# MacBook Pro (Retina, 13-inch, Early 2015) - Technical Specifications

Languages English



## Display

- Retina display
- 13.3-inch (diagonal) LED-backlit display with IPS technology; 2560-by-1600 native resolution at 227 pixels per inch with support for millions of colors
- Supported scaled resolutions:
  - o 1680 by 1050
  - o 1440 by 900
  - o 1024 by 640
- 300 nits brightness
- Standard color gamut (sRGB)
- 900:1 contrast ratio

#### Processor

- 2.7GHz 128GB
  - 2.7GHz dual-core Intel Core i5 processor (Turbo Boost up to 3.1GHz) with 3MB shared L3 cache Configurable to 2.9GHz dual-core Intel Core i5 (Turbo Boost up to 3.3GHz) with 3MB shared L3 cache or 3.1GHz dual-core Intel Core i7 (Turbo Boost up to 3.4GHz) with 4MB shared L3 cache.
- 2.7GHz 256GB
  - 2.7GHz dual-core Intel Core i5 processor (Turbo Boost up to 3.1GHz) with 3MB shared L3 cache Configurable to 2.9GHz dual-core Intel Core i5 (Turbo Boost up to 3.3GHz) with 3MB shared L3 cache or 3.1GHz dual-core Intel Core i7 (Turbo Boost up to 3.4GHz) with 4MB shared L3 cache.
- 2.9GHz
  - 2.9GHz dual-core Intel Core i5 processor (Turbo Boost up to 3.3GHz) with 3MB shared L3 cache Configurable to 3.1GHz dual-core Intel Core i7 (Turbo Boost up to 3.4GHz) with 4MB shared L3 cache.

## Memory

 8GB of 1866MHz LPDDR3 onboard memory Configurable to 16GB.

# Storage 1

- 2.7GHz 128GB
  - 128GB PCIe-based flash storage
- 2.7GHz 256GB
  - 256GB PCIe-based flash storage
- 2.9GHz
  - 512GB PCle-based flash storage Configurable to 1TB flash storage.

# Size and Weight

- Height: 0.71 inch (1.8 cm)
- Width: 12.35 inches (31.4 cm)
- Depth: 8.62 inches (21.9 cm)
- Weight: 3.48 pounds (1.58 kg)<sup>2</sup>

# Graphics and Video Support

- Intel Iris Graphics 6100
- Dual display and video mirroring: Simultaneously supports full native resolution on the built-in display and up to 3840 by 2160 pixels on up to two external displays, both at millions of colors.
- Thunderbolt digital video output
  - Native Mini DisplayPort output
  - DVI, VGA, dual-link DVI, and HDMI output supported using Mini DisplayPort adapters (sold separately)
- HDMI video output

- Support for 1080p resolution at up to 60Hz
- Support for 3840-by-2160 resolution at 30Hz
- Support for 4096-by-2160 resolution at 24Hz

#### Camera

■ 720p FaceTime HD camera

#### Connections and Expansion

- MagSafe 2 power port
- Two Thunderbolt 2 ports (up to 20 Gbps)
- Two USB 3 ports (up to 5 Gbps)
- HDMI port
- 3.5 mm headphone jack
- SDXC card slot
- Apple Thunderbolt to FireWire Adapter (sold separately)
- Apple Thunderbolt to Gigabit Ethernet Adapter (sold separately)

#### Wireless

- Wi-Fi
- 802.11ac Wi-Fi wireless networking; IEEE 802.11a/b/g/n compatible
- Bluetooth

Bluetooth 4.0 wireless technology

#### Audio

- Stereo speakers
- Dual microphones
- 3.5 mm headphone jack
  - o Support for Apple iPhone headset with remote and microphone
  - Support for audio line out (digital/analog)

#### Keyboard and Trackpad

- Full-size backlit keyboard with 78 (U.S.) or 79 (ISO) keys, including 12 function keys and 4 arrow keys (inverted "T" arrangement) with ambient light sensor
- Force Touch trackpad for precise cursor control and pressure-sensing capabilities; enables Force clicks, accelerators, pressure-sensitive drawing, and Multi-Touch gestures

## Battery and Power<sup>3</sup>

- Up to 10 hours wireless web
- Up to 12 hours iTunes movie playback
- Up to 30 days of standby time
- Built-in 74.9-watt-hour lithium-polymer battery
- 60W MagSafe 2 Power Adapter with cable management system; MagSafe 2 power port

# **Electrical and Operating Requirements**

- Line voltage: 100V to 240V AC
- Frequency: 50Hz to 60Hz
- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: -13° to 113° F (-25° to 45° C)
- Relative humidity: 0% to 90% noncondensing
- Operating altitude: tested up to 10,000 feet
- Maximum storage altitude: 15,000 feet
- Maximum shipping altitude: 35,000 feet

# Operating System

# macOS Sierra

macOS is the operating system that powers everything you do on a Mac. macOS Sierra introduces Siri to Mac<sup>4</sup> — along with new ways to enjoy your photos, shop more securely online, and work more seamlessly between devices.

Learn more about latest operating system

## Accessibility

Accessibility features help people with disabilities get the most out of their new MacBook Pro. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can create and do amazing things.

