bye, Dell + Napster

- iPod and iTunes competitors falter.
- Dell quietly withdraws from MP3 player market.
- Napster publicly mulls a sale.

U.S. Carmakers Back In-Car iPod

- Ford, GM, Mazda 2007 cars will have iPod-ready stereos.
- By year's end, over 70% of cars sold in U.S. are iPod-ready.

Apple + Creative

- Lawsuit settled; Creative becomes iPod add-on maker, gets \$100M from Apple with caveats about future patent licenses.



"Made For Sansa"

- Sandisk launches accessory program with iPod add-on developers.

iPod 5.5G, nano 2G, shuffle 2G Debut, iTV Shown

- New iPods debut with brighter video screens (\$249/30GB, \$349/80GB).
- New metal nanos: 5 colors, battery+ (\$149/2GB, \$199/4GB, \$249/8GB).
- New radically smaller metal-bodied iPod shuffle (\$79/1GB)
- Offers advance look at iTV: device Wi-Fi streams videos, music to TVs.

iTunes 7.0; Movies & Games

- \$4.99 iPod games, \$9.99-\$14.99 640x480 movies in "iTunes Store."
- iTunes adds Cover Flow browsing mode, gapless audio playback.



Product (RED) iPod nano

- Special edition red nano debuts; \$10 of the \$199 nano fights AIDS in Africa.

88,701,000 iPods Sold

2007

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iPhone, Apple TV Feted

- Apple shows "revolutionary" iPhone.
- Combines a cell phone, Internet communicator, and widescreen iPod.
- \$499 (4GB), \$599 (8GB) plus 2-year AT&T contract.
- 480x320, 3.5" touchscreen,
- Launch planned for June.
- iTV renamed Apple TV, set for February with 40GB hard drive.

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**iPod shuffle colors**

- Apple adds green, blue, pink, and orange shuffles to the lineup.

Jobs Fights DRM

- CEO posts open letter on Apple's website.
- Says Apple will sell DRM-free music if labels will supply it.
- Refuses to license Apple's DRM.

Cisco + Apple

- iPhone trademark fight resolved; name shared.

iTunes 7.1

- Support for streaming and syncing media to Apple TV.
- Adds full-screen Cover Flow, confusing sorting options.

Apple TV Ships

- Delayed a month, the "DVD player for the 21st Century" ships.
- Requires extended- or high-definition TV, separate video cables.
- Only plays videos purchased or converted through iTunes.

**100M iPods Sold**

- Apple breaks the 100 million sales mark for the iPod family.

iTunes 7.2, DRM-Free

- Apple adds \$1.29 iTunes Plus downloads to the iTunes Store.
- DRM-free, bitrate doubled to 256Kbps, old tracks can be upgraded for 30 cents each.
- Only certain labels support iTunes Plus format.

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Apple TV Updates

- Now deemed only a "hobby" by Steve Jobs.
- Gets a \$399 (160GB) version and YouTube.

iPhone Dominates Media, Launches

- After utterly dominating news for a month, iPhone launches to lines across U.S.
- Apple sells 270,000 units in first weekend, but doesn't sell out in many locations.
- AT&T activation problems dog the otherwise happy event, but are mostly resolved in 2 weeks.

iTunes 7.3, #3 in U.S., 3B Songs

- New iTunes adds iPhone activation support.
- iTunes Store becomes the #3 vendor of music in the U.S., surpassing Amazon.com.
- Store quietly sells 3 billionth song.

NBC Ends iTunes Deal

- Shocking TV fans, NBC opts not to renew its iTunes agreement.
- Apple blames greed, and refuses to carry the network's Fall lineup.

iPod nano, classic, touch Debut, New iPod shuffle Colors, iPhone Price Cut

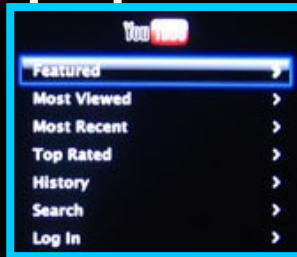
- Apple introduces a video nano (\$149/4GB, \$199/8GB)
- Renames iPod to "iPod classic" (\$249/80GB, \$349/160GB).
- Introduces widescreen, flash-based iPod touch (\$299/8GB, \$399/16GB).
- iPhone's price radically cut by \$200, and the 4GB version is killed off.
- Four muted iPod shuffle colors replace January's, including new purple.

iPhone Mea Culpa, iTunes 7.4

- iTunes 7.4 adds 99-cent ringtone creator for iPhone, plus new iTunes Wi-Fi Music Store for iPod touch and iPhone.
- Steve Jobs apologizes for shocking iPhone price cut, offering \$100 Apple Store credit.

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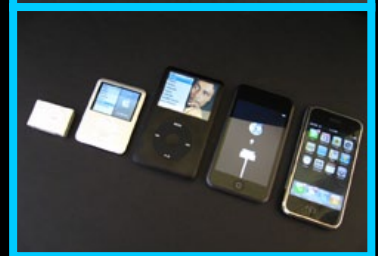
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iPhone Dev Center opens

- Apple says it will release a software development kit for the iPhone in February 2008, then opens a site to help devs create custom "web apps."

119,265,000 iPods sold

- The number, tallying total iPod family sales for six years, doesn't include 1,389,000 total iPhones sold through September 2007.

iPhone Hits UK, Germany, France

- Following September and October announcements, O2 (UK) and T-Mobile (Germany) become exclusive service providers on November 9, with France's Orange joining on the 29th.
 - Sales are respectable, but not fantastic.
 - By December, O2's CEO is already talking about a "3G iPhone" for 2008.

Carmack Criticizes iGaming Strategy

- Following numerous complaints from developers skeptical of Apple's still-cloudy plans for iPhone software, famed Doom and Quake developer John Carmack describes Apple's closed game development strategy for iPods as "horrible."
 - Notes that he personally told Steve Jobs not to repeat the mistakes with iPhone gaming, but isn't optimistic.

Apple Fights iPhone Unlockers

- Despite software updates from Apple, hackers continue to succeed in "cat and mouse game" of unlocking iPhones for sale overseas, "jailbreaking" them to run unauthorized apps.
 - Apple threatens overseas importers with legal penalties of up to \$1,000 per phone sold.

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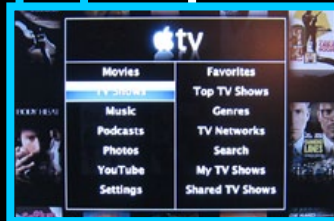
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iPhone, iPod touch, Apple TV Software Updated with Major New Features

- iPhone + iPod touch get 1.1.3 software: custom home screens and location finding ability for maps.
- iPod touch owners offered previously iPhone-only apps such as Mail for \$20.
- Apple TV 2.0 software is shown, supports iTunes purchasing and movie rentals. Released 2/12.
- Hardware drops to \$229 (40GB), \$329 (160GB).



iTunes 7.6: Movie Rentals + Copies

- Following months of leaks, Apple + all six major studios unveil U.S. movie rental service for iTunes.
- \$2.99-\$4.99 based on movie's age + DVD-/HD-quality.
- iTunes Digital Copy lets buyers of certain Fox movies get iTunes-ready, DRM-protected version.

Apple Adds Pink 8GB nano

- Lighter pink 8GB iPod nano debuts as sixth "Spring" color, Valentine's Day gift for standard \$199 price.

141.265M iPods, 3.7M iPhones Sold

- Apple's strongest quarter adds 22.1 million iPods, 2.3 million iPhones to totals.
- Reports suggest up to 1/3 of iPhones are purchased to be unlocked; Apple cites strong global interest.



16GB iPhones, 32GB touch Added

- Apple debuts higher capacity devices via press release.
- \$499 for 16GB iPhone or 32GB iPod touch.
- touch sells in Europe at a slightly lower price than iPhone.

iPod shuffle 1GB Price Drops, 2GB Debuts

- 1GB shuffle drops to \$49, 2GB added for \$69, both in same five colors. Higher capacity ships in early March.



iTunes Store #2 Music Retailer in U.S.

- iTunes now trails only Wal-Mart in music sales.
- Apple attacks developers of Hymn Project, software to strip DRM off of iTunes purchases.

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Apple's iPhone SDK Event

- Instead of the SDK in February, Apple releases free beta kit and \$99 developer program for select U.S. applicants.
- All software will be distributed through iTunes, starting in June, requiring iPhone 2.0 software.
- Developers offer praise and concern; 100,000 downloads in four days.
- Eight days later, Apple sends out rejection letters, blaming high demand.

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Ireland, Austria Get iPhone, Supplies Low

- O2, T-Mobile expand iPhone sales to more countries.
- Stock of 16GB iPhones dries up.

Apple Buys Chipmaker P.A. Semi

- Apple buys maker of low-power CPUs.
- Explains chips are for future iPods, iPhones.

iTunes Store #1 Music Retailer; AT&T Hints 3G iPhone "In Months"

- iTunes now top U.S. seller of music, over Walmart.
- iPhone stock scarce, AT&T hints 3G phone soon.

152M iPods, 5.4M iPhones Sold

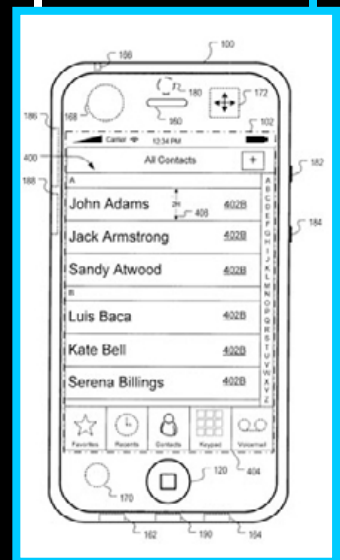
- Quarter reflects slowing sales growth.

Apple Welcomes International Developers

- Comes 2 months after U.S. developers join iPhone SDK program.

iPhone Patented

- A 371-page filing attempts to cover the entire UI.



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iPhone 3G, 2.0 Software Finally Dated

- Apple sets July 11 release for iPhone 3G.
- \$199 (8GB), \$299 (16GB).
- Faster, plastic-bodied, GPS-enabled.
- 70 countries, inc. Japan + Australia, to get iPhone.
- 2.0 software and App Store to launch at same time.
- Expensive rate plans anger many potential buyers.

iTunes Store Sells 5 Billion Songs

- Music catalog now 8 million tracks
- Also claims to be most popular online movie store.

iTunes 7.7, App Store, Apple TV 2.1

- Adds the App Store, with 500 applications. 25% are free.
- Apple TV now lets iPhones, iPod touches serve as remotes.

iPhone 3G Bows

- Worldwide launches start in Australia and New Zealand.
- Lines form; activation, call drop, and software issues anger buyers.
- Regardless, Apple sells 1 million units in three days.

163M iPods, 6.1M iPhones Sold

New classic, touch, nano Released

- Fourth-generation nano repacks 3G model in 9 tall, colorful shells.
- \$149 (8GB), \$199 (16GB).
- iPod touch 2G gets speaker, volume buttons, Nike + iPod support.
- \$229 (8GB), \$299 (16GB), \$399 (32GB).
- Two iPod classics replaced by single \$249/120GB model.
- Four iPod shuffle colors are updated to brighter tones.

iTunes 8: HD TV Shows + Genius

- HD TV show downloads, including NBC programs.
- Genius feature finds music similar to a selected song.
- Also adds photo-heavy Grid library view, new visualizer.

4GB iPod nanos appear

- Without warning, new 4GB iPod nanos appear in Europe.
- Suggests that Apple decided late on the top 16GB capacity.

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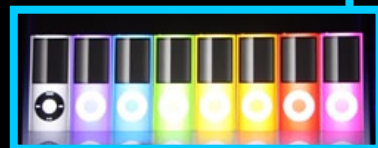
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174M iPods, 13M iPhones Sold

- iPhone sales beat predictions, due to 30,000 selling locations worldwide.

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**Fadell Out, Papermaster In**

- "The Father of the iPod," the man who pitched the device to Apple, is abruptly replaced by Mark Papermaster as VP of iPod/iPhone Engineering.
- Fadell quietly leaves Apple in March 2010, founding home automation company Nest.

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Apple TV 2.1, iPhone OS 2.2 Released

- Apple TV update adds 3rd party remote control support.
- Lets the device stream audio to Apple wireless devices.
- iPhone OS 2.2 provides iPhone-only support for Google Street View and public transport directions
- Also adds direct-to-device podcast downloads.

**In-Ear Headphones with Remote + Mic Ship**

- Months after adding wired three-button remote and microphone support to late 2008 iPods, Apple ships a \$79 pair of canalphones as the first remote and mic accessory.

**Apple Pushes iPhone As Gaming Device; Developer Complaints Grow**

- As Apple begins to push the iPhone as a viable and growing gaming platform, developers take to the Internet to complain about lengthy delays and amateurish Apple review processes.
- Titles are rejected for unclear, often specious reasons.
- The complaints will continue through 2009.

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iTunes To Go DRM-Free, 69¢-\$1.29

- At Apple's last appearance at Macworld Expo, only one iTunes announcement.
- In April, Apple will drop DRM and let songs sell for \$0.69 (rarely), \$0.99, or \$1.29.

New iPhone Model Leaks Via UAE

- Rumors of new iPhone model in June start as the iPhone 3G goes on sale in U.A.E.
- Corroborated in March by spy shots that show new but similar iPhone body shell.

iPod shuffle 3G Out

- Apple quietly unveils new iPod shuffle via press release.
- \$79 (4GB).
- No integrated playback or volume controls; requires Apple remote-equipped headphones and new VoiceOver feature.

Apple Previews iPhone OS 3.0

- Beta for iPhone and iPod touch adds cut, copy, and paste, push notifications, Spotlight search, Voice Memos, third-party accessory support, stereo Bluetooth, tethering capabilities.
- "Summer" release.
- Video recording, autofocus camera, and compass features are found hidden inside.

1 Billion Apps Downloaded, Problems Persist

- 9 months after launch, the App Store celebrates billionth app download.
- 13-year-old Connor Mulcahey wins \$10,000 iTunes card, 17" MacBook Pro, 32GB iPod touch, and a Time Capsule.
- Hours earlier, Apple was forced to apologize for allowing a baby shaking app, one of many deemed offensive or problematic by App Store visitors.

iPhone 3GS, iPhone OS 3.0

- Apple reveals "50% faster" iPhone 3GS, with almost identical body to iPhone 3G.
- \$199 (16GB), \$299 (32GB). 8GB iPhone 3G kept around at new \$99 price.
- Adds 3-Megapixel still camera, 640x480 video recording, compass, and faster chips.
- iPhone OS 3.0 ships right before iPhone 3GS's June 19 release date.

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App Store Hits 50,000 Apps

- On its first birthday, App Store has 100 times as many titles as when it launched.

Google Voice Rejected; FCC Steps In

- Apple refuses to approve a Google app that offers free SMS and cheap long distance calling.
- FCC later investigates Apple and AT&T.

New iPod nano, shuffle, classic, touch

- nano now includes widescreen display, camera, pedometer, FM radio, and polished aluminum body.
- \$149 (8GB), \$179 (16GB).
- New iPod touch boosts speed, gets Voice Control, and accessibility features; lacks camera due to supply issue.
- \$299 (32GB), \$399 (64GB). Prior 8GB priced at \$199.
- \$249 classic bumped to 160GB, no other changes.
- Four new shuffle colors debut, including \$59 2GB models and a \$99 4GB stainless steel special edition.
- By October, 228M iPods, 33M iPhones have been sold.

iPhone OS 3.1, iTunes 9 Ship

- iPhone OS adds support for new iPod touch, minor Bluetooth, video editing, and other bug fixes.
- iTunes 9 gains CD- and DVD-emulating iTunes LP and iTunes Extras features, app organization, new iTunes Store design, and wireless Home Sharing of media.

Apple TV: 160GB, \$229

- 40GB Apple TV discontinued, price drops on larger model.

Apple TV 3.0 Software Debuts

- Includes new main screen for Apple TV, Internet Radio streaming.

App Store Hits 100,000 Apps**Google Grabs AdMob From Apple**

- Google buys leading phone ad company, deepening antagonism with Apple.

Apple Buys Lala

- Rumors of a web-based iTunes swirl; Apple buys/shuts Lala, supposedly for use in iTunes.

Apple + Nokia Cross-Sue Over Patents

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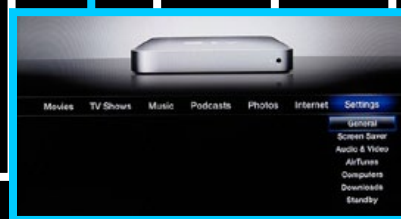
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Apple Buys Quattro, 3B Apps

- Apple buys smaller mobile ad company Quattro for future iPhone OS advertising.
- 3B App Store downloads, with 10M per day.

iLounge Pavilion Opens At CES

- Following Apple's exit from Macworld Expo, 100+ iPod, iPhone, and Mac developers join a new Apple-dedicated section of the Consumer Electronics Show, which is warmly received.

