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Apple iPad 2 (16GB, Wi-Fi, black)

Editors' Choice

GRADS & DADS GIFT PICKS 2011

Want it **120**

Got it **69**

Had it **26**

Like  523



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CNET Editors' Rating

[4.0 stars](#)

Excellent

Average User Rating

[3.5 stars](#)

out of 78 user reviews [See all user reviews](#)

Quick Specs

OS provided: Apple iOS 4

Processor: Apple A5 1 GHz

Wireless connectivity: IEEE 802.11n Bluetooth 2.1 EDR IEEE 802.11b IEEE 802.11a IEEE 802.11g

[See all specifications](#)

Where to buy

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Starting at: [\\$556.68](#) from [2](#) stores

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Editors' review



Reviewed by:
Donald Bell
Reviewed on: 03/11/2011
Updated on: 06/09/2011

The good: Apple's **iPad 2** is dramatically thinner and boasts front and rear cameras, FaceTime video chat, a faster processor, and 3G options for both AT&T and Verizon.

The bad: The iPad's screen resolution hasn't budged, photo quality is

Released on: 03/11/2011

mediocre, there's still no Adobe Flash support, and ports for HDMI, USB, and SD all require adapters.

The bottom line: The iPad 2 refines an already excellent

[CNET Editors' Choice Mar 11](#)

4.0 stars CNET editors' rating
 Design: **9.0**
9.0/10 Features: **8.0**
8.0/10 Performance: **8.0**
8.0/10 [Editors' rating explained](#)

product. Its easy-to-use interface, vast app catalog, and marathon battery life bolster Apple's claim to being the king of tablets.



[Photo gallery: Apple iPad 2](#)

Editors' note: On June 6, 2011, Apple announced a new version of iOS due out in fall for the iPod Touch, iPhone, and iPad. The free upgrade will bring new capabilities including a unified messaging app, improved notifications, iCloud synchronization, and more. Visit CNET's [iPhone Atlas for more information on iOS 5](#).

The competition must really hate Apple. The Apple iPad wasn't just a successful tablet computer in 2010--it was *the* tablet computer. In one fell swoop, Apple created the new tablet market and sold tens of millions of iPads in spite of a global economic downturn and considerable skepticism.

The same, only better

With the iPad's second go-around, Apple sticks to its successful formula. The iPad 2 is thinner, faster, and includes two cameras, but otherwise, the iPad stays the same: size, price, capacity, and features all carry over.

Oh, except for color. Apple now offers both white and black versions of the iPad 2 in every price and configuration. The base model starts at \$499, giving you 16GB of storage and a Wi-Fi connection to the Internet. If you want more storage for all your applications, photos, music, and videos, you can jump up to the 32GB (\$599) or 64GB (\$699) models.

The freedom to surf the Web over a 3G cellular connection costs an extra \$130 for any of the three models mentioned above, plus monthly carrier fees. Unlike with the original iPad, you now have a choice of two carriers (Verizon or AT&T). Choose carefully, though, since the Verizon version of the iPad can't be made to work on AT&T, and vice versa.

The hardware

The iPad 2 is thin--so thin, in fact, that it feels like a different device. Measuring just 0.34 of an inch, it's thinner than the iPhone 4 and a third thinner than the original iPad.

Despite the thinner design, its construction quality is no less rugged than the original's. The back of the iPad is still made from a durable, single slab of aluminum machined to fit the iPad's internal components like a glove. The face of the iPad is covered in the same scratch-resistant glass, with a home button at the bottom of the screen and a new front-facing camera at the top.

Otherwise, the iPad 2 sticks to familiar iPad routines. The sleep/wake buttons and headphone jack are in the same place as on the original, up top, as are the volume rocker and mute/rotation lock switch on the right edge. On the bottom you'll find the iPad's universal dock connection and the internal speaker. The speaker's perforated grille now wraps around the back, giving it more surface area and noticeably better sound quality.



The height and width may look similar, but in terms of thickness, the iPad has done some dieting, shrinking from 13.4mm thick on the original model to 8.8mm thick for the iPad 2. It's thinner, even, than the iPhone 4.

comes in two materials--leather (\$59) and polyurethane (\$39)--and multiple colors. It attaches magnetically to the left or right edge of the iPad 2 using two aluminum hinges embedded with impressively strong rare-earth magnets. Magnets within the cover are used to detect when the cover is open or shut, allowing the iPad 2 to automatically wake or sleep. It works, but you also have the option in Settings to bypass the automatic wake feature and use the button manually.