Learn more about Accessibility

## Features include:

- VoiceOver
- Zoom
- Increase Contrast
- Reduce Motion
- Siri and Dictation

- Switch Control
- Closed Captions
- Text to Speech

## Built-in Apps 5

- Photos
- iMovie
- GarageBand
- Pages
- Numbers
- Keynote
- Siri
- Safari
- Mail
- FaceTime
- Messages
- Maps
- Notes
- Calendar
- Contacts
- Reminders
- Photo Booth
- Preview
- iTunes
- iBooks
- App Store
- Time Machine

#### Limited Warranty and Service

Every Mac comes with a one-year limited warranty and up to 90 days of complimentary telephone technical support. Extend your coverage to three years from your Mac original purchase date with the AppleCare Protection Plan. You'll get direct, one-stop access to Apple's award-winning technical support for questions about your Mac, macOS, and Apple-branded applications such as Photos, iMovie, GarageBand, Pages, Numbers, Keynote, and more. In addition, you'll get 24/7 priority access to Apple experts via chat or phone through getsupport.apple.com. You can even get local repair service when you visit other countries around the

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## What's in the Box

- MacBook Pro
- MagSafe 2 Power Adapter
- Power cord
- AC wall plug

## Configure to Order

Configure your MacBook Pro with these options, only at apple.com:

- Up to 3.1GHz dual-core Intel Core i7, Turbo Boost up to 3.4GHz, with 4MB shared L3 cache
- 16GB of 1866MHz LPDDR3 onboard memory
- Up to 1TB PCle-based onboard SSD<sup>1</sup>

## MacBook Pro and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more about MacBook Pro and the Environment

MacBook Pro is designed with the following features to reduce its environmental impact:

- Mercury-free LED-backlit display
- Arsenic-free display glass
- BFR-free
- PVC-free<sup>6</sup>
- Beryllium-free
- Highly recyclable aluminum enclosure
- Meets ENERGY STAR 6.1 requirements
- Rated EPEAT Gold?

## Apple and the Environment

Learn more about Apple's dedication to reducing the environmental impact of our products and process. Or read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

## Recycling

Apple takes a holistic view of materials management and waste minimization. Learn more about how to recycle your Mac.

#### Acoustic Performance

Declared noise emission values in accordance with ECMA-109

	Sound Power Level L <sub>W A,m</sub> (B)	Sound Pressure Level Operator Position L <sub>p A,m</sub> (dB)
Idle	1.25 (K <sub>v</sub> = 0.25)	3.5
Wireless web	1.25 (K <sub>v</sub> = 0.25)	3.5

- 1. L  $_{WA,m}$  is the mean A-weighted sound power level, rounded to the nearest 0.05 B.
- 2. L <sub>p A,m</sub> is the mean A-weighted sound pressure level measured at the operator position (rounded to the nearest 0.5 dB).
- 3. 1 B (bel) = 10 dB (decibel)
- 4. K <sub>v</sub> is the statistical adder for computing upper-limit of A-weighted sound power level.
- 5. The quantity, L  $_{WA,C}$  (formerly called L  $_{WAd}$ ) may be computed from the sum of L  $_{WA,m}$  and K  $_{V}$ .
- 6. The Wireless web test browses 25 popular websites.
- 7. Configuration tested: 2.9GHz dual-core Intel Core i5 processor, 8GB memory, 512GB storage, Intel Iris Graphics 6100.

#### Accessories

#### Mac Software

- Final Cut Pro X
- Logic Pro X

#### Displays and Adapters

- Apple Mini DisplayPort to DVI Adapter
- Apple Mini DisplayPort to VGA Adapter
- Apple Mini DisplayPort to Dual-Link DVI Adapter
- MagSafe to MagSafe 2 Converter

## AirPort and Wireless

- AirPort Express
- AirPort Extreme
- AirPort Time Capsule

# Other Accessories

- Apple USB SuperDrive
- Thunderbolt to Gigabit Ethernet Adapter
- Thunderbolt to FireWire Adapter
- 60W MagSafe 2 Power Adapter
- AppleCare Protection Plan
- 1. 1GB = 1 billion bytes and 1TB = 1 trillion bytes; actual formatted capacity less.
- 2. Weight varies by configuration and manufacturing process.
- 3. Testing conducted by Apple in April 2015 using preproduction 2.2GHz quad-core Intel Core i7-based 15-inch MacBook Pro systems with 256GB of flash storage and 16GB of RAM. Testing conducted by Apple in February 2015 using preproduction 2.9GHz dual-core Intel Core i5-based 13-inch MacBook Pro units (wireless web test and HD movie playback test) and preproduction 2.7GHz dual-core Intel Core i5-based 13-inch MacBook Pro units (standby test). The wireless web test measures battery life by wirelessly browsing 25 popular websites with display brightness set to 12 clicks from bottom or 75%. The HD movie playback test measures battery life by playing back HD 1080p content with display brightness set to 12 clicks from bottom or 75%. The standby test measures battery life by allowing a system, connected to a wireless network and signed in to an iCloud account, to enter standby mode with Safari and Mail applications launched and all system settings left at default. Battery life varies by use and configuration. See www.apple.com/batteries for more information.
- 4. Siri may not be available in all languages or in all areas, and features may vary by area.
- 5. iMovie, GarageBand, Pages, Numbers, and Keynote are available on the Mac App Store. Downloading apps requires an Apple ID and a device that is compatible with the OS version required for each app.
- 6. PVC-free AC power cord available in all regions except India and South Korea.
- 7. MacBook Pro achieved a Gold rating from EPEAT in the U.S. and Canada.

Published Date: Apr 14, 2021

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