

TSMC prepares to build first 1.4nm chip factory, investment capital could be up to 49 billion USD

TSMC accelerates construction of 1.4nm chip factory in Taiwan with investment capital of up to 49 billion USD. Expected to be tested in 2027 and commercialized from 2028, A14 technology promises to increase performance by 15% and save 30% power.

TSMC's plan to mass produce 2nm chips is expected to start in the fourth quarter of 2025. However, while this technology still needs a few years to perfect, the 'semiconductor giant' has accelerated dramatically with plans to build a factory specializing in 1.4nm wafers. This new technology, also known as A14 or Angstrom, will be deployed earlier than expected in October, with an initial investment of up to NT\$1.5 trillion (about US\$49 billion), to consolidate its leading position in the global semiconductor race.

According to **Economic News Daily** , suppliers have been notified by TSMC to be ready to accelerate the supply of equipment for 1.4nm chip production. The 'Fab 25' plant will be located in **the Central Taiwan Science Park, near Taichung City** , and will consist of four production facilities. The first of these will begin testing in late 2027.



If on schedule, TSMC could mass produce 1.4nm chips from the second half of 2028. The new technology promises **a 15% increase in performance and 30% savings in power** . The remaining three facilities will also focus on 1.4nm wafer production. The report said TSMC is also aiming for the more advanced 1nm process, but there is no specific testing schedule yet.

Of course, this technology is not cheap. If the price of 2nm process wafer has shocked the technology world at **30,000 USD/piece** , then 1.4nm wafer (A14) is expected to cost up to **45,000 USD/piece** . Users and partners will have to wait a few more years to see this technology commercialized, but it is clear that TSMC is determined to lead the future era of super small chips.

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