



## Mac mini (2024) - Tech Specs

Year introduced: 2024

[Identify your Mac mini model](#)

**Finish**

Silver

**Chip**

- Apple M4 chip
- 10-core CPU with 4 performance cores and 6 efficiency cores
- 10-core GPU
- Hardware-accelerated ray tracing
- 16-core Neural Engine
- 120GB/s memory bandwidth

	<p><b>Media Engine</b></p> <p>Hardware-accelerated H.264, HEVC, ProRes, and ProRes RAW</p> <p>Video decode engine</p> <p>Video encode engine</p> <p>ProRes encode and decode engine</p> <p>AV1 decode</p> <p><b>Apple M4 Pro chip</b></p> <p>12-core CPU with 8 performance cores and 4 efficiency cores</p> <p>16-core GPU</p> <p>Hardware-accelerated ray tracing</p> <p>16-core Neural Engine</p> <p>273GB/s memory bandwidth</p> <p><b>Media Engine</b></p> <p>Hardware-accelerated H.264, HEVC, ProRes, and ProRes RAW</p> <p>Video decode engine</p> <p>Video encode engine</p> <p>ProRes encode and decode engine</p> <p>AV1 decode</p> <p><b>Configurable to:</b></p> <p>M4 Pro with 14-core CPU and 20-core GPU</p>
<b>Apple Intelligence<sup>1</sup></b>	<p>Apple Intelligence is the personal intelligence system that helps you write, express yourself, and get things done effortlessly. With groundbreaking privacy protections, it gives you peace of mind that no one else can access your data — not even Apple.</p> <p><a href="#">Learn more about Apple Intelligence</a></p>
<b>Memory</b>	<p><b>Apple M4 chip</b></p> <p>16GB unified memory</p> <p><b>Configurable to:</b></p> <p>24GB or 32GB</p> <p><b>Apple M4 Pro chip</b></p> <p>24GB unified memory</p> <p><b>Configurable to:</b></p> <p>48GB or 64GB</p>
<b>Storage<sup>2</sup></b>	<p><b>Apple M4 chip</b></p> <p>256GB SSD</p> <p><b>Configurable to:</b></p>

512GB, 1TB, or 2TB

### **Apple M4 Pro chip**

512GB SSD

### **Configurable to:**

1TB, 2TB, 4TB, or 8TB

## **Display Support**

### **Apple M4 chip**

#### **Simultaneously supports up to three displays:**

Up to three displays: Two displays with up to 6K resolution at 60Hz over Thunderbolt and one display with up to 5K resolution at 60Hz over Thunderbolt or 4K resolution at 60Hz over HDMI

Up to two displays: One display with up to 5K resolution at 60Hz over Thunderbolt and one display with up to 8K resolution at 60Hz or 4K resolution at 240Hz over Thunderbolt or HDMI

#### **Thunderbolt 4 digital video output**

Support for native DisplayPort 1.4 output over USB-C

### **Apple M4 Pro chip**

#### **Simultaneously supports up to three displays:**

Up to three displays: Three displays with up to 6K resolution at 60Hz over Thunderbolt or HDMI

Up to two displays: One display with up to 6K resolution at 60Hz over Thunderbolt and one display with up to 8K resolution at 60Hz or 4K resolution at 240Hz over Thunderbolt or HDMI

#### **Thunderbolt 5 digital video output**

Support for native DisplayPort 2.1 output over USB-C

#### **HDMI display video output**

Support for one display with up to 8K resolution at 60Hz or 4K resolution at 240Hz (M4 and M4 Pro)

## **Video Playback**

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

HDR with Dolby Vision, HDR10+/HDR10, and HLG

## **Audio Playback**

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

## **Audio**

Built-in speaker

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

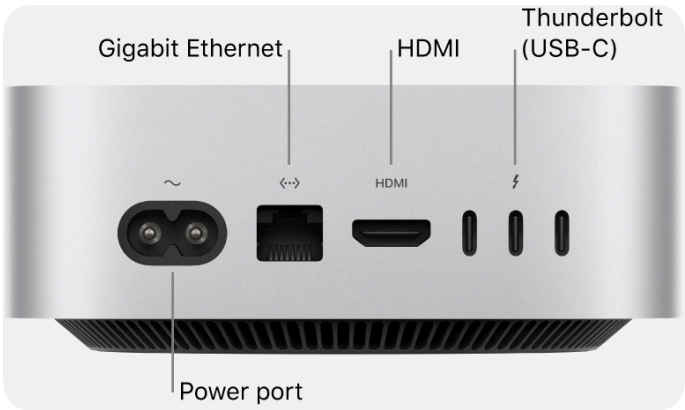
HDMI port supports multichannel audio output

