M2 Ultra Mac Studio review: Who needs a Mac Pro, anyway?

Enlarge / Apple’s M2 Ultra Mac Studio.
Andrew Cunningham

reader comments

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The original Mac Studio, despite the absence of “Pro” in the name, was Apple’s most compelling professional desktop release in years. Though it was more like a supercharged Mac mini than a downsized Mac Pro, its M1 Max and M1 Ultra processors were fantastic performers, and they were much more energy-efficient than the one in the most recent Intel Mac Pro, too.

Apple is releasing the M2 version of the Mac Studio this week, and even though it’s being launched alongside a brand-new Mac Pro, it still might be Apple’s most compelling professional desktop. That’s partly because the new Studio is even faster than the old one—Apple sent us a fully enabled M2 Ultra model with 128GB of RAM—and partly because Apple Silicon Macs are designed in ways that make Mac Pro-style expandability and modularity impossible.

There is probably still a tiny audience for the redesigned Mac Pro, people who still use macOS and still use internal PCI Express expansion cards that aren’t GPUs; it should also be relatively easy to add gobs of cheap, fast internal storage, a kind of upgrade the Mac Studio is still frustratingly incapable of. There’s also a bit of awkward pricing overlap with the high-end M2 Pro Mac mini that didn’t exist last year.

But for the vast majority of people who prefer to do their photo and video editing, 3D rendering, app development, and other heavy-duty work on Apple’s desktops, the Mac Studio is still the one to beat.

The new Mac Studio

Ports on the front, one of the Mac Studio’s killer features. On the M2 Ultra Studio, these are Thunderbolt ports; on the M2 Max., they’re 10Gbps USB-C.
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Apple hasn’t changed anything about the outside of the Studio since the last generation, and nothing about the pricing or available configuration options has changed, either.

There are two versions of the Mac Studio, one with an M2 Max

processor (as seen in the most recent MacBook Pro refresh, and one with an M2 Ultra chip that’s new to the Studio and the Apple Silicon Mac Pro. In Apple’s chip family, “Ultra” is the highest you can go, and “Max” (presumably short for “maximum”) is the second-highest.

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Everything about the M2 Ultra version of the Studio is exactly double what you get with the M2 Max: double the CPU cores, double the GPU cores, double the RAM, and double the price. That makes sense since, architecturally, the M2 Ultra is just two M2 Max chips fused together with a silicon interposer that lets them communicate at rates of up to 2.5TB per second. Performance doesn’t exactly double, but we’ll talk about that more later.

Aside from the chips, there are a few other notable distinctions between the two systems. The two ports on the front of the M2 Max Mac Studio are 10Gbps USB-C ports, while the two on the M2 Ultra are full 40Gbps Thunderbolt ports. The M2 Max has between 32GB and 96GB of RAM, and the M2 Ultra comes with between 64GB and 192GB; neither is upgradeable after purchase, per usual for Apple Silicon systems. Either can be configured with up to 8TB of internal storage, though doing this costs over $2,000 for either configuration, and you might be better off researching external Thunderbolt SSD enclosures if you’re looking for a ton of space.

On the back, you still get four Thunderbolt ports, a 10 gigabit Ethernet port, a pair of 5Gbps USB-A ports, an HDMI port, and an audio jack.
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The M2 Ultra Mac Studio is also a full two pounds heavier than the M2 Max version, though the two are the same size; Apple uses a heavier and more conductive copper heatsink to cool the faster chip, while the M2 Max gets by with a lighter aluminum heatsink.

Aside from the front Thunderbolt ports, connectivity is the same on both systems. You get four Thunderbolt ports, one 10-gigabit Ethernet port, two 5Gbps USB-A ports, a headphone jack, and an HDMI port on the back (Apple doesn’t say which version it is, but since it can drive an 8K display at 60Hz, HDMI 2.1 seems likely). And there’s an SD card slot next to

the two ports on the front, a boon for photographers or other kinds of hobbyists who use SD or microSD cards.

I liked the Mac Studio a lot last year, and I still like it a lot. It performs well, it’s dead silent, it will fit just about anywhere, and it’s the rare Apple computer to put ports on the front, where they can actually be accessed. If you’re eyeing an upgrade from an Intel Mac, the M2 Max version is a great step (at least performance-wise) for anyone used to a 27-inch iMac’s performance level. The M2 Ultra can run circles around the Intel Mac Pro and should perfectly match the Apple Silicon Mac Pro, as it uses the same chip.

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