3/12/24, 12:23 PM MacBook Pro - Tech Specs - Apple

14-inch

16-inch



#### **Finish**

### With Apple M3 chip



#### With Apple M3 Pro or M3 Max chip



## Price

\$1599 (8GB unified memory, 512GB SSD) \$1799 (8GB unified memory, 1TB SSD) \$1999 (16GB unified memory, \$1999

\$2399

\$3199

## Chip



1TB SSD)

## Apple M3 chip

8-core CPU with 4 performance cores and 4 efficiency cores

10-core GPU
Hardwareaccelerated
ray tracing

16-core
Neural Engine
100GB/s memory
bandwidth

Media Engine

Hardwareaccelerated H.264, HEVC, ProRes, and ProRes RAW Video decode

engine
Video encode engine
ProRes encode and
decode engine

\_

AV1 decode

#### **€**M3 PRO

# Apple M3 Pro chip 11-core CPU with 5 performance cores and 6 efficiency

cores
14-core GPU
Hardwareaccelerated

ray tracing
16-core
Neural Engine
150GB/s memory
bandwidth

# Media Engine

Hardwareaccelerated H.264, HEVC, ProRes, and ProRes RAW Video decode

engine
Video encode engine
ProRes encode and
decode engine

Configurable to:

AV1 decode

M3 Pro with 12-core CPU and 18-core GPU, M3 Max with 14-core CPU and 30-core GPU (300GB/s memory bandwidth), or M3 Max with 16-core CPU and 40-core GPU (400GB/s memory bandwidth)

#### **€**M3 PRO

cores

# Apple M3 Pro chip 12-core CPU with 6 performance cores and 6 efficiency

18-core GPU
Hardwareaccelerated
ray tracing
16-core

16-core
Neural Engine
150GB/s memory
bandwidth

## Media Engine

Hardwareaccelerated H.264, HEVC, ProRes, and ProRes RAW Video decode engine

Video encode engine
ProRes encode and
decode engine
AV1 decode

## Configurable to:

M3 Max with 14core CPU and 30core GPU (300GB/s memory bandwidth) or M3 Max with 16core CPU and 40core GPU (400GB/s memory bandwidth)

#### **€**M3 <sub>MAX</sub>

#### Apple M3 Max chip 14-core CPU with 10

performance cores and 4 efficiency cores 30-core GPU Hardware-

accelerated
ray tracing
16-core
Neural Engine
300GB/s memory
bandwidth

## Media Engine

Hardwareaccelerated H.264,
HEVC, ProRes, and
ProRes RAW
Video decode
engine
Two video encode
engines
Two ProRes encode
and decode engines

## Configurable to:

AV1 decode

M3 Max with 16-core CPU and 40-core GPU (400GB/s memory bandwidth)

## Display

## Liquid Retina XDR display

14.2-inch (diagonal) Liquid Retina XDR display;¹ 3024-by-1964 native resolution at 254 pixels per inch

#### MacBook Pro

Overview Tech Specs Compare New to Mac Buy



#### XDR (Extreme Dynamic Range)

1,000,000:1 contrast ratio

XDR brightness: 1000 nits sustained full-screen, 1600 nits peak<sup>2</sup> (HDR content only)

SDR brightness: 600 nits

Color

1 billion colors

Wide color (P3)

True Tone technology

#### Refresh rates

ProMotion technology for adaptive refresh rates up to 120Hz

Fixed refresh rates: 47.95Hz, 48.00Hz, 50.00Hz, 59.94Hz, 60.00Hz

#### Memory

8GB or 16GB unified memory

Configurable to:

16GB or 24GB

18GB unified memory

Configurable to:
36GB (M3 Pro or
M3 Max with 14core CPU)
or 96GB (M3 Max

or 96GB (M3 Max with 14-core CPU) or 48GB, 64GB, or 128GB (M3 Max with 16-core CPU) 18GB unified memory

Configurable to:

36GB (M3 Pro or
M3 Max with 14core CPU)

or 96GB (M3 Max
with 14-core CPU)

or 48GB, 64GB, or
128GB (M3 Max with

16-core CPU)

**36GB**36GB unified memory

Configurable to:

96GB (M3 Max with
14-core CPU)

or 48GB, 64GB, or
128GB (M3 Max with
16-core CPU)

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

МЗ

Up to 22 hours Apple TV app movie playback

Up to 15 hours wireless web

70-watt-hour lithium-polymer battery<sup>3</sup>
70W USB-C Power Adapter

USB-C to MagSafe 3 Cable

Fast-charge capable with 96W USB-C Power Adapter

## M3 Pro and M3 Max

Up to 18 hours Apple TV app movie playback

Up to 12 hours wireless web

72.4-watt-hour lithium-polymer battery<sup>3</sup>

70W USB-C Power Adapter (included with M3 Pro with 11-core CPU)

96W USB-C Power Adapter (included with M3 Pro with 12-core CPU and M3 Max, configurable

with M3 Pro with 11-core CPU)
USB-C to MagSafe 3 Cable

Fast-charge capable with 96W USB-C Power Adapter

## Storage<sup>4</sup>

**512GB or 1TB** 512GB or 1TB SSD⁵

Configurable to:

1TB or 2TB

512GB SSD

Configurable to:

1TB, 2TB, or 4TB;

8TB (M3 Max only)

1TB

1TB SSD

Configurable to:

2TB or 4TB; 8TB

(M3 Max only)

TTB

1TB SSD

Configurable to: 2TB, 4TB, or 8TB

# Charging and Expansion

SDXC card slot HDMI port

3.5 mm headphone jack

MagSafe 3 port

М3

Two Thunderbolt / USB 4 ports with support for:

Charging
DisplayPort

Thunderbolt 3 (up to 40Gb/s)

USB 4 (up to 40Gb/s)

MagSafe 3

3.5 mm headphone jack

Thunderbolt / USB 4

SDXC HDMI

M3 Pro and M3 Max

Three Thunderbolt 4 ports with support for:

Charging

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DisplayPort

Thunderbolt 4 (up to 40Gb/s) USB 4 (up to 40Gb/s)

> 3.5 mm headphone jack MagSafe 3

> > Thunderbolt 4

SDXC HDMI

Thunderbolt 4

М3

## **Display Support**

Simultaneously supports full native resolution on the built-in display at 1 billion colors and:

One external display with up to 6K resolution at 60Hz

M3 Pro

Simultaneously supports full native resolution on the built-in display at 1 billion colors and: Up to two external displays with up to 6K resolution at 60Hz over Thunderbolt, or one external display with up to 6K resolution at 60Hz over Thunderbolt and one external display with up to 4K resolution at 144Hz over HDMI

One external display supported at 8K resolution at 60Hz or one external display at 4K resolution at 240Hz over HDMI

M3 Max

Simultaneously supports full native resolution on the built-in display at 1 billion colors and: Up to four external displays: Up to three external displays with 6K resolution at 60Hz over Thunderbolt and one external display with up to 4K resolution at 144Hz over HDMI Up to three external displays: Up to two external displays with 6K resolution at 60Hz over Thunderbolt and one external display with up to 8K resolution at 60Hz or one external display with 4K resolution at 240Hz over HDMI

Thunderbolt 4 digital video output

Support for native DisplayPort output over USB-C (M3 Pro and M3 Max)

HDMI digital video output

Support for one display with up to 4K resolution at 120Hz (M3)

Support for one display with up to 8K resolution at 60Hz or 4K resolution at 240Hz (M3 Pro and M3 Max)

