# = IPad =

iPad ( / ?a?pæd / EYE @-@ pad ) is an iOS @-@ based line of tablet computers designed and marketed by Apple Inc . The first iPad was released on April 3 , 2010 ; the most recent iPad models are the 9 @.@ 7 @-@ inch iPad Pro released on March 31 , 2016 and the iPad Mini 4 , released on September 9 , 2015 . The user interface is built around the device 's multi @-@ touch screen , including a virtual keyboard . The iPad includes built @-@ in Wi @-@ Fi and cellular connectivity on select models . As of January 2015 , there have been over 250 million iPads sold. iPad tablets are second most popular , by sales , against Android @-@ based ones , since 2013 , when Android tablet sales increased by 127 % .

An iPad can shoot video , take photos , play music , and perform Internet functions such as web @-@ browsing and emailing . Other functions ? games , reference , GPS navigation , social networking , etc . ? can be enabled by downloading and installing apps . As of October 2013 , the App Store has more than 475 @,@ 000 native apps by Apple and third parties .

There have been six versions of the iPad . The first generation established design precedents , such as the 9 @.@ 7 @-@ inch screen size and button placement , that have persisted through all models . The 2nd generation iPad ( iPad 2 ) introduced a whole new design which also added a dual @-@ core Apple A5 processor and VGA front @-@ facing and 720p rear @-@ facing cameras designed for FaceTime video calling , and dramatically reduced the thickness of the device . The third generation added a Retina Display , the new Apple A5X processor with a quad @-@ core graphics processor , a 5 @-@ megapixel camera , HD 1080p video recording , voice dictation , and 4G ( LTE ) . The fourth generation added the Apple A6X processor and replaces the 30 @-@ pin connector with an all @-@ digital Lightning connector . The iPad Air added the Apple A7 processor and the Apple M7 motion coprocessor , and reduced the thickness for the first time since the iPad 2 . The iPad Air 2 added the Apple A8X processor , the Apple M8 motion coprocessor , an 8 @-@ megapixel camera , and the Touch ID fingerprint sensor , and further reduced the thickness .

There have been four versions of the iPad Mini . The first generation features a reduced screen size of 7 @.@ 9 inches and features similar internal specifications as the iPad 2 except it uses the Lightning connector . The iPad Mini 2 features the Retina Display , the Apple A7 processor and the Apple M7 motion coprocessor , closely matching the internals specifications of the iPad Air . The iPad Mini 3 features the Touch ID fingerprint sensor . The iPad Mini 4 features the Apple A8 and the Apple M8 motion coprocessor .

## = = History = =

Apple co @-@ founder Steve Jobs said in a 1983 speech that the company 's
strategy is really simple . What we want to do is we want to put an incredibly great computer in a book that you can carry around with you and learn how to use in 20 minutes ... and we really want to do it with a radio link in it so you don ? t have to hook up to anything and you ? re in communication with all of these larger databases and other computers .

Apple 's first tablet computer was the Newton MessagePad 100 , introduced in 1993 , powered by an ARM6 processor core developed by ARM , a 1990 spinout of Acorn Computers in which Apple invested . Apple also developed a prototype PowerBook Duo based tablet , the PenLite , but decided not to sell it in order to avoid hurting MessagePad sales . Apple released several more Newton @-@ based PDAs ; the final one , the MessagePad 2100 , was discontinued in 1998 .

Apple re @-@ entered the mobile @-@ computing markets in 2007 with the iPhone . Smaller than the iPad , but featuring a camera and mobile phone , it pioneered the multi @-@ touch finger @-@ sensitive touchscreen interface of Apple 's iOS mobile operating system . By late 2009 , the iPad 's release had been rumored for several years . Such speculation mostly talked about " Apple 's tablet " ; specific names included iTablet and iSlate . The iPad was announced on January 27 , 2010 , by Steve Jobs at an Apple press conference at the Yerba Buena Center for the Arts in San Francisco .

Jobs later said that Apple had begun developing the iPad before the iPhone . Jonathan Ive in 1991 had created an industrial design for a stylus @-@ based tablet , the Macintosh Folio , as his first

project for Apple ; by 2004 his studio at the company was participating in the development of a large tablet prototype , which he later described as " very crude , involving projectors " . Ive stated that after seeking to produce the tablet first , he came to agree with Jobs that the phone was more important , as the tablet 's innovations would work as well in it . The iPad 's internal codename was K48 , which was revealed in the court case surrounding leaking of iPad information before launch .

