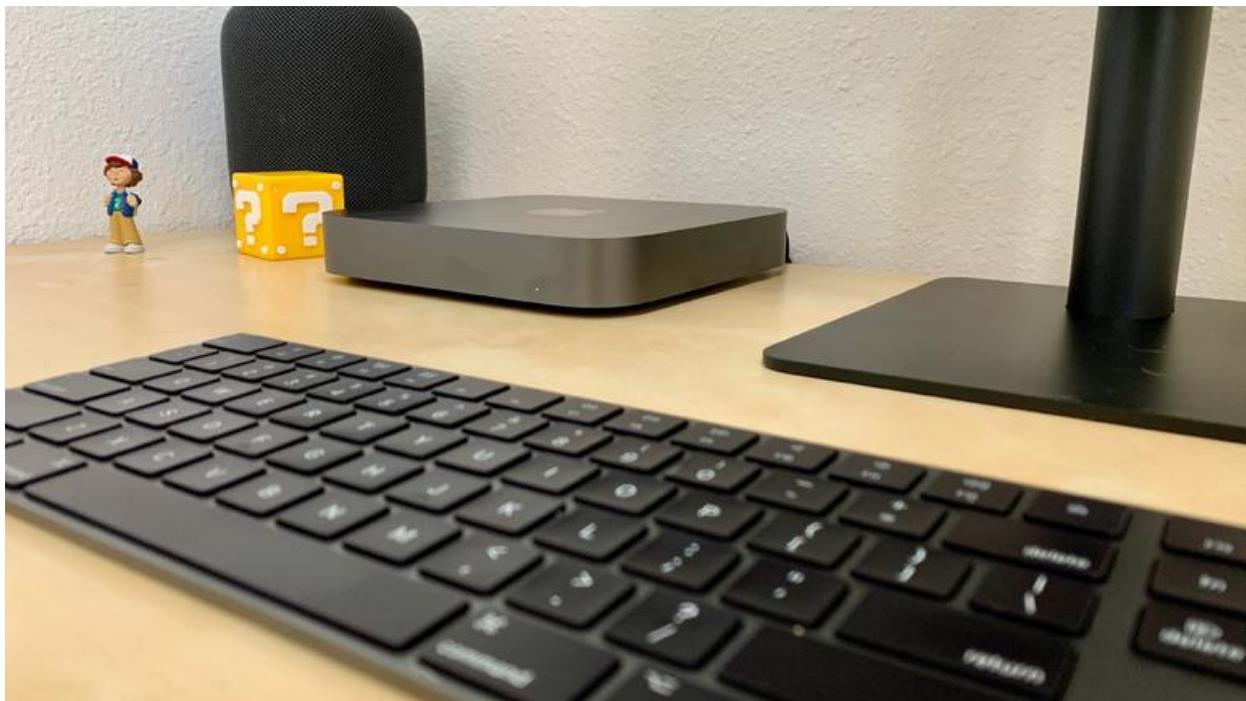


Apple Mac mini (2018) review: The little Mac that could



By [Jason Cipriani](#) | November 6, 2018 -- 11:00 GMT (03:00 PST) |

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The last time [Apple](#) updated the [Mac mini](#) was in October 2014. Over the past four years, users and pundits alike have speculated whether the Mini had been left behind and if Apple had decided it was time to move on from the small box and instead focus resources on other Mac products.

In a lot of ways, it's the same story as the MacBook Air, another Apple computer that had gone without a meaningful update for a number of years.

Also: [Mac Mini 2018 teaches an old design new tricks](#)

Then, rumors began to surface that Apple was indeed going to update the Mac mini, and this time, it would have features that professional users would appreciate.

Sure enough, during Apple's October event -- where the company not only refreshed the [iPad Pro](#) but also the [MacBook Air](#) -- a new Mac mini was unveiled. The svelte enclosure houses the latest and greatest components, and the refresh shows Apple is listening to some of its most vocal users, and that the Mac mini has a place in its product lineup.

For the past few days, I've been using the Mac mini, and have come away rather impressed with this little Mac.