## Video Playback

Supported formats include HEVC, H.264, AV1, and ProRes

HDR with Dolby Vision, HDR10, and HLG

## Audio Playback

Supported formats include AAC, MP3, Apple Lossless, FLAC, Dolby Digital, Dolby Digital Plus,

and Dolby Atmos

#### Keyboard and Trackpad

**Backlit Magic Keyboard with:** 

78 (U.S.) or 79 (ISO) keys including 12 full-height function keys and 4 arrow keys in an inverted-T arrangement

Touch ID

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

Force Touch trackpad

Wireless Wi-Fi

Wi-Fi 6E (802.11ax)<sup>6</sup>

Bluetooth

Bluetooth 5.3

Camera 1080p FaceTime HD camera

Advanced image signal processor with computational video

**Audio** 

High-fidelity six-speaker sound system with force-cancelling woofers

Wide stereo sound

Support for Spatial Audio when playing music or video with Dolby Atmos on built-in speakers Spatial Audio with dynamic head tracking when using AirPods (3rd generation), AirPods Pro, and AirPods Max

https://www.apple.com/macbook-pro/specs/

#### MacBook Pro - Tech Specs - Apple

Studio-quality three-mic array with high signal-to-noise ratio and directional beamforming

3.5 mm headphone jack with advanced support for high-impedance headphones

HDMI port supports multichannel audio output

# 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 (3000 meters)

Maximum storage altitude: 15,000 feet

Maximum shipping altitude: 35,000 feet

#### Size and Weight

Height: 0.61 inch (1.55 cm)

Width: 12.31 inches (31.26 cm)

Depth: 8.71 inches (22.12 cm)

Weight (M3): 3.4 pounds (1.55 kg)<sup>2</sup>

Weight (M3 Pro): 3.5 pounds (1.61 kg)<sup>2</sup>

Weight (M3 Max): 3.6 pounds (1.62 kg)<sup>2</sup>



8.71 inches (22.12 cm)

12 31 inches (31 26 cm



## **Operating System**

macOS

macOS is the most advanced desktop operating system in the world. And with macOS Sonoma, work and play on your Mac are even more powerful — with new ways to elevate your video presentations, boost your gaming performance, and personalize your device.

Learn more >

## Accessibility

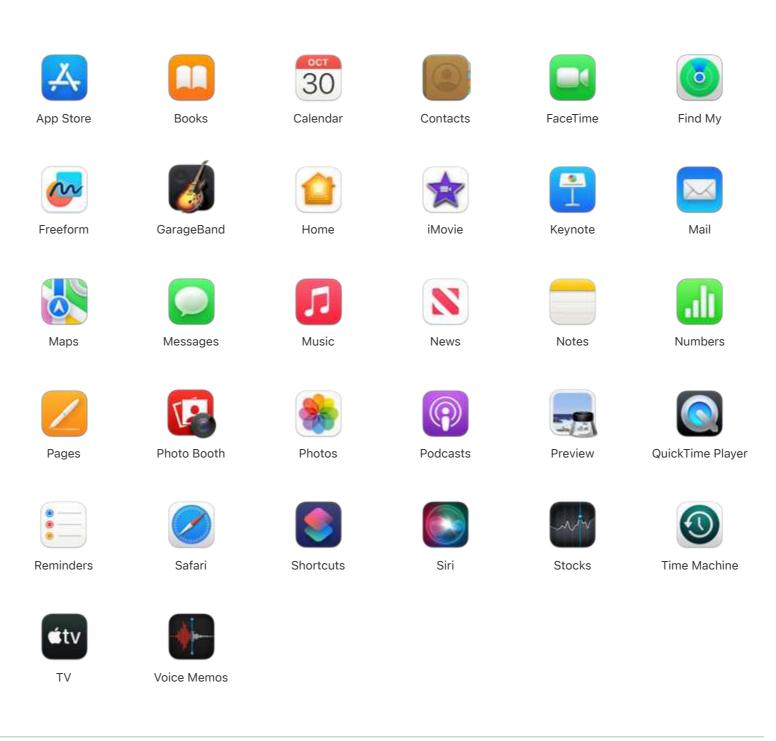
Accessibility features help people with disabilities get the most out of their new MacBook Pro. With built-in support for vision, hearing, mobility, and learning, you can create and do amazing things.