Apple began taking pre @-@ orders for the first @-@ generation iPad on March 12 , 2010 . The only major change to the device between its announcement and being available to pre @-@ order was the change of the behavior of the side switch to perform either sound muting or screen rotation locking ( user selectable ) . The Wi @-@ Fi version of the iPad went on sale in the United States on April 3 , 2010 . The Wi @-@ Fi + 3G version was released on April 30 . 3G service in the United States is provided by AT & T and was initially sold with two prepaid contract @-@ free data plan options : one for unlimited data and the other for 250 MB per month at half the price . On June 2 , 2010 , AT & T announced that effective June 7 the unlimited plan would be replaced for new customers with a 2 GB plan at slightly lower cost ; existing customers would have the option to keep the unlimited plan . The plans are activated on the iPad itself and can be cancelled at any time .

Initially , the iPad was only available to order at the Apple Store , but has since become available for purchase through retailers including Amazon , Walmart , and network operators . The iPad was launched in countries including Australia , Canada , France , Germany , Japan and the United Kingdom on May 28 . Online pre @-@ orders in those countries began on May 10 . Apple released the iPad in Hong Kong , Ireland , Mexico , New Zealand and Singapore on July 23 , 2010 . Israel briefly prohibited importation of the iPad because of concerns that its Wi @-@ Fi might interfere with other devices . On September 17 , 2010 , the iPad was officially launched in China .

300 @,@ 000 iPads were sold on their first day of availability . By May 3 , 2010 , Apple had sold a million iPads ; this was in half the time it took Apple to sell the same number of first @-@ generation iPhones . After passing the one million mark they continued selling rapidly reaching 3 million sales after 80 days . During the October 18 , 2010 , financial conference call , Steve Jobs announced that Apple had sold more iPads than Macs for the fiscal quarter . In total , Apple sold more than 15 million first @-@ generation iPads prior to the launch of the iPad 2 ? selling more than all other tablet PCs combined since the iPad 's release. and reaching 75 % of tablet PC sales at the end of 2010 .

Jobs unveiled the iPad 2 at a March 2 , 2011 , press conference . About 33 % thinner than its predecessor and 15 % lighter , the iPad 2 has a better processor , a dual core Apple A5 that Apple says is twice as fast as its predecessor for CPU operations and up to nine times as fast for GPU operations . The iPad 2 includes front and back cameras that support the FaceTime videophone application , as well as a three @-@ axis gyroscope . It retained the original 's 10 ? hour battery life and had a similar pricing scheme .

The successor to the iPad 2 was unveiled on March 7 , 2012 , by Apple CEO Tim Cook at the Yerba Buena Center for the Arts . The new iPad contained a new dual core A5X processor with quad @-@ core graphics , and a Retina Display with a resolution of 2048 by 1536 pixels , more than 50 percent more pixels than a standard 1 @,@ 920 by 1 @,@ 080 high definition TV screen . A brief controversy erupted when it was revealed that the LTE advertised did not work in some countries .

On October 23 , 2012 , Apple announced the fourth generation iPad , which began shipping on November 2 , 2012 . The new hardware includes an A6X processor , HD FaceTime camera , improved LTE compatibility , and the all @-@ digital Lightning connector . It is available in the same storage increments and pricing structure as the third generation . Following the announcement of the fourth @-@ generation iPad , the previous generation was discontinued .

Alongside the launch of the 4th generation hardware , Apple announced the iPad Mini . With a screen measuring 7 @.@ 9 inches , it is aimed at the emerging sector of smaller tablets such as the Kindle Fire and Nexus 7 . The hardware of the new iPad Mini is similar to the iPad 2 , with a 1024 by 768 pixel resolution screen and a dual core A5 processor , but is 53 % lighter and 7 @.@ 2 mm thick . It was released on November 2 , 2012 , in 16 GB , 32 GB , and 64 GB capacities and WiFi or Wi ? Fi + Cellular versions .

On October 22 , 2013 , Apple introduced the fifth generation of iPad , called the iPad Air , and the second generation of iPad Mini , called iPad Mini 2 that comes with a Retina Display . The iPad Air went on sale on November 1 , 2013 , starting at $ 499 , while the iPad Mini 2 was released on November 12 , 2013 , starting at $ 399 .

In October 2014 , Apple released the iPad Air 2 and the iPad Mini 3 . The iPad Air 2 is the first iOS device to feature a triple core CPU and 2GB of RAM . As well as being thinner and faster than its predecessor , the iPad Air , it features Touch ID and is available with a gold color option . The iPad Mini 3 is similar than the iPad Mini 2 in design and hardware , but also includes Touch ID and available in gold color .