Apple Shows iPad, iBookstore, iWork

- Confirming several years of rumors, Apple unveils iPad.
- 16/32/64GB. Wi-Fi \$499-\$699, Wi-Fi + 3G (\$629-\$829).
- Multi-touch tablet, 9.7" screens, iPhone OS 3.2.
- Release promised in 60-90 days, depending on model.
- To launch with iBooks, iBookstore, and \$10 iWork apps.



Jobs Pitches iPad, Locks Out Sex Apps

- Steve Jobs personally demos at newspaper and magazine editorial offices, pushing iPad as next platform for publishing.
- Apple tightens content restrictions in the App Store, nixing overtly sexual apps that were previously allowed to be sold.

iTunes Sells 10 Billion Songs

- Johnny Cash's "Guess Things Happen That Way" gets Louie Sulcer \$10,000 in iTunes credit.

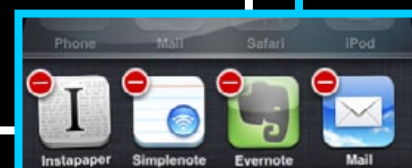


Apple Sued Over iPod shuffle 3G

- Supposedly workout-ready third-gen shuffle's controls fail when moistened.
- One month later, Apple initiates a free replacement program for faulty earphones.

iPad With Wi-Fi Launches In U.S.

- Following two months of teases, the first iPad version arrives for sale.
- Sells 450,000 units and 3.5 million iPad apps in only 5 days.



iPhone OS 4.0 Announced

- First time Apple's operating system will cut off support for first-gen iPhone and iPod touch.
- Multitasking, folders, Home Screen wallpaper, and iAd in-app advertising added.
- iPad support promised for "fall," iPhone 3G/3GS and iPod touch 2G/3G version in June.

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iPhone 4 Prototype Sold, Revealed

- Lost prototype of next-gen iPhone, rumored to be called iPhone HD, is sold by finder to Gizmodo.
- Site shows device, humiliates Apple employee who lost it, offers to trade it back to Apple for a better relationship or a statement that it's real.
- Device has glass surfaces, front-facing camera, LED flash, and a metal frame.
- Police become involved after it's returned.
- Next month, white version appears in photos.



Apple Buys Voice-Based Service Siri

- Apple quietly acquires the voice-based personal assistant service Siri, leaves app in App Store.

iPad With Wi-Fi + 3G Out In U.S., Apple Sells 1 Millionth iPad

- One day after Apple named largest cell phone maker in the U.S., iPad 3G debuts; \$15-\$30 AT&T contract-free data plans. Four days later, Apple has sold the millionth iPad.



Zune Execs Gone

- Despite an aggressive late 2009 relaunch of Zune with HD features, Microsoft loses the two key heads of the Zune division.

Foxconn Suicides Make Waves

- Low wages, long hours away from families, and little prospect of career advancement lead to suicides at iPod, iPhone, iPad manufacturer.
- The company scrambles to improve as media publicizes the deaths.

2 Million iPads Sold

AT&T Changes iPad, iPhone Plans

- AT&T kills unlimited data plans in favor of \$25 2GB plans, just ahead of new iPhone launch.
- Old customers are grandfathered in; new ones are capped.

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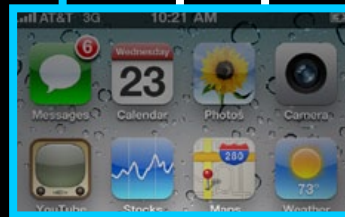
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iPhone 4 Debuts With Renamed iOS

- Confirming prototype leaks, iPhone 4 is announced at Worldwide Developers Conference.
- New 960x640 "Retina Display," FaceTime video calling, new front VGA and rear 5-MP cameras.
- Unit's black/white glass body and metal frame/antenna are praised on stage by Steve Jobs.
- iPhone OS renamed iOS.
- 5 billion apps sold from catalog of 225,000.
- iPhone 4 pre-orders start one week later, crash Apple's and AT&T's websites.

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iOS 4, iPhone 4 Released, iPad at 3M

- iOS 4 launches day before iPhone 4.
- Has problems on pre-2009 models.
- iPhone 4 arrives in black; white model missing.
- Apple announces 3M iPads sold, offers iMovie.

"Antennagate" Begins

- Some early iPhone 4 users find that their cell signals die when holding the device normally.
- Apple downplays the issue for days before getting slammed by Consumer Reports, sued by users.

1.7M iPhone 4s Sold First Weekend

- Despite antenna issues, iPhone 4 is Apple's fastest selling product.

Antennagate Continues

- Apple concedes antenna strength is reduced when device is held.
- Software patch reduces the "normal" number of bars.
- At press event, Jobs claims that all smartphones have the same problem, but offers free cases for the next two months, no-questions returns.

Mysterious Touchscreens Appear

- Tiny Apple-branded touchscreens appear, suggest shuffle-sized iPod touch.
- Weeks later, iPod-touch sized screen is found with front-facing camera.

269M iPods, 59M iPhones Sold

White iPhone 4 Delayed, Free Cases

- Apple unveils iPhone 4 Case Program app, offering each buyer a free case with limited choices.
- White iPhone 4 delayed again.

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Papermaster Out As iPhone/iPod Chief

- Reportedly blamed for iPhone 4-related problems, Mark Papermaster is fired.

iPod shuffle, nano, touch Replaced, New Apple TV + iTunes 10 Debut

- Fourth-gen shuffle has built-in buttons: \$29 (2GB).
- New nano is audio only, with a clip and the leaked touchscreen: \$149 (8GB), \$179 (16GB).
- Thinner iPod touch 4G has twin cameras, Retina Display: \$229 (8GB), \$299 (32GB), \$399 (64GB).
- \$99 plastic, driveless Apple TV 2G unveiled.
- iTunes 10 adds Ping social network and AirPlay wireless media streaming.

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279.5M iPods, 73.7M iPhones, 7.46M iPads Sold, 300K App Library

White iPhone 4 Delayed Again To Spring 2011

- Two days later, white iPhone 4 removed from Apple online store.

AT&T, Verizon Begin Selling iPad Directly

- AT&T selling Wi-Fi + 3G iPads with data plans.
- Verizon selling Wi-Fi only models with Mi-Fi packages.

Fortune Confirms Early-2011 Verizon iPhone

- CDMA-capable iPhone said to be released early next year.

The Beatles Land On iTunes

- Catalog of digital music holdout finally comes to iTunes in one-year exclusive.
- 450,000 albums sold in the first week.

iOS 4.2 Released for iPad, iPhone, iPod touch; 4.1 for Apple TV

- First iOS release to unite Apple's mobile devices, brings iOS 4 features to iPad.
- Adds AirPlay, AirPrint, other new features.

First Supposed Second-Generation iPad Cases Seen

- Features slimmer design, large speaker opening, and rear camera hole.
- Some sources claim that speaker opening is actually an SD Card slot.

Ping

A social network for music. Join the conversation.

The Beatles. Now on iTunes.



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Verizon iPhone Parts Appear Online?

- Slightly redesigned iPhone 4 shows different black bands, moved switch and buttons.

iPad 2 Body Seen at iLounge Pavilion

- Accessory developer shows a supposed iPad 2 rear shell, with features that match early case leaks.

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Apple Drops iPhone 3GS Price, Restock Fees

- iPhone 3GS cut from \$99 to \$49, with 2-year contract.
- All Apple restocking fees eliminated.

Verizon iPhone Finally A Reality

- Apple and Verizon announce launch of CDMA-based iPhone 4 for February 10; same prices as AT&T model.
- \$30 unlimited data at first, to be replaced with tiered options.
- Launches to short lines, but sales are consistently strong.

Apple CEO Jobs Takes Medical Leave of Absence

- For second time in two years, Jobs leaves to focus on health while battling pancreatic cancer.

298M iPods, 89.9M iPhones, 14.79M iPads Sold

10 Billionth App Downloaded

- Gail Davis's download of Paper Glider rewarded with \$10,000 iTunes card.

News Corp. Launches "The Daily" iPad Newspaper

- Aided by Apple, News Corp. launches daily newspaper app with interactive content.
- Utilizes new "In-App Subscription" billing option from Apple: \$0.99/week, \$40/year.
- Usability, stability, quality of content criticized from early on.

HP Unveils iPad Rival TouchPad

- 9.7"-inch tablet computer runs webOS, acquired during purchase of Palm.
- Physically very similar to the first-generation iPad, but plastic.
- TouchPad and all webOS hardware killed off August 18, weeks after the tablet's release.

The Future of MobileMe

- Apple stops selling boxed versions of its online service for Mac OS, iOS devices.
- Rumors suggest revamped free service with new features, cloud-based "locker" for content.

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The App Store is about to hit ten billion downloads.

Download the ten billionth app and you could win a US \$10,000 iTunes Gift Card. Visit the App Store.



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Apple Announces iPad 2

- Matching rumors, iPad 2 to launch March 11.
- New dual-core A5 processor, two cameras, available in black or white, is thinner and lighter than first-generation model, same prices.
- Garageband, iMovie debuted for iPad.
- Launches to long lines, sell outs on March 11.
- 100M iPhones, 15M iPads, 100M iBooks sold.

**iOS 4.3 for iPhone, iPad, iPod touch**

- Improved performance, iPad side-switch options, Personal Hotspot for GSM iPhones, Home Sharing.
- Apple TV 4.2 brings MLB and NBA content, AirPlay for apps and Safari, other new features.

White iPhone 4 Launches

- After months of delays, GSM- and CDMA-versions of white iPhone 4 finally launch to short lines.

**AT&T Says No Summer Launch For Next iPhone**

- Kicks off months of speculation, confusion about new iPhone models.

Apple Announces iOS 5, iCloud, iTunes Match

- WWDC focuses on software; iOS gets revamped notifications, iMessage instant messages, Twitter integration, wireless syncing and over-the-air updating.
- iCloud is a new free replacement for MobileMe, with contact, calendar, and mail syncing, redownloads of iTunes content, cloud-based backups, and more.
- iTunes Match is introduced as a new syncing/downloading service for music whether it was purchased through iTunes or not; subscriptions are \$25/year.

**Jobs Outlines Plans For New "Spaceship" Campus in Cupertino****Apple Begins Offering Unlocked iPhone 4 In The U.S.**

- GSM iPhone 4 can be purchased unlocked; \$649 (16GB), \$749 (32GB).

Bloomberg Reports Specs Of Next-Generation iPhone

- Magazine claims same A5 processor as iPad 2, 8-Megapixel camera.

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15 Billion App Store Downloads

128.89M iPhones, 314.56M iPhones, 28.73M iPads Sold

T-Mobile USA Offers iPhone 4 SIMs

- Despite not carrying the device, T-Mobile offers service to those with unlocked iPhones.
- Later claims over 1M iPhone users on network.

Apple TV Updated, Adds iCloud TV Shows

- Unexpected software update brings streaming of previously purchased iTunes TV content.

Apple Passes Exxon Mobil In Market Cap

- Apple becomes world's most valuable company.
- The two companies swap positions for months.

Steve Jobs Resigns

- Hinting at health, Apple CEO resigns, named Chairman of Board.
- Chief Operating Officer Tim Cook is named new CEO.

99-Cent TV Show Rentals Pulled From iTunes

- Without explanation, Apple halts TV show episode rentals, one of the second-generation Apple TV's highly promoted features.

Purported iPhone 5 Test Photo Appears Online

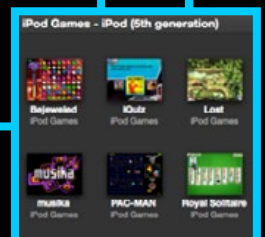
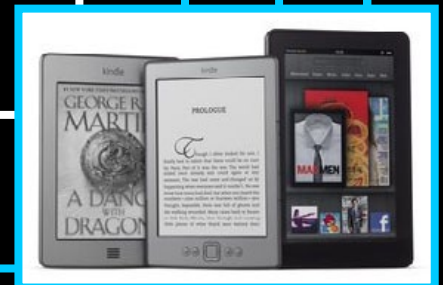
- EXIF data apparently confirms photo was taken on Apple's campus.
- Suggests 3264 x 2448 resolution, 8-Megapixel camera at f/2.4.

Amazon Undercuts Apple With \$79-\$199 Kindle

- Online retailer introduces cheaper dedicated e-readers.
- Also shows off Kindle Fire, a \$199 7" color-screened tablet to launch in November.

Click Wheel Games Disappear from iTunes Store

- Five years after introduction, Click Wheel games are removed from the iTunes Store.
- Believed to suggest iPod classic was on way out after extended period without an update.



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Apple Unveils iPhone 4S

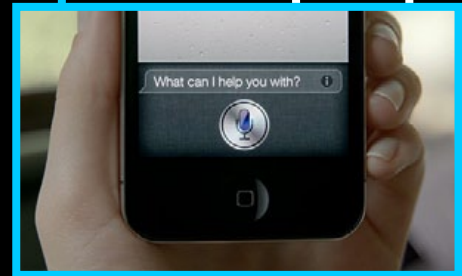
- After months of rumors, Apple debuts new iPhone 4S.
- \$199 (16GB), \$299 (32GB), \$399 (64GB).
- Same body as iPhone 4, redesigned antenna, A5 processor, 8-Megapixel camera.
- Gets voice-activated Siri personal assistant, acquired from an iOS developer, demoed by Senior VP Scott Forstall.
- White iPod touch added, 8GB price drops to \$199.
- iPod nano price now \$129 (8GB), \$149 (16GB), new software changes UI, adds new watch faces.
- AppleCare+ plan replaces standard AppleCare for iPhone, offers coverage for accidental damage.
- Over 300 million iPods sold, 16 billion songs downloaded.

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**Former Apple CEO Steve Jobs Dies, Aged 56**

- Passing of Jobs announced on Apple.com, following battle with pancreatic cancer.
- Profound worldwide reaction to loss of "creative genius."
- Apple launches dedicated "Remembering Steve" site, holds memorial event for corporate and retail employees.

**iOS 5, iPhone 4S Released**

- Smooth rollout of iOS 5 ushers in the beginning of PC-free iPad, iPhone, iPod touch ownership.
- iCloud goes fully live; iTunes Match follows in mid-November, and iTunes in the Cloud expands, allowing free streaming of more purchased music/TV shows.
- Apple TV adds NHL, WSJ videos, support for Photo Stream, AirPlay Mirroring.
- Following one million preorders, iPhone 4S goes on sale to lines at Apple Retail Stores and other retailers; over four million are sold in the first weekend, more than doubling record set by iPhone 4.
- Soon after launch, iPhone 4S users begin to experience Siri outages and issues, seemingly attributable to both connectivity and server problems.

145.96 Million iPhones, 321.18 Million iPods, 39.85M iPads Sold**Apple Retail SVP Johnson Joins J.C. Penney, Engineering VP Leaves**

- Announced in mid-June, Rob Johnson takes over troubled J.C. Penney chain; Apple searches for a replacement. David Tupman, a VP of iPod and iPhone engineering, quietly leaves late in 2011, while other executive changes continue under Tim Cook's leadership.

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Third-Gen iPad Body Leaks

- Tiny differences suggest an improved rear camera and thicker body for upcoming model.

Chinese iPhone 4S Launch Marred

- Shoppers pelt Beijing's Apple Store with eggs after Apple misses launch time; Apple stops at-store sales.

Apple Adds iPad Textbooks To iBooks 2

- NYC education-focused event sees debut of iPad-only interactive textbooks, and iTunes U app for students/teachers.

336.58M iPods, 183M iPhones, 55.28M iPads Sold**Foxconn Manufacturing Under Fire, Cook Responds**

- After reports of poor working conditions at Foxconn, Apple's top manufacturing partner, CEO Tim Cook promises increased oversight of partners, higher salaries for Foxconn workers, and fair labor hours.

John Browett Hired As Senior VP, Retail

- Hired following CEO stints at UK retailers Dixons Retail and Tesco, Browett is later blamed for flagging morale and other issues at Apple's retail stores.

Eight-Inch iPad Now In Testing, WSJ Reports**"Micro" Dock Connector Coming**

- Renewed reports suggest Apple will replace the 2003 Dock Connector, likely soon.

25 Billionth App Downloaded: "Where's My Water? Free"**Apple Unveils iPad (3rd-Gen) + Apple TV (3rd-Gen)**

- "The new iPad" looks nearly identical to iPad 2, but sports a 2048x1536 Retina display, 5MP rear camera, and LTE/4G cellular option at prior \$499-\$829 prices. A new A5X processor is inside.
- Three million new iPads are sold in first four days of Mar. 16 launch.
- Users discover new iPads run warm, require extra recharging time.
- iPad 2 drops in price to \$399 with a \$529 cellular model.
- Third-gen Apple TV keeps design and \$99 price, adds 1080p video.
- Redesigned Apple TV 5.0 UI switches to icon grid akin to iOS devices.
- iTunes in the Cloud adds movies; iTunes 10.6 gets 1080p support.

