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PRESS RELEASE
October 29, 2024

Apple's all-new Mac mini is more mighty, more mini, and built for Apple Intelligence

The compact, do-it-all desktop now features the power of M4 and M4 Pro, and marks an important environmental milestone as the first carbon neutral Mac



With M4 and M4 Pro, the new Mac mini brings incredible performance and connectivity in a design that's small enough to fit in your hand.

CUPERTINO, CALIFORNIA — Apple today unveiled the all-new Mac mini powered by the M4 and new M4 Pro chips, and redesigned around Apple silicon to pack an incredible amount of performance into an even smaller form of just 5 by 5 inches. With M4, Mac mini delivers up to 1.8x faster CPU performance and 2.2x faster GPU performance over the M1 model.[1] With M4 Pro, it takes the advanced technologies in M4 and scales them up to tackle even more demanding

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workloads. For more convenient connectivity, it features front and back ports, and for the first time includes Thunderbolt 5 for faster data transfer speeds on the M4 Pro model. The new Mac mini is also built for Apple Intelligence, the personal intelligence system that transforms how users work, communicate, and express themselves while protecting their privacy. And marking an important environmental milestone, Mac mini is Apple's first carbon neutral Mac with an over 80 percent reduction in greenhouse gas emissions across its materials, manufacturing, transportation, and customer use.[2] Starting at just $599 with 16GB of memory, the new Mac mini is available to pre-order today, with availability beginning November 8.

"The new Mac mini delivers gigantic performance in an unbelievably small design thanks to the power efficiency of Apple silicon and an innovative new thermal architecture," said John Ternus, Apple's senior vice president of Hardware Engineering. "Combined with the performance of M4 and the new M4 Pro chip, enhanced connectivity on both the front and back, and the arrival of Apple Intelligence, Mac mini is more capable and versatile than ever, and there is nothing else like it."

Small, but Fierce

The new Mac mini footprint is less than half the size of the previous design at just 5 by 5 inches, so it takes up much less space on a desk. The super-compact system is enabled by the incredible power efficiency of Apple silicon and an innovative thermal architecture, which guides air to different levels of the system, while all venting is done through the foot.



The unbelievably compact form is made possible by the power-efficient performance of Apple silicon combined with an all-new innovative thermal architecture.

When compared to the best-selling PC desktop in its price range, Mac mini is up to 6x faster at one-twentieth the size.[1] For a wide range of users, from students to aspiring creatives and small business owners, the Mac mini with M4 is a tiny

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powerhouse. Mac mini with M4 features a 10-core CPU, 10-core GPU, and now starts with 16GB of unified memory. Users will feel the performance of M4 in everything they do, from multitasking across everyday productivity apps to creative projects like video editing, music production, or writing and compiling code.



Mac mini is more versatile than ever — perfect for anywhere, from home offices to large businesses and beyond.

When compared to the Mac mini with Intel Core i7, Mac mini with M4:

- Applies up to 2.8x more audio effect plugins in a Logic Pro project.[1]
- Delivers up to 13.3x faster gaming performance in World of Warcraft: The War Within.[1]
- Enhances photos with up to 33x faster image upscaling performance in Photomator.[3]

When compared to the Mac mini with M1, Mac mini with M4:

- Performs spreadsheet calculations up to 1.7x faster in Microsoft Excel.[1]
- Transcribes with on-device AI speech-to-text up to 2x faster in MacWhisper.[1]
- Merges panoramic images up to 4.9x faster in Adobe Lightroom Classic.[4]

Introducing M4 Pro for Pro-Level Performance

For users who want pro-level performance, Mac mini with M4 Pro features the world's fastest CPU core[5] with lightning-fast single-threaded performance. With up to 14 cores, including 10 performance cores and four efficiency cores, M4 Pro also provides phenomenal multithreaded performance. With up to 20 cores, the M4 Pro GPU is up to twice as powerful as the GPU in M4, and both chips bring hardware-accelerated ray tracing to the Mac mini for the first time. The Neural Engine in M4 Pro is also over 3x faster than in Mac mini with M1, so on-device Apple Intelligence models run at blazing speed. M4 Pro supports up to 64GB of

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unified memory and 273GB/s of memory bandwidth — twice as much bandwidth as any AI PC chip — for accelerating AI workloads. And M4 Pro supports Thunderbolt 5, which delivers up to 120 Gb/s data transfer speeds on Mac mini, and more than doubles the throughput of Thunderbolt 4.