In September 2015 , the iPad Pro was announced , which included a 12 @.@ 9 @-@ inch screen .

In March 2016 , the 9 @.@ 7 @-@ inch iPad Pro was announced . And Apple added a new 256 GB of storage for both the iPad Pro 9.7- & 12 @.@ 9 @-@ inch .

= = Hardware = =

= = = Screen and input = = =

The iPad 's ( first two generations ) touchscreen display is a 1024 by 768 pixel , 7 @.@ 75 × 5 @.@ 82 in ( 197 × 148 mm ) liquid @-@ crystal display ( diagonal 9 @.@ 7 in ( 246 @.@ 4 mm ) ) , with fingerprint- and scratch @-@ resistant glass . Steve Jobs said a 7 @-@ inch screen would be " too small to express the software " and that 10 inches was the minimum for a tablet screen . Like the iPhone , the iPad is designed to be controlled by bare fingers ; normal , non @-@ conductive gloves and styli do not work , although there are special gloves and capacitive styli designed for this use .

The display responds to other sensors : an ambient light sensor to adjust screen brightness and a 3 @-@ axis accelerometer to sense iPad 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 .

There are four physical switches on the iPad , including a home button near the display that returns the user to the main menu , and three plastic physical switches on the sides : wake / sleep and volume up / down , plus a software @-@ controlled switch whose function has changed with software updates . Originally the switch locked the screen to its current orientation , but the iOS 4 @.@ 2 changed it to a mute switch , with rotation lock now available in an onscreen menu . In the iOS 4 @.@ 3 update , released with the iPad 2 , a setting was added to allow the user to specify whether the side switch was used for rotation lock or mute .

The first generation iPad had no camera ; the iPad 2 has a front VGA camera and a rear @-@ facing 720p camera , both capable of still images ( but these are only taken at a low quality 0 @.@ 3 megapixels ) and 30fps video . The rear @-@ facing camera has a 5 × digital zoom for still images only . Both shoot photo and video in a 4 : 3 fullscreen aspect ratio , unlike the iPhone 4 , which shoots in a 16 : 9 widescreen aspect ratio . Unlike the iPhone , the iPad does not support tap to focus , but does allow a tap to set auto exposure . The cameras allow FaceTime video messaging with iPhone 4 , fourth generation iPod Touch , and Snow Leopard , Lion , and Mountain Lion Macs .

= = = Audio and output = = =

The iPad has two internal speakers reproducing left and right channel audio located on the bottom @-@ right of the unit . In the original iPad , the speakers push sound through two small sealed channels leading to the three audio ports carved into the device , while the iPad 2 has its speakers behind a single grill . A volume switch is on the right side of the unit . A 3 @.@ 5 @-@ mm TRRS connector audio @-@ out jack on the top @-@ left corner of the device provides stereo sound for

headphones with or without microphones and / or volume controls . The iPad also contains a microphone that can be used for voice recording .

The built @-@ in Bluetooth 2 @.@ 1 + EDR interface allows wireless headphones and keyboards to be used with the iPad . However iOS does not currently support file transfer via Bluetooth. iPad also features 1024 × 768 VGA video output for limited applications , screen capture , connecting an external display or television through an accessory adapter .

### = = = Battery = = =

The iPad uses an internal rechargeable lithium @-@ ion polymer ( LiPo ) battery . The batteries are made in Taiwan by Simplo Technology ( 60 % ) and Dynapack International Technology . The iPad is designed to be charged with a high current of 2 amperes using the included 10 W USB power adapter and USB cord with a USB connector at one end and a 30 @-@ pin dock connector at the other end . While it can be charged by a standard USB port from a computer , these are limited to 500 milliamperes ( 0 @.@ 5 amps ) . As a result , if the iPad is running while powered by a normal USB computer port , it may charge very slowly , or not at all . High @-@ power USB ports found in newer Apple computers and accessories provide full charging capabilities .

Apple claims that the battery for both generations of iPad can provide up to 10 hours of video , 140 hours of audio playback , or one month on standby . Like any rechargeable battery technology , the iPad 's battery loses capacity over time , but is not designed to be user @-@ replaceable . In a program similar to the battery @-@ replacement program for the iPod and the original iPhone , Apple will replace an iPad that does not hold an electrical charge with a refurbished iPad for a fee of US $ 99 plus $ 6 @.@ 95 shipping . As a different unit is supplied , user data is not preserved . The refurbished unit will have a new case . The warranty on the refurbished unit may vary between jurisdictions .