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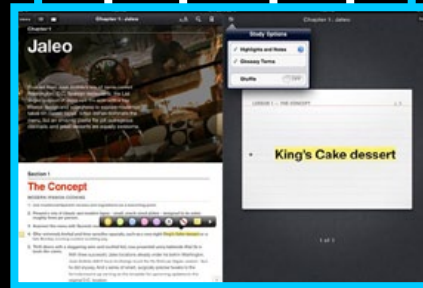
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iPhone 5, iPod touch 5G Body Leaks Begin

- iLounge reveals next iPhone will have a metal/glass back, 4" screen, and new dock port; a 4" iPod touch screen is leaked.

Foxconn Hints At iTV

- Following rumors, Apple's manufacturing partner claims it will build an aluminum Apple TV set with Siri and FaceTime.
 - Apple later discloses that content/cable company negotiations failed; had planned to offer live and on-demand content via iTV.

iOS 6 Shown: New Maps, Passbook, Facebook

- Promising over 200 new features, iOS 6 is announced for a "fall" release. A new Apple-developed Maps app, the digital coupon/pass-holding wallet Passbook, and Facebook integration are added, with Siri improvements - including iPad support.

351.08M iPods, 244.1M iPhones, 84.08M iPads Sold**Apple v. Samsung Trial Begins**

- Apple accuses partner Samsung of infringing iPhone, iPad + iPod patents; Samsung countersues.
 - After being forced to divulge confidential info on iPhone and iPad development and marketing, Apple wins \$1B jury verdict, affirming UI + design patents.
 - Trial reveals many iPhone and iPad prototypes, survey showing 78% of iPhone users use cases, and that Apple "buzz marketing" gets products in movies and TV.

Apple Explores Set-Top Box Version of Apple TV

- The WSJ reports that Apple has worked on set-top box plans for the Apple TV for two years, but cable operators haven't signed on, balking at Apple's 30% cut on transactions.

Apple Debuts iPhone 5, iPod nano 7G, iPod touch 5G

- Leaks reveal a taller, faster iPhone 5 that Apple officially debuts at an event with a similar iPod touch (\$299-\$399), plus a fully redesigned iPod nano (\$149) featuring a 2.5" touchscreen and restored video playback. All three feature new Lightning ports.
 - iTunes 10.7 arrives that day, with iPhone 5 on September 21, and the iPods in mid-October. iTunes 11 is due in "late October," then is delayed for quality assurance reasons.
 - Event is sign of an odd shift of major hardware and software updates to late in year, removing previously staggered debuts.
 - Major problems with new iOS Maps app cause Cook to issue public apology, quietly creating turmoil within Apple's executive ranks.

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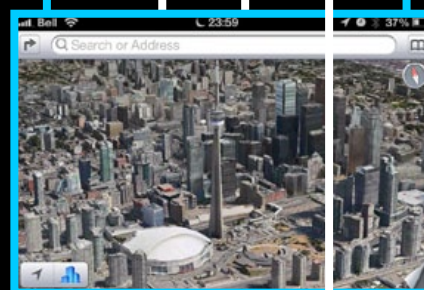
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Apple Announces iPad mini, iPad (4th-Gen)

- The 7.9"-screened iPad mini debuts with surprising pricing: \$329 to start, with iPad-style 16/32/64GB capacities and \$130 cellular options. Apple also announces the iPad (4th-Gen) with a faster A6X chip and Lightning port. Both models launch November 2 in Wi-Fi versions, with cellular models hitting November 16.



355.98 Million iPods, 271 Million iPhones, 100 Million iPads Sold

Browett, Forstall Out; Jonathan Ive, Eddy Cue, Craig Federighi Take On New iOS Responsibilities

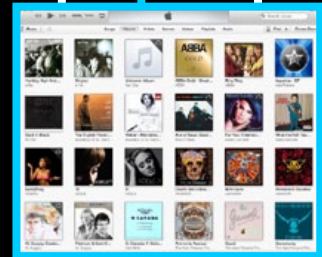
- Senior VP of iOS Scott Forstall, once called Apple's "CEO in waiting," is reportedly forced out of the company following complaints over Siri, Maps, and iOS app design; several key executives take over his prior responsibilities in a move Apple suggests will be consensus-building. After a tumultuous, short run, retail chief John Browett leaves as well. One month later, Apple also fires Richard Williamson, listed as a manager of iOS Maps.

Apple Loses FaceTime Patent Fight

- A judge orders Apple to pay patent troll VirnetX \$368.2-million for infringing VPN patents with FaceTime, causing Apple to quietly alter FaceTime to rely on relay servers, later removing its ability to offer HD-quality video connections.

iTunes 11 Released

- Following an unexpected delay from October, Apple releases iTunes 11, featuring a redesigned interface and store, and new iCloud features, among other additions.

**Cook Calls TV "An Area of Intense Interest" For Apple**

- During an interview with NBC News, Apple CEO Tim Cook disparages the current TV user experience, calling it 20- to 30-years backwards in time and noting that it's "an area of intense interest," public confirmation that Apple was exploring further TV initiatives.

Apple reportedly testing several TV set designs

- The Wall Street Journal claims Apple is working on a large, high-resolution TV, and that the company has been testing TV prototypes "for a number of years."
- Rumors persist that Apple has tried but failed to reach agreements with content and cable providers

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Next iPhone, iOS 7 Seen In Logs

- Developers see Apple testing new iPhone, iOS 7.

iPad 5, iPhone 5S, Plastic iPhone Leaks

- iLounge reveals details of upcoming thinner iPad, iPhone 5S with upgraded CPU and camera, and less expensive plastic iPhone with slightly larger housing.



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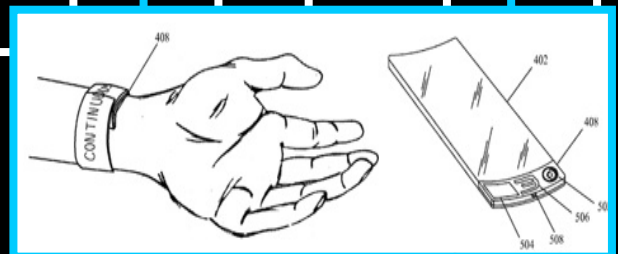
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Apple Announces 128GB iPad

- iPad to sell on Feb. 5 for \$799/\$929, pitched for business.

25 Billion Songs Sold On iTunes**Apple Reportedly Working On Smart Watch**

- Bloomberg reports a team of 100 is working on a wristwatch-like device with iOS-like functions.
 - "iWatch" said to run iOS, suffer from 1-day battery life.
 - Rumors suggest the watch may use curved glass.
 - Patents show Apple exploring wristbands, batteries.

**iTunes U Hits 1B Content Downloads****Reports Claim Fingerprint Scanner For Next iPhone**

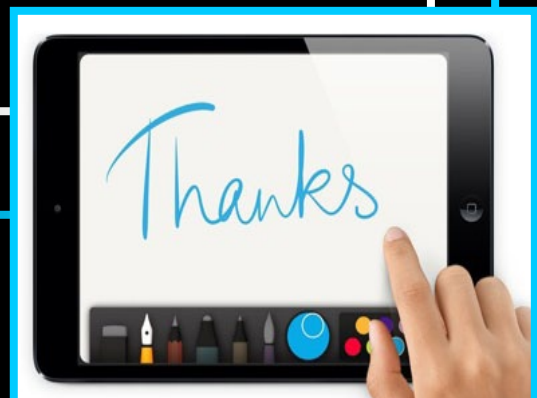
- A report out of China claims the next iPhone will contain a fingerprint sensor; NFC claims are also made.

New iPhone Production To Start Q2

- WSJ reports Apple will soon begin production on two new iPhones, including an iPhone with a plastic shell.

App Store Tops 50B Downloads**CEO Cook Testifies In Senate On Taxes**

- Apple takes heat over claims that the company uses gimmicks to avoid paying U.S. taxes.
 - CEO Tim Cook appears in front of a U.S. Senate subcommittee to defend Apple's tax practices.



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Apple Offers 16GB iPod touch 5G

- Apple quietly releases a 16GB fifth-generation iPod touch for \$229, notably missing the 32/64GB versions' rear camera and loop wrist strap.
- The fourth-gen iPod touch is discontinued.

Alleged iPhone Parts Reveal Gold Color

- A leak reveals possible components for a gold iPhone, reportedly the iPhone 5S, though many are skeptical that Apple would release such a device.

Apple Denies Aiding Government Data Mining

- Government program PRISM is revealed, claims to let National Security Agency collect data from Apple and others.
- Apple outright denies knowledge of the program, quickly works to build customer trust regarding its data practices.

WWDC: iOS 7, iTunes Radio Debut

- Apple debuts iOS 7, which features a flatter interface that removes shadowing and many textures from integrated apps.
- iOS 7 features many new icons, transparency and parallax effects, some of which immediately are met with derision.
- The long-rumored streaming music service is demonstrated for iOS 7, and will be ad-free for iTunes Match users.

Apple Posts Guidelines For Game Controllers

- For the first time, Apple officially publishes guidelines for making iOS game controllers; multiple designs are shown.

1B TV Shows, 380M Movies Downloaded Via iTunes

Judge Rules Apple Conspired To Raise e-Book Prices

- A judge ruled Apple conspired to raise e-book prices along with a group of five book publishers. Apple in September is prevented via injunction from entering price-fixing agreements with those publishers, among other penalties.
- Apple and four publishers agreed in 2012 to settle a similar lawsuit in Europe.

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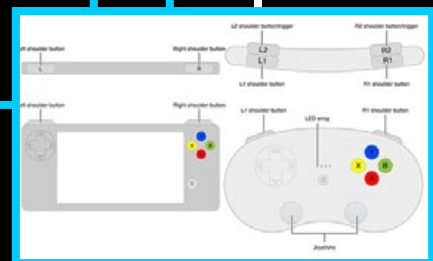
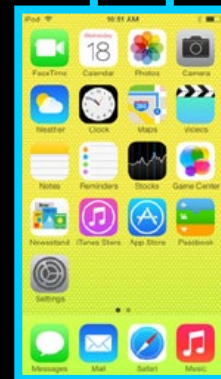
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Apple Reportedly Testing Larger iPad, iPhone Screens

- The Wall Street Journal reports Apple is testing smartphone screens larger than 4 inches, and tablets "slightly less than 13 inches."

1B Podcast Subscriptions Announced

Apple Debuts High-End iPhone 5s, Plastic 5c

- Apple's new iPhone 5s is announced; it goes on sale Sept. 20 in 16GB (\$199), 32GB (\$299), and 64GB (\$399) capacities in Space Gray, silver, and gold. It comes with Touch ID, Apple's fingerprint scanner, as well as an improved iSight camera and fast new 64-bit A7 processor.
- For the first time, Apple debuts a second iPhone at the same time — the plastic-bodied iPhone 5c; it comes in five colors in 16GB (\$99) and 32GB (\$199) capacities, replacing the just-discontinued iPhone 5. It's virtually identical to the iPhone 5 except in cosmetics.
- Apple releases its own official cases and docks for the 5c and 5s.

Space Gray iPod touch, nano, shuffle Introduced

- Apple quietly adds a Space Gray iPod touch, nano, and shuffle to its lineup, replacing the slate (near-black) models.

iTunes 11.1 With iTunes Radio Released

- iTunes 11.1 debuts with the long-awaited iTunes Radio, customizable podcast stations, and Genius Shuffle.

iOS 7 Released To Public

- The release is the biggest change yet to Apple's mobile operating system, debuting to a polarized reception; 65% reportedly upgrade quickly, while others hold off.

Apple Shows iPad Air, Retina iPad mini; iWork/iLife Go Free

- The fifth-generation iPad debuts as iPad Air, losing 1/3 of its prior weight, slimming down, and getting an A7 chip while staying at \$499-\$929 across 16-128GB models. It's released on Nov. 1.
- A 7.9"-screened but otherwise near-identical iPad mini with Retina display starts at \$399 with the same features and storage capacities; Apple says it's coming "later in November."
- All iWork and iLife apps become free with the purchase of new iOS devices, giving every new user access to a suite of office apps and creative tools - all redesigned for iOS 7.

382.78 Million iPods, 421.278 Million iPhones, 169.18 Million iPads Sold

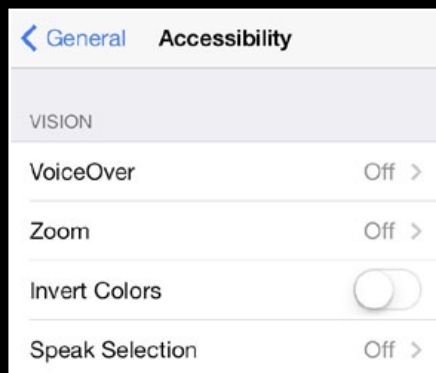


The iGlossary.

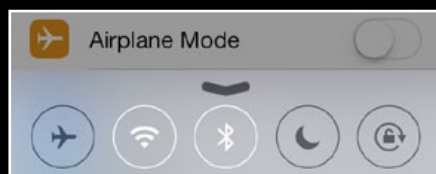
Now with over 230 definitions, our iGlossary enables you to easily understand virtually every term in Apple's ever-growing collection of iPod, iPhone, iPad, and Apple TV technical jargon and marketing phrases.

AAC: Advanced Audio Coding is a compression technology offering superior sound quality to an MP3 audio file of the same size. All of Apple's iTunes Store audio files are sold in AAC format.

Accelerometer: A feature of some iPods, all iPhones, and all iPads that enables the device to know how much it is being turned on three axes, or shaken.



Accessibility: Apple's collective term for features designed to help disabled users to use its products. See Spoken Menus and VoiceOver.



Airplane Mode: A setting on the iPad, iPhone and iPod touch that turns off all wireless broadcasting and receiving capabilities at once, rendering each device "safe" for use on airplanes.



AirPlay: Previously known as AirTunes, this wireless technology streams audio and sometimes video or photos from an iOS device, Apple TV, or iTunes computer to Apple TVs, AirPort Expresses, or certain third-party AirPlay accessories.

AirPlay Mirroring: Supported by the iPhone 4S, iPhone 5, iPod touch 5G, iPad 2, iPad (3rd-Gen), iPad (4th-Gen), and iPad mini, this feature wirelessly mirrors the contents of the device's screen on any HDTV with a second- or third-generation Apple TV. This lets you watch videos, games, web sites, and other content on a big screen while interacting with them on the touchable screen.



AirPort Express: Originally introduced in 2004, and updated with a new design in 2012, this Apple Wi-Fi router doubles as an audio receiver. Can stream audio

from any computer with iTunes, playing that audio through attached speakers using AirPlay.

AirPort Extreme: Introduced in 2003, Apple's full-sized wireless (Wi-Fi) router, compatible with Macs and PCs.

AirPrint: Apple's wireless printing solution for iOS devices, compatible only with specific and relatively recent wireless printers. Hacks add AirPrint support to other printers attached to computers running specific operating systems.

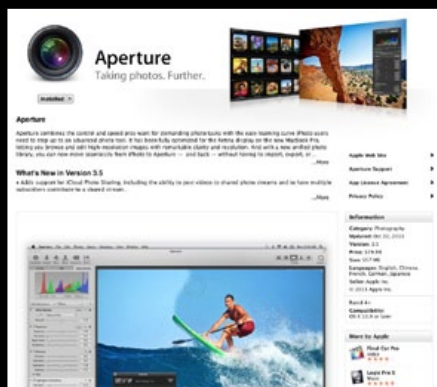
Aluminosilicate Glass: Used in the iPhone and likely in other iOS devices, this special glass is more scratch- and chip-resistant than regular glass thanks to chemical strengthening. Sold by Corning as "Gorilla Glass."

Anodized Aluminum: The matte-finished metal used in most iPods, all iPads, the iPhone 5, and many Macintosh computers.

Anodized Aluminum, Polished: A glossy version of anodized aluminum, debuted by Apple in the late 2009 iPod nano, changed in the 2010 iPod nano and iPod shuffle, both replaced with non-glossy metal in 2012.

Antennagate: The public relations debacle surrounding the discovery that the iPhone 4 suffered from antenna attenuation issues, and Apple's initially flippant response. Also refers to the unusual media event Apple held to address the issue.

Aperture: The ratio of focal length to effective diameter of a camera's lens hole, expressed in the format "f/2.8," with lower numbers indicating superior light-gathering capabilities and more pronounced depth of field. Apple's current iPads, iPod touches, iPhone 4S/5/5c have f/2.4 lenses, versus slower f/2.8 lenses in the iPhone 3GS and iPhone 4, and a faster f/2.2 lens in the iPhone 5s. Aperture is also the name of Apple's professional photo editing and organization tool for Macs, not yet for iOS.

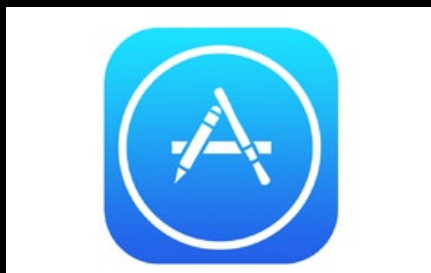


API: Short for "application programming interface," a behind-the-scenes tool to help developers build more powerful apps quickly. Apple touts new iOS releases as containing "over 200 new APIs," suggesting that developers have many new tricks at their disposal.