Learn more >

## Features include:

Voice Control	Increase Contrast	Switch Control
VoiceOver	Reduce Motion	Closed Captions
Zoom	Siri and Dictation	Text to Speech

## Built-in Apps<sup>8</sup>



## In the Box

14-inch MacBook Pro

70W USB-C Power Adapter (M3 or M3 Pro with 11-core CPU) or 96W USB-C Power Adapter (M3 Pro with 12-core CPU or M3 Max)
USB-C to MagSafe 3 Cable (2 m)

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## Limited Warranty and Service

Your MacBook Pro comes with 90 days of complimentary technical support and a one-year limited warranty. Purchase <u>AppleCare+ for Mac</u> to extend your coverage from your AppleCare+ purchase date and add unlimited repairs for accidental damage from handling, each subject to a service fee of \$99 for screen damage or external enclosure damage, or \$299 for other repairable accidental damage, plus applicable tax.

Learn more >

### **Configure to Order**

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

М3

16GB or 24GB unified memory

1TB or 2TB SSD

96W USB-C Power Adapter

#### M3 Pro and M3 Max

M3 Pro with 12-core CPU, 18-core GPU, and 16-core Neural Engine
M3 Max with 14-core CPU, 30-core GPU, and 16-core Neural Engine

M3 Max with 16-core CPU, 40-core GPU, and 16-core Neural Engine

36GB unified memory (M3 Pro and M3 Max with 14-core CPU)

48GB unified memory (M3 Max with 16-core CPU)

64GB unified memory (M3 Max with 16-core CPU)

96GB unified memory (M3 Max with 14-core CPU)

128GB unified memory (M3 Max with 16-core CPU)

1TB, 2TB, or 4TB SSD (M3 Pro or M3 Max)

8TB SSD (M3 Max)

96W USB-C Power Adapter (included with M3 Pro with 12-core CPU and M3 Max)



**Environment** 

The 14-inch MacBook Pro is designed with the following features to reduce its environmental impact:<sup>9</sup>

See the 14-inch MacBook Pro Product

## Environmental Report (PDF)

Made with better materials
32% recycled or renewable content in the

device,<sup>10</sup> including:

100% recycled aluminum in the enclosure100% recycled gold in the plating of

multiple printed circuit boards

100% recycled rare earth elements in all
magnets, representing 98% of the rare

100% recycled tin in the solder of multiple printed circuit boards

35% or more recycled plastic in

Energy efficient

multiple components

earth elements in the device

ENERGY STAR® certified<sup>11</sup>

Smarter chemistry<sup>12</sup>

Arsenic-free display glass
Mercury-, BFR-, PVC-, and beryllium-free

tures to reduce its

Over 270/ manufacturing

Over 27% manufacturing electricity sourced from supplier clean energy projects<sup>13</sup>

Apple's Zero Waste Program helps suppliers eliminate waste sent to landfill

## Responsible packaging

100% of virgin wood fiber comes from responsibly managed forests

99% fiber-based packaging

## Progress toward our 2030 goal

Over 40% emissions reduction against baseline<sup>14</sup>

## Apple Trade In

Trade in your eligible device for credit toward your next purchase, or get an Apple Gift Card you can use anytime. If your device isn't eligible for credit, we'll recycle it for free.

See how it works >

## Apple and the Environment

Today, Apple is carbon neutral for global corporate operations, and we are focused on our Apple 2030 goal to make every product carbon neutral.