Independent companies also provide a battery replacement service , returning the original unit with new battery but original case . Alternatively it is possible for a technically competent user to buy and install a new battery . The task does not require soldering , but is technically challenging .

### = = = Storage = = =

The iPad was released with three capacity options for storage : 16 , 32 , or 64 GB of internal flash memory . On January 29 , 2013 , Apple announced a 128 GB model of the fourth generation iPad , which was released on February 5 . All data is stored on the internal flash memory , with no option to expand storage . Apple sells a " camera connection kit " with an SD card reader , but it can only be used to transfer photos and videos . On March 21 , Apple announced a 256 GB model of the iPad Pro , which was released on March 31 .

### = = = Cellular connectivity = = =

iPad models come in two basic variants : Wi @-@ Fi only and Wi @-@ Fi with cellular support . The cellular variants however do not support circuit @-@ switched voice calls and texts , only data connectivity . The side of the Wi @-@ Fi + 3G iPad had a micro @-@ SIM slot ( not mini @-@ SIM ) . The 3G iPad can be used with any compatible GSM carrier , unlike the iPhone , which is usually sold ' locked ' to specific carriers . On the first generations of the iPad in the U.S. , data network access via T @-@ Mobile 's network was limited to slower EDGE cellular speeds because T @-@ Mobile 's 3G Network at the time used different frequencies .

The second generation iPad introduced a third tier of models with CDMA support for Verizon Wireless in the United States , available separately from the AT & T capable version .

The iPad up to the 4th generation uses a Micro @-@ SIM , while the first generation iPad Mini uses a nano @-@ SIM as introduced with the iPhone 5 . The iPad mini is available with two different frequency bands worldwide . Both devices support the same quad @-@ band GSM and quad @-@ band UMTS frequencies , but one variant also supports LTE bands 4 and 17 ( principally intended

for use on the U.S. AT & T network ) , while the other adds support for LTE bands 1 , 3 , 5 , 13 , 25 and CDMA EV @-@ DO Rev. A and Rev. B.

The 5th generation iPad and 2nd generation iPad mini introduced support for many additional LTE bands worldwide . The iPad Air and Mini with Retina display cellular models come in two variants each , all of which support nano @-@ SIMs , quad @-@ band GSM , penta @-@ band UMTS , and dual @-@ band CDMA EV @-@ DO Rev. A and B. Additionally , one variant of each iPad also supports LTE bands 1 , 2 , 3 , 4 , 5 , 7 , 8 , 13 , 17 , 18 , 19 , 20 , 25 and 26 while the other variant supports LTE bands 1 , 2 , 3 , 5 , 7 , 8 , 18 , 19 , 20 and TD @-@ LTE bands 38 , 39 and 40 . Apple 's ability to handle many different bands in one device allowed it to offer , for the first time , a single iPad variant which supports all the cellular bands and technologies deployed by all the major North American wireless providers at the time of the device 's introduction . Moreover , with T @-@ Mobile USA selling the iPad Air and Mini with Retina display , these models became the first iPads that were made available for purchase directly from all four nationwide U.S. wireless carriers ( and , as previously indicated , with all U.S. carriers now selling the same hardware variant of the device ) .

= = = Accessories = = =

Apple offers several iPad accessories , most of which are adapters for the proprietary 30 @-@ pin dock connector , the iPad 's only port besides the headphone jack . A dock holds the iPad upright at an angle , and has a dock connector and audio line out port . Each generation of iPad requires a corresponding dock . A dock that included a physical keyboard was only supported for the original iPad , but all generations are compatible with Bluetooth keyboards that also work with Macs and PCs . The iPad can be charged by a standalone power adapter ( " wall charger " ) also used for iPods and iPhones , and a 10 W charger is included with the iPad .

Apple sells a camera connection kit that consists of two separate adapters for the dock connector , one to USB Type A , the other an SD card reader . Adapter can be used to transfer photos and videos and to plug USB audio card or MIDI keyboard . A third party sells an adapter that includes USB , SD , and microSD on a single unit . An adapter to VGA connectors allows the iPad to work with external monitors and projectors . Another adapter mirrors the screen onto HDMI compatible devices in 1080p and works with all apps and rotations . Unlike other adapters , it allows the iPad to charge through another dock connector . While the HDMI adapter was released with and advertised for the second generation iPad , it also works with the first @-@ generation iPad , the iPhone 4 , and the fourth generation iPod Touch .

