TSMC to launch chipmaking plant in Japan, but US plant to face delays

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Taiwan Semiconductor Manufacturing Company controls more than half the world's output of silicon wafers.

Taiwan's TSMC will open its latest chipmaking foundry on Japan's Kyushu island on February 24, but a plant in the United States will face further delays, the company said Thursday.

Taiwan Semiconductor Manufacturing Company—which counts Apple and Nvidia as clients—controls more than half the world's output of silicon wafers, used in everything from smartphones to cars and missiles.

In recent years, the company has had to navigate geopolitical tussles between the United States and China as the two face off over technology import restrictions, trade and Taiwan—the primary manufacturing base for TSMC.

On Thursday, during an investors' call over fourth-quarter earnings, Chairman Mark Liu announced the official date of the long-awaited Japan foundry's opening ceremony would be February 24.

"In Japan, we are building a special technology fab(rication plant) in Kumamoto which will utilize 12- and 16-nanometer and 28- and 22-nanometer process technology," Liu said.

"We will hold an opening ceremony for this fab on February 24 next month and volume production is on track for fourth quarter of 2024."

He added that TSMC's expansion overseas was "based on our customers' needs and a necessary level of government subsidies for support".

"In today's fractured globalization environment, our strategy is to expand our global manufacturing footprint to increase our customers' trust, expand our future growth potential, and reach for more global talents," Liu said.

Japan's government said last year it plans to spend $13 billion to boost domestic production of strategically important semiconductors and generative AI technology.

Part of that spending would be to support the construction of a second TSMC plant in Kumamoto, a Japanese trade ministry official said in November.

But Liu said Thursday that the second plant was still in the "serious evaluation stage".

"We are still discussing with the Japanese government, they are very cooperative," he said. "Nothing is definitive."

Delays in US

Liu also said its fabrication facility in the US state of Arizona was "on track for volume production of N4—or 4-nanometer—technology in the first half of 2025".

But the completion of its second Arizona foundry will be delayed until "2027 or 2028", he said.

The delay is a setback for the administration of US President Joe Biden, who had wooed TSMC to build its chipmaking factories on American soil in a bid to, in theory, lessen US reliance on factories located abroad.

But the Arizona plants—one of the largest foreign investments in the United States—have run into issues, which TSMC attributed to a shortage of skilled workers.

It had also incited the ire of Arizona's unions with those comments.

Liu said TSMC was working closely to "develop strong relationships with our local union and trade partners in Arizona", signing an agreement on training, hiring local workers, and establishing regular communications.

A planned fabrication facility in Germany—