

# Apple to move Mac to Arm CPUs: What you need to know

Apple's move to Arm processors has been telegraphed for months, but developers are going to have to get ready.



By [Larry Dignan](#) for [Between the Lines](#) | June 9, 2020 -- 13:02 GMT (06:02 PDT) | Topic: [Hardware](#) - ZDNet



Apple will reportedly announce plans to move the Mac to its own processors based on Arm in a move that is expected, but likely to be somewhat disruptive to Intel, software developers and customers.

Bloomberg reported that Apple will outline its Mac processor plans at WWDC later this month. Apple accounts for about 10% of the PC market and the Mac-to-Arm move is a major customer loss for Intel, but not fatal. It's also worth noting that Apple's Arm move has been rumored for a decade with the drumbeat picking up in recent months.

- [Why now? What would drive the Mac's move to Apple's ARM family](#)
- [Apple dumping Intel would be a good thing for Macs, but it's a mammoth task](#)
- [MacBook move: Apple hires key Arm chip designer, pointing to shift from Intel](#)
- [Apple MacBook Pro \(13-inch, 2020\) review: New processors and new keyboard enhance Apple's lightweight business laptop](#)

WWDC will serve as a heads up to software developers that the Mac will be getting a new chip. Apple has been connecting Mac, iPhone and iPad in various ways, but running on the same silicon will enable the company to make those ties tighter. Apple ran on its own processors in the 1990s and then rolled out Intel-based Macs in 2006. Here's what you need to know.

- Apple will shift the Mac to its own processors under the code name Kalamata. Bloomberg reported that the week of June 22 will mark the shift.
- Developers will have time to adjust and prep applications. New Macs based on Apple's own silicon could show up in 2021 and developers will have a

window to prep their software. Companies such as Adobe (Photoshop, Creative Cloud, Illustrator) and Microsoft (Office) will have to retool their applications for the new processors.

- The shift may already be halfway complete for developers. The developers that have to migrate their applications to Mac's new chips may not have a heavy lift given it's highly likely that they make software for iOS already. [I wish I'd made this simple macOS tweak years ago](#)
- Browser-based applications make the transition easier. Macs have proliferated in the enterprise as the iPhone and iPad have created a halo effect. Shifting to the Arm architecture on the Mac won't matter for enterprises using cloud and browser-based apps but may be an issue for others.
- Arm has Intel surrounded. Apple isn't the only company swapping to Arm. Laptop makers such as Microsoft, Lenovo and Samsung are creating designs for Arm processors too as smartphones, tablets and computers harmonize. [Qualcomm expects to make inroads to the PC market](#). In addition, [Amazon's recent move to launch its own processors for AWS highlight Arm momentum](#).
- Apple will control its own destiny features and designs by breaking free of Intel. When you compare the Mac to Apple's other devices it becomes clear that Intel stuck out. Apple typically has a vertically integrated

model and the Mac was one of the last product lines without silicon controlled by the company.

- TSMC is the big winner. Apple depends on TSMC to make its Arm processors for iPhone and iPad and will likely win the Mac business too.
- There are some risks to ponder. For instance, Patrick Moorhead, principle of Moor Insights & Strategy, said:

Apple has been gearing this up for over 5 years and with the deceleration of Intel's client roadmap the past few years, Apple saw the opportunity and appears to be taking it. It's a risky and expensive move for Apple and right now I'm scratching my head on why Apple would do this.

There's no clear benefit for developers or for users and it appears Apple is trying to boost profits. All things equal, Apple's new CPUs would need to outperform Intel's to translate the X86 (Intel/AMD) world to ARM. To get a strategic benefit, Apple needs developers to rewrite applications to take advantage of its GPUs and NPUs which is a heavy lift.