Smart Covers are screen protectors that magnetically attach and align to the face of the iPad 2 , 3 , or 4 . The cover has three folds which allow it to convert into a stand , which is also held together by magnets . While original iPad owners could purchase a black case that included a similarly folding cover , the Smart Cover is meant to be more minimal , easily detachable , and protects only the screen . Smart Covers have a microfiber bottom that cleans the front of the iPad , which wakes up when the cover is removed . There are five different colors of both polyurethane and leather , with leather being more expensive . Smart Covers are not compatible with the original iPad . In June 2012 , Apple started selling the Smart Case - a case with the combined function of a smart cover and a back protection case which is compatible with the iPad 2 , and iPad 3rd & 4th generation devices .

= = Software = =

Like the iPhone , with which it shares a development environment the iPad only runs its own software , software downloaded from Apple 's App Store , and software written by developers who have paid for a developer 's license on registered devices . The iPad runs almost all third @-@ party iPhone applications , displaying them at iPhone size or enlarging them to fill the iPad 's screen . Developers may also create or modify apps to take advantage of the iPad 's features . Application developers use iOS SDK for developing applications for iPad . The iPad originally shipped with a customized iPad @-@ only version of iPhone OS , dubbed v3.2. On September 1 , it was

announced the iPad would get iOS 4 @.@ 2 by November 2010 ; to fulfill this Apple released iOS 4 @.@ 2 @.@ 1 to the public on November 22 .

= = = Interface = = =

The interface is centred around the home screen , a graphical list of available applications . The home screen can be accessed at any time by a hardware button below the screen , closing an open application in the process .
Users can also add and delete icons from the dock , which is the same on every home screen . Each home screen holds up to twenty icons , and the dock holds up to six icons . Users can delete Web Clips and third @-@ party applications at any time , and may select only certain applications for transfer from iTunes . Apple 's default programs , however , may not be removed .
Almost all input is given through the touch screen , which understands complex gestures using multi @-@ touch . The iPad 's interaction techniques enable the user to move the content up or down by a touch @-@ drag motion of the finger . For example , zooming in and out of web pages and photos is done by placing two fingers on the screen and spreading them farther apart or bringing them closer together , a gesture known as " pinching " .
Scrolling through a long list or menu is achieved by sliding a finger over the display from bottom to top , or vice versa to go back . In either case , the list moves as if it is pasted on the outer surface of a wheel , slowly decelerating as if affected by friction . In this way , the interface simulates the physics of a real object .
Other user @-@ centered interactive effects include horizontally sliding sub @-@ selection , the vertically sliding keyboard and bookmarks menu , and widgets that turn around to allow settings to be configured on the other side . Menu bars are found at the top and bottom of the screen when necessary . Their options vary by program , but always follow a consistent style motif . In menu hierarchies , a " back " button in the top @-@ left corner of the screen displays the name of the parent folder .

= = = Multimedia = = =

The layout of the music library is similar to that of an iPod or current Symbian S60 phones . The iPad can sort its media library by songs , artists , albums , videos , playlists , genres , composers , podcasts , audiobooks , and compilations . Options are always presented alphabetically , except in playlists , which retain their order from iTunes . The iPhone uses a large font that allows users plenty of room to touch their selection .
Users can rotate their device horizontally to landscape mode to access Cover Flow . Like on iTunes , this feature shows the different album covers in a scroll @-@ through photo library . Scrolling is achieved by swiping a finger across the screen . Alternatively , headset controls can be used to pause , play , skip , and repeat tracks .
The iPad supports gapless playback . Like the fifth @-@ generation iPods introduced in 2005 , the iPad can play digital video , allowing users to watch TV shows and movies in widescreen . Double @-@ tapping switches between widescreen and fullscreen video playback .
The iPad allows users to purchase and download songs from the iTunes Store directly to their iPad . It includes software that allows the user to upload , view , and email photos taken with the camera . The user zooms in and out of photos by sliding two fingers further apart or closer together , much like Safari . The Camera application also lets users view the camera roll , the pictures that have been taken with the iPad 's camera . Those pictures are also available in the Photos application , along with any transferred from iPhoto or Aperture on a Mac , or Photoshop on a Windows PC .

= = = Internet connectivity = = =

The iPad can use Wi @-@ Fi network trilateration from Skyhook Wireless to provide location information to applications such as Google Maps . The 3G model supports A @-@ GPS to allow its

position to be calculated with GPS or relative to nearby cellphone towers ; it also has a black strip on the back to aid 3G reception . The iPad has a headphone jack and a proprietary Apple dock connector , but no Ethernet or USB port . However , the Apple Camera Connection Kit accessory provides two dock connector adapters for importing photos and videos via USB and SD memory cards .