Design



Image: Jason Cipriani/ZDNet

The Mac mini looks like a bigger version of the [Apple TV](#). The square enclosure measures 7.7 x 7.7 x 1.4-inches and weighs 2.9 pounds. So, it's bigger than an Apple TV, but the resemblance is certainly there.

The shell is made of 100-percent recycled aluminum and is one of the first two Apple products to carry such a claim. The other product is the new MacBook Air.

Beyond the Apple logo on top, and an indicator light on the front of the enclosure, the Mini is rather nondescript gray

housing. On the back, however, things start to get busy. From left to right, you'll find the power button, power port, an Ethernet port, four Thunderbolt 3 ports, HDMI 2.0, two USB 3.1 ports, and a headphone jack. Just below all of the ports is a vent for the new cooling system.

The bottom of the Mac mini has a circular foot that holds the unit off the table or desk a tiny bit.

For those unaware, the Mac mini is sold as a standalone product. Inside the box is the Mini itself and the power cable; that's it. You'll need to supply your own keyboard, mouse, trackpad, and display. Apple included a [Magic Keyboard](#) with number pad, a Magic Trackpad 2, and an LG UltraFine 4K display.

But you can connect whatever accessories you want. Prefer a mechanical keyboard from Razer, an Amazon Basics mouse, and a 1080p display? No problem.

That's part of the appeal to the Mac mini. It can be as expensive of a setup, accessory wise, as you want. Or it can be overly simple, and that's just fine, too.

Specifications

There are several different configurations you can purchase, ranging from \$799 all the way up to \$4,199 for a fully loaded Mini. Here's the \$799 configuration I was sent and have been using:

- **CPU:** 3.6GHz Intel Core i3-8100B (quad-core, 6MB cache)
- **Graphics:** Intel UHD Graphics 630
- **RAM:** 8GB DDR4 (2666MHz)
- **Storage:** 128GB PCIe SSD
- **Ports:** 2 x USB 3.1, 1 x HDMI 2.0, 1 x 3.5mm audio jack, 4 Thunderbolt 3, 1 x Ethernet
- **Connectivity:** 802.11 ac Wi-Fi, Bluetooth 5
- **Weight:** 2.9 pounds
- **Size:** 7.7 x 7.7 x 1.4-inches

The Mini now accepts up to 64GB of memory and up to a 2TB SSD for storage. Users can upgrade to a 3.2GHz 6-core Intel Core i7 with TurboBoost of up to 4.6GHz.

Performance



I ran benchmarking software Geekbench 4 a few times. The Mac mini averaged a single-core score of 4,756 and a multi-core score of 14,426. I also ran Cinebench R15, and the Mac mini averaged 41fps in the OpenGL test and scored 588 in the CPU test.

What do those numbers mean? Well, those results put the base model on par with a 2017 iMac equipped with an Intel Core i5-7500. In regards to multi-core, the Mac mini performs just as fast as a 2015 MacBook Pro with an Intel Core i7-4980HQ.

Still, those numbers don't mean much without sitting down and actually using it.

After plugging in a monitor and connecting the keyboard and trackpad Apple included in my review kit, I've used the Mini as my main computer for roughly four days. I tasked it with writing this review, editing some photos, streaming music, and editing a bit of video (more on that below). I used it for all the things one would normally use a computer for, especially one that's for work and personal use.

As the Mini handily went from task to task, without any hangups or issues, I kept waiting for the fan to kick on. Even as I was exporting a video, streaming a [YouTube video](#), and reading through my Twitter timeline, I realized I was yet to hear the fans.

I felt the top of the Mini, and it was warm. So turned off all audio, and leaned really close to the enclosure. Only then could I hear the whirr of the fans. They are stunningly quiet, which was something the company strived for. Often times, the Mini is used in music studios or on film sets where loud fans aren't welcome.

Let me say it another way: The external hard drive I used for Time Machine on my iMac is louder than the Mac mini's cooling system.

The internal speakers on the Mac mini aren't very loud. If you're going to use this device to stream music or watch a lot of videos, I would suggest picking up some external speakers or headphones. The internal speakers are designed for minimal use. Think system alerts and the occasional song.