As accessories go, the Smart Cover is nifty--not so much for the protection it offers, but for the convenient stand it provides when rolled up. If, on the other hand, you are seriously concerned about protecting your investment, keeping the iPad 2 in a traditional wraparound case is still the best way to go.

For the iPad 2, Apple has avoided compatibility shenanigans. With the exception of any original iPad cases, the device works with first-gen accessories (docks, adapters, speakers, video cables, chargers), though first-gen docks don't fit like a glove. An updated standard dock for the iPad 2 is available. For keyboard support, Apple now recommends its Bluetooth wireless keyboard.

The iPad 2 accessory that's really getting all the attention is Apple's new Smart Cover. An answer to all the bulky, overdone, rubber third-party cases made for the first iPad, Apple's unique hinged cover



[Photo gallery:](#)

[Apple iPad 2 and Smart Cover](#)

Features: New stuff

The iPad 2 isn't a radical departure from the original, but it does have a few new tricks up its sleeve.

The banner feature for the iPad 2 is the addition of two cameras, both able to record video or snap photos. The camera on the back is located in the upper-right corner where it isn't likely to be covered by your hand (in portrait orientation, at least). It looks just like the chrome-ringed lens on the iPhone 4 and is similarly blessed with 720p video capture. There's no camera flash, however, and the camera sensor is a far cry from the one used in the iPhone 4. Just like the fourth-generation iPod Touch, the iPad 2 takes photos that are essentially video stills. A gallery of photos taken with the iPad 2 can be seen [here](#).



The iPad 2 boasts two cameras; the original iPad doesn't even have one. The rear-facing camera, pictured here, supports 720p video capture.

available for Mac, iPhone, iPod Touch, and iPad 2. If you've been waiting for the Jetsons' video phone, FaceTime on the iPad gets you pretty close. Unlike smaller devices, the iPad's 9.7-inch screen can present faces at life-size. We've seen this before with desktop- and laptop-based video calling, but it can be uncanny to actually hold an image of someone's life-size face in your hands. FaceTime still remains a Wi-Fi-only feature, however, so in-car iPad video calls are an elusive capability (probably to humanity's advantage).

Other iPad 2 apps designed by Apple include GarageBand and iMovie, which must be purchased separately for \$4.99 each. The iPad is the last of Apple's iOS devices to be blessed

Even if Apple had gone the route of using a Carl Zeiss lens and a 10-megapixel sensor, the iPad 2 just isn't a replacement for a camera or smartphone. Having tested the camera quality of tablets over the past year, we can't stress enough how silly you feel shooting videos or photos with a tablet in public. It's like taking a picture with a cutting board. Your grandfather's camera was less conspicuous. You get looks, and they're not the envious kind.

Really, the cameras are there as a way to support Apple's FaceTime video chat app, which is now



The iPad's rear-facing camera won't replace your point-and-shoot, but the image quality isn't bad.

with iMovie (and the camera required for it), but is the first to receive GarageBand. We have separate write-ups of [GarageBand for iPad](#) and [iMovie for iPad](#) available for more depth.

Under the hood, the iPad 2 has plenty to brag about. The new spec uses a dual-core A5 processor that promises to be twice as fast with nine times the graphics performance. If gaming graphic quality is an important consideration for you, you can jump ahead to the Performance section of this review.

Another feature sure to burn the competition is full HDMI AV output

compatibility. Using a \$39 dock cable, the iPad can now mirror its output to a TV over a standard HDMI connection. The supported resolution goes up to 1080p, though video playback and most apps never break out of 720p. Unlike previous video-out solutions for the iPad, this cable no longer limits users to simply video playback or presentations. Everything you see on the screen is mirrored on your TV, including video, photos, games, and the home screen. Competitors such as RIM's BlackBerry PlayBook and the [Motorola Xoom](#) have been waving HDMI compatibility as a key advantage over the iPad. Now they have one fewer bragging point.

The iPad 2 also adds the same three-axis gyroscope sensor shared by the iPhone 4 and iPod Touch, giving the device a more detailed sense of its orientation in space, similar to the feeling of holding a Nintendo Wii remote. The gyro's appeal is mostly for gaming, allowing for more precise motion control and realistic navigation within virtual environments. In a first-person shooter game like N.O.V.A., for instance, you can tilt the iPad 2's screen up, down, left, or right to explore the game's surroundings, just like a window into the game's universe.