### = = = Applications = = =

 The iPad comes with several applications , including Safari , Mail , Photos , Video , iPod , iTunes , App Store , iBooks , Maps , Notes , Calendar , and Contacts . Several are improved versions of applications developed for the iPhone or Mac .
 The iPad syncs with iTunes on a Mac or Windows PC . Apple ported its iWork suite from the Mac to the iPad , and sells pared down versions of Pages , Numbers , and Keynote apps in the App Store . Although the iPad is not designed to replace a mobile phone , a user can use a wired headset or the built @-@ in speaker and microphone and place telephone calls over Wi @-@ Fi or 3G using a VoIP application . As of June 2012 , there were about 225 @,@ 000 iPad specific apps on the App Store .
 In December 2010 , Reuters reported that iPhone and iPad users have lodged a lawsuit against Apple alleging that some applications were passing their information to third party advertisers without consent .

### = = = iBooks = = =

 The iPad has an optional iBooks application that can be downloaded from the App Store , which displays books and other ePub @-@ format content downloaded from the iBookstore . For the iPad launch on April 3 , 2010 , the iBookstore is available only in the United States . Several major book publishers including Penguin Books , HarperCollins , Simon & Schuster and Macmillan have committed to publishing books for the iPad . Despite its being a direct competitor to both the Amazon Kindle and Barnes & Noble Nook , both Amazon.com and Barnes & Noble have made Kindle and Nook apps available for the iPad .
 In February 2010 , Condé Nast said it would sell iPad subscriptions for several of its magazines by June .
 In April 2010 , the New York Times announced that it would begin publishing daily on the iPad . The " Top News " section is available free of charge , and the remainder on payment of a subscription . Major news organizations , including The Wall Street Journal , the BBC , and Reuters have released iPad applications . NewsCorp created an iPad @-@ only publication , The Daily , in February 2011 . It ceased operations in December 2012 .

## = = Model comparison = =

### = = = iPad series = = =

### = = = iPad mini series = = =

 The iPad is assembled by Foxconn , which also manufactures Apple 's iPod , iPhone and Mac Mini , in its largest plant in Shenzhen , China . In April 2011 , Foxconn announced that it would be moving production of the iPad and other Apple products to Brazil where it could begin production before the end of 2011 .
 iSuppli estimated that each first @-@ generation iPad 16 GB Wi @-@ Fi version costs US $ 259 @.@ 60 to manufacture , a total that excludes research , development , licensing , royalty and patent costs . Apple does not disclose the makers of iPad components , but teardown reports and

analysis from industry insiders indicate that various parts and their suppliers include :
 Apple A4 , A5 and A5X SoC : Samsung .
 NAND flash RAM chips : Toshiba and Samsung ( 64 GB model ) .
 Touch @-@ screen chips : Broadcom .
 IPS Display ( 1st & 2nd generation ) : LG Display .
 IPS Display ( 3rd generation ) : Samsung .
 Touch panels : Wintek ( after TPK Touch Solutions was unable to fulfill its orders , delaying the iPad 's release from late March to early April ) .
 Case : Catcher Technologies .
 Batteries : 60 % are made in Taiwan by Simplo Technology , 40 % by Dynapack International .
 Accelerometer : STMicroelectronics .

= = = iPad Pro series = = =


= = Restrictions = =


= = = Digital rights management = = =

 The iPad does not employ digital rights management ( DRM ) , but the OS prevents users from copying or transferring certain content outside of Apple 's platform without authorization , such as TV shows , movies , and apps . Also , the iPad 's development model requires anyone creating an app for the iPad to sign a non @-@ disclosure agreement and pay for a developer subscription . Critics argue Apple 's centralized app approval process and control of the platform itself could stifle software innovation . Of particular concern to digital rights advocates is Apple 's ability to remotely disable or delete apps on any iPad at any time .
 Digital rights advocates , including the Free Software Foundation , Electronic Frontier Foundation , and computer engineer and activist Brewster Kahle , have criticized the iPad for its digital rights restrictions . In April 2010 , Paul Sweeting , an analyst with GigaOM , was quoted by National Public Radio as saying , " With the iPad , you have the anti @-@ Internet in your hands . ... It offers [ the major media companies ] the opportunity to essentially re @-@ create the old business model , wherein they are pushing content to you on their terms rather than you going out and finding content , or a search engine discovering content for you . " But Sweeting also thought that the limitations imposed by Apple impart the feeling of a safe neighborhood , saying , " Apple is offering you a gated community where there 's a guard at the gate , and there 's probably maid service , too . " Laura Sydell , the article 's author , concludes , " As more consumers have fears about security on the Internet , viruses and malware , they may be happy to opt for Apple 's gated community . " The Russian government has switched from iPads to Android devices over security concerns .

