

= MacBook =

The MacBook was a brand of notebook computers manufactured by Apple Inc. from May 2006 to July 2011 , and relaunched in 2015 . It replaced the iBook series and 12 @-@ inch PowerBook series of notebooks as a part of the Apple @-@ Intel transition from PowerPC . Positioned as the low end of the MacBook family , below the premium ultra @-@ portable MacBook Air and the powerful MacBook Pro , the MacBook was aimed at the consumer and education markets . It was the best @-@ selling Macintosh ever . For five months in 2008 , it was the best @-@ selling laptop of any brand in US retail stores . Collectively , the MacBook brand is the " world 's top @-@ selling line of premium laptops . "

There have been four separate designs of the MacBook . The original model used a combination of polycarbonate and fiberglass casing which was modeled after the iBook G4 . The second type was introduced in October 2008 alongside the 15 @-@ inch MacBook Pro ; the MacBook shared the more expensive laptop 's unibody aluminum casing , but omitted FireWire , which hurt sales . A third design , introduced in late 2009 , had a polycarbonate unibody casing and no FireWire ports .

On July 20 , 2011 , the MacBook was discontinued for consumer purchase as it had been effectively superseded by the MacBook Air whose starting price was lowered . Apple continued to sell the MacBook to educational institutions until February 2012 .

A new , redesigned MacBook line was launched on March 9 , 2015 . Available in silver , gold or space grey , it is thinner than the MacBook Air and removes the traditional MagSafe charging port (along with all other ports , except the headphone jack) in favor of the multi @-@ purpose USB Type @-@ C port . It also features a Retina Display . On April 19 , 2016 , Apple updated the 12 @-@ inch Retina MacBook with new sixth @-@ generation Intel Core M processors , longer battery life and a new rose gold option .

= = Original polycarbonate model = =

The original MacBook , available in black or white colors , was released on June 28 , 2006 , and used the Intel Core Duo processor and 945GM chipset , with Intel 's GMA 950 integrated graphics on a 667 MHz front side bus . Later revisions of the MacBook moved to the Core 2 Duo processor and the GM965 chipset , with Intel 's GMA X3100 integrated graphics on an 800 MHz system bus . Sales of the black polycarbonate MacBook ceased in October 2008 , after the introduction of the aluminum MacBook .

While thicker than its predecessor ? the iBook G4 ? the MacBook is wider than the 12 @-@ inch model due to its widescreen display . In addition , the MacBook was one of the first (the first being the MacBook Pro) to adopt Apple 's MagSafe power connector and it replaced the iBook 's mini @-@ VGA display port with a mini @-@ DVI display port . The iBook 's discrete graphics chip was initially replaced by an integrated Intel GMA solution , though the latest revisions of the MacBook were upgraded with the more powerful Nvidia GeForce 9400M and later the 320M .

While the MacBook Pro largely followed the industrial design standard set by the PowerBook G4 , the MacBook was Apple 's first notebook to use features now standard in its notebooks ? the glossy display , the sunken keyboard design and the non @-@ mechanical magnetic latch . With the late 2007 revision , the keyboard received several changes to closely mirror the one which shipped with the iMac , by adding the same keyboard short @-@ cut to control multimedia , and removing the embedded numeric keypad and the Apple logo from the command keys .

A more expensive black model was offered until the introduction of the unibody aluminum MacBook . The polycarbonate MacBook was the only Macintosh notebook (until the new 2015 model) to be offered in more than one color since the iBook G3 (Clamshell) .

= = = Ports = = =

The ports are all on the left edge ; on early models , from left to right , they are the MagSafe power connector , Gigabit Ethernet , mini @-@ DVI , FireWire 400 , 2 USB 2 @-@ 0 ports , audio in , audio

out and Kensington Security Slot .

For the unibody polycarbonate MacBook (2009) , the ports from left to right are the MagSafe power connector , Gigabit Ethernet , Mini DisplayPort , 2 USB 2.0 ports , audio out and Kensington Security Slot .

On the front , there is a power light and an infrared receiver , while on the right edge , there is only the optical drive .

=== User serviceability ===

The polycarbonate Intel MacBook is easier for users to fix or upgrade than its predecessor . Where the iBook required substantial disassembly to access internal components such as the hard drive , users only need to remove the battery and the RAM door to replace the MacBook drive . Apple provides do-it-yourself manuals for these tasks .

=== Quality problems ===

In February 2007 , the MacBook was recalled because the graphics card and hard drive caused the computer to overheat , forcing the unit to shut down .

Some early polycarbonate MacBook models suffered from random shutdowns ; Apple released a firmware update to resolve these random shutdowns .

There were also cases reported of discolored or chipping palmrests . There were many instances of the edges of the palm rest and screen bezel splitting and thin strips peeling off . In such cases , Apple asked affected owners to contact AppleCare .

There were problems with batteries on some models from 2007 not being read by the MacBook . This is caused by a logic board fault and not a fault with the battery .

In February 2010 , Apple announced a recall for MacBooks bought between 2006 - 2007 for hard drive issues . This is caused by heat and other problems .

=== Model specifications ===

Apple used the A1181 code , printed on the case , for this family of models , though 17 variations may be counted if color is included .

Notes : 1 Requires the purchase of a wireless N enabler software from Apple in order to enable the functionality . Also enabled in Mac OS X 10.6 and later.2 Hard drives noted are options available from Apple . As the hard drive is a user-replaceable part , there are custom configurations available , including use of 7200 rpm drives.3 Given optical drive speed is its maximum.4 Beginning with the early 2008 revision , the Apple Remote became an optional add-on.5 Expandable to 4 GB , with 3 GB usable.6 Expandable to 8 GB , but with only 6 GB working stably with a Mac OS X older than 10.6.6 due to a software bug .