Features: Oldies but goodies

Cameras and gyros are nice, but let's not forget all the features that made the original iPad unbeatable. If you've ever used an iPhone or iPod Touch, the iPad 2 will feel immediately familiar. Out of the box, you get many of the iPhone's capabilities, including Apple-designed apps for Web browsing, e-mail, maps, photos, music, video, and YouTube. More apps can be installed using the built-in App Store software or by connecting the iPad to iTunes via your

computer using the included cable. If you already own apps purchased for an iPhone or iPod Touch, you can transfer these apps to the iPad, as well.

The original iPad made its debut with iOS 3.2. That OS' limitations seem prehistoric today. You couldn't bounce between applications with multitasking. You couldn't organize applications into folders. And support for document printing and AirPlay streaming of music, videos, and photos didn't arrive until November 2010.

At launch, the iPad 2 comes with iOS 4.3, bringing a host of important new features and improvements. There are new apps for Photo Booth (a dedicated portrait-taking app), and FaceTime video chat. The Safari Web browser gets a speed boost under the hood for improved JavaScript rendering. The app now includes a Home Sharing option for streaming media over your home network from local computers. And for those of you who want flexible control over the function of the switch above the iPad's volume buttons, iOS 4.3 hands over the reins and allows you to designate it as either a rotation lock or a mute for system alert sounds (such as incoming FaceTime calls).

One sticking point in the original iPad that Apple hasn't addressed in the iPad 2 is Adobe Flash support for Apple's Safari Web browser. Apple seems dead set against supporting Adobe's popular tool for presenting video and graphics on the Web, and without it, many corners of the Web are inaccessible on the iPad or present a Swiss cheese of broken content. For the most part, though, the iPad's Web-browsing experience is the best you'll find on a tablet. Navigation is responsive, zooming in and out of text is fluid, and managing multiple open pages is a cinch.

The iPad's device features, such as Bluetooth 2.1 (A2DP, EDR), Wi-Fi 802.11 n, 3G, and 10 hours of battery life, are all here, and in many cases are still the bar by which other tablets are judged.

Wi-Fi versus 3G

For road warriors or those who just get a little itchy at the idea of not being connected to the Internet, Apple offers a version of the iPad with an integrated 3G cellular data connection.

Aside from a negligible added heft of 0.1 pound and the fact that buyers are paying an extra \$130 for the 3G capability (compared with Wi-Fi-only models), there's no downside to owning a 3G-compatible model. Unlike the data plans for most smartphones, the iPad doesn't come with any long-term contractual obligations. If you don't end up using the iPad's 3G capability, you can cancel the data plan at any time.

If you decide to go with the 3G option for the iPad 2, you have your choice of two carriers: AT&T or Verizon. Data plans and fees differ between the two carriers (and are always subject to change), and the 3G cellular technology under the hood differs as well.

The AT&T iPad model uses a GSM modem and a micro-SIM card slot, allowing you to easily swap in compatible micro-SIM cards from foreign carriers when overseas. Verizon's iPad uses a CDMA 3G modem and lacks the SIM-swapping feature of AT&T's GSM modem, making it a poor choice for international jet-setters.

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As far as data plans go, AT&T offers two options: \$15 a month for 250MB of data, or \$25 a month for 2GB. Each option can be prepaid for a month, and AT&T's plans do not include an activation fee.

Verizon's plans are a little steeper, but more generous with data. There's a 1GB plan for \$20, 3GB for \$35, 5GB for \$50, and a whopping 10GB for \$80. There's an initial \$35 activation fee, however, which you run the chance of paying each time you let your account lapse for over three months.

To our eyes, AT&T's plans seem more consumer-friendly and its GSM technology more flexible for travelers. That said, the plans from both carriers seem reasonable, and data quality and coverage should be your first concern. Before making the plunge, do some research to see which carrier provides better coverage for your area, as well as places you frequently travel.

Another advantage of iPad 2 models enabled with 3G is the added capability of assisted GPS (A-GPS), allowing users to accurately pinpoint their locations on a map and take advantage of navigation and location-aware apps. The Wi-Fi-only models of the iPad can use rudimentary Wi-Fi hot-spot triangulation techniques to guess locations, but are much less accurate and consistent.

If you have no plans to regularly use the iPad outside of your home, you'd do just as well to save some money and stick with a Wi-Fi model.

iPad 2 as e-reader

When Apple pitched the original iPad and then-new iBooks app as the be-all and end-all e-book reader, we were skeptical. Apple had only a handful of publishers, and the device was as thick as two Kindles put together.

