

= iPad (4th generation) =

The fourth @-@ generation iPad (marketed as iPad with Retina display , colloquially referred to as the iPad 4) is a tablet computer produced and marketed by Apple Inc . Compared to its predecessor , the fourth @-@ generation iPad maintained the Retina Display but featured new and upgraded components such as the Apple A6X chip , and the Lightning connector , which was introduced on September 12 , 2012 . It shipped with iOS 6 @.@ 0 , which provides a platform for audio @-@ visual media , including electronic books , periodicals , films , music , computer games , presentations and web content . It has supported 5 major iOS releases , they are iOS 6 , 7 , 8 , 9 , and 10 . This being the third iPad to support 5 major iOS versions , after the iPad (3rd generation) and the iPad 2 .

It was announced at a media conference on October 23 , 2012 as the fourth generation of the iPad line , succeeding the third @-@ generation iPad , and was first released on November 2 , 2012 in thirty @-@ five countries . The device was released throughout December in ten other countries including China , India and Brazil . The third generation was discontinued following the fourth 's announcement , after only seven months of general availability .

The device is available with either a black or white front glass panel and various connectivity and storage options . Storage size options include 16 GB , 32 GB , 64 GB , and 128 GB ; the available connectivity options are Wi @-@ Fi only and Wi @-@ Fi + Cellular with LTE capabilities .

The fourth @-@ generation iPad received primarily positive reviews and was praised for its hardware improvements as well as the Retina display , which was also featured in the device 's predecessor . Furthermore , benchmarks reveal that the fourth @-@ generation iPad is able to perform CPU @-@ reliant tasks twice as fast as its predecessor . During the first weekend of sales , an aggregated amount of three million fourth @-@ generation iPads and iPad Minis were sold .

= = History = =

Rumors regarding the next @-@ generation iPad emerged shortly after the release of the third @-@ generation iPad . At that point some speculated that the next iPad released would be of a smaller size . Further speculations emerged in July 2012 when DigiTimes , with the help of unspecified sources , claimed that Apple made small revisions to the then upcoming iPad and scheduled its release for late 2012 . On October 16 , 2012 , Apple announced a media event scheduled for October 23 at the California Theatre in San Jose , California . The company did not pre @-@ disclose the subject of the event , but it was widely expected to be regarding the iPad Mini . Photographic images of the device 's dock connector and front camera emerged shortly before the media event .

At the media event , Apple CEO Tim Cook introduced a new version of iBooks and new generations of the MacBook Pro , Mac Mini , and the iMac before unveiling the fourth @-@ generation iPad and the iPad Mini . During the unveiling , Apple stated that the fourth @-@ generation iPad would be available to pre @-@ order online in a selected number of countries starting October 26 . On November 2 , Apple released the Wi @-@ Fi model of device in thirty @-@ five countries across Europe , East Asia and North America . The cellular model was released in @-@ store a few weeks after the initial release of the device .

The release of the fourth @-@ generation iPad led to the discontinuation of its predecessor , which angered many third @-@ generation iPad users . In response , Apple extended its 14 @-@ day return policy to 30 days . ITProPortal noted that , since the price of both models is identical , consumers that purchased the third @-@ generation iPad within this time frame were effectively allowed to exchange their discontinued device for the fourth @-@ generation model .

On January 29 , 2013 , Apple announced and scheduled the launch of the 128 GB variant of 4th generation iPad . It was released on February 5 , 2013 .

Following the announcement of the iPad Air on October 22 , 2013 , sales of the fourth @-@ generation iPad was discontinued . The fourth @-@ generation iPad was reintroduced on March 18 , 2014 , following the discontinuation of the iPad 2 . In order to make its reintroduction a low @-@

end device to the iPad Air , its price was cut by 20 % over its original launch price . On October 16 , 2014 the fourth @-@ generation iPad was discontinued in favor of the iPad Air 2 and iPad Mini 3 . The iPad Air takes its place as the entry @-@ level iPad .

= = Features = =

= = = Software = = =

The fourth @-@ generation iPad is shipped with iOS 6 @.@ 0 . It can act as a hotspot with some carriers , sharing its Internet connection over Wi @-@ Fi , Bluetooth , or USB , and also access the Apple App Store , a digital application distribution platform for iOS . The service allows users to browse and download applications from the iTunes Store that were developed with Xcode and the iOS SDK and were published through Apple . From the App Store , GarageBand , iMovie , iPhoto , and the iWork apps (Pages , Keynote , and Numbers) are available .