See Apple's commitment >

## Accessories

## Mac Software

Final Cut Pro Logic Pro

## Displays and Adapters

Studio Display
Pro Display XDR

Thunderbolt 3 (USB-C) to Thunderbolt 2

Adapter
USB-C to USB Adapter

USB-C Digital AV Multiport Adapter

USB-C VGA Multiport Adapter
Belkin USB-C to Gigabit Ethernet Adapter

## Other Accessories

USB-C to Lightning Cable

USB-C to MagSafe 3 Cable

240W USB-C Charge Cable

70W USB-C Power Adapter
96W USB-C Power Adapter

140W USB-C Power Adapter

Magic Keyboard with Touch ID

Magic Keyboard with Touch ID and Numeric Keypad

Numeric Keypad Magic Keyboard

Magic Keyboard with Numeric Keypad

Magic Trackpad
Magic Mouse
Polishing Cloth

https://www.apple.com/macbook-pro/specs/

Pay monthly at 0% APR

You can pay over time when you choose to check out with

Apple Card Monthly

Installments.†

Learn more >

Fast delivery or pickup

Enjoy two-hour delivery from an

Apple Store, free delivery, or easy
pickup.

Get help buying

Have a question? Call a Specialist or chat online.

Call 1-800-MY-APPLE.

Contact us >

Learn more >

- 1. The displays on the 14-inch and 16-inch MacBook Pro have rounded corners at the top. When measured as a standard rectangular shape, the screens are 14.2 inches and 16.2 inches diagonally (actual viewable area is less).
- 2. In temperatures less than 25° C.
- 3. Actual rating of 69.6 watt-hours (14-inch model) or 99.6 watt-hours (16-inch model). Testing conducted by Apple in September and October 2023 using preproduction 14-inch MacBook Pro systems with Apple M3, 8-core CPU, 10-core GPU, 8GB of RAM, and 512GB SSD; preproduction 14-inch MacBook Pro systems with Apple M3 Pro, 12-core CPU, 18-core GPU, 18GB of RAM, and 1TB SSD; and preproduction 16-inch MacBook Pro systems with Apple M3 Pro, 12-core CPU, 18-core GPU, 36GB of RAM, and 512GB SSD. The wireless web test measures battery life by wirelessly browsing 25 popular websites with display brightness set to 8 clicks from bottom. The Apple TV app movie playback test measures battery life by playing back HD 1080p content with display brightness set to 8 clicks from bottom. Battery life varies by use and configuration. See <a href="mailto:apple.com/batteries">apple.com/batteries</a> for more information.
- 4. 1GB = 1 billion bytes and 1TB = 1 trillion bytes; actual formatted capacity less.
- 5. Price varies depending on storage capacity.
- 6. Wi-Fi 6E available in countries and regions where supported.
- 7. Weight varies by configuration and manufacturing process.
- 8. 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.
- 9. Data accurate as of product launch.
- 10. Product recycled or renewable content is the mass of certified recycled material relative to the overall mass of the device, not including packaging or in-box accessories.
- 11. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
- 12. Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end-customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for two-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.
- 13. We estimate emissions savings from supplier clean electricity by allocating to our carbon model clean electricity generated by our suppliers in the prior fiscal year, based on the supplier manufacturing allocations at time of product launch.
- 14. Carbon reductions are calculated against a baseline scenario: 1) No use of clean electricity for manufacturing or product use, beyond what is already available on the grid (based on regional emissions factors). 2) Apple's carbon intensity of key materials as of 2015 (our baseline year for our 2030 product carbon neutrality goal). Carbon intensity of materials reflects use of recycled content and production technology. 3) Apple's average mix of transportation modes (air, rail, ocean, ground) by product line across three years (fiscal years 2017 to 2019) to best capture the baseline transportation emissions of our products.
- 15. Trade-in values will vary based on the condition, year, and configuration of your eligible trade-in device. Not all devices are eligible for credit. You must be at least 18 years old to be eligible to trade in for credit or for an Apple Gift Card. Trade-in value may be applied toward qualifying new device purchase, or added to an Apple Gift Card. Actual value awarded is based on receipt of a qualifying device matching the description provided when estimate was made. Sales tax may be assessed on full value of a new device purchase. In-store trade-in requires presentation of a valid photo ID (local law may require saving this information). Offer may not be available in all stores, and may vary between in-store and online trade-in. Some stores may have additional requirements. Apple or its trade-in partners reserve the right to refuse or limit quantity of any trade-in transaction for any reason. More details are available from Apple's trade-in partner for trade-in and recycling of eligible devices. Restrictions and limitations may apply.