App (Application): Another word for "piece of software," used by Apple to refer to any downloadable software - including games - available for the iPad, iPhone, and iPod touch. Apple began to use the term for Mac software in 2010, opening the Mac App Store.

App Store: The exclusive distribution point for all Apple-authorized software for the iPad, iPhone, iPod touch, and Mac; the

Mac App Store is separate from the iOS App Store.



Apple: Founded in 1976, a developer of computers and software that in 2001 branched out into music players, 2007 into cellular phones, and 2010 into tablet devices. Now the maker of iPhones, iPods, iPads, Macs, iTunes, iOS, OS X, and numerous other products.



Apple A4 Chip: Based upon the ARM Cortex-A8, this customized CPU also includes a PowerVR SGX 535 graphics processor, and is found inside the iPad, iPhone 4, iPod touch 4G, and second-generation Apple TV.

Apple A5 Chip: Based upon the ARM Cortex-A9, this dual-core CPU is bundled with a PowerVR SGX 543MP2 graphics processor, together delivering 2-9X the power of Apple's A4 Chip. It's found inside the iPad 2, iPad mini, iPhone 4S, third-generation Apple TV, and fifth-generation iPod touch.

Apple A5X Chip: An enhanced version of the A5, using a dual-core ARM Cortex-A9 CPU and quad-core PowerVR SGX 543MP4 graphics processor. Found only in the third-generation iPad.

Apple A6 Chip: Custom-built by Apple but based on an ARMv7s instruction set, this chip has a CPU in the same class as a dual-core ARM Cortex-A15, plus a triple-core PowerVR SGX 543MP3 graphics processor. Currently found only in the iPhone 5 and iPhone 5c.

Apple A6X Chip: Like the A6, this chip is custom-built by Apple and boasts twice the CPU and graphics power of its predecessor, the A5X. Only used in the fourth-generation iPad.

Apple A7 Chip: Custom-built by Apple but based on an ARMv8 instruction set, this chip has a dual-core ARM 64-bit CPU, plus a four-cluster PowerVR G6430 graphics processor. Ships in 1.3GHz and 1.4GHz versions depending on the size of the device. Currently found in the iPhone 5s, iPad Air, and iPad mini with Retina display, and billed as the first 64-bit processor in a smartphone.





AppleCare/+: Apple's extended warranty options. AppleCare provides a two-year warranty and post-90-day telephone assistance for iPods and Apple TVs, while AppleCare+ is more expensive and adds up to two incidents of device replacement (with a per-replacement fee) for broken iPhones or iPads.

Apple Lossless: An Apple-developed audio format that creates sonically perfect copies of CD audio tracks while consuming less space.

Apple TV: A media player designed solely to be connected to high-definition television sets for the playback of standard- and high-definition video, stereo and 5.1-channel audio, and photos. The first model was effectively a seriously stripped down Macintosh computer without traditional keyboard, mouse, or monitor support, controllable only with various remote controls, and contained a hard disk. It was followed by a smaller diskless iPod touch-like version that streamed rented, subscription, iTunes, and iOS device content at up to 720p resolution, then a third version with higher-resolution 1080p output. A fourth version virtually identical to the third was released with a smaller A5 inside.

Audible: Owned by Amazon, a leading provider of audiobooks that can be played on iPads, iPods and iPhones.

Audiobook: A spoken version of a printed book, generally separated by chapter markers that can be skipped through like music tracks.

Autocorrect: A feature of the iPad, iPhone, iPod touch, and some software that automatically corrects perceived mistakes in your typing, using a dictionary and your prior key presses to guess what you wanted to type.

Autofocus: The ability of certain cameras to adjust their lenses to focus sharply on objects at different distances. Contrast with "fixed focus," where some close objects become blurry because the lens cannot adjust.

Aux/Auxiliary: Generally refers to a secondary, external source of audio output or input, connected via a standard-sized 3.5mm (headphone port-sized) audio cable. A device with Aux-In can receive and play sound from a connected sound-generating device; a device with Aux-Out can send sound to a connected sound-amplifying device.

A2DP/AVRCP: Refers to two related standards for stereo Bluetooth wireless audio streaming and remote control. A2DP was added to iOS 3.0, and AVRCP to iOS 4.1, enabling most iOS devices to work fully with stereo wireless speakers and their built-in track controls.

Backside Illumination: First added to the iPhone 4, this redesigned camera sensor

technology improves low-light photography, increasing the amount of light that the sensor can gather by roughly 30%. Various Apple devices have improved upon the original implementation since then.

Bitrate: The amount of data used per second to store audio or video content, with higher numbers generally meaning higher-quality audio or video if everything else is held equal. See also Kbps and Mbps.

Bluetooth (Monaural/Stereo): A wireless standard used by iPads, iPhones, most iPod touches, the seventh-generation iPod nano, and some accessories to transfer audio and other non-video data. Monaural Bluetooth lets iPhones connect wirelessly with headsets and speakerphones for phone calls; Stereo Bluetooth lets other iOS devices and the new iPod nano send music to wireless headphones and speakers. Bluetooth can also be used by certain iOS apps for multi-player gaming. The latest iPhones, iPads, iPod touch, and iPod nano include Bluetooth 4/Bluetooth Smart - the latest version of the standard - while older iPhone, iPod, and iPad models all use Bluetooth 2.0 or 2.1.



Burst Mode: A term referring to the ability of a camera to shoot clusters of photos in rapid succession without stopping. The iPhone 5s can shoot up to 10 full 8-Megapixel images per second continuously, roughly three times the speed of the iPhone 5/5c.

CDMA: Short for Code Division Multiple Access, the wireless technology used by Verizon and Sprint's 3G networks, which rendered them incompatible with early iPhones based on the competing GSM standard. The first CDMA iPhone was the Verizon iPhone 4.

Cellular/Cell: Refers to the wireless networks created by phone companies' towers, capable of broadcasting and receiving telephone calls and data from iPhones and other cellular phones. EDGE, 3G, 4G, and LTE towers differ in speed and relative pervasiveness across the world.

Click Wheel: The five-button plus touchable surface circular controller incorporated on most iPods sold until recently, providing scrolling, selection, volume-, and track-changing functionality. Currently used only on the iPod classic, possibly never to return to other devices.



Cloud: Refers generally to servers on the Internet where data can be remotely stored and wirelessly retrieved regardless of one's geographic location. See iCloud and MobileMe.

Component AV Cable: A cable that uses five "RCA-style" connectors - three video, two stereo audio - to output standard- or high-definition video to a television set.



Composite AV Cable: A cable that uses three analog connectors - one for video, two for stereo audio - to output standard-definition video to a television set.

Cover Flow: A feature of iTunes, all iPhones, iPod classics, and iPod touches that displays album covers in a line, with the currently selected cover in the center and others on angles to its sides. Enables visual, photographic browsing for albums rather than reading a list of text. Abandoned after Apple lost a patent lawsuit, despite a later successful appeal of the verdict and damages.



DC-HSDPA: Supported by the third-generation iPad and later iPads, as well as the iPhone 5 and later iPhones, this interim "dual-cell" standard between 3G and LTE promises download speeds of 42 Mbps on certain Canadian, European, and Asian cellular networks.

Developer (Dev): Refers to anything from a single person to an entire company of people who make products. Third-party developers create products that are dependent on products created by the "first-party," here, Apple.

Dictation: Generally coupled with Siri, allowing certain iOS devices to accurately transcribe spoken words into text. Offered without Siri on the third-generation iPad until iOS 6; still offered alone on Macs running OS X Mountain Lion.

Digital Compass: Also known as a magnetometer, a sensor that detects the device's orientation relative to the Earth's magnetic poles. Currently found in iPhones and iPads, not iPods.



Dock Connector: One of two names for Apple's proprietary 30-pin connector, which was used in all iPad, iPod, and iPhone models from 2003 through early 2012 except for iPod shuffles. Hides tiny pins for charging, data

synchronization, remote control, and audio and video output. Replaced by the Lightning connector.

DRM: Digital Rights Management, a technology that locks audio, video, and other files such that they can only be played by one user or a small group of users sharing a single account and password.

Dual-Band Wi-Fi: The ability of an 802.11n device to broadcast or receive data on either 2.4GHz or 5GHz frequencies. A simultaneous dual-band router transmits data on both frequencies at once; iPads, the iPhone 5, and iPod touch 5G can switch between 2.4GHz and 5GHz as requested by the user.

Dual-Core Chip: One chip with two separate processors working together at the same task. A dual-core CPU is akin to two single-core CPUs.

Dual-Mode: A phone that is capable of operating either in CDMA or GSM mode as needed. The iPhone 4S, 5, and 5s do this.



EarPods: Apple's latest \$29 earbuds, released in 2012 and packed in with the iPhone 5, iPod nano 7G, and iPod touch 5G. A

new design funnels bass directly into the ear canal, improving stability and comfort.

EDGE: Refers primarily to the slow cellular data standard used on GSM networks in the United States and elsewhere prior to the growth of 3G. Relied upon by the original 2007 iPhone, and a fallback for newer iPhones when 3G towers cannot be located nearby, dropping their data speeds.

Exchange: Shorthand for Microsoft Exchange, software offered by Microsoft to help large organizations synchronize their e-mail, calendars, contacts, and tasks. Exchange support was added to the iPhone OS in 2008 to help Apple's devices gain inroads in the Microsoft-dominated corporate market.

Facebook: The social network with over 1 billion users. Integrated Facebook status posting, photo/video posting, and contact information access was added in iOS 6.



FaceTime: Apple's name for both video calling and front-facing cameras on the most recent iPads, iPhones, iPod touches, and Macs. The FaceTime standard supports two-person calls with H.264 video and AAC audio. FaceTime HD refers to a front-facing camera with at least 1280x720 resolution for video recording and possibly

calling, depending on network bandwidth. As of now, FaceTime calls use considerably lower HVGA resolution (480x368) regardless of the camera a device has.

FairPlay: Apple's DRM scheme for iTunes Store content, including movies, TV shows, and apps, but no longer music. Permits multiple devices to share the same content, so long as they are all registered to the same iTunes Store account.

Fingerprint Identity Sensor: See Touch ID Sensor.

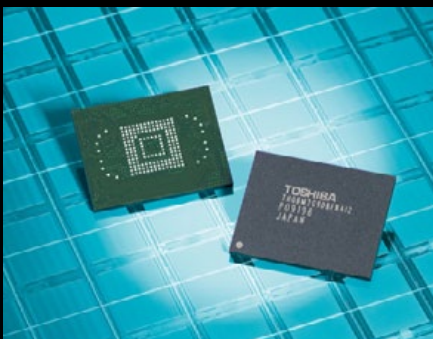


FireWire Charging: The original charging and synchronization connector technology found in all iPods before Apple migrated partially (2003) and then almost entirely (2008) to the more common USB standard for charging. Unlike subsequent Apple charging and syncing standards, FireWire initially had two identical male connectors on both sides of the cables, for connection to female FireWire ports on the first- and second-generation iPods. Apple switched to the Dock Connector for the third-generation iPod, but continued to sell FireWire to Dock Connector cables for users with FireWire ports on their computers. Most iPods since 2003 and the original iPhone supported both FireWire and USB charging, but in 2008 the iPhone 3G, iPod nano, and iPod touch dropped

support for FireWire charging, breaking charging compatibility with computers and some accessories. Today, FireWire can not be used to charge current iPods or iPhones; it has never been supported for iPads.



Flash: Shorthand for Adobe Flash Player, a web browser plug-in for PCs and Macs that enables the display of animated graphics and video. Support for Adobe Flash was left out of all iOS devices due to stability, memory, and battery issues; HTML5 is offered as an alternative.



Flash Drive/Flash Memory: A chip-based replacement for a hard disk, requiring less power and physical space, thus enabling the creation of the iPod nano, shuffle, and touch.

Flyover: Apple's term for user-controlled movement through the textured 3-D landscapes included in iOS 6 and iOS 7 maps, akin to flying over cities in a helicopter.

Frames Per Second (FPS):

Like a flipbook turning pages in rapid succession, refers to the number of still pictures that can be displayed on a screen in one second to create a smooth video image. Human beings can barely perceive more than 30 FPS, but gamers will notice a difference between 30 and 60 FPS. Movies are typically shown at 24 FPS, a rate below which video appears to be choppy. The Slo-mo Video feature added to the iPhone 5s records 120 FPS for the purpose of playing segments back at 1/4 normal speed, optionally showing any segment of the recording as smooth but slowed-down video.

Game Center: Apple's game matchmaking, turn-managing, and achievement-tracking app/service for iOS and Mac users.

Generation: As in, "second-generation iPod nano." A term used first by iLounge and later by Apple to distinguish between successive versions of iPods, iPhones, and iPads, given that Apple continued to use the same product names year after year for different models. Often abbreviated "G," such as "iPod 5G" or "iPod nano 3G," though the abbreviation invites confusion with the iPhone 3G - actually the second iPhone model - and with "GB," or Gigabytes, below.

Gigabyte (GB): The unit of measurement for every iPod's, iPad's, and iPhone's storage capacity. Apple estimates that 125-250 songs or 1 hour of video can fit in each Gigabyte of a device's storage capacity, though the actual numbers will vary based on how the audio and video is encoded, as well as

other factors. As distinguished from Generation/G above and 3G below, capacity is listed to show "an iPod 5G with 30GB capacity" or "an iPhone 3G with 32GB capacity."



Genius: Refers variously to the key technical support personnel in Apple Stores, and a feature of iTunes that uses information about your current song library to predict additional songs that you might like.

Genius Mix: An extension of the iTunes Genius feature that uses information about your current song library to create playlists of songs that are similar to one another.

Geocoding: Added to iOS 5, a feature that allows street addresses to be converted directly to geographic coordinates, and vice-versa.

Geofence: Introduced with iOS 5 and available in certain iPhone and iPad models, this GPS-related software technology creates a virtual "fence" around a certain geographic location, enabling the iOS device to remind you of something when you walk in or out of the area.

Geotagging: The ability of iOS devices with GPS or Location Services to mark photos, videos, and audio recordings with the map coordinates at which they were recorded.

GLONASS: A Russian-built alternative to GPS satellite navigation, supported by the iPhone 4S/5 and third-generation iPad.

GPS: Outside the Apple world, refers to mapping devices with satellite antenna-assisted ability to know their locations, and offer turn-by-turn guidance from one street address to another. In Apple's world, refers solely to the presence of a small GPS antenna and chip combination that can roughly estimate location on a map, aiding in geotagging, but lacking turn-by-turn direction software. AGPS is "Assisted GPS," or a GPS chip with help from cellular tower triangulation.

GSM: Global Standard for Mobile (communications), the cellular telephone standard used by 80% of the world's phones, including iPhones. Enables all iPhones except the Verizon iPhone 4 to be used almost anywhere in the world, either with roaming charges, or unlocked with different SIM cards.



Gyroscope: Found in the iPhone 4/4S/5, iPad 2/3rd-Gen/4th-Gen, iPad mini, and iPod touch 4G/5G, this positional sensor enables devices to more accurately know their orientation and track user movements, for both gaming and augmented reality applications.

H.264: Apple's preferred video compression format is a sequel to MPEG-4 technology, resulting in high-quality, comparatively small video files. Challenging for some computers to create, but no problem for computers, iPods, iPads, iPhones, or Apple TVs to play. One of two key video formats supported by Apple for iPods, iPhones, iPads, iTunes, and Apple TVs; MPEG-4 is the other, less efficient format.

HDCP: An industry-developed copy protection technology for high-definition content, implemented both within televisions and devices that connect to them. Required by recent Apple TVs, iPads, iPhones, and iPod touches in order to play back iTunes Store-sold HD video output at 720p or 1080p resolutions.



HDMI: A cable standard designed to handle high-definition video and multi-channel audio, plus data

transmissions, in a single thick digital connector.

HDR (Photography): High Dynamic Range, referring to the ability of a camera to capture more detail in dark and light areas of an image by taking several quick photos at different exposure levels, comparing the differences, and merging them together into one enhanced "HDR" photo. The iPhone 4, 4S, and 5 include HDR support, as does the iPod touch 5G.

Headphone Jack/Port: The primary way to hear audio from an iPod, this 3.5-millimeter-wide hole makes low-power electrical connections with headphone plugs and 3.5mm audio cables, splitting outgoing sounds into left- and right-channel stereo. Current iPad, iPod and iPhone headphone ports are also used for one- or three-button remote controls and monaural microphone input, as well.



Home Screen: Known to developers as Springboard, the "Home Screen" of the iPad, iPhone, iPod touch, and seventh-generation iPod

nano is where the icons for individual applications reside, and accessible at any time by pressing the circular Home Button on the front of these Apple touchscreen devices.

