The image shows a dark-themed webpage for the MacBook Pro. At the top is a navigation bar with the Apple logo and links for 'Mac', 'iPhone', 'iPad', 'Watch', 'TV', 'Music', 'Support', and 'Contact'. Below this is a sub-navigation bar with 'MacBook Pro', 'Overview', 'macOS', 'Tech Specs', and a blue 'Buy' button. The main content area features the text 'MacBook Pro' followed by the headline 'More power. More performance. More pro.' in large white font. Below the headline is a high-angle photograph of a MacBook Pro laptop with a vibrant, abstract, multi-colored liquid-like background on its screen. Underneath the laptop are four feature highlights arranged in a 2x2 grid, each separated by a thin white horizontal line. At the bottom of the page, there is a partial view of another MacBook Pro laptop.

MacBook Pro

Overview macOS Tech Specs [Buy](#)

MacBook Pro

# More power. More performance. More pro.



---

4-, 6- and now 8-core  
Intel processors.

---

Up to 32GB of memory  
for running multiple pro  
apps.

---

Stunning Retina display  
with True Tone  
technology.

---

Touch Bar and Touch ID  
for increased  
productivity.





## Performance

# With great power comes great capability.

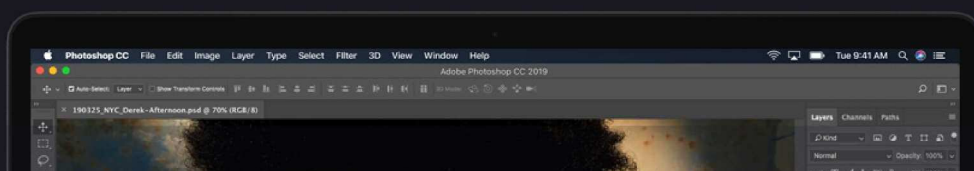
MacBook Pro elevates the notebook to a whole new level of performance and portability. Wherever your ideas take you, you'll get there faster than ever with high-performance processors and memory, advanced graphics, amazingly fast storage and more.

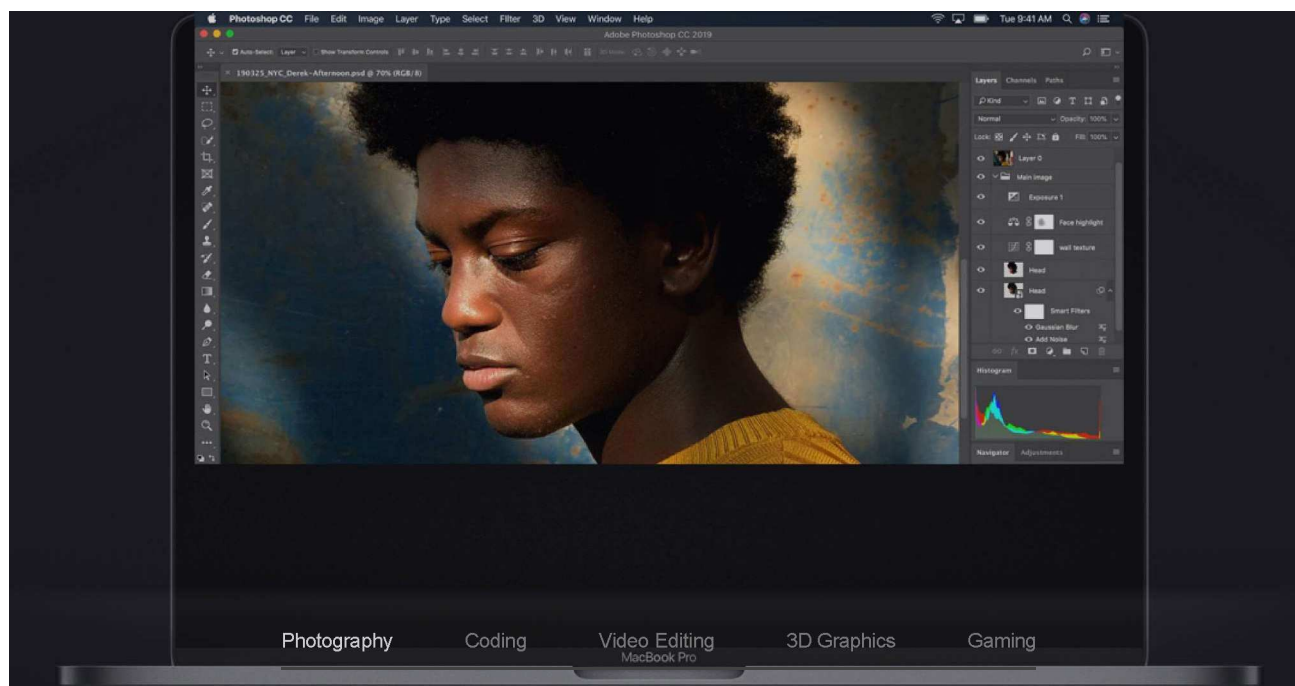
Up to  
**8-core**  
Intel processor

Up to  
**5.0GHz**  
Turbo Boost

Up to  
**32GB**  
memory

Up to  
**3.2GB/s**  
SSD read speeds





Retouch, edit and work with high-resolution photos in Photoshop at lightning speed.

## Processor

# More power at its cores.

With the latest Intel Core processors, MacBook Pro reaches new heights in compute performance. The 15-inch model now features a ninth-generation 8-core Intel Core i9 processor that reaches Turbo Boost speeds up to 5.0GHz. This gives 3D graphics apps like Autodesk Maya up to 40 per cent faster render speeds compared with the previous-generation 6-core processor and up to 2x faster render speeds than a quad-core processor.<sup>2</sup> And a new eighth-generation quad-core processor on the 13-inch MacBook Pro makes it ready to take on even the toughest tasks. So when you're powering through pro-level processing jobs like compiling code, rendering 3D models, adding special effects, layering multiple tracks or encoding video, you'll get everything done. Faster.

### 13-inch model

Up to

# 2.8GHz

quad-core Intel Core i7 processor

Up to

# 4.7GHz

Turbo Boost

### 15-inch model

Up to

# 2.4GHz

8-core Intel Core i9 processor

Up to

# 5.0GHz

Turbo Boost

## Logic Pro X

WebKit Compile

Wolfram Mathematica

NASA

Adobe Photoshop CC

Adobe Lightroom  
Classic CC

Pixelmator Pro

Autodesk Maya

Blackmagic Fusion Studio

Final Cut Pro X

Adobe Premiere Pro CC

## Memory

# Run more. Wait less.

For faster performance when working with large files, or running multiple pro apps or virtual machines, the 15-inch MacBook Pro can be configured with up to 32GB of high-performance 2400MHz DDR4 memory.

15-inch model

Up to

# 32GB

DDR4 memory

Up to

# 2.8x

faster than 16GB<sup>1</sup>

## Graphics

# Eye-opening graphics performance.

MacBook Pro features a Radeon Pro discrete GPU in every 15-inch model, combining impressive power with remarkable power efficiency. And now we've paired each discrete GPU with 4GB of GDDR5 memory as standard, giving you fluid, real-time performance for pro tasks like rendering 3D titles in Final Cut Pro X. The 13-inch model features powerful integrated graphics with 128MB of embedded DRAM — twice as much as the previous generation — which accelerates graphics tasks. That means more time for what matters most: creating amazing work.

## Radeon Pro Vega graphics.

The 15-inch MacBook Pro offers Radeon Pro Vega GPU options — the first discrete mobile Vega GPUs in a notebook. Vega, the same graphics architecture found in iMac Pro, delivers an enhanced compute engine and utilises High Bandwidth Memory (HBM2). HBM2 doubles the memory bandwidth to the GPU while doing so at considerably lower power, so more of the graphics power budget can be used by the GPU itself. The result is significantly faster graphics performance — up to 60 per cent faster than the Radeon Pro 560X<sup>13</sup> — for tackling demanding video, 3D, rendering and compute workloads.

## Blackmagic eGPU and eGPU Pro

# Desktop-class graphics without the desktop.

Blackmagic Design has created two external GPUs (eGPUs) ideal for MacBook Pro.<sup>19</sup> So you can have desktop-class graphics performance without giving up the portability of a notebook. Housed in an all-in-one aluminium enclosure, Blackmagic eGPUs are powerful yet quiet, charge your Mac using Thunderbolt 3, and have built-in I/O connections to drive both a Thunderbolt 3 display and VR accessories simultaneously. Choose the Blackmagic eGPU to accelerate pro apps and enjoy super-smooth gaming, or the Blackmagic eGPU Pro for the ultimate workstation-class graphics performance for your pro app workflows and VR content creation.

[Buy Blackmagic eGPU .](#)

[Buy Blackmagic eGPU Pro .](#)

## Touch Bar

# More ways to be productive. Always within reach.

Now on every MacBook Pro, the Touch Bar replaces the function keys that have long occupied the top of your keyboard with something much more versatile and capable. It changes automatically based on what you're doing to show you relevant tools that are intuitive to use — system controls like volume and brightness, interactive ways to adjust or browse through content, and intelligent typing features like emoji and predictive text, just to name a few.

## Tap it. Hold it. Flick it. Slide it.

Familiar gestures make it easy to use the Touch Bar. Tap to expand the Control Strip, flick to adjust volume and brightness or slide to rewind while watching a film.

Tap

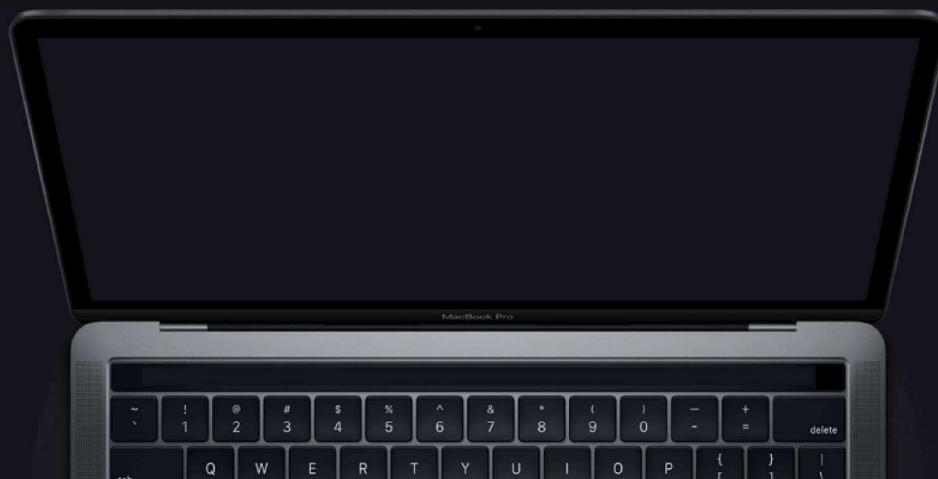
Touch and Hold

Flick

Slide

## Just what you need. Just where you need it.

Many of the built-in apps on your MacBook Pro have Touch Bar controls that make common actions like sending an email or formatting a document even easier. The Touch Bar changes to match the app you're using, bringing these shortcuts front and centre. And third-party apps can take advantage of the Touch Bar as well.





Final Cut Pro X

Photos

Logic Pro X

Mail

## Customise what you use most.

You can create shortcuts in your Control Strip and in apps like Mail, Pages, Safari and Final Cut Pro X to help you work faster and be more productive.



### Touch ID

## Advanced security. Right at your fingertip.

With Touch ID, you can unlock your MacBook Pro in an instant. You can also use Apple Pay to make secure online purchases, quickly access system settings and locked notes, and even switch between users — all with the touch of a finger.

Unlock  
your Mac

Buy with  
Apple Pay

Use for  
authentication

## Apple T2 Security Chip

# The next generation of security.

Every MacBook Pro is equipped with the Apple T2 Security Chip — our second-generation custom Mac silicon designed to make everything you do even more secure. It includes a Secure Enclave coprocessor that provides the foundation for secure boot and encrypted storage capabilities. It also consolidates many discrete controllers, including the system management controller, audio controller and SSD controller, into one. And the Apple T2 Security Chip brings a familiar voice to MacBook Pro — Hey Siri is always ready to open apps, find documents, play music or answer your questions.

## SSD Storage

# Make quicker work of everything.

MacBook Pro includes a solid-state drive that's amazingly fast, with sequential read speeds up to 3.2GB/s. The 15-inch model is available with up to a 4TB SSD, and the 13-inch MacBook Pro is available with up to a 2TB SSD — enough space to take even your biggest files with you, like large photo libraries or video projects. So you can boot up, launch multiple apps or import huge files in a flash. And with the Apple T2 Security Chip, everything is automatically encrypted on the fly.

**13-inch model**

Up to

**2TB**

SSD storage

Up to

**3.2GB/s**sequential read speed<sup>25</sup>

Up to

**2.2GB/s**sequential write speed<sup>25</sup>**15-inch model**

Up to

**4TB**

SSD storage

Up to

**3.2GB/s**sequential read speed<sup>25</sup>

Up to

**2.2GB/s**sequential write speed<sup>25</sup>**Thunderbolt 3****The most powerful and versatile port ever.**

Thunderbolt 3 combines ultra-high bandwidth with the ultra-versatility of the USB-C industry standard to create one revved-up universal port. It integrates data transfer, charging and video output in a single connector, delivering up to 40Gb/s of throughput for twice the bandwidth of Thunderbolt 2. Both sizes of MacBook Pro are available with up to four ports, so you can do all of that from either side. Existing devices are easily connected with a cable or adapter. And Thunderbolt 3 is reversible, so no matter how you plug in, it's always the right way up.

[Learn more about Thunderbolt 3.](#)

Up to 40Gb/s  
data transfer

Charge and provide  
power from any port

Connects with  
eGPU

Supports up to two 5K  
displays

## Display and Audio

# Easy on the eyes. Music to your ears.

The Retina display in MacBook Pro is the best ever in a Mac notebook. It features bright LED backlighting and a high contrast ratio, delivering deep blacks and bright whites. It supports P3 wide colour for even more vibrant greens and reds than with sRGB. And every MacBook Pro features True Tone technology. The white balance automatically adjusts to match the colour temperature of the light around you — for a more natural viewing experience. MacBook Pro has a dynamic soundstage that feels and sounds much wider than its physical dimensions imply. Films are more immersive. Music more room-filling. And three built-in mics form directional beams that capture your voice more clearly for FaceTime calls and talking to Siri.

500 nits  
brightness

25% more  
colours than sRGB

True Tone  
technology

Wide stereo  
sound

**Sidecar**

# Extend your desktop. With iPad.

Sidecar lets you extend your workspace by using your iPad as a second Mac display. Work in one app while you reference another, or view your artwork on your MacBook Pro while you use tools and palettes on your iPad. You can also mirror the screens so they both display the same content, making it perfect for sharing exactly what you see with others.

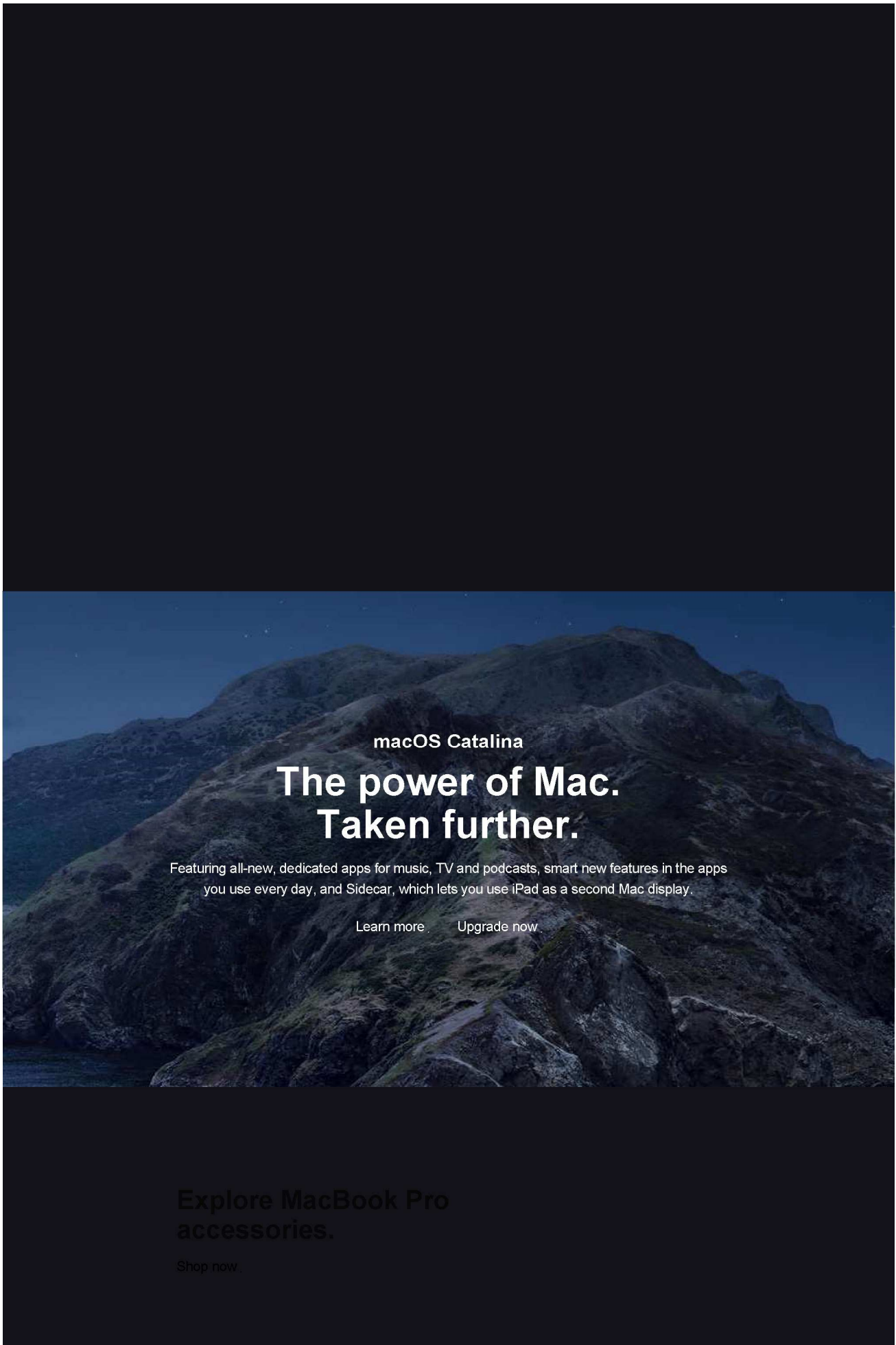
# Express your creativity. With Apple Pencil.

Bring the ease and precision of Apple Pencil to your favourite creative Mac apps with Sidecar. Use Apple Pencil to design in Illustrator, edit photos in Affinity Photo or create 3D models in ZBrush. And the handy sidebar puts essential Command, Control and Shift keys right at your fingertips.

## Keyboard and Trackpad

# Your workspace just got quieter.

The MacBook Pro keyboard has a butterfly mechanism — providing four times more key stability than a traditional scissor mechanism, along with greater comfort. Every MacBook Pro now features a keyboard with a quieter typing experience. And the spacious Force Touch trackpad gives your fingers plenty of room to gesture and click.



macOS Catalina

# The power of Mac. Taken further.

Featuring all-new, dedicated apps for music, TV and podcasts, smart new features in the apps you use every day, and Sidecar, which lets you use iPad as a second Mac display.

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accessories.

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Call 0800 048 0408.

[Chat now >](#)

1. Testing conducted by Apple in April 2019 using pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM and 2TB SSD; and shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems with 16GB of RAM and 2TB SSD. Tested with Final Cut Pro 10.4.6 using a 50-second Multicam project with 11 streams of Apple ProRes RAW video, at 4096x2160 resolution and 23.98 frames per second. Multicam playback with Angle Viewer in Final Cut Pro was set to display 16 angles. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
2. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Autodesk Maya 2019 tested using a 144.8MB scene. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
3. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Tested using Logic Pro X 10.4.4 with project consisting of 85 tracks, each with an Alchemy plug-in instance applied. Individual tracks were enabled during playback until CPU became overloaded. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
4. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Tested with Xcode version 10.2.1. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
5. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Tested using Mathematica v11.3.0 with built-in benchmark, WolframMark. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
6. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Tested using NACA 0012 project with 2000 iterations. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
7. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Adobe Photoshop CC 2019 20.0.4 tested using the crystallize, pointillize, radial blur, shape blur, dust & scratches and median filters. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
8. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Adobe Lightroom Classic CC 8.2.1 tested using 780 RAW images. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
9. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Pixelmator Pro 1.3.3 tested using a 54.3MB image. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
10. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Tested with Blackmagic Fusion Studio 16.0b022; rendered 100 frames of a project to disk in full size. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
11. Testing conducted by Apple in April 2019 using pre-production 2.8GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with 16GB of RAM, and pre-production 2.4GHz 8-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM; and shipping 3.5GHz dual-core Intel Core i7–based 13-inch MacBook Pro systems, as well as shipping 3.1GHz quad-core Intel Core i7–based 15-inch MacBook Pro systems, both configured with 16GB of RAM. Tested with Adobe Premiere Pro CC 13.1.1 (Build 11), using a fully colour-graded 5-minute REDCODE RAW video at 23.98 frames per second. Colour grading was done using LUTs from Adobe Premiere's Lumetri Colour Panel. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
12. Testing conducted by Apple in June 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with 16GB of RAM; and pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with 32GB of RAM. Adobe Photoshop 19.1.5 tested using a 6.25GB file and rotate, unsharp mask, auto colour and scale functions. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
13. Testing conducted by Apple in October 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro Vega 20 graphics, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics, both configured with 32GB of RAM and 4TB SSD. Cinema 4D R20 tested using a 15.7MB scene. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
14. Testing conducted by Apple in October 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro Vega 20 graphics, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics, both configured with 32GB of RAM and 4TB SSD. Tested with Unity 2018.2.0b10 using Book of the Dead demo, at 2560x1440 resolution. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.



15. Testing conducted by Apple in October 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro Vega 20 graphics, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics, both configured with 32GB of RAM and 4TB SSD. Cinema 4D R20 tested using a 599.4MB scene. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
16. Testing conducted by Apple in October 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro Vega 20 graphics, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics, both configured with 32GB of RAM and 4TB SSD. Tested with DaVinci Resolve Studio 15 using 14 common effects and a 10-second UHD project at 3840x2160 resolution and 24 frames per second. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
17. Testing conducted by Apple in October 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro Vega 20 graphics, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics, both configured with 32GB of RAM and 4TB SSD. Tested with Rise of the Tomb Raider using the built-in benchmark, at 2304x1440 resolution, with very high settings and Vsync disabled. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
18. Testing conducted by Apple in October 2018 using pre-production 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro Vega 20 graphics, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics, both configured with 32GB of RAM and 4TB SSD. Tested with pre-release Final Cut Pro X using a 10-second project with Apple ProRes 422 video at 3840x2160 resolution and 30 frames per second. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
19. Sold separately.
20. Testing conducted by Apple in October 2018 using shipping 2.7GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with Intel Iris Plus Graphics 655 with 1.5GB of VRAM, 16GB of RAM and 2TB SSD, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics with 4GB of VRAM, 32GB of RAM and 4TB SSD; and Blackmagic eGPU Pro with Radeon RX Vega 56 graphics with 8GB of VRAM, as well as Blackmagic eGPU with Radeon Pro 580 graphics with 8GB of VRAM. All testing conducted with an external 5K display. Tested with Unity 2018.2.0b10 using Book of the Dead demo, at 2560x1440 resolution. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
21. Testing conducted by Apple in October 2018 using shipping 2.7GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with Intel Iris Plus Graphics 655 with 1.5GB of VRAM, 16GB of RAM and 2TB SSD, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics with 4GB of VRAM, 32GB of RAM and 4TB SSD; and Blackmagic eGPU Pro with Radeon RX Vega 56 graphics with 8GB of VRAM, as well as Blackmagic eGPU with Radeon Pro 580 graphics with 8GB of VRAM. All testing conducted with an external 5K display. Tested with Rise of the Tomb Raider using the built-in benchmark, at 2560x1440 resolution, with very high settings and Vsync disabled. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
22. Testing conducted by Apple in October 2018 using shipping 2.7GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with Intel Iris Plus Graphics 655 with 1.5GB of VRAM, 16GB of RAM and 2TB SSD, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics with 4GB of VRAM, 32GB of RAM and 4TB SSD; and Blackmagic eGPU Pro with Radeon RX Vega 56 graphics with 8GB of VRAM, as well as Blackmagic eGPU with Radeon Pro 580 graphics with 8GB of VRAM. All testing conducted with an external 5K display. Tested with DaVinci Resolve Studio 15 using 14 common effects and a 10-second UHD project at 3840x2160 resolution and 24 frames per second. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
23. Testing conducted by Apple in October 2018 using shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics with 4GB of VRAM, 32GB of RAM and 4TB SSD; and Blackmagic eGPU Pro with Radeon RX Vega 56 graphics with 8GB of VRAM, as well as Blackmagic eGPU with Radeon Pro 580 graphics with 8GB of VRAM. All testing conducted with an external 5K display. Cinema 4D R20 tested using a 15.7MB scene. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
24. Testing conducted by Apple in October 2018 using shipping 2.7GHz quad-core Intel Core i7–based 13-inch MacBook Pro systems with Intel Iris Plus Graphics 655 with 1.5GB of VRAM, 16GB of RAM and 2TB SSD, and shipping 2.9GHz 6-core Intel Core i9–based 15-inch MacBook Pro systems with Radeon Pro 560X graphics with 4GB of VRAM, 32GB of RAM and 4TB SSD; and Blackmagic eGPU Pro with Radeon RX Vega 56 graphics with 8GB of VRAM, as well as Blackmagic eGPU with Radeon Pro 580 graphics with 8GB of VRAM. All testing conducted with an external 5K display. Tested with pre-release Final Cut Pro X using a 20-second project with Apple ProRes 422 video at 4096x2304 resolution and 59.94 frames per second. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.
25. Testing conducted by Apple in June 2018 using pre-production 2.3GHz quad-core Intel Core i5–based 13-inch MacBook Pro systems with 8GB of RAM and 1TB SSD, and pre-production 2.6GHz 6-core Intel Core i7–based 15-inch MacBook Pro systems with 16GB of RAM and 1TB SSD. Tested with FIO 3.7, 1024KB request size, 150GB test file and IO depth=8. Performance tests are conducted using specific computer systems and reflect the approximate performance of MacBook Pro.

Software and content may be sold separately. Title availability is subject to change.

Mac MacBook Pro

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- Today at Apple
- Apple Summer Camp
- Field Trip
- Apple Store App
- Refurbished and Clearance
- Financing
- Apple Trade In
- Order Status
- Shopping Help

**For Business**

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- Shop for Business
- For Education**
- Apple and Education
- Shop for University
- For Healthcare**
- Apple in Healthcare
- Health on Apple Watch

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- Environment
- Privacy
- Supplier Responsibility
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