

TSMC introduces 2nm chips to Apple, expected to be equipped on iPhone 17 Pro models

Microprocessor manufacturing technology for smartphones and tablets has made miraculous progress in the past few years, providing chips that are not only compact but also powerful and energy efficient.

Although 3nm processor technology has just been launched and is not yet popular, TSMC has begun to introduce its 2nm chip line with countless outstanding improvements, expected to be the first to be equipped. on Apple products.

At the September event, Apple announced two new iPhone 15 Pro models running the A17 Pro chip. While the standard iPhone 15 models equipped with the A16 Bionic chip are still very powerful, the A17 Pro based on TSMC's more advanced 3nm process has significant improvements in performance and power savings. power. Although it's still early, according to a report, TSMC has already introduced its new 2nm chip to Apple, which will be mass produced in 2025.



TSMC's trial production of 2nm microprocessors can be considered an important milestone for the entire semiconductor chip manufacturing industry. The 2nm fabrication process, also known simply as "N2", is expected to provide a 10 to 15% speed improvement at the same power level or a 25 to 30% reduction in power consumption at the same clock frequency. compared to chips manufactured using TSMC's 3nm technology. The 2025 timeframe is the first official schedule for the company's 2nm chip production, and will likely be the earliest for Apple's silicon chips.

A new report from the Financial Times published this week also revealed some of Apple's plans for its custom chip line. It is mentioned that TSMC's 2nm chip will first be available on iPhone 17 Pro models in 2025.

Apple is TSMC's biggest customer because of its custom silicon chip product lines for iPhones and Macs. The iPhone maker has acquired TSMC's entire 3nm chip supply in 2023, allowing the company to adopt the technology before any competitors. According to the plan, TSMC will begin mass production of 2nm chips in 2025, and it is not excluded that Apple will also "fully cover" new chip supply in the same way.

TSMC itself has also confirmed to the Financial Times that it is researching manufacturing a 2nm process, which will be mass produced in 2025. The company also said that this process is progressing and the deadline will be met. suitable for large quantity production. Additionally, it will be "the most advanced semiconductor technology in the industry" in terms of transistor density and power consumption.

As mentioned, TSMC's 2nm chip mass production launch timeframe will most likely coincide with Apple's launch of the iPhone 17 Pro. Apple will also use similar technology to develop the M chip line for Macs. Note that these are just speculations, and whether the new chip can launch on schedule depends on the production challenges TSMC faces.

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