Connections and Expansion



On front:

- Two USB-C ports with support for USB 3 (up to 10Gb/s)
- 3.5 mm headphone jack



On back (M4):

- Gigabit Ethernet port (configurable to 10Gb Ethernet)
- HDMI port

Three Thunderbolt 4 (USB-C) ports with support for:

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

On back (M4 Pro):

- Gigabit Ethernet port (configurable to 10Gb Ethernet)
- HDMI port

Three Thunderbolt 5 (USB-C) ports with support for:

- Thunderbolt 5 (up to 120Gb/s)
- USB 4 (up to 120Gb/s)
- DisplayPort

Communications

Wi-Fi

Wi-Fi 6E (802.11ax)<sup>3</sup>

Bluetooth

Bluetooth 5.3

Ethernet

10/100/1000BASE-T Gigabit Ethernet (RJ-45 connector)  
Configurable to 10Gb Ethernet (Nbase-T Ethernet with support for 1Gb, 2.5Gb, 5Gb, and 10Gb Ethernet using RJ-45 connector)

Size and Weight	Height: 2.0 inches (5.0 cm)		
	Width: 5.0 inches (12.7 cm)		
	Depth: 5.0 inches (12.7 cm)		
	Weight (M4): 1.5 pounds (0.67 kg) <sup>4</sup>		
	Weight (M4 Pro): 1.6 pounds (0.73 kg) <sup>4</sup>		
Electrical and Operating Requirements	Line voltage: 100–240V AC		
	Frequency: 50Hz to 60Hz, single phase		
	Maximum continuous power: 155W		
	Operating temperature: 50° to 95° F (10° to 35° C)		
	Storage temperature: –40° to 116° F (–40° to 47° C)		
	Relative humidity: 5% to 90% noncondensing		
	Operating altitude: tested up to 16,400 feet (5000 meters)		
	Typical acoustical performance: Sound pressure level (operator position): 5 dBA at idle <sup>5</sup>		
In the Box	Mac mini		
	Power cord (1.8 m)		
Operating System	macOS		
	macOS is the most advanced desktop operating system in the world. macOS Sequoia helps you be productive and creative in new ways — with Apple Intelligence, <sup>1</sup> iPhone Mirroring, window tiling, major updates to Safari, and more.		
	<a href="#">Learn more about latest operating system</a>		
Accessibility	Accessibility features help people with disabilities get the most out of their new Mac mini. With built-in support for vision, hearing, mobility, and learning, you can create and do amazing things.		
	<a href="#">Learn more about Accessibility</a>		
	Features include:		
	Voice Control	Siri and Dictation	
	VoiceOver	Switch Control	
	Zoom	Closed Captions	
	Increase Contrast	Text to Speech	
	Reduce Motion		
Built-in Apps <sup>6</sup>	App Store	Freeform	Mail
	Books	GarageBand	Maps
	Calendar	Home	Messages
	Contacts	iMovie	Music
	FaceTime	iPhone Mirroring	News
	Find My	Keynote	Notes

Numbers	Podcasts	Shortcuts	Voice Memos
Pages	Preview	Stocks	Weather
Passwords	QuickTime Player	Time Machine	
Photo Booth	Reminders	Tips	
Photos	Safari	TV	

## Configure to Order

Configure your Mac mini with these options at [apple.com](https://apple.com):

### Apple M4 chip

24GB or 32GB unified memory  
512GB, 1TB, or 2TB SSD  
10Gb Ethernet

### Apple M4 Pro chip

M4 Pro with 14-core CPU, 20-core GPU, and 16-core Neural Engine  
48GB or 64GB unified memory  
1TB, 2TB, 4TB, or 8TB SSD  
10Gb Ethernet

## Mac mini and the Environment

### Environmental impact

Mac mini is designed to reduce environmental impact:<sup>7</sup>

[See the Mac mini Product Environmental Report \(PDF\).](#)

### Progress toward Apple 2030

Mac mini is one of Apple's carbon neutral products:

More than 50% recycled content<sup>8</sup>

Manufacturing electricity sourced from 100% renewable electricity<sup>9</sup>

50% or more non-air shipping<sup>10</sup>

More than 80% emissions reduction against business-as-usual scenario as modeled by Apple<sup>11</sup>