Hotspot: A public access point for wireless Internet access. Also known as a Wi-Fi Hotspot. Through partnerships with businesses such as Starbucks and Barnes & Noble, AT&T offers free Wi-Fi Hotspot access to iPhone (and some iPad) users in the United States. Hotspot Internet access is always provided using Wi-Fi.

HSDPA: One of several 3G (or third-generation) cellular standards, "High-Speed Downlink Packet Access." Offers up to 14Mbps download speeds under ideal conditions; supported by recent iPhones and cellular iPads.

HSPA+: Short for Evolved High-Speed Packet Access, this stepping stone to LTE cellular performance typically offers up to 21Mbps or 42Mbps download speeds - 3 or 6 times faster than the 7.2Mbps HSDPA found in the iPhone 3GS and 4. Included in the iPhone 4S, iPhone 5, third-generation iPad, fourth-generation iPad, and iPad mini.

HSUPA: One of several 3G cellular standards, "High-Speed Uplink Packet Access," added to the iPhone 4 and iPad 2, increasing cellular upload speeds from 0.4Mbps to up to 5.76Mbps, depending on carrier support and antenna obstructions.

HTML5: An open standard for next-generation web site development, championed by Apple as an alternative to

Adobe's Flash for animated graphics and video playback. Increasingly supported by web sites that want their pages to work fully on both iOS devices and modern computers.



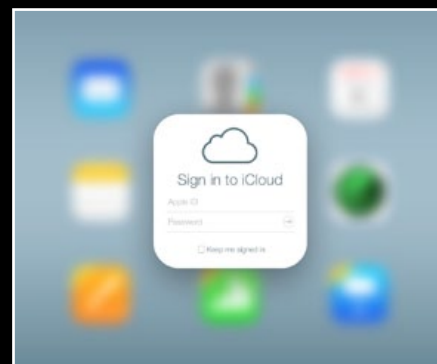
HVGA Resolution: Currently the default resolution for Apple's FaceTime video calling service, 480x368 refers roughly to half the classic VGA (480x640) resolution, adjusted for the taller aspect ratios of Apple's 4" displays.

iAd: Apple's premium advertising service, introduced in iOS 4, enabling companies to advertise using banners and full app-sized "rich advertising content" nestled within free or inexpensive apps. iAds leverage newer iOS devices' multitasking to quickly flip back and forth between the ad and the original app, so users aren't discouraged from viewing compelling ads.



iBooks + iBookstore: Once the name of Apple's low-end laptops, iBooks has become the name for a book- and PDF-reading application for the iPad, iPhone, iPod touch, and Mac; iBookstore is the built-in store that sells digital books for iBooks.

iCloud: Unveiled in mid-2011, this replacement for Apple's MobileMe service is free for all iOS 5 and newer device users, storing music, photos, apps, calendars, documents, and settings on Apple's Internet-accessible servers (see Cloud), then automatically synchronizing them to all of your devices. Also includes a free @icloud.com e-mail account, and can be upgraded with additional music or data storage capacity for an annual fee.



iCloud Tabs: An iCloud-reliant feature of iOS 6 and OS X Mountain Lion for Macs, enabling a user to see the open tabs on all of her Safari web browsers from any iOS device or Mac.

iLife: Apple's aggregate name for the iPhoto, iMovie, and GarageBand apps. The latest versions of all three are included with each new computer purchase, and as of late 2013 with each new iOS device purchase as well.

iMessage: Apple's Messages app for iPhones, iPod touches, iPads, and Macs enables any iOS 5 or newer device to send and receive text, photo, and video messages over Apple's "iMessage" network without relying upon cellular networks or paying per-message fees; the Messages app handles fee-based SMS/MMS, too.

In-App Purchasing: Also known as IAP, this allows developers to sell additional content - game levels, additional characters, or application features - from within an already-downloaded game or app. For a minimum of 99 cents, a purchase can either download new content and expand the original size of the app, or unlock existing content that was hidden inside the app.

Infrared: Refers to the wireless technology used by most remote controls, using red light that's invisible to the human eye to broadcast flashing signals. Infrared remotes generally work only from 30- or fewer-foot distances, and must generally be pointed in a direct line of sight towards the receiving device. Superior remote controls use radio frequency (RF), which is not as limited in feet or direction.

Internet Radio: An alternative to AM, FM, and HD Radio that depends solely upon the Internet rather than broadcasting towers in order to transmit music and talk programming to users, generally in a "streaming" form that is passively heard by the listener rather than controlled. Thousands of stations around the world now offer Internet Radio; traditional AM and FM stations now offer their content in this format as well. iTunes, Apple TVs, and third-party iPhone/iPod

touch/iPad apps can stream Internet Radio.



iOS: The most recent (and likely final) name of what was previously called iPhone OS and OS X iPhone, referring to the operating system that powers all iPhones, iPod touches, iPads, and the latest two Apple TVs.



iPad: The family name for Apple's line of tablet computers. Can also refer to either the first such tablet Apple released, the third-generation model announced as "the new iPad" in early 2012, or November 2012's fourth-generation model.

iPad mini: Apple's 7.9"-screened smaller iPad, to be available in November 2012. Capable of running iPad applications, but otherwise similar in features to the iPod touch 5G.

iPad With Retina display: The name Apple began to use for the full-sized iPad after debuting the iPad mini. Currently refers to the

fourth-generation iPad.

iPad With Wi-Fi: The original base model of Apple's tablet computer, using a 9.7" touchscreen and an 802.11n wireless chip to offer Internet access at homes, offices, and Wi-Fi hotspots, plus most of the media and app features of iPhones.

iPad With Wi-Fi + 3G: The high-end original iPad, adding a 3G cellular data chip to offer Internet access on the road, typically without the need for a multi-month service contract.

iPad With Wi-Fi + Cellular: Apple's current naming convention for its third- and fourth-generation 3G/LTE versions of the iPad. Briefly known as iPad With Wi-Fi + 4G until Apple was accused of false advertising in certain markets without 4G/LTE.



iPad 2: Apple's second-generation tablet computer, built thinner and lighter than the original while containing much faster processors and twin cameras for FaceTime. Comes in Wi-Fi-only or Wi-Fi + 3G versions, as well as white- or black-bezeled versions, each with silver aluminum backs.

iPhone: The family name for Apple's line of cellular phones

with integrated iPod media capabilities and Internet functionality built in. Also refers to the original 2007 product of the same name, which was discontinued in mid-2008.

iPhone 3G: The 2008 replacement for the original iPhone, named specifically to reference its 3G cellular compatibility, which offered GPS, superior speeds, and better network compatibility than the first model. Discontinued in 2010 after two years of sales.

iPhone 3GS: The 2009 sequel to the iPhone 3G, with an added "S" to indicate superior speeds achieved through faster chips, more RAM, and better cellular capabilities relative to the iPhone 3G, plus a compass and video camera. Discontinued in late 2012.



iPhone 4: The fourth member of the iPhone family, featuring a "Retina Display" screen, "FaceTime" video calling, and a rear 5-Megapixel camera amongst other improvements. Originally sold in 16GB and 32GB capacities, then only a 8GB capacity, as well as black or white versions.

iPhone 4S: The fifth-generation

iPhone, preserving all of the features of the iPhone 4 while adding an 8-Megapixel rear camera, faster chips, and the Siri intelligent assistant. The first iPhone to come in a 64GB capacity beyond 16GB and 32GB versions, all of which were later discontinued, leaving an 8GB model as Apple's entry-level "free" iPhone.

iPhone 5: Actually the sixth-generation iPhone, this model introduced a 4", 16:9-aspect ratio screen and LTE cellular connectivity to the family, while dramatically improving processing speeds and camera performance. Available in 16, 32, and 64GB capacities, it was discontinued in September 2013.

iPhone 5c: Virtually identical to the iPhone 5 in functionality, this 2013 model shed the metal and glass rear housing in favor of a glossy plastic enclosure with five different color choices - the first iPhone to come in primary colors. Originally sold in 16GB and 32GB capacities.

iPhone 5s: Virtually identical to the iPhone 5 cosmetically, this 2013 model doubled its predecessor's processing power, added a Touch ID fingerprint scanner, and upgraded the camera systems, most notably with a dual-LED rear flash and Slo-Mo video. The first iPhone to be available in gold or gray colors. Originally sold in 16GB, 32GB, and 64GB capacities.

iPhone OS: The former name of iOS, changed in 2010 with iOS 4.

iPod Click Wheel Games: Refers to a library of roughly 50 pieces of software developed from 2006 through 2009 to be played on

the iPod 5G, classic, and nano 3G, 4G, and 5G models. These games sold for \$5 each with the exception of a few \$1 titles, and are incompatible with the iPhone, iPod touch, Apple TV, and other Apple products. Quietly discontinued in 2011 and entirely unplayable on other Apple devices or computers.

iPod: The family name for Apple's line of digital media players, and later iPhone/iPad applications that emulated them. Also refers to the original 2001 product of the same name, renamed in 2006 to "iPod classic." Has traditionally referred to a pocket-sized (or smaller) audio player that may or may not have other capabilities. Original iPods exclusively featured white or black plastic face plates and polished stainless steel rear casings; black and red-faced versions were released from 2004-2006 with the rock band U2.



iPod classic: Apple's sole remaining hard disk-based digital media player, previously known as the iPod. iPod classics have exclusively featured silver or black anodized aluminum face plates and polished stainless steel rear casings. For years, it has been available only in a 160GB capacity for \$249.



iPod mini: Released in 2004, Apple's first attempt to shrink the iPod into a physically smaller, less expensive, and less capacious version. Pioneered the use of colored anodized aluminum shells as a resilient, eye-catching, and personalizing alternative to the plastic and stainless steel full-sized iPods; established 4GB of storage capacity, size, and colors as key to appealing to mainstream users. Discontinued in 2005.

iPod nano: Released in late 2005 as a replacement for the iPod mini, Apple's first attempt to repackage a color-screened iPod in an "impossibly thin" shell, using flash memory as a replacement for the hard disk. Replaced annually every year since introduction with a new design, adding video capabilities in 2007, evolving from two plastic and stainless steel body colors to nine by 2008, and adding video camera, speaker, microphone, and FM radio features in 2009. Lost all video and camera features in 2010 when shrinking to size of iPod shuffle, but gained a touchscreen; the larger 2012 model regained video playback and an iOS-like (but not iOS) interface with a 2.5" touchscreen. Currently available in a 16GB capacity.

iPod photo: Released in 2004 as the iPod Photo (later "photo"), this thick, expensive iPod was Apple's first with a color screen and photo playback. It was subsequently shrunk, price-chopped, and renamed "iPod."



iPod shuffle: Released in 2005, this screenless iPod was Apple's first to hit a \$99 price point, and the first to use flash memory instead of a hard disk for storage. Pitched as wearable and designed for users who didn't need the complexity of Click Wheel controls, the shuffle shrunk into a matchbox-sized form in 2007, and then smaller in 2009, losing its integrated buttons in favor of a headphone-mounted remote control. It regained buttons and audio quality in 2010. Currently sold only in a 2GB capacity.

iPod touch: Released in 2007 after the original iPhone, this was the first widescreen, Wi-Fi, and Internet-ready iPod and, in essence, an iPhone without the phone, camera, speakers, or microphone. Initially crippled with a deliberately limited subset of the iPhone's features, iPod touch grew with software updates to be extremely similar to the iPhone in applications, adding a speaker and microphone-friendly headphone port in 2008, then voice controls in 2009, then twin

cameras and a Retina Display in 2010. The 2012 model improved the cameras and lengthened the screen to 4" with a 16:9 aspect ratio. Now pitched as the iPod for gamers, an iPod touch runs virtually all the same apps as the iPhone. Apple sells 8GB and 16GB fourth-generation iPod touches alongside 32GB and 64GB fifth-generation models.



iPod touch loop: Bundled with the fifth-generation iPod touch and sold separately, this wrist strap attaches to a swirled metal button that pops out of the iPod's back.

iSight Camera: Apple's recent name for the rear cameras found on most iPhones, iPod touches, and iPads; the term previously referred to front-facing cameras found on Macs, which are now called FaceTime cameras.

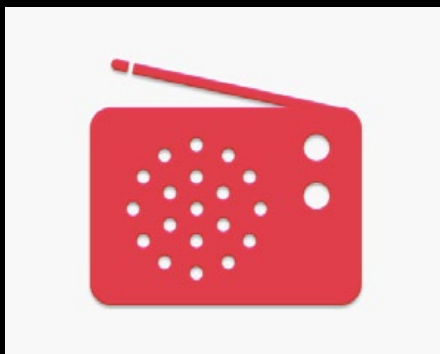
iTunes: Released in 2001, Apple's digital music management software has evolved to become the Mac and PC hub for managing and selling music, video, and game content to iPad, iPod and iPhone users, wirelessly sending audio, photo, and video content to Apple TV users, backing up devices, and streaming media to AirPlay devices. As of iOS 5, iTunes use became optional; iCloud can be used instead for wireless device backup and synchronization.

iTunes in the Cloud: Apple's mid-2011 upgrade to allow certain past iTunes Store music, TV show, and video purchases to be re-downloaded by computers and iOS devices at no additional charge.

iTunes Match: A paid \$25/year service by which the majority of your iTunes music library can be made available for nearly instant playback on any iOS 5 or later device using iCloud. iTunes Match scans your entire music library, gives you quick access to any track it can find in the iTunes Store, and lets you transfer any unlocated tracks to your iCloud account for future streaming.



iTunes Plus: Refers to 256Kbps music sold through the iTunes Store without DRM, and at twice the bitrate/Kbps of prior 128Kbps music sold there.



iTunes Radio: Added to iOS 7, iTunes 11.1 and Apple TV Software 6.0, this free streaming music service creates radio-like “channels” based on the artists or songs you specify, playing similar tracks from Apple’s large

catalog of iTunes music rather than limiting you to what’s on your own device. Songs can be skipped but not rewinded or fast-forwarded; ads are played unless users subscribe to iTunes Match.

iTunes Store: The section of iTunes devoted to selling music, audiobooks, and videos on computers and iOS devices, as well as distributing free and paid podcasts, iTunes U educational content, books, applications, and games on computers. The latter media are sold through separate apps on iOS devices.

iTunes Tagging: A feature of certain accessories and iPods, enabling iPods to store “tags” with name data for currently playing radio songs, then synchronize it back to iTunes for location in the iTunes Store.

iTunes U: A section of the iTunes Store devoted to educational content from numerous higher learning institutions, museums, and information providers. Also the name of an iOS app that browses, organizes and performs this content.

iWork: A collection of three Apple-developed Mac and iOS alternatives to Microsoft Office programs: Pages replaces Word, Numbers replaces Excel, and Keynote replaces PowerPoint. Documents from iWork programs can be viewed on the iPad, iPod touch and iPhone without the apps. As of late 2013, the iWork apps are now free with any iOS device purchase.

JPEG/JPG: The primary format for photo storage and display on iPads, iPods, iPhones, and Apple TVs, as synchronized through iTunes or viewed via their Internet connections.

Kbps: Kilobits per second. A measure of the amount of data stored in a given second’s worth of audio or video. Higher numbers typically mean higher quality. See Bitrate.

Light Sensor: Also known as an Ambient Light Sensor, this small front-facing sensor enables iPhones, iPads, and most iPod touches to automatically adjust screen brightness in especially bright or dark rooms. Quietly removed from the fifth-generation iPod touch due to what Apple said was a lack of thickness for the sensor.

Lightning Connector: Apple’s late 2012 replacement for the classic 30-pin Dock Connector found on all iPads, all iPhones, and most iPods sold from 2003 through mid-2012. Considerably smaller and reversible, this connector uses 8 tiny pins in a line for all-digital communication with cables and other accessories. Apple offers Lightning Adapters to allow some older Dock Connector accessories to work with Lightning-equipped iPads, iPhones, and iPods.

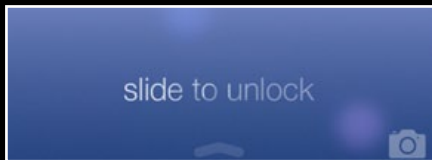


Lithium-Ion/Lithium-Polymer Batteries: Rechargeable battery technology used in iPads, iPods, and iPhones that enables them to operate at full or nearly full capacity for around two years before requiring new replacement batteries.

Live Pause: Apple’s term for the ability to stop a live radio

broadcast, then resume it from the point where you stopped. Found in the FM Radio feature of certain iPod nano models.

Location Services: Apple's broad term for GPS and GPS-simulating technologies such as Skyhook, which creates a rough GPS-like approximation of your location by consulting a map of wireless routers. All cellular iPads and all iPhone 3G and later models have real GPS, while the iPads with Wi-Fi, iPod touches, and the original iPhone have no GPS, but can use Location Services.



Lock Screen: Found on the iPad, iPhone, and iPod touch, this screen prevents the device's many apps from being accidentally activated by adding a swipable left-to-right lock before you reach the Home Screen of a sleeping iOS unit. In addition to containing a photo of your choice, this screen now also has a down-to-up swipable camera icon to automatically open the Camera app on many iOS devices.

Loop: See iPod touch loop.