A year later, the iPad has legitimately seized the attention of the publishing industry. Apple claims to have passed its 100 millionth iBook download. Meanwhile, competitors such as Barnes & Noble, Amazon.com, and Kobo have jumped on board with apps for the iPad. Mainstream magazines, including The New Yorker, Wired, and Vanity Fair, all have iPad-specific editions. Even specialty publications, such as comic books, test prep, and sheet music, have found their way onto the iPad. As far as content goes, the iPad has you covered.

In terms of hardware, the iPad is still a little beefy at 1.3 pounds, compared with the Kindle 3's 0.55 pound. And in spite of the iPad's otherwise excellent IPS LED-backlit display, there's no beating e-ink displays when it comes to outdoor readability. Also, a product like the Kindle DX promises up to four days of reading without a recharge, whereas the iPad will only get you 10 hours.

In spite of all these criticisms, the iPad has already proven itself a success as an e-reader. There are certainly cheaper options out there, but none with the breadth of features offered by the iPad. Plus, with the iPad 2's dramatically thinner design, Apple is in much better shape than it was last year.

What the iPad still isn't

We have plenty of kind things to say about the iPad, but there is a limit to its "magic." Tablets, in general, sit between the practicality of laptops and the convenience of smartphones, but stop short of actually replacing either device.

The iPad 2 is not a laptop replacement. After spending a year with the original iPad, we've come to appreciate laptops more than ever. In most cases, laptops and Netbooks offer a more natural typing experience, and there's still nothing like a tried-and-true mouse or touch pad when it comes to editing and navigating documents and spreadsheets. Also, if you're really a stickler for the full Adobe Flash-enabled Web experience, traditional laptop and desktop computers are still your best bet, offering more flexibility and compatibility with the Web's many formats (especially when it comes to video content and games).

The iPad 2 isn't a smartphone replacement, either. To point out the obvious, the iPad simply doesn't fit in your pocket. Today's smartphones do more than connect us to the world; they're extensions of us. If it doesn't fit in your pocket, it's not going to stay with you all day, and it will never be as personal.

It's also worth mentioning that the iPad is not a 4G device, meaning that it doesn't take advantage of the latest generation of high-speed cellular data networks. Several manufacturers, including Motorola, Samsung, LG, and RIM, are promising 4G-network-compatible tablets in 2011. Will 4G be the feature that gives iPad alternatives the edge they need to oust Apple as the top tablet maker? Honestly, we don't know yet, but it seems to be the bet the competition is making.

Apple's aces

The App Store built into every iOS device is Apple's secret weapon. Any tablet can offer a fun experience right out of the box, but it takes a steady stream of interesting, affordable apps and games to keep people glued over the long haul.

When Apple debuted the iPad in 2010, it also gave developers the tools and guidelines needed to create a new breed of tablet-optimized apps. Since then, more than 65,000 apps have been made just for the iPad. By contrast, competitors such as Google, RIM, and HP are just now starting to create catalogs of tablet-optimized apps, and the chances of them catching up are slim.

The quality and selection of apps made for the iPad represent a kind of fountain of youth for the device, imbuing it with new uses and capabilities whenever you tire of the old ones. It also helps that Apple's App Store, iTunes Store, iBooks Store, and iTunes software all run off a common user ID, making account setup and purchases just about as effortless as it gets.

The main menu app for Apple's iTunes store is also one of these "sleeping giant" features we take for granted. Here you have one-touch access to what is now the No. 1 music retailer in the world. The *world*. On top of music selections, you also get movie and TV downloads as well as rentals priced as low as 99 cents. Podcasts, university lectures, music videos--it's all there, and no other competitor has it, or anything close.

To be fair, when it comes to core features such as e-mail, Web browsing, media playback, maps, and contacts, many of Apple's competitors (most notably Google and the Android Honeycomb tablets) are quickly matching the iPad. If third-party apps, games, and media downloads aren't your thing, there are many competent tablets on the market worth considering, and more are on the horizon. On the other hand, if apps and media aren't your thing, you may want to consider skipping a tablet altogether.

Performance

The iPad 2 is an undeniably faster and more responsive machine than its predecessor. With a

new dual-core A5 processor under the hood, Apple is claiming to have doubled performance speed overall, and boosted gaming graphics by nine times. The company has also gone and tweaked the code behind the Safari Web browser, improving JavaScript load time.