= = = Jailbreaking = = =

 Like certain iOS devices , the iPad can be " jailbroken " , depending on which version of iOS it is running , thus allowing applications and programs that are not authorized by Apple to run on the device . Once it is jailbroken , users are able to download many applications previously unavailable through the App Store via unofficial installers such as Cydia , as well as illegally pirated applications . Apple claims jailbreaking " can " void the factory warranty on the device in the United States even though jailbreaking is legal . The iPad , released in April 2010 , was first jailbroken in May 2010 with the Spirit jailbreak for iOS version 3 @.@ 1 @.@ 2 . The iPad can be jailbroken on iOS versions 4 @.@ 3 through 4 @.@ 3 @.@ 3 with the web @-@ based tool JailbreakMe 3 @.@ 0 ( released in July 2011 ) , and on iOS versions including 5 @.@ 0 and 5 @.@ 0 @.@ 1 using redsn0w Absinthe 2 @.@ 0 was released on May 25 , 2012 as the first jailbreak method for all iOS 5 @.@ 1 @.@ 1 devices except the 32 nm version of the iPad 2 .

### Censorship

Apple 's App Store , which provides iPhone and iPad applications , imposes censorship of content , which has become an issue for book publishers and magazines seeking to use the platform . The Guardian newspaper described the role of Apple as analogous to that of British magazine distributor WH Smith , which for many years imposed content restrictions .

Due to the exclusion of pornography from the App Store , YouPorn and others changed their video format from Flash to H.264 and HTML5 specifically for the iPad . In an e @-@ mail exchange with Ryan Tate from Valleywag , Steve Jobs claimed that the iPad offers " freedom from porn " , leading to many upset replies including Adbustings in Berlin by artist Johannes P. Osterhoff and in San Francisco during WWDC10 .

## Reception

On May 28 , 2010 , the iPad was released in Australia , Canada , and Japan , as well as in several larger European countries . Media reaction to the launch was mixed . The media noted the positive response from fans of the device , with thousands of people queued on the first day of sale in a number of these countries .

### Reaction to the announcement

Media reaction to the iPad announcement was mixed . Walter Mossberg wrote , " It 's about the software , stupid " , meaning hardware features and build are less important to the iPad 's success than software and user interface , his first impressions of which were largely positive . Mossberg also called the price " modest " for a device of its capabilities , and praised the ten @-@ hour battery life . Others , including PC Advisor and the Sydney Morning Herald , wrote that the iPad would also compete with proliferating netbooks , most of which use Microsoft Windows . The base model 's $ 499 price was lower than pre @-@ release estimates by the tech press , Wall Street analysts , and Apple 's competitors , all of whom were expecting a much higher entry price point .

CNET also criticized the iPad for its apparent lack of wireless sync which other portable devices such as Microsoft 's Zune have had for a number of years . The built @-@ in iTunes app is able to download from the Internet as well .

### Reviews

Reviews of the iPad have been generally favorable . Walt Mossberg then , of The Wall Street Journal called it a " pretty close " laptop killer . David Pogue of The New York Times wrote a " dual " review , one part for technology @-@ minded people , and the other part for non @-@ technology @-@ minded people . In the former section , he notes that a laptop offers more features for a cheaper price than the iPad . In his review for the latter audience , however , he claims that if his readers like the concept of the device and can understand what its intended uses are , then they will enjoy using the device . PC Magazine 's Tim Gideon wrote , " you have yourself a winner " that " will undoubtedly be a driving force in shaping the emerging tablet landscape . " Michael Arrington of TechCrunch said , " the iPad beats even my most optimistic expectations . This is a new category of device . But it also will replace laptops for many people . " PC World criticized the iPad 's file sharing and printing abilities , and ArsTechnica said sharing files with a computer is " one of our least favorite parts of the iPad experience . "

The media also praised the quantity of applications , as well as the bookstore and other media applications . In contrast they criticized the iPad for being a closed system and mentioned that the iPad faces competition from Android @-@ based tablets , that outsold iPads in 2013 , surpassing iPads in the second quarter of 2013 , and have overtaken iPad 's installed base , and has lost majority of web browsing to Android , by StatCounter estimates , in South America , Africa , most of

Asia ? many large countries there and in Eastern Europe . The Independent criticized the iPad for not being as readable in bright light as paper but praised it for being able to store large quantities of books . After its UK release , The Daily Telegraph said the iPad 's lack of Adobe Flash support was " annoying . "

= = = Recognition = = =

The iPad was selected by Time magazine as one of the 50 Best Inventions of the Year 2010 , while Popular Science chose it as the top gadget behind the overall " Best of What 's New 2010 " winner Groasis Waterboxx .