The iPad comes with several pre @-@ installed applications , including Siri , Safari , Mail , Photos , Video , Music , iTunes , App Store , Maps , Notes , Calendar , Game Center , Photo Booth , and Contacts . Like all iOS devices , the iPad can sync content and other data with a Mac or PC using iTunes , although iOS 5 and later can be managed and backed up without a computer . Although the tablet is not designed to make phone calls over a cellular network , users can use a headset or the built @-@ in speaker and microphone to place phone calls over Wi @-@ Fi or cellular using a VoIP application , such as Skype . The device has a dictation application , using the same voice recognition technology as the iPhone 4S . The user speaks and the iPad types what they say on the screen , though the iPad must have an internet connection available (via Wi @-@ Fi or cellular network) due to the feature 's reliance on Apple servers to translate the speech .

The fourth @-@ generation iPad has an optional iBooks application , which displays books and other ePub @-@ format content downloaded from the iBookstore . Several major book publishers including Penguin Books , HarperCollins , Simon & Schuster , and Macmillan have committed to publishing books for the device . Despite being a direct competitor to both the Amazon Kindle and Barnes & Noble Nook , both Amazon.com and Barnes & Noble offer e @-@ reader apps for the iPad .

It was announced at the Apple WWDC 2015 that the 4th generation iPad (along with various other iOS devices) will support iOS 9 .

It was announced at the Apple WWDC 2016 that the 4th generation iPad (along with various other iOS devices) will support iOS 10 , which is the latest version of iOS , while dropping support to its immediate predecessor the 3rd generation iPad .

= = = Hardware = = =

The device has an Apple A6X SoC which comprises a 32 @-@ bit Apple Swift dual @-@ core CPU running at 1 @.@ 4 GHz and a quad @-@ core PowerVR SGX554MP4 GPU , 1 GB of RAM . It also features a 5 @-@ megapixel , rear @-@ facing camera capable of 1080p video recording ; and a 720p HD front @-@ facing videophone camera designed for FaceTime . The device features a 9 @.@ 7 " (diagonal) display with a resolution of 2 @,@ 048 by 1 @,@ 536 (QXGA) resulting in 3 @.@ 1 million pixels , this gives the display a pixel density of 264 ppi . The total number of pixels used in the display of the fourth @-@ generation iPad is four times that of the iPad 2 ? providing even scaling from the prior model .

As with all previous generations of iPhone and iPad hardware , there are four buttons and one switch on the fourth @-@ generation iPad . With the device in its portrait orientation , these are : a " home " button on the face of the device under the display that returns the user to the home screen , a wake / sleep button on the top edge of the device , and two buttons on the upper right side of the device performing volume up / down functions , under which is a switch whose function varies according to device settings , generally functioning either to switch the device into or out of silent

mode or to lock / unlock the orientation of the screen . Externally , the fourth @-@ generation iPad is identical to its predecessor apart from the differences between dock connectors used and change of manufacturers that produce the display . In addition , the Wi @-@ Fi only version weighs 652 grams while the cellular model weighs 662 grams ? 2 grams heavier than their respective predecessors . The display responds to other sensors : an ambient light sensor to adjust screen brightness and a 3 @-@ axis accelerometer to sense orientation and switch between portrait and landscape modes . Unlike the iPhone and iPod Touch 's built @-@ in applications , which work in three orientations (portrait , landscape @-@ left and landscape @-@ right) , the iPad 's built @-@ in applications support screen rotation in all four orientations , including upside @-@ down . Consequently , the device has no intrinsic " native " orientation ; only the relative position of the home button changes .

The tablet is manufactured either with or without the capability to communicate over a cellular network . All models can connect to a wireless LAN via Wi @-@ Fi . The fourth @-@ generation iPad is available with 16 , 32 , 64 or 128 GB of internal flash memory , with no expansion option . Apple sells a " camera connection kit " with an SD card reader , but it can only be used to transfer photos and videos .

The audio playback of the fourth @-@ generation iPad has a frequency response of 20 Hz to 20 @, @ 000 Hz . Without third @-@ party software it can play the following audio formats : HE @-@ AAC , AAC , Protected AAC , MP3 , MP3 VBR , Audible formats (2 , 3 , 4 , AEA , AAX , and AAX +) , ALAC , AIFF , and WAV .