The M4 Pro chip takes the advanced technologies debuted in M4 and scales them up to tackle even more demanding workloads.

When compared to the Mac mini with Intel Core i7, Mac mini with M4 Pro:

- Performs spreadsheet calculations up to 4x faster in Microsoft Excel.[1]
- Executes scene-edit detection up to 9.4x faster in Adobe Premiere Pro.[3]
- Transcribes with on-device AI speech-to-text up to 20x faster in MacWhisper.[1]
- Processes basecalling for DNA sequencing in Oxford Nanopore MinKNOW up to 26x faster.[1]

When compared to the Mac mini with M2 Pro, Mac mini with M4 Pro:

- Applies up to 1.8x more audio effect plugins in a Logic Pro project.[1]
- Renders motion graphics to RAM up to 2x faster in Motion.[6]
- Completes 3D renders up to 2.9x faster in Blender.[6]

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The Mac mini with M4 Pro comes with Thunderbolt 5 for the first time, which more than doubles transfer speeds, so users will be able to use faster external storage and connect to more accessories at the same time.

Upgraded Connectivity and Display Support

The new Mac mini features a wide array of ports to drive any setup. It includes front-facing ports for more convenient access, including two USB-C ports that support USB 3, and an audio jack with support for high-impedance headphones. On the back, Mac mini with M4 includes three Thunderbolt 4 ports, while Mac mini with M4 Pro features three Thunderbolt 5 ports. Mac mini comes standard with Gigabit Ethernet, configurable up to 10Gb Ethernet for faster networking speeds, and an HDMI port for easy connection to a TV or HDMI display without an adapter. With M4, Mac mini can support up to two 6K displays and up to one 5K display, and with M4 Pro, it can support up to three 6K displays at 60Hz for a total of over 60 million pixels.

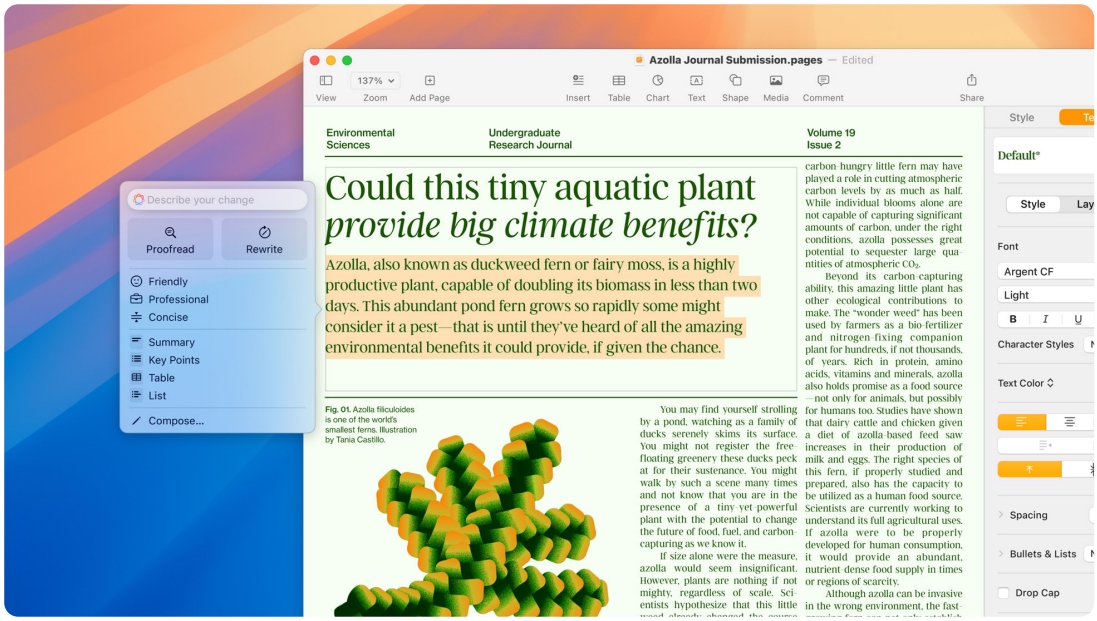


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The new front-facing ports on Mac mini include two USB-C ports and an audio jack with support for high-impedance headphones.