=== Unibody aluminum model ===

On October 14 , 2008 , Apple announced a MacBook featuring a new Nvidia chipset at a Cupertino , California press conference with the tagline : " The spotlight turns to notebooks " .

The chipset brought a 1066 MHz system bus , use of DDR3 system memory , and integrated Nvidia GeForce 9400M graphics up to five times faster than the original MacBooks ' Intel chipset . Other changes include a display which uses LED backlights (which replace the fluorescent tube backlights used in the previous model which contain mercury) and arsenic-free glass , a new Mini DisplayPort (replacing the polycarbonate MacBook 's mini DVI port) , a multi-touch glass trackpad which also acts as the mouse button , and the removal of the FireWire 400 port (thus it doesn't support Target Disk Mode , used for data transfers or operating system repairs without booting the system) .

=== Design ===

The design had stylistic traits of the MacBook Air which were also implemented into the design of the MacBook Pro . This model is thinner than the original polycarbonate MacBooks , and it made use of a unibody aluminum case with tapered edges . The keyboard of the higher @-@ end model included a backlight .

=== Reception ===

Although Gizmodo concluded it to be " our favorite MacBook to date , " they did claim , at this time , its display was inferior to that found on the MacBook Pro and MacBook Air , alleging a smaller viewing angle , washed @-@ out colors , and dimmer backlighting . Similarly , AppleInsider and Engadget concluded it " may well be Apple 's best MacBook to date " and " these are terrific choices ? not only from an industrial design standpoint , but in specs as well " respectively , while also drawing attention to a lower quality display as compared with the MacBook Pro and MacBook Air . Charlie Sorrel of Wired News reached an identical conclusion about the MacBook display , citing its poor contrast and lack of vertical angle in comparison with the MacBook Pro and even the older white MacBook . Peter Cohen wrote an article discussing the loss of the FireWire port for Macworld , saying " The absence of FireWire ports is certainly an inconvenience for some users . But it shouldn ' t be considered a deal @-@ breaker for most of us , anyway . "

=== Model specifications ===

Notes : 1 Hard drives noted are options available from Apple . As the hard drive is a user @-@ replaceable part , there are custom configurations available , including use of 7 @,@ 200 @-@ rpm drives and SSDs.2 Given optical drive speed is its maximum .

== Unibody polycarbonate model ==

On October 20 , 2009 , Apple released a MacBook that introduced a new polycarbonate (plastic) unibody design , faster DDR3 memory , a multi @-@ touch trackpad , an LED @-@ backlit display , and a built @-@ in seven @-@ hour battery . The polycarbonate unibody MacBook , like its aluminum predecessor , lacks FireWire and , like the 13 @-@ inch MacBook Pro , has a combined audio in / out port . There is no infrared port and the Apple Remote is not included . On May 18 , 2010 , the MacBook was refreshed with a faster processor , a faster graphics card , improved battery life , and the ability to pass audio through the Mini DisplayPort connector . On July 20 , 2011 , the MacBook was discontinued for consumer purchases , but was still available to educational institutions until February 2012 .

=== Design ===

Unlike the MacBook Air , the MacBook follows the same design first seen in the MacBook Pro ; however , it is rounder on the edges than previous laptops in the MacBook line . This model has an all @-@ white fingerprint @-@ resistant glossy palm rest , unlike the grayish surface of its predecessor , and uses a multi @-@ touch glass trackpad like the one found on the MacBook Pro . The video @-@ out port is Mini DisplayPort . The bottom of the MacBook features a rubberized non @-@ slip finish . The built @-@ in battery of the late 2009 revision , a feature introduced earlier in the year with the MacBook Pro , is claimed by Apple to last seven hours compared with five hours in the older models . However , in tests conducted by Macworld , the battery was found to last only about four hours while playing video at full brightness with AirPort turned off . However , Apple 's battery life was calculated with the brightness at the middle setting and while browsing websites and editing word documents , not with video and at full brightness . Gizmodo also reached about the same conclusion in their tests , but with AirPort turned on . The battery included in the mid @-@

2010 model holds an additional five watt @-@ hours over the previous model 's and is claimed to last up to ten hours .

= = = Reception = = =

Despite being hailed by Slashgear as " one of the best entry @-@ level notebooks Apple have produced , " the unibody MacBook has received criticism for its lack of a FireWire port and SD card slot . Nilay Patel of Engadget added the USB ports were easily dented and the bottom of the laptop became worn and discolored after a few days . He also drew particular attention to the fact that the price was not lowered , stating the small price difference between the MacBook and the MacBook Pro makes it a " wasted pricing opportunity . " However , most critics agree that the unibody MacBook 's display is significantly better than its predecessor 's . AppleInsider states the new display " delivers significantly better color and viewing angle performance " than the previous MacBook , but still " not as vivid and wide @-@ angle viewable as the MacBook Pro screens . "

= = = Model specifications = = =

Notes : 1 Memory noted are the options available from Apple . As memory is a user @-@ replaceable part , there are custom configurations available , including use of two 2 GB RAM modules , for 4 GB of RAM.2 Hard drives noted are options available from Apple . As the hard drive is a user @-@ replaceable part , there are custom configurations available , including use of 7200 @-@ rpm drives and SSDs.3 Given optical drive speed is its maximum .

= = Criticisms and defects = =

The rubber bottom of unibody MacBooks has been known to peel off . Apple has noticed this as a flaw and will replace the bottom for free , with or without a warranty . Some consumers have also reported defects in their LCD displays in mid @-@ 2010 @-@ 2011 models .

The Magsafe power adapter of MacBooks has been known to fray , break , and stop working . Following a lawsuit , Apple replaces these adapters for US residents with affected adapters , purchased (or received as a gift) with computers or as an accessory .

= = Timeline of the MacBook family = =