LTE: Also known as 4G LTE, this "Long Term Evolution" standard for fourth-generation cellular wireless transmissions promises peak download speeds of 300Mbps and uploads at up to 75Mbps. American LTE networks are still under development, with speeds in the 10-70Mbps down/2-30Mbps up range. The iPhone 5/5c/5s, iPad mini, and Retina display-equipped iPads with Wi-Fi + Cellular support LTE in certain countries. A related

standard, LTE-Advanced, is currently rolling out in South Korea.

M7 Chip: Co-developed by NXP and Apple, the M7 motion coprocessor is a low-power ARM Cortex-M3 chip that records accelerometer, gyroscope, and compass data without demanding the power-hungry CPU to be actively involved. Fitness and mapping apps can use M7's data to understand the user's current state of movement and speed. It's inside the iPhone 5s, iPad Air and Retina iPad mini.

Magnetometer: See Digital Compass.

Mbps: Megabits per second. A measure of the amount of information contained in one second worth of transmitted or played data. Higher numbers typically mean higher quality video. See Bitrate.

Megapixel: Each million dots used in a digital photo is referred to as a "Megapixel." The original iPhone and iPhone 3G had 2-Megapixel cameras. iPhone 3GS has a 3-Megapixel camera. The iPhone 4, iPod touch 5G, iPad mini, third-generation iPad and fourth-generation iPad have 5-Megapixel cameras, and iPhone 4S/5 have 8-Megapixel cameras. Only the iPod touch 4G has a 0.7-Megapixel rear still camera. As a general rule, more Megapixels in the same-sized space (say, 4" x 6") means more detailed photos, though this isn't always 100% accurate.

Micro-SIM: The now mid-sized SIM card used by the iPad, iPad 2, iPad 3rd-Gen, iPad 4th-Gen, and iPhone 4/4S. See also Nano-SIM and SIM Card.



Micron: Represented with the symbol μ , another name for "micrometre," or 0.001 millimeters. Apple recently began to note the size of pixels in its iPhone rear cameras; the iPhone 5s pixels are a slightly larger 1.5μ (0.0015 mm) versus 1.4μ in the iPhone 5/5c. Larger pixels can theoretically gather more light.

MIMO: Short for Multiple Input, Multiple Output, MIMO refers to multiple wireless antennas that can work together to send and receive data faster. iPad Air and the Retina iPad mini have "2x2" antennas - two send, two receive.

MobileMe: Apple's now-discontinued \$99/year service that stores emails, photos, videos, music, contacts and calendars in a 20GB "cloud" account, letting you instantly sync email and other info to iPads, iPhones and iPod touches, as well as accessing media and documents stored online. Largely replaced by iCloud.

MP3: Also known as MPEG-3 (more accurately MPEG-2, audio layer 3), the breakthrough audio compression format that eventually led to digital distribution of music, albeit in other, more heavily DRMed audio formats such as protected AAC and Microsoft's WMA.

MPEG-4: Also known as MP4, a video compression format that enabled huge movie and

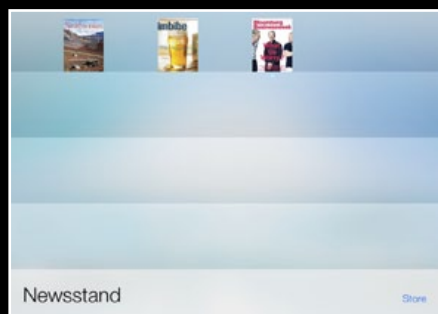
television files to be compressed into sizes that could fit on pocket-sized devices. One of two key video formats supported by Apple for iPads, iPods, iPhones, iTunes, and Apple TV; H.264 is a newer, superior format.

MSRP: Industry abbreviation for Manufacturer's Suggested Retail Price. Virtually every product sold in the U.S. has one; SRP and RRP mean the same thing.

Multitasking: Refers generally to the ability of a computer to do several things at the same time, displaying one or more of them on screen at the same time while others work in the "background," invisible to the user but still occupying the computer's processor and memory. Though all iOS devices multitask, only iOS 4 and later devices allow third-party applications to do so.

Multi-Touch: Apple's term for the technologies it uses to enable touchscreens and trackpads to recognize more than one finger's movement at a given time, enabling pinch zooming, two-finger scrolling, and other tricks.

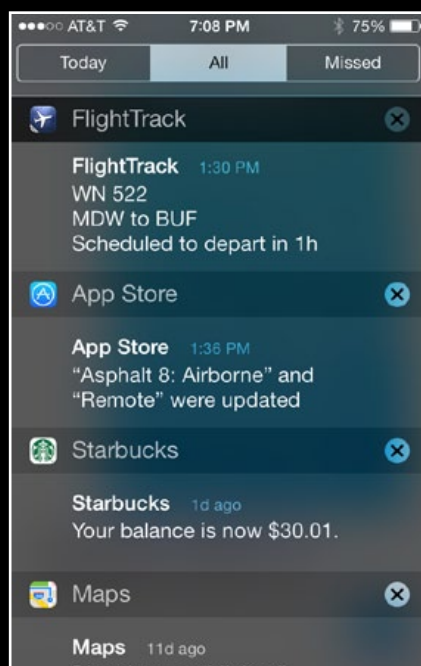
Nano-SIM: The smallest SIM card standard, currently used by the iPhone 5c/5s, iPad Air, and iPad mini. See also Micro-SIM and SIM Card.



Newsstand: Apple's virtual newspaper and magazine rack

for iOS devices, containing app-based periodicals that can automatically download new issues and maintain recurring paid subscriptions through the iTunes Store/App Store.

Nike + iPod (Sport Kit): The 2006 fruit of a collaboration between Apple and fitness apparel company Nike, combining an iPod-based receiver with a Nike shoe-based sensor to track the distance walked or run by the user. The iPod then synchronizes the workout data with iTunes and a Nikeplus.com web site, providing ongoing performance metrics. Current iPod touch and iPhone models have Nike+ wireless receivers built-in; the accessories are compatible with iPod nanos but not with iPod shuffles, classics, minis, or earlier iPhones. In late 2011, Apple enabled the sixth-generation iPod nano to offer Nike + iPod-like run tracking with its pedometer. A 2012 accessory called the Nike+ Sport Sensor added a pressure sensitive feature for basketball jump height measurement, and workout motion tracking.



Notifications: Previously displayed in a small blue box in the center of an iOS device's screen, these text and image boxes can contain messages from other people, reminders, mentions of past phone calls, updates from apps, and more, interrupting whatever else you're doing on your device. As of iOS 5, all notifications are brought together in a Notification Center, and many are displayed on your Home Screen for immediate access.

Office: Refers to Microsoft Office, the dominant productivity suite for word processing (Word), spreadsheet (Excel) and presentation (PowerPoint) creation. iPad, iPhone and iPod touch can display Office documents for reading only.

Oleophobic Coating: A complex way of saying "oil-resistant." Found on iPads, recent iPhones, and certain iPod touches, this coating makes it easier to remove finger and face smudges with a simple wipe of the display.

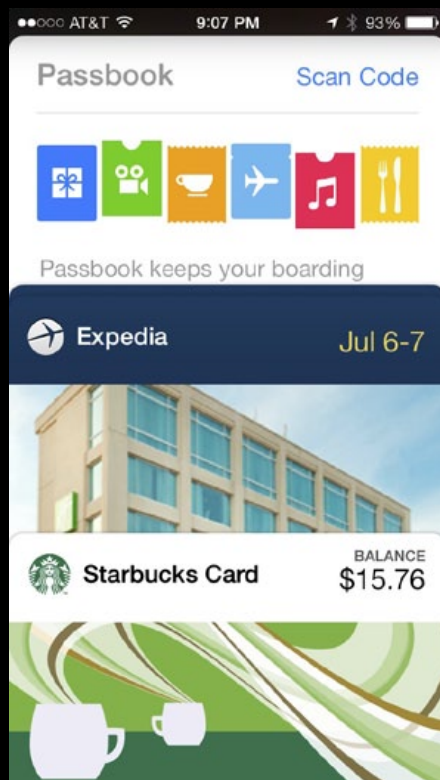
OpenGL ES: The industry-wide cross-platform development software for rendering 2-D/3-D game graphics on portable devices and certain game consoles. iOS devices have supported OpenGL ES for years; most current devices run OpenGL ES 2.0, with Apple A7 chip-based devices supporting the newer OpenGL ES 3.0.

Optical Audio: Refers to the fiber optic cables used to connect certain AV receivers to components for a digital stereo or multi-channel audio signal. All Apple TVs, all AirPort Expresses, and most Mac computers are capable of optical audio output.

Pano: See Panorama.

Panorama: An iOS 6 camera software feature supported by the iPhone 4S/5 and fifth-generation iPod touch, capturing super-wide or -tall photos that have been automatically stitched together into a (nearly) seamless image.

Passbook: Apple's iOS app that aggregates digital versions of wallet-carried items - membership and gift cards, as well as airplane, movie, sports, and train tickets. Passbook-enabled cards and tickets can automatically pop up on the iPhone's Home Screen when GPS and geofencing determines you're near the places where they can be used.



PDF: Portable Document Format. Created by Adobe, this standardized format enables text, bitmapped graphics, and vector artwork to be assembled into files that look the same from machine to machine, and print in high-resolution on printers.

iPads, iPhones and iPod touches can display PDFs, now within Apple's iBooks application.

Pedometer: A piece of hardware that measures the number of footsteps taken by the user, assisting in calculations of calories burned during a given period of time. Found in the last several iPod nanos.

Photo Stream: Added in iOS 5, this iCloud-based feature automatically gathers photographs snapped by all of your iOS devices or stored on your Macs, placing them in a "last 1,000 images" collection that can be viewed from your computer, Apple TV, or any other iOS 5/6/7 device. Can also be used now in a limited way to share videos originally recorded on iOS devices.

Ping: Added to iTunes 10 in September 2010, this music social network was designed to help iTunes Store shoppers get recommendations from friends, as well as follow the activities of artists selected by Apple to receive special accounts. Discontinued in September 2012 due to weak interest from users and participation from artists.

Pixels: The colored square dots that create images on computer and portable device screens. If two screens are the same size, and one has more pixels per inch (PPI, aka dots per inch or DPI) than the other, the first screen is capable of displaying pictures with a greater level of detail.

Podcast: Term that describes radio- or TV show-like audio and/or video recordings that are distributed solely over the Internet rather than on radio or TV. Podcasts can be found in the

iTunes Store or on individual web sites, and are playable through iTunes, iPads, iPods, iPhones, and Apple TVs.

PowerVR SGX: The graphics processors used in most iPhones and iPod touches, as well as in all iPads. Developed by Imagination Technologies as energy-efficient alternatives to the massive, power-hungry graphics chips in Macs and PCs. Original versions had only one processing core; current versions have two, three, or four cores.

Predictive Text: A software technique to guess what you're trying to type or about to type from what you've already typed, sometimes enabling you to skip finishing words and just accept the software's guess as correct. Used often in searching.



(PRODUCT) RED: The official brand of the Global Fund to Fight AIDS, Tuberculosis and Malaria, licensed to partners who produce red versions of their products to sell with charitable proceeds given to the Fund. Apple partnered with the Global Fund in 2006 and has released six iPod nanos, three iPod shuffles, one iPod touch, three iPad accessories, an iPhone 4S Bumper, iPhone and iPad Cases, and iTunes Cards with the (PRODUCT) RED logo.

Proximity Sensor: Built into every iPhone, proximity sensors enable the phones to deactivate and activate their screens when faces are brought close to the controls.

Realtime: Refers to the ability of a user to interact with or edit something as it's happening or with 1-to-1 speed rather than on a delay. Realtime video editing, as one example, means that changes are made without having to wait minutes or hours between edits; "slower than realtime" implies a wait.

Remote and Mic: As used by Apple, a short term to reference the current combination of a microphone with a three-button volume and multifunction track remote control on certain of its iPod/iPhone/iPad-compatible Earphones, as well as EarPods.



Resolution: The total pixel count of a screen, generally measured horizontally and then vertically. The iPod classic has a resolution of 320x240 pixels, while older iPod touches (3G and older) and iPhones (3GS and older) have a resolution of 480x320 pixels. By comparison, the iPhone 4/4S and iPod touch 4G have resolutions of 960x640 pixels, with the iPhone 5 and iPod touch 5G at 1136x640 pixels. The iPad, iPad 2, and

iPad mini have 1024x768 pixels, while the third- and fourth-generation iPad have 2048x1536 pixels. Higher resolutions make images and videos look more detailed, when screen size is held constant.

Retina Display: Apple's name for a screen with resolution so high that the human eye cannot perceive individual pixels. Currently used in all current iPhones and iPod touches, which feature 326 pixels per inch in their 3.5"-4" displays, as well as the latest iPads, which have 264 pixels per inch. The company has alternated capitalization on the word "Display," largely choosing to leave it all in lower case.

Safari: Apple's web browser, now found on iPads, iPhones, iPods, Macs, and PCs.

Sapphire Crystal: The highly scratch-resistant glass used in some iOS device rear camera lenses and in Touch ID sensors.

Screen Mirroring: The ability of a device to use an external screen (such as an HDTV or computer monitor) to display whatever is on its own screen. The iPhone 4S, iPhone 5/5c/5s, iPod touch 5G, iPad 2, all iPad minis, third-generation iPad, fourth-generation iPad, and iPad Air can do this. All of these devices can use the Apple TV for wireless AirPlay Mirroring, or one of Apple's VGA/Digital AV Adapters for wired mirroring.

Season Pass: The iTunes Store term for a subscription to an entire season of episodes that download one at a time as they're released into the Store.

Shared (Photo) Streams: Added

to iOS 6 and Apple TV software 5.1, an iCloud-based way to easily share specific photos with friends and family. Includes "like" and "comment" features akin to Facebook. Only for viewing by individuals you select, or on a public web page if you prefer. Now called Shared Streams.

Shuffle: To randomize the order of audio tracks or videos. The iPod shuffle took its name from this iTunes feature, which Apple started to give greater prominence in earlier iPods in the year leading up to the shuffle's announcement.

SIM Card: A Subscriber Identity Module; a tiny chip-based card that links a cell phone to a specific billing account for access to phone and data services. Almost every iPhone (except Verizon's iPhone 4) and iPad with cellular capabilities has a SIM card slot. See also Micro-SIM and Nano-SIM, smaller versions of the same SIM Card technology.



Siri: An extension of Apple's earlier Voice Control, combining impressive voice recognition, text-to-speech, and artificial intelligence technologies to create an "intelligent assistant" that listens to your voice and responds to questions with information. Based on a free

app released for iPod touches and iPhones by Siri, a company Apple acquired; the free app has since been discontinued and the feature radically expanded as a key feature of the iPhone 4S/5, third-generation iPad, fourth-generation iPad, iPad mini, and fifth-generation iPod touch. Now can provide sports scores, movie showtimes, and restaurant information in addition to launching apps, playing music, dialing people on the phone, sending text-based messages, and assisting with driving directions. See also Dictation.

Skeuomorphism: The term for a software interface that cosmetically resembles the real-world object it's intended to replicate, using similar textures and controls to make users comfortable with the interface. Following Apple's loss of CEO Steve Jobs and firing of Scott Forstall, two top proponents of skeuomorphism, the company's designers nixed skeuomorphic interfaces in reconceiving iOS 7.

Slo-Mo Video: Debuted in the iPhone 5s, a video recording feature whereby the rear camera records live action at four times normal speeds - 120 frames per second, far faster than a human's ability to perceive motion - and then can switch between playing the video back at full or 1/4 speed. Slo-mo reveals many details in motion that would otherwise have been unnoticeable.

Smart Case/Cover: An Apple-developed accessory that covers an iPad's screen when the device is not in use, and enables the iPad to stand up or recline on an angle for typing. Also automatically unlocks the iPad's screen when opened, re-locking

it when closed, using magnets to attach to both the iPad's side and face. The Smart Cover was introduced with the iPad 2 and continued for the third-generation iPad, fourth-generation iPad, and iPad mini. A more protective version called the Smart Case was later released for the second- and third-generation iPads, eliminating the side-of-iPad magnets in favor of a soft body covering fabric shell.



Spoken Menus: Apple's accessibility technology for fourth- and fifth-generation iPod nanos, enabling users to hear all of the nano's menu options read through the headphones or integrated speaker. See also VoiceOver.

Spotlight: Apple's name for a system-wide search feature, found first on Macs before coming to iPod touches, iPhones, and iPads.



Stabilization: Accomplished through hardware or software with varying results depending on the specific method chosen, image or video stabilization

attempts to reduce blur or jitter in images attributable to a shaky hand holding the camera during shooting. Hardware stablization is generally superior to software stablization, and found in better standalone still and video cameras; certain iOS devices have software stabilization for video, and do an OK job with it.

Stainless Steel: The metal used for the mirror-polished rear housings of original iPods, then original iPod nanos, iPod classics, and first- to fourth-generation iPod touches. Highly scratchable.