Taking Apple's spec bravado with a grain of salt, the iPad 2 is still an improvement. The original iPad was already pretty tough to beat in terms of general system responsiveness, such as keyboard latency, scrolling, and zooming. With the iPad 2, the system is a little tighter and response is more immediate, but the real-world benefits come in the form of app load times and when switching between apps using the multitasking bar.

Is the iPad 2 a gamer's dream come true? It's a mixed bag. To Apple's credit, the iPad has more games than any other tablet out there, and many of the titles feature graphic and play quality on par with full-blown gaming consoles. With the new processor, even graphically intensive games like Infinity Blade run with an uncanny fluidity, free from stuttering. But no matter how fast the iPad 2 can render its pixels, it's still limited by the iPad 2's 1,024x768-pixel display resolution. We had hoped for some of the iPhone 4's Retina Display technology in the iPad 2, but it seems Apple might be saving it for next time.

There's more to a screen than pixel density, though. Apple is still using the IPS panel technology from the original iPad, which offers outstanding viewing angles in every direction. Photo and video playback quality are still great. We noticed a slightly warmer color on the iPad 2's display compared with the original, but the contrast and black levels seemed about the same.

Our CNET Labs team will update this review with its analysis of iPad 2 performance as data comes in. We'll be testing for battery life, Web page load time, and gaming performance.

Accessories

The number of accessories made for the original iPad is overwhelming. There are cases, stands, speakers, dock adapters, gaming peripherals--even an iPad-compatible grill. With the iPad 2's new thinner design, fitted accessories for the original iPad (such as cases) aren't likely to work. Even Apple's own dock and keyboard dock for the original iPad are an awkward fit for the second-generation models--though they do work.

Fortunately, Apple hasn't done anything to monkey around with the iPad 2's universal dock connection. Generally speaking, if you could plug it into the first iPad, it should work with the new version as well. This goes for charging cables, video adapters, Apple's Camera Connection kit, or any in-car adapter cables.

For the iPad 2, Apple announced two new accessories. There's the magnetic Smart Cover (which we've gone over already) and a new Digital AV Adapter that allows you to connect the iPad to a TV over HDMI. The same AV adapter also works with the iPhone, iPod Touch, and the original iPad, but only on the iPad 2 allows you to output everything from your iPad's screen--the menu, the browser, apps, games, you name it. Priced at only \$39, it's a bit of an Apple TV killer, since it will output the entire iOS experience at up to 1080p, including downloaded iTunes videos and even streaming content from apps such as Netflix.

If you'd prefer to beam content wirelessly from your iPad to your TV, the little hockey-puck-size \$99 Apple TV is the way to go. Aside from working as a great standalone media streamer for iTunes downloads, Netflix, and others, you can also use it to push media from your iPad to your TV (a feature Apple calls AirPlay). As of iOS 4.3, AirPlay streaming works with music, videos, and photos, as well as selected apps and Web content.



Apple's new Smart Cover for the iPad 2 comes in five colors of the polyurethane version (\$39) and five of the leather (\$69).

Worth the upgrade?

If you wanted the first iPad but possessed the foresight and restraint to wait until now, congratulations. There's nothing about the iPad 2 that is a step backward from the original. Buy with confidence.

If you're sitting there with a first-generation iPad and wondering whether you should upgrade, the sensible answer is no. That said, we understand that the iPad isn't a device that sells on its sensibleness. It's a fun product, and if fun is your only criterion, then by all means, buy them by the bushel.

Some of the iPad 2's capabilities for some niche audiences may justify trading in the old iPad for its thinner, faster next of kin. If Apple's FaceTime video calling service has become an indispensable feature for your family (via iPhone, iPod Touch, or Mac), it's one feature of the iPad 2 that firmware updates and accessories will just never bring to the original iPad. Some professionals may also find the iPad 2's unique HDMI video output mirroring (adapter required) to be a critical tool for presentations.

For the rest of you original iPad owners, the iPad 2's thinner profile, added cameras, and improved performance probably aren't enough to justify shelling out another \$500 to \$800. Unless you just have piles of cash lying around, we recommend that most existing iPad owners wait for the iPad 3.

Final thoughts

So, is the iPad 2 the tablet to beat in 2011? No doubt. It has the most apps, the thinnest construction, the longest battery life, a competitive price, and an existing pool of hundreds of thousands of satisfied, iPad-evangelizing customers. Competition from Google, HP, and RIM will keep things interesting this year, but from what we've seen so far, they've got their work cut out for them.

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