This iPad uses an internal rechargeable lithium @-@ ion polymer (LiPo) battery that can hold a charge of 11 @, @ 560 mAh . The batteries are made in Taiwan by Simplo Technology (60 %) and Dynapack International Technology (40 %) . The iPad is designed to be charged with a relatively high current of 2 amps using the included 12 W USB power adapter and Lightning connector . While it can be charged by an older USB port from a computer , these are limited to 500 milliamps (0 @. @ 5 amps) . As a result , if the iPad is in use while powered by a computer , it may charge very slowly , or not at all . High @-@ power USB ports found in newer computers and accessories provide full charging capabilities . Apple claims that the battery can provide up to 10 hours of video , audio playback , or web surfing on Wi @-@ Fi , 9 hours of web surfing over a cellular connection , or one month on standby . Like any rechargeable battery , the iPad 's battery loses capacity over time . However , the iPad 's battery is not user @-@ replaceable . In a program similar to iPod and iPhone battery @-@ replacement programs , Apple promised to replace an iPad that does not hold an electrical charge with a refurbished unit for a fee . During the battery replacement process , user data is not preserved / transferred , and repaired or refurbished units come with a new case . The warranty on the refurbished unit may vary between jurisdictions .

= = = Accessories = = =

The Smart Cover , introduced with the iPad 2 , is a screen protector that magnetically attaches to the face of the iPad . The cover has three folds which allow it to convert into a stand , which is also held together by magnets . The Smart Cover can also assume other positions by folding it . Smart Covers have a microfiber bottom that cleans the front of the iPad , and wakes up the unit when the cover is removed . It comes in five colors of both polyurethane and the more expensive leather .

Apple offers several other accessories , most of which are adapters for the proprietary Lightning connector , the only port besides the headphone jack . A dock holds the iPad at an angle , and has a dock connector and audio line @-@ out port . The iPad can use Bluetooth keyboards that also work with Macs and PCs . The iPad can be charged by a standalone power adapter (" wall charger ") compatible with iPods and iPhones , and a 12 watt charger is included .

= = Reception = =

The fourth @-@ generation iPad received primarily favorable reviews from critics and commentators . The review by Gareth Beavis of TechRadar praised the device for its high resolution

Retina Display , which TechRadar wrote is " ... one of the most impressive we 've seen on a tablet to date . " However , the reviewer also wrote that the screen " lacks the ' punch ' seen in Super AMOLED screens seen on devices like the Samsung Galaxy Note 2 . " The review also praised the interface of the iPad for its simple design and easy to use layout . Additionally , other aspects , such as the design of the iPad and updated SoC were noted and praised in the review . Critically , Beavis noted that the iPad can still moderately heat up under medium usage , however not to the extent seen in the third @-@ generation iPad . Tim Stevens of Engadget praised the Retina Display and labelled it as the best screen available on tablets . Benchmarks and tests conducted by Engadget resulted in Stevens concluding that the fourth @-@ generation iPad is the fastest Apple mobile device available , surpassing a " record " that the iPhone 5 held for a brief period .

Benchmark tests conducted by SlashGear concluded that the SoC of the fourth @-@ generation iPad is able to perform CPU @-@ reliant tasks more than twice as fast as that of the third @-@ generation iPad . A series of benchmark tests conducted on the graphics performance of the fourth @-@ generation iPad by Anandtech resulted in the device achieving the highest score compared to other consumer mobile devices , including the Samsung Galaxy S III , Nexus 10 and third @-@ generation iPad . The performance increase of the fourth @-@ generation iPad varies between tests , however an increase is nonetheless evident . Furthermore , battery longevity tests conducted by the same organization suggests that the battery of the fourth @-@ generation iPad is able to last longer than its predecessor . However , the battery of the updated iPad 2 is able to outlast the fourth @-@ generation iPad .

= = = Commercial Reception = = =

In the first weekend of sales of the iPad Mini and fourth @-@ generation iPad , Apple reported that it sold an aggregated number of 3 million units . TechRadar noted that the first weekend sales figures for the fourth @-@ generation iPad are lower than corresponding figures for the third @-@ generation iPad , which sold 3 million units in its first weekend . Subsequent reports and analysis such as that from David Hsieh , a technology analyst , suggest that the iPad mini is selling better than the fourth @-@ generation iPad . Despite the noted slump in sales , Apple 's stock price , in direct response to the figures released , rose by 1 @.@ 4 % to \$ 584 @.@ 62 on November 5 .

= = = Criticism = = =

In a repairability review conducted by iFixit , the fourth @-@ generation iPad scored 2 out of 10 (10 being the easiest to repair) due to the use of adhesive to attach components . However , reviewers noted that several components such as the screen and battery could be removed easily for replacement .