Standby Time: A measurement of the number of hours or days a cell phone's battery can last when the phone is turned on but not doing anything else, such as making or receiving calls, or in the iPhone's case, accessing the web, playing games, or performing audio and video.

Three-Axis Gyro: See gyroscope.



Touch ID Sensor: Apple's name for the fingerprint scanner debuted in the iPhone 5s, which rests below the Home Button and quickly scans fingers to determine whether to unlock the iPhone and allow iTunes Store purchases.

True Tone Flash: A dual-LED flash and software package introduced with the iPhone 5s, using one white and one amber

LED light to more accurately add color to low-light photos.

Tweet: Shorthand for posting a 140- or fewer-character message on Twitter, the social information service. Support for Twitter and tweeting was added to iOS 5.

UMTS: Universal Mobile Telecommunications System, the basis of many 3G and upcoming 4G cellular networks. Most iPhone and iPad models support UMTS networks.

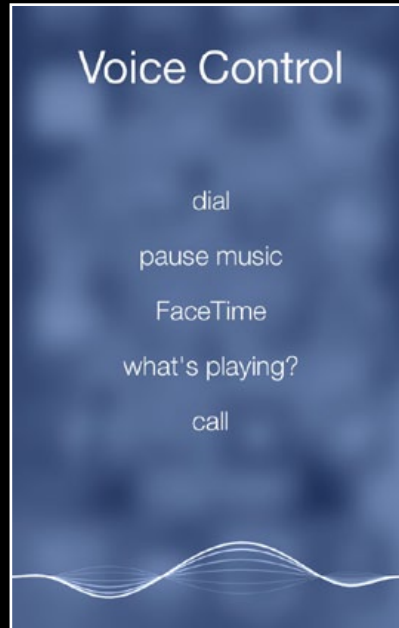
USB: Universal Serial Bus, the dominant cable standard for all computers, and the only way to connect iPads, iPhones and most iPods for charging. Uses a rectangular metal box on one end to connect to your computer. USB replaced FireWire, the original charging and synchronization technology found in iPods and accessories.

VGA: Short for Video Graphics Array. Refers to 640x480 resolution, which at one point was the maximum resolution for computer screens; VGA-quality resolution is now considered to be lower than what is commonly called high-definition (HD). The iPod touch 4G, iPhone 4, iPhone 4S, iPad 2, and the third-generation iPad each have VGA-quality front video cameras and HD-quality rear ones.

VGA Adapter: Originally only for iPads, these cables also lets iPhones and iPod touches output HD-quality video (not audio) to TVs and monitors with VGA ports.

Voice Control: Apple's iPhone 3GS, iPhone 4, and 2009-2010 iPod touch application, triggered by holding down the Home button, that uses a microphone to listen for the user's voice

commands to choose music to play back, or in an iPhone's case, make phone calls. Replaced by Siri in the iPhone 4S, iPod touch 5G, and newer iPads, but still can be toggled back on.



VoiceOver: On earlier iPod nanos and current iPod shuffles, the term VoiceOver refers to Apple's text-to-speech technology that tells the user the name of a currently playing song, and on the iPod shuffle, the potential names of selectable playlists. On iPads, current iPhones, and current iPod touches and nanos, VoiceOver refers to an accessibility option that lets the user hear text-to-speech for anything touched on the screen. See also Spoken Menus.

Watt-Hour (Battery): One way of stating the total power capacity of a battery. If an iPad consumes an average of 4.25 watts of power per hour and has a 42.5 Watt-Hour battery, it will run for 10 hours of average use; longer if it's doing things (such as only playing music) that consume less power, shorter if it's doing things (such as recording video) that consume more power.

Wi-Fi: Refers to 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac wireless standards that enable the iPod touch, all iPhones, and Apple TVs to send data back and forth from computers and the Internet without using cables, or relying on cellular networks. Old iPod touch and iPhone devices support only 802.11b and 802.11g, which are slower and older than 802.11n, a Wi-Fi standard that is supported by all shipping Macs, iPod touches, iPhones, iPads, Apple TVs, and most PCs. See also 802.11ac.



Widescreen: Generally refers to a screen that is capable of displaying movies and in some cases TV shows with a 16:9 aspect ratio - wider than the 4:3 aspect ratios of pre-HDTVs. iPod touches and iPhone 5/5c/5s have roughly 16:9 aspect ratio screens, as seen in the top screenshot below, as compared with all iPads, which have 4:3 aspect ratio screens.



Worldphone: A cellular phone that can be used in most parts of the world. The term was once used to refer to GSM phones that worked on different frequencies in different countries, and later referenced support for both GSM and CDMA standards. Today, as incompatible 4G/LTE networks are spreading, the idea of a true LTE worldphone seems unlikely in the near future.

WWDC: Short for Worldwide Developers Conference, Apple's annual June event for Mac OS X and iOS software developers to learn about the company's latest operating systems, software, and generally hardware as well.

YouTube: A Google-owned free hosting service for amateur and professional video content, uploaded by users, and viewable anywhere in the world on computers and Apple TVs. Until iOS 6, the iPhone, iPod touch, and iPad also had YouTube browsers built in; certain iPhones, iPod touches, and iPads can still upload videos directly from their cameras to the service.

10W/12W: iPads recharge at either 12 Watt/2.4-Amp (iPad 3rd/4th/Air) or 10-Watt/2.1-Amp (all other iPads) peak speeds.



1080p: The current peak HD video resolution for HDTVs in most of the world. Also known as "full HD," this is 1920x1080

pixels - 2 Megapixels per frame. The iPhone 4S/5, iPod touch 5G, iPad mini, iPad (3rd-Gen), and iPad (4th-Gen) can record videos at 1080p. Notably, the Retina screens on iPads have a higher resolution than 1080p, and so-called "4K" and "8K" television sets are being developed with "Ultra HD" 4- and 8-Megapixel capabilities, respectively.

3G: Understood in the cell phone context, a broad reference to "third-generation," broadband Internet-approaching cellular data services that are superior to EDGE and earlier analog/digital cellular technologies. The iPhone 3G/3GS and iPad With Wi-Fi + 3G were named for these networks, as Apple sought to let users know that the new models would support 3G cellular Internet connectivity. In the iPod context, refers to third-generation iPods, iPod nanos, iPod shuffles, and iPod touches, which have sometimes been known as "iPod 3G," "iPod nano 3G," "iPod shuffle 3G," or "iPod touch 3G," or alternately called by new defining features or dates of release.

4G: In the cell phone context, a reference to "fourth-generation" cellular data services, which in some cases will be capable of rivaling or exceeding wired broadband speeds. LTE is considered a "true 4G" service, while HSPA+ and DC-HSDPA are stepping stones between 3G and 4G/LTE.

30-Pin Connector: See Dock Connector.

64-Bit Processor: Prior to the iPhone 5s, all of Apple's iOS devices ran on 32-bit processors, which were more power-efficient than Apple's Mac family of laptop and desktop computers. Starting with the iPhone 5s and A7

processor, Apple is moving iOS devices to more powerful 64-bit chips, which are considerably faster at crunching numbers, and roughly comparable to low-end Macs Apple released in 2010.



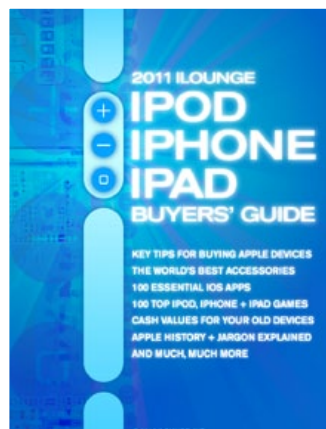
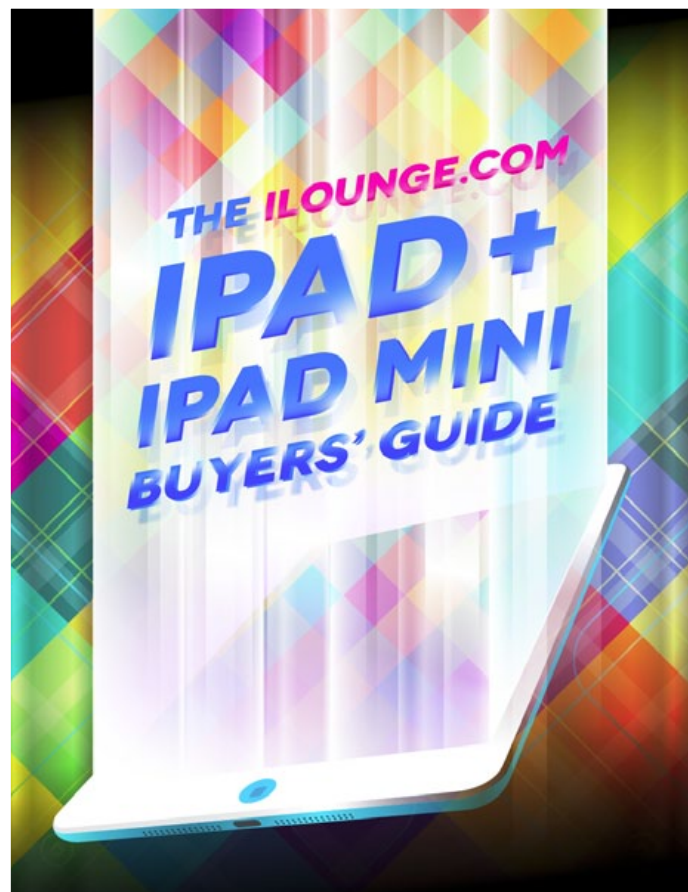
720p: Refers to 1280x720 video resolution, a high-definition standard with less detail than "full HD" 1080p (1920x1080).

802.11ac: The latest Wi-Fi standard, introduced in 2013-vintage Apple routers and Mac computers but not yet found in iOS devices. Promises up to 1.3Gbps speeds, three times faster than 802.11n, with nearby 802.11ac devices; also works with older devices.



802.11b/g: The older, slower Wi-Fi standards supported by pre-2010 iPhone and iPod touch models for accessing the Internet through a wireless router or hotspot.

802.11n: Faster and newer than 802.11b/g, 802.11n Wi-Fi also works at longer distances. Supported by 2010 and newer iPhone, iPod touch, and iPad models for accessing the Internet through a wireless router or hotspot; has been supported by Apple TV since the first model.



Find the best accessories
for your iPod, iPhone or
iPad. Old or new.

Visit the iLounge Library:
Top picks from 2004-2013!

The iLounge Pavilion.



Every January, Las Vegas hosts the world's largest consumer technology trade show: the International Consumer Electronics Show (CES). Over 150,000 people descend upon the city to see the future of televisions, computers, in-car technology, cameras, and - since 2010 - Apple accessories. iLounge hosts the iLounge Pavilion at CES, a large part of the 1.9-million square foot exhibition.

What is **CES**?

First held in 1967 and attended by around 17,500 people, CES now hosts over 150,000 people and 3,000 exhibitors per year. Produced by the non-profit Consumer Electronics Association, CES now occupies the entire Las Vegas Convention Center (LVCC), overflowing into ballroom spaces in the LVH and Venetian hotels. Attendees are able to visit booths showing off current and upcoming products from thousands of companies, getting ears-on experiences with new speakers and headphones, eyes-on time with 4K/8K televisions, and hands-on opportunities with the latest gadgets from major companies. It runs from January 7-10, 2014.

What is the **iLounge Pavilion**?

iLounge created the iLounge Pavilion to give Apple accessory developers a place to shine at CES. Located in the North Hall of LVCC (shown above) and the immediately adjacent LVH hotel, this 127,000-square foot exhibition hosts over 375 of the world's most noteworthy accessory vendors. Each company selects its own booth space, bringing representatives to show off recently-released and just-announced products. More new Apple accessories now debut at CES each year than at any other time or place in the world.

Who can **attend**?

CES attendance is limited strictly to members of the consumer electronics industry, 18 years of age or older. While the show is not open to the general public, it is attended each year by everyone from retail electronics store employees to CEOs of the world's largest companies, government officials, and celebrities. General attendance is free before September 1, \$100 until January 2, and \$200 through January 10.

Learn more about the 2014 International CES and register to attend before January 2 at cesweb.org.



Attendees flocked to the iLounge booth in North Hall, where 2012's Best of the Year Awards and 2013's Best of Show Awards were on display. Each year's top Apple products were honored after exhaustive searches and debates by iLounge editors.



New accessories arrived at CES four to six months before they became available for purchase. Elaborate booths in North Hall (bottom left) and the LVH hotel (bottom right) enabled attendees to learn all about both the products and their developers.



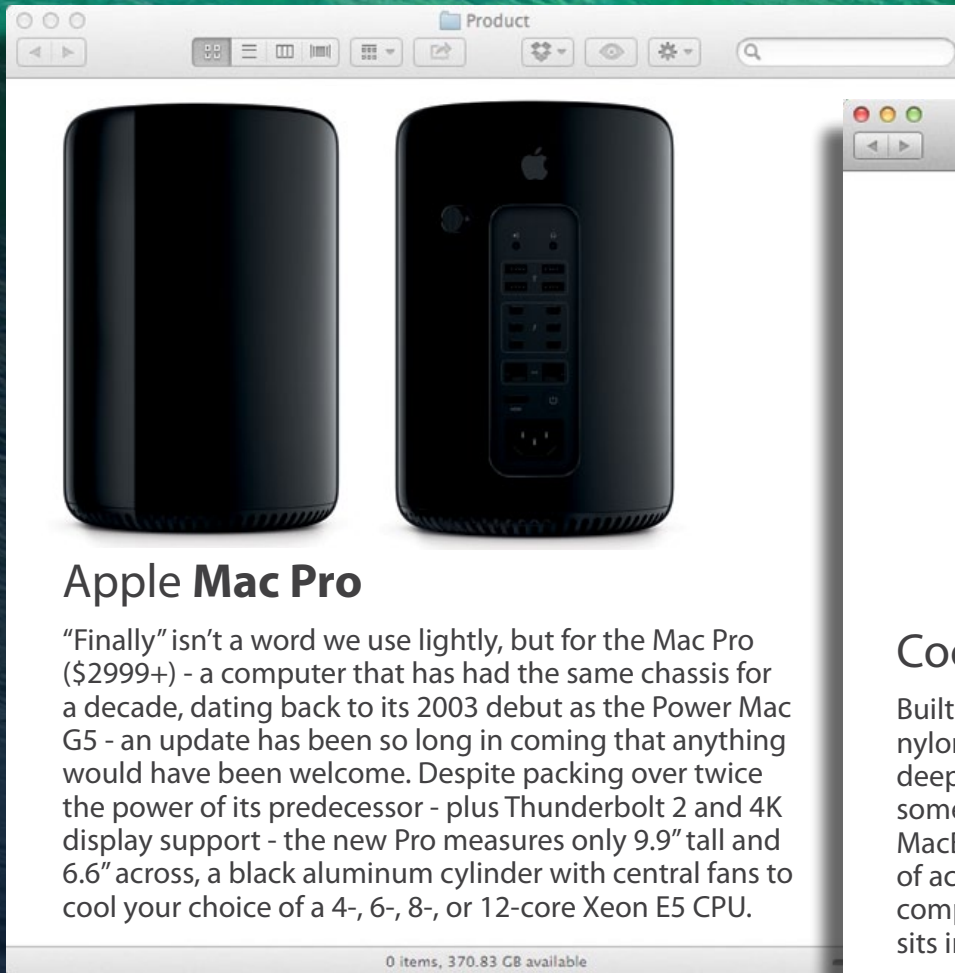
As of November 2013, over 350 companies will be exhibiting in the iLounge Pavilion at the 2014 International CES, including:

1OAK Technologies	California Pac. Designs	EZIO	Image Icon/Kajsa
2 the Max Asia Pacific	Canopy	Famous Works Elec.	Imego Infinity
2001 Technology	CARRY Tech.	Feifan Industrial	iMobo Group
ABC (HK) Electronics	Case Scenario	Fitness Technologies	Impossible
Accessory Export	Cellairis	Fonegear	Incipio
Ace Elite	CG Mobile SAS	Free Free Industrial	Industrial Revolution
ADMAX-Trade-Line	Changzhou Super Int'l.	Future Tech. Enterprise	Infinite Peripherals
Adonit	Changzhou Xinyue Elec.	Gamber - Johnson	iNoxCase
Advanced Elec. Energy	Chen-Source Inc.	Geneva Lab	Int'l. Chinese Network
AiQ Smart Clothing	China Electronics SZ	Gopod Tech.	iOttie
AKASHI // ALTADIF	China ETech Groups	Gourmandise China	Invisible Phone Guard
Alpheus Digital	Cian Chiang Industry	GP Enterprise Asia	iPort
Amethyst Innovations	Cirago Int'l.	Grand iPearl Elec./Tech.	IQ Massager
AMZER	Cixi Lead Int'l.	Green Driver	IRUAL
Anhui Fulin Elec. Tech.	CME	Greensmart	Issassi
Antech Industrial (HK)	Concept Audio	Gresso	iStabilizer
Anyworld Tech.	Concord Keystone	Griffin Technology	iWorld
Aplustec	ConnecteDevice	Guangdong Pisen Elec.	Jiangmen VIPO Elec.
Appcessory Pte	Corpcom Company	GZ Beautifulrecorder	Jiangxi JGS CKING
Aristo Technology Corp.	Cozistyle Corp.	GZ Jison Hardware	Jill-e Designs
Arkon Resources	CPC	GZ Luckysky Industry	Just Mobile Direct
Ascendeo	CQ	GZ Yicai Craft Factory	Just Mobile
Asia Kingston	DC Cases	Hard Candy Cases	Kalaideng Tech. (SZ)
ATC EnergyTech	DecalGirl	Hasmo Industries	Kanex
Auzura Company	Dexim Santom USA	Head-Direct (Kunshen)	KB Covers
Avance Electronics	DG ARUN Industrial	Henge Docks	Keith McMillen Inst.
Ballistic Case Co.	DG Digi-in Digital Tech.	HGD Industry	Kemett Innovations
Baseline Global	DG Eontec	Hipstreet	Kenwin Industrial (HK)
be.ez / QWESTER	DG Jifu Elec.	HMDX	Knomo
Beijing Epoch Hi-Tec	DG Kaiwei Electronic	Hua So Industrial	Kopi Incorporation
Benks Tech.	DG LongRich Electronic	Huckleberry	Limited
Best Wisdom Industrial	DG YongFang Elec.	Hyper by Sanho	Laza Wireless
Beyond Cell	Doria International	Hyper Power Holding	LAZY-HANDS
BK Pride Electronics	Dotz	HZO	Lenmar Enterprises
Blue Wi	Dr. Bott	IBIOPEN Tech.	Libratone
Bluelounge	DRACOdeshign	iCat by EK Ekcessories	LIFX
BodyGuardz	dreamGear	iCella/EZ Comms.	Light Harmonic
Boluo Cty. Quancheng	DUBGEAR	iCore Gear	Limitless Innovations
Bonjour Lixin SZ Elec.	Eaglecell	iCreation	Lin Shiung Enterprise
Boomphones	ECBC	ID America	LOKSAK
BOOSTCASE	Echo Creative	IDAPT	Loop Attachment
Bosign AB	Econology	iGlo	Looptworks
Bracketron	Element Case	iHealth Lab	Lucky Goldjyx
Braven	E-Link Technology	IK Multimedia	Macally/SecurityMan
Breffo	eskuche	iKey Rugged Peripherals	Maclocks
CableJive	Evutec	iKlear/Klear Screen	Magic Protection Tech.