121 kg CO<sub>2</sub>e or less total remaining emissions covered by high-quality carbon credits<sup>12</sup>

[See Apple's commitment](#)

### Materials

100% recycled aluminum in the enclosure and thermal module stage<sup>13</sup>

100% recycled copper in multiple printed circuit boards, multiple thermal module components,<sup>14</sup> AC inlet prongs, and multiple small parts

100% recycled gold in the plating of all Apple-designed printed circuit boards

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

100% recycled rare earth elements in all magnets

100% recycled zinc in the AC inlet prongs and multiple small parts

80% recycled steel in multiple components  
20% or more recycled plastic in 25 components  
100% fiber-based packaging<sup>15</sup>  
42% recycled content in fiber packaging

Energy

100% of manufacturing electricity for Mac mini is sourced from renewable electricity  
100% of expected customer use electricity matched with low-carbon electricity  
ENERGY STAR® certified<sup>16</sup>

Waste

No established final assembly sites generate waste sent to landfill as part of Apple’s Zero Waste Program

Smarter chemistry<sup>17</sup>

Mercury-, BFR-, and PVC-free

Acoustic Performance

Declared noise emission values in accordance with ECMA-109

	Sound Power Level  $L_{WA,m}$ (B)	Sound Pressure Level  Operator Position  $L_{pA,m}$ (dB)
Idle	1.3 ( $K_v = 0.3$ )	4
Wireless web	1.3 ( $K_v = 0.3$ )	4

- $L_{WA,m}$  is the mean A-weighted sound power level, rounded to the nearest 0.1 B.
- $L_{pA,m}$  is the mean A-weighted sound pressure level measured at the operator position (rounded to the nearest 1 dB).
- 1 B (bel) = 10 dB (decibel).
- $K_v$  is the statistical adder for computing upper-limit of A-weighted sound power level.
- The quantity,  $L_{WA,c}$  (formerly called  $L_{WA,d}$ ) may be computed from the sum of  $L_{WA,m}$  and  $K_v$ .
- The wireless web test browses 6 tabs with a mix of content including media.
- Configuration tested: Mac mini with Apple M4 chip, 10-core CPU, 10-core GPU, 16GB unified memory, 512GB storage and Mac mini with Apple M4 Pro chip, 12-core CPU, 16-core GPU, 24GB unified memory, 512GB storage.

1. Apple Intelligence is available in beta on Mac models with M1 and later, with Siri and device language set to the same supported language, as part of a macOS Sequoia software update. Supported languages include English, French, German, Italian, Portuguese (Brazil), Spanish, Japanese, Korean, and Chinese

(Simplified). More languages are coming over the course of the year, including Vietnamese. Some features may not be available in all regions or languages.

2. 1GB = 1 billion bytes and 1TB = 1 trillion bytes; actual formatted capacity less.
3. Wi-Fi 6E available in countries and regions where supported.
4. Weight varies by configuration and manufacturing process.
5. Acoustics measured from typical operator position sitting in front of standard Mac mini system. Acoustics may vary by configuration.
6. iMovie, GarageBand, Pages, Numbers, and Keynote are available on the Mac App Store. Downloading apps requires an Apple Account and a device that is compatible with the OS version required for each app. iPhone Mirroring is not available in all countries and regions. Some iPhone features (e.g., camera and microphone) are not compatible with iPhone Mirroring.
7. Data accurate as of product launch.
8. 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.
9. Manufacturing electricity for Mac mini is sourced from renewable electricity, including a mix of supplier and Apple clean energy projects. Renewable electricity refers to fossil fuel-free sources of energy, like wind, solar, and low-impact hydroelectricity projects.
10. 50% of Mac mini by weight is shipped by non-air modes of transportation, like ocean freight, from the factory to their next destination.
11. Carbon reductions are calculated against a business-as-usual scenario as modeled by Apple: 1) No use of clean electricity for manufacturing or product use, beyond what is already available on the latest modeled 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.
12. We will balance remaining residual emissions for Mac mini with high-quality carbon credits. For more information about our approach to carbon removal, please see our Carbon Removal Strategy white paper: [Apple's Carbon Removal Strategy](#).
13. Recycled aluminum in the thermal module applies to Mac mini with M4 chip only.
14. Recycled copper in the thermal module applies to Mac mini with M4 Pro chip only.
15. Based on retail packaging as shipped by Apple. Breakdown of U.S. retail packaging by weight. Adhesives, inks, and coatings are excluded from our calculations of plastic content and packaging weight.
16. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
17. 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.

Helpful?

Yes

No

Support

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