= = Usage = =

= = = Market share = = =

iPad tablets still have a wide margin globally on second most used Android tablets . The market share , however , differs widely by regions ; and the iPad has lost market share globally , every year since 2012 ( when StatCounter started tracking tablets separately ) .
According to StatCounter statistics , that tracks web use and gives operating system / platform share based on it , the iPad has lost majority of use in South America to Android , did also lose majority while gaining back in Asia and in Africa has lost by a wide margin , where Android is up to 70 % .

= = = Business = = =

While the iPad is mostly used by consumers , it also has been taken up by business users . Within 90 days of its release , the iPad managed to penetrate 50 % of Fortune 100 companies . Some companies are adopting iPads in their business offices by distributing or making available iPads to employees . Examples of uses in the workplace include attorneys responding to clients , medical professionals accessing health records during patient exams , and managers approving employee requests .
A survey by Frost & Sullivan shows that iPad usage in office workplaces is linked to the goals of increased employee productivity , reduced paperwork , and increased revenue . The research firm estimates that " The mobile @-@ office application market in North America may reach $ 6 @.@ 85 billion in 2015 , up from an estimated $ 1 @.@ 76 billion [ in 2010 ] . "
Since March 2011 , the US Federal Aviation Administration has approved the iPad for in @-@ cockpit use to cut down on the paper consumption in several airlines . In 2011 , Alaska Airlines became the first airline to replace pilots ' paper manuals with iPads , weighing 0 @.@ 68 kg compared to 11 kg for the printed flight manuals . It hopes to have fewer back and muscle injuries . More than a dozen airlines have followed suit , including United , which has distributed 11 @,@ 000 iPads to cockpits . Also , many airlines now offer their inflight magazine as a downloadable application for the iPad .

= = = Education and healthcare = = =

The iPad has several uses in the classroom , and has been praised as a valuable tool for homeschooling . Soon after the iPad was released , it was reported that 81 % of the top book apps were for children . The iPad has also been called a revolutionary tool to help children with autism learn how to communicate and socialize more easily .
In the healthcare field , iPads and iPhones have been used to help hospitals manage their supply chain . For example , Novation , a healthcare contracting services company , developed VHA PriceLynx ( based on the mobile application platform of business intelligence software vendor

MicroStrategy ) , a business intelligence app to help health care organizations manage its purchasing procedures more efficiently and save money for hospitals . Guillermo Ramas of Novation states , " Doctors won 't walk around a hospital with a laptop . With an iPad it 's perfect to walk around the hospital with as long as they have the information they need . "

In 2013 , Gianna Chien ( aged 14 ) presented to more than 8 @,@ 000 doctors at the Heart Rhythm Society meeting that Apple iPad 2 can , in some cases , interfere with life @-@ saving heart devices ( pace maker ) because of the magnets inside . Apple 's webpage has advised pacemaker users to keep iPads at least 6 @-@ inches away from the pacemaker .

= = = Consumer usage = = =

In the United States , fans attending Super Bowl XLV , the first Super Bowl since the iPad was released , could use an official National Football League ( NFL ) app to navigate Cowboys Stadium . In 2011 , the Tampa Bay Buccaneers became the first NFL club to discontinue the use of paper copies of playbooks , and instead distributed all players their playbook and videos in electronic format via an iPad 2 .

The iPad is able to support many music creation applications in addition to the iTunes music playback software . These include sound samplers , guitar and voice effects processors , sequencers for synthesized sounds and sampled loops , virtual synthesizers and drum machines , theremin @-@ style and other touch responsive instruments , drum pads and many more . Gorillaz 's 2010 album , The Fall , was created almost exclusively using the iPad by Damon Albarn while on tour with the band . The music video for Luna Sea 's 2012 single , " Rouge " , was filmed entirely on an iPad .

The iPad has also greatly increased social television use . Viewers can use the iPad as a convenient second networked computer ( or " second screen " ) for communicating with other viewers or with the television provider . Viewers can use a web browser or specialised applications to discuss a program with other viewers , while it is being broadcast , while content providers may use the second screen to interact with viewers in real time . For example , the latter facility allows content providers to conduct real @-@ time polls or to collect comments about the program , that can be displayed as text on the main television screen . Viewer interaction via a second screen is becoming increasingly popular .

= = Timeline = =