Marware	Professional Cable	SZ Hongman Yuan	SKECH
Matias	Pro-Mat Tech.	SZ Iptech	SKM Industries
Matrix Audio Limited	Prosben	SZ Kangchengtai Ind.	Smart IT USA
Maysun Info Technology	PureGear	SZ KEP Technology	Sonte
MEElectronics	Puro	SZ Kfly Electronics	Soundfreaq
Megix Technology	Purpleday Cons./Mccoy	SZ Kingsun Enterprises	Speck Products
Meijin Investment.	Qmadix	SZ Konnoc Battery Ind.	Spider International
Melkco Limited	RadTech	SZ Koonhome Tech.	Square Jellyfish
Miikey	RDGA	SZ KSY Technology	Standzout
Mimoco	Recover	SZ Lamax Technology	Stelle Audio Couture
MixBin	Reflying Int'l. Elec.	SZ Letsolar Technology	Stiger Elec. Tech.
Mobee Technology	Reiko Wireless	SZ Limei Plastic Prod.	STSJ Digi. Tech.
Mobio Holdings	RHP Multimedia	SZ Lisaier Tronics	Suncrest Products
Mophie	Rocstor	SZ LVsun Elec. Tech.	Sunlight Elec. Group
Motion Systems	Rokform	SZ Maxco Technology	Sunmi Group
MTM	Sanyou Electronics	SZ Membrane Pr. Elect.	Sunshine Electronics
Musubo Company	Schneider Optics	SZ Navee Imp. & Export	SwitchEasy
myCharge	Scosche Industries	SZ Phaeton Nice Elec.	Taer Innovation
Nanhai Lihao Elec.	Seemarket Technology	SZ PKCELL Battery	Tecyea Electronics
Native Union	Seenda Technology	SZ Ployer Electronics	Teleforceusa
Naztech	Seidio	SZ Renqing Technology	Ten One Design
Ndevr	Shanghai JCPAL Ind.	SZ Rihuida Electronics	The Joy Factory
Ningbo Banmen Electric	Shanghai Kingstronic	SZ Sandrosolar Tech.	The SOM
Ningbo Lianxun Imp/Ex.	SZ E-Best Technology	SZ Sawink Technology	TJM Innovations
Nio	SZ Aita Technolgoy	SZ Saywell Electronics	Toast
Noetic	SZ Akun Electronics	SZ Sewha Plastic Prod.	Trident Case
Noon Technology	SZ Aavid Technology	SZ Shike Kam Wah Elec.	Tune Belt
Nucourse Distribution	SZ Baolifeng Opto-Elec.	SZ South Fortune Tech.	TYLT
ODOYO China	SZ BHX Technology	SZ Supertempo Digital	Typo Products
Ogio International	SZ Blueendless Elec.	SZ Taiji Opto-Elec.	Umigo Tech. (HK)
OhMiBod	SZ Bomei HW/Plastic	SZ Thinkano Tech.	Valenta Int'l. BV
Oloclip	SZ Bowful Leather Prod.	SZ Tiantian Weibang	Valor Communication
ON.EARZ (A6 Europe)	SZ Carku Technology	SZ Transway Technology	Vina Int'l Holdings
OtterBox	SZ Coolzone Tech.	SZ TZX Technologies	Wanxinda (GZ) Tech.
OZAKI	SZ CRT Projector	SZ Vtsonic	Wilsonic Development
Padholdr	SZ Ctech Sci. & Tech.	SZ WanYishun Tech.	WorldConnect AG
Patchworks	SZ Dnine Technology	SZ Winnersshine Elec.	Xentris Wireless
Pega	SZ Elite Power	SZ WinTop Elec. Tech.	XMI
Perf. Designed Products	SZ Esorun Technology	SZ Wisdom Electronics	Xshot
PhoneSuit	SZ Fancy Package/Man.	SZ WJM Silic. & Plastic	Yisen Technology
Photofast	SZ First Union Tech.	SZ Xianda Plas. & Elec.	Yunnan Trio Imp/Export
Pinlo Technology	SZ Gblue Tech. Ltd	SZ XinliYang Tech.	Yutron
Power Mart Industry	SZ Gobelike Tech.	SZ Yixinfa Elec.	Zenixx
Powerocks	SZ Haipai Tech.	SZ Zhengfang Ent.	ZeroChroma
Pro Clip USA	SZ Har Rui Meng Tech.	SZ Zhongyuneng Tech.	ZS Tianmao Batt.
Procare International	SZ Heui Xint Tech.	Siteng Elec.	zNitro/Clear Protector

What's New in Mac.

iLounge + Mac spotlights one cool Mac, accessory, app, or decor item every weekday. These are some of the best things we've found in 2013.



Apple Mac Pro

"Finally" isn't a word we use lightly, but for the Mac Pro (\$2999+) - a computer that has had the same chassis for a decade, dating back to its 2003 debut as the Power Mac G5 - an update has been so long in coming that anything would have been welcome. Despite packing over twice the power of its predecessor - plus Thunderbolt 2 and 4K display support - the new Pro measures only 9.9" tall and 6.6" across, a black aluminum cylinder with central fans to cool your choice of a 4-, 6-, 8-, or 12-core Xeon E5 CPU.



Cocoon Slim Backpack

Built from water-resistant ballistic nylon and designed to be only 3.5" deep when packed, Slim (\$80) is somehow able to hold not only a 15" MacBook Pro, but also a vast number of accessories and office supplies. The company's signature Grid-It organizer sits in the front, ready for everything.

Apple OS X Mavericks

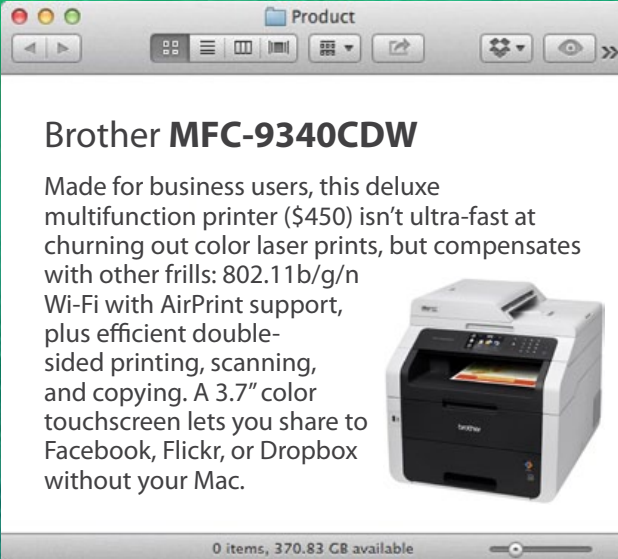
Most of OS X 10.9's new features are small, but the addition of an iBooks reading tool, a Maps app, and proper Retina graphics drivers are long overdue. New tools to reduce battery drain, treat any HDTV as an AirPlay-based second display (rather than mirroring), and improve memory utilization all help, too. Best of all, OS X is now free for all Mac users.



Belkin YourType Bluetooth Wireless Keypad


More than a little similar to Apple's Magic Trackpad, YourType (\$60) is the numeric keypad Mac users have been waiting for since Apple left the special-purpose keys off the Wireless Keyboard. Metal and gorgeous, it lets you enter numbers on a classic grid - wirelessly.





Brother MFC-9340CDW

Made for business users, this deluxe multifunction printer (\$450) isn't ultra-fast at churning out color laser prints, but compensates with other frills: 802.11b/g/n Wi-Fi with AirPrint support, plus efficient double-sided printing, scanning, and copying. A 3.7" color touchscreen lets you share to Facebook, Flickr, or Dropbox without your Mac.



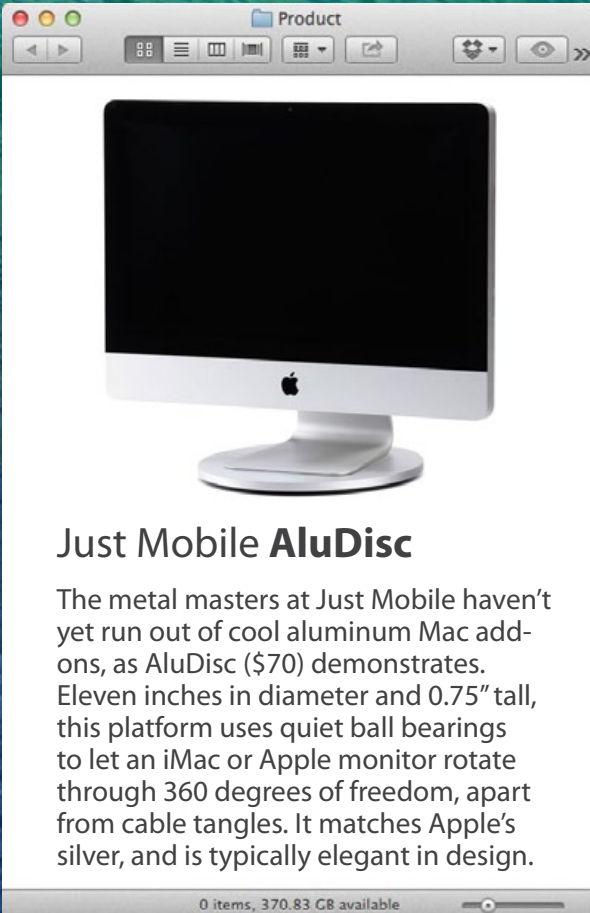

0 items, 370.83 GB available




Chrome Mini Metro Night

Chrome's bags are some of the hardest-core we've tested, and this small, reflective messenger (\$140) retains all the weatherproof and tear-proof materials we'd expect from the brand; this design was tweaked to be handsome during the day and more visible at night. Prominent reflective strips make Mini Metro Night easier to see in the dark; it holds a 15" MacBook.

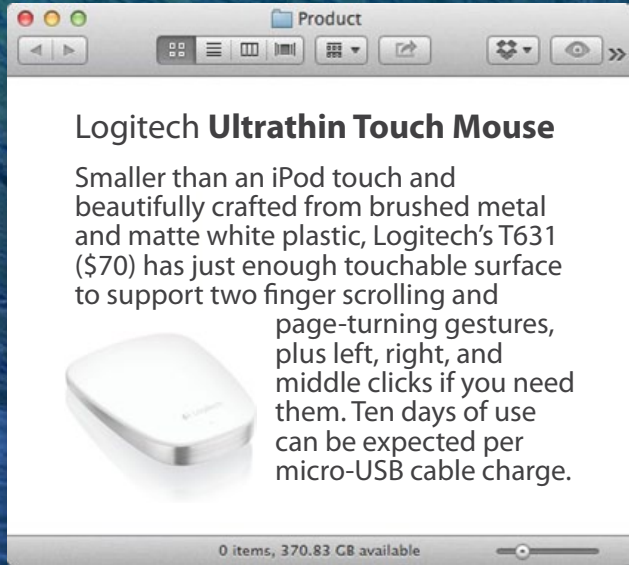

0 items, 370.83 GB available

Just Mobile AluDisc

The metal masters at Just Mobile haven't yet run out of cool aluminum Mac add-ons, as AluDisc (\$70) demonstrates. Eleven inches in diameter and 0.75" tall, this platform uses quiet ball bearings to let an iMac or Apple monitor rotate through 360 degrees of freedom, apart from cable tangles. It matches Apple's silver, and is typically elegant in design.

0 items, 370.83 GB available

Logitech Ultrathin Touch Mouse

Smaller than an iPod touch and beautifully crafted from brushed metal and matte white plastic, Logitech's T631 (\$70) has just enough touchable surface to support two finger scrolling and page-turning gestures, plus left, right, and middle clicks if you need them. Ten days of use can be expected per micro-USB cable charge.

0 items, 370.83 GB available





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iPads, iPhones, and iPods Around the World Photo Galleries

Apple's devices have become so ubiquitous that it's easy to find them anywhere you travel. Here are some recent reader-submitted images of their favorite devices on the road.



**Top: iPhone 5 Visits Castle Rock
Ross Island, Antarctica**



**Left: iPad (3rd-Gen) at Independence Hall
Philadelphia, Pennsylvania**



**Bottom Left: iPhone at Bunny Valley
La Marqueza, Mexico**

**Bottom Right: iPod touch Au Natural
Germany**



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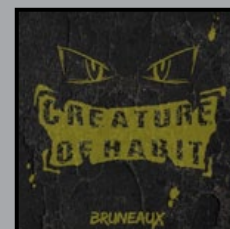
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The 2014 Buyers' Guide was created using Adobe InDesign CS5 on a 27" iMac, a 13" MacBook Pro with Retina Display, and a Mac Pro with a 30" Cinema Display. We listened to Bruneaux's *Creature of Habit*, Gotan Project's *Lunático*, and Innocents from Moby.



iLounge.com

Since 2001, the world's leading resource for iPod, iPhone & iPad news, reviews, forums, photos, guides, tricks, software, and much more.



Closing the Curtain.

Before we end this Guide, we take one final look towards the future and guess at what Apple might have planned for iOS devices going forward.



iPad: A Mac-Like Evolution?

At some point in the Mac's lifespan, major functional changes became fewer and further between, as Apple focused mostly on making its computers thinner and sleeker. The iPad may be headed in the same direction, although rumors suggest that Apple aims to develop an iOS-based computer halfway between an iPad and a MacBook - with keyboard-style input as needed. In our view, a rethinking of iOS for the iPad is long overdue, as full-screen apps waste the 64-bit potential of the latest models.



iPhone: Bigger And Thinner?

Reports out of Asia have suggested for nearly a year that Apple is testing roughly 4.7" screens for the next-generation iPhone, said by sources to be codenamed "iPhone Plus." Complaints that Apple missed the boat on growing demand for much larger-screened phones reached a fever pitch in mid-2013, as virtually every rival debuted a device with more real estate and resolution than the iPhone 5. Given Apple's track record, we expect that the company will grudgingly follow the trend - and improve upon it with a thinner, better-built alternative - while keeping devices with the current 4" screen around for other users.



iPod: Another Slow Year?

It's been clear for some time that the iPod family is on autopilot: the shuffle and classic are effectively ignored, the nano makes less sense each year, and the iPod touch continues to be merely a subset of the iPhone. At the rate iPod sales have been dropping, it's hard to know whether Apple will bother to make more than token gestures going forward. The \$549 price of an unlocked 16GB iPhone 5c is still over \$300 more expensive than a 16GB iPod touch, so we'd expect Apple to make a new touch eventually. Will the iWatch replace the nano? Our guess is "no," due primarily to pricing, but we'll see.