Ideally, the base model would forgo 128GB of storage. Most users can get away with half that amount on phones and tablets, but in a computer, 128GB isn't enough. I haven't installed everything I have on my iMac, because eventually, the Mini has to go back to Apple, and because I currently have about 500GB of storage in use. The Mac mini should start at 256GB of storage, and allow the user to upgrade from there.

The Mac mini uses Apple's new T2 Security Chip for secure boot, encrypted storage, and tasks such as system management controller, audio controller, and the SSD controller.

Pro users



Even though I've been testing the base model Mini for the past few days, I'm somewhat mesmerized by the device. In the past, when shopping for a Mac, I've only ever considered a MacBook or iMac. I had always viewed the Mac mini as a device that's better designed for use as a home server or a really powerful [Raspberry Pi](#).

As my workload has gone back and forth between having to edit and render videos or spend a lot of time in Photoshop editing photos, I assumed the Mac mini just wasn't capable of keeping up. And several years ago, I was probably right. The Mini was a solid computer, but not one for resource-intensive tasks.

With this year's update and my own rudimentary tests, I have little doubt the Mac mini is more than capable of keeping up with my workload, and more intense workloads.

I downloaded a handful of videos, imported them into an iMovie project where I spliced, added effects, transitions, and even some slow-motion magic, and then exported my quick creation. The first video was around two minutes in length and exported at full 1080p with best quality rendering in 1 minute and 20 seconds. I then lengthened the clip to over 17 minutes and exported with the highest settings possible, and it was done in just over 10 minutes, with a file size of 17.5 GB.

I then took that file and used QuickTime Player to convert it to HEVC format, shrinking it down to 1.75GB. That process took five minutes.

Indeed, using more in-depth programs like [Final Cut Pro](#) or Logic Pro would push the system a lot harder than I did, but my experience has left me impressed.

With four Thunderbolt 3 ports, with which you can connect monitors, external GPUs, external hard drives, and a myriad of other peripherals that take advantage of a high-speed connection, and the option to upgrade to a 10GB Ethernet connection, which can be used to share the workload across multiple Mac minis, it's hard to imagine

that a professional photographer, video editor, or developer would be left feeling underwhelmed by the Mac mini.

Any criticism about the new price point -- roughly \$200 higher than what the Mac mini previously started at -- needs to account for the amount of modern technology built into the Mini. It's not just built for now, but built for use well into the future.



Pro users often appreciate the upgradeability of computers, whether it's adding storage or more memory. The Mac mini can accept up to 64GB of RAM, and technically, it is user upgradeable. Although the process of

getting into the Mini, and doing it yourself isn't going to be easy. When I asked Apple about user upgrades, I was told the company views the Mini as a service upgradeable device -- meaning users should use a certified technician (or Apple itself) for any upgrades. That said, I would suggest waiting to see how difficult the upgrade is going to be once [iFixit](#) publishes its teardown and then decide which path you want to take.

Nevertheless, the option is technically there. It just depends on how comfortable you are with removing the base, cooling enclosure, and digging through the Mini's guts.

Conclusion

Between the number of ports, the types of accessories those ports allow for, and the customization options, the Mac mini is a computer that's no longer serving a niche market. It's designed for all types of users, whether you want to use it as a server in your home, and set up more than one Mini as a set of servers to offload video encoding and code compiling.

For the past four years, Mac mini users have wanted more from the desktop-like portable computer. And with the 2018 model, Apple has delivered. Even the base model is something I could see myself using on a daily basis, and

when I realistically look at my use, I'm not a "Pro" user. I'm an average user who dabbles in pro features.

If I were in need of a new desktop computer at this very moment, my search would start with -- and it's entirely possible it would end with -- the Mac mini, as opposed to an iMac. The versatility it offers, combined with performance, is just too compelling.

original article:

<https://www.zdnet.com/product/apple-mac-mini-2018/?ftag=TRE-03-10aaa6b&bhid=23405847687286447375579737817622>