A New Era with Apple Intelligence on the Mac

Apple Intelligence ushers in a new era for the Mac, bringing personal intelligence to the personal computer. Combining powerful generative models with industry-first privacy protections, Apple Intelligence harnesses the power of Apple silicon and the Neural Engine to unlock new ways for users to work, communicate, and express themselves on Mac. It is available in U.S. English with macOS Sequoia 15.1. With systemwide Writing Tools, users can refine their words by rewriting, proofreading, and summarizing text nearly everywhere they write. With the newly redesigned Siri, users can move fluidly between spoken and typed requests to accelerate tasks throughout their day, and Siri can answer thousands of questions about Mac and other Apple products. New Apple Intelligence features will be available in December, with additional capabilities rolling out in the coming months. Image Playground gives users a new way to create fun original images, and Genmoji allows them to create custom emoji in seconds. Siri will become even more capable, with the ability to take actions across the system and draw on a user's personal context to deliver intelligence that is tailored to them. In December, ChatGPT will be integrated into Siri and Writing Tools, allowing users to access its expertise without needing to jump between tools.



With brand-new systemwide Writing Tools powered by Apple Intelligence, users can rewrite, proofread, and summarize text virtually everywhere they type.

Apple Intelligence does all this while protecting users' privacy at every step. At its core is on-device processing, and for more complex tasks, Private Cloud Compute gives users access to Apple's even larger, server-based models and offers groundbreaking protections for personal information. In addition, users can access ChatGPT for free without creating an account, and privacy protections are built in — their IP addresses are obscured and OpenAI won't store requests. For those who choose to connect their account, OpenAI's data-use policies apply.

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The First Carbon Neutral Mac

The new Mac mini is Apple's first carbon neutral Mac, marking a significant milestone toward Apple 2030, the company's goal to be carbon neutral across the entire carbon footprint by the end of this decade.

Mac mini is made with over 50 percent recycled content overall, including 100 percent recycled aluminum in the enclosure, 100 percent recycled gold plating in all Apple-designed printed circuit boards, and 100 percent recycled rare earth elements in all magnets. The electricity used to manufacture Mac mini is sourced from 100 percent renewable electricity. And, to address 100 percent of the electricity customers use to power Mac mini, Apple has invested in clean energy projects around the world. Apple has also prioritized lower-carbon modes of shipping, like ocean freight, to further reduce emissions from transportation. Together, these actions have reduced the carbon footprint of Mac mini by over 80 percent.[2] For the small amount of remaining emissions, Apple applies high-quality carbon credits from nature-based projects, like those generated by its innovative Restore Fund.

In another first for Mac mini, the packaging is now entirely fiber-based, bringing Apple closer to its goal to remove plastic from its packaging by 2025.



The new Mac mini is Apple's first carbon neutral Mac.

An Unrivaled Experience with macOS Sequoia

macOS Sequoia completes the new Mac mini experience with a host of exciting features, including iPhone Mirroring, allowing users to wirelessly interact with their iPhone, its apps, and notifications directly from their Mac.[7] Safari, the world's fastest browser,[8] now offers the Highlights feature, which quickly pulls up relevant information from a site; a smarter, redesigned Reader with a table of contents and high-level summary; and a new Video Viewer to watch videos without distractions. With Distraction Control, users can hide items on a webpage that they may find disruptive to their browsing. Gaming gets even more immersive with features like Personalized Spatial Audio and improvements to Game Mode, along with a breadth of exciting titles, including the upcoming Assassin's Creed Shadows. Easier window tiling means users can stay organized with a window layout that works best for them. The all-new Passwords app gives convenient access to passwords, passkeys, and other credentials — all stored in one place. And users can apply new, beautiful built-in backgrounds for video

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calls, which include a variety of color gradients and system wallpapers, or upload their own photos.