† Apple Card Monthly Installments (ACMI) is a 0% APR payment option that is only available if you select it at checkout in the U.S. for eligible products purchased at Apple Store locations, apple.com, the Apple Store app, or by calling 1-800-MY-APPLE, and is subject to credit approval and credit limit. See <a href="support.apple.com/kb/HT211204">support.apple.com/kb/HT211204</a> for more information about eligible products. APR ranges may vary based on when you accepted an Apple Card. Cardholders who accept an Apple Card on and/or after February 1, 2024: Variable APRs for Apple Card, other than ACMI, range from 19.24% to 29.49% based on creditworthiness. Rates as of February 1, 2024. Existing cardholders: See your Customer Agreement for applicable rates and fee. If you buy an ACMI eligible product by choosing to pay in full with Apple Card (instead of using ACMI), that purchase is subject to the Apple Card variable APR, not 0% APR. Taxes and shipping on ACMI purchases are subject to the variable APR, not 0% APR. When you buy an iPhone with ACMI, you'll need to select AT&T, T-Mobile, or Verizon as your carrier when you check out. An iPhone purchased with ACMI is always unlocked, so you can switch carriers at any time. ACMI is not available for purchases made online at the following special stores: Apple Employee Purchase Plan; participating corporate Employee Purchase Programs; Apple at Work for small businesses; Government, and Veterans and Military Purchase Programs, or on refurbished devices. The last month's payment for each product will be the product's purchase price, less all other payments at the monthly payment amount. ACMI financing is subject to change at any time for any reason, including but not limited to, installment term lengths and eligible products. See <a href="support.apple.com/kb/HT211204">support.apple.com/kb/HT211204</a> for information about upcoming changes to ACMI financing. See the <a href="Apple Card Customer Agreement">Apple Card Customer Agreement</a> for information about ACMI fina

To access and use all Apple Card features and products available only to Apple Card users, you must add Apple Card to Wallet on an iPhone or iPad that supports and has the latest version of iOS or iPadOS. Apple Card is subject to credit approval, available only for qualifying applicants in the United States, and issued by Goldman Sachs Bank USA, Salt Lake City Branch.

If you reside in the U.S. territories, please call Goldman Sachs at 877-255-5923 with questions about Apple Card.

Mac MacBook Pro	Technical Specifications			
Shop and Learn	Account	Apple Store	For Business	Apple Values
Store	Manage Your Apple ID	Find a Store	Apple and Business	Accessibility
Mac	Apple Store Account	Genius Bar	Shop for Business	Education
iPad	iCloud.com	Today at Apple	evel with	Environment
iPhone	Entertainment	Apple Camp	Apple and Education	Inclusion and Diversity
Watch		Apple Store App		Privacy
Vision	Apple One	Certified Refurbished	Shop for K-12	Racial Equity and Justice
AirPods	Apple TV+	Apple Trade In	Shop for College	Supplier Responsibility
TV & Home	Apple Music	Financing	For Healthcare	
AirTag	Apple Arcade	Carrier Deals at Apple	Apple in Healthcare	About Apple
Accessories	Apple Fitness+	Order Status	Health on Apple Watch	Newsroom
Gift Cards	Apple News+	Shopping Help	Health Records on iPhone	Apple Leadership
	Apple Podcasts			Career Opportunities
Apple Wallet	Apple Books		For Government	Investors
Wallet	App Store		Shop for Government	Ethics & Compliance
Apple Card			Shop for Veterans and Military	Events
Apple Pay				Contact Apple
Apple Cash				

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