Pricing and Availability

- Customers can pre-order the new Mac mini with M4 and M4 Pro starting today, Tuesday, October 29, on apple.com/store and in the Apple Store app in 28 countries and regions, including the U.S. It will start arriving to customers, and in Apple Store locations and Apple Authorized Resellers, beginning Friday, November 8.
- Mac mini with M4 starts at **$599** (U.S.) and **$499** (U.S.) for education. Additional technical specifications are available at apple.com/mac-mini.
- Mac mini with M4 Pro starts at **$1,399** (U.S.) and **$1,299** (U.S.) for education. Additional technical specifications are available at apple.com/mac-mini.
- New accessories with USB-C — including Magic Keyboard (**$99** U.S.), Magic Keyboard with Touch ID (**$149** U.S.), Magic Keyboard with Touch ID and Numeric Keypad (**$179** U.S.), Magic Trackpad (**$129** U.S.), Magic Mouse (**$79** U.S.), and Thunderbolt 5 Pro Cable (**$69**) — are available at apple.com/store.
- Apple Intelligence is available now as a free software update for Mac with M1 and later, and can be accessed in most regions around the world when the device and Siri language are set to U.S. English. The first set of features is in beta and available with macOS Sequoia 15.1, with more features rolling out in the months to come.
- Apple Intelligence is quickly adding support for more languages. In December, Apple Intelligence will add support for localized English in *Australia*, *Canada*, *Ireland, New Zealand*, *South Africa*, and the *U.K.*, and in April, a software update will deliver expanded language support, with more coming throughout the year. Chinese, English (India), English (Singapore), French, German, Italian, Japanese, Korean, Portuguese, Spanish, Vietnamese, and other languages will be supported.
- With Apple Trade In, customers can trade in their current computer and get credit toward a new Mac. Customers can visit apple.com/shop/trade-in to see what their device is worth.
- AppleCare+ for Mac provides unparalleled service and support. This includes unlimited incidents of accidental damage, battery service coverage, and 24/7 support from the people who know Mac best.
- Every customer who buys directly from Apple Retail gets access to Personal Setup. In these guided online sessions, a Specialist can walk them through setup, or focus on features that help them make the most of their new device. Customers can also learn more about getting started with their new device with a Today at Apple session at their nearest Apple Store.

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Apple revolutionized personal technology with the introduction of the Macintosh in 1984. Today, Apple leads the world in innovation with iPhone, iPad, Mac, AirPods, Apple Watch, and Apple Vision Pro. Apple's six software platforms — iOS, iPadOS, macOS, watchOS, visionOS, and tvOS — provide seamless experiences across all Apple devices and empower people with breakthrough services including the App Store, Apple Music, Apple Pay, iCloud, and Apple TV+. Apple's more than 150,000 employees are dedicated to making the best products on earth and to leaving the world better than we found it.

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1. Testing was conducted by Apple in September and October 2024. See apple.com/mac-mini for more information.
2. Carbon reductions are calculated against a business-as-usual baseline scenario: No use of clean electricity for manufacturing or product use, beyond what is already available on the latest modeled grid; Apple's carbon intensity of key materials as of 2015; and Apple's average mix of transportation modes by product line across three years. Learn more at apple.com/2030.
3. Results are compared to previous-generation 3.2GHz 6-core Intel Core i7-based Mac mini systems with Intel Iris UHD Graphics 630, 64GB of RAM, and 2TB SSD.
4. Results are compared to previous-generation Mac mini systems with Apple M1, 8-core CPU, 8-core GPU, 16GB of RAM, and 2TB SSD.
5. Testing conducted by Apple in October 2024 using shipping competitive systems and select industry-standard benchmarks.
6. Results are compared to previous-generation Mac mini systems with Apple M2 Pro, 12-core CPU, 19-core GPU, 32GB of RAM, and 8TB SSD.
7. Available on Mac computers with Apple silicon and Intel-based Mac computers with a T2 Security Chip. Requires that iPhone and Mac are signed in with the same Apple Account using two-factor authentication, iPhone and Mac are near each other and have Bluetooth and Wi-Fi turned on, and Mac is not using AirPlay or Sidecar. Some iPhone features (e.g., camera and microphone) are not compatible with iPhone Mirroring.
8. Testing was conducted by Apple in August 2024. See apple.com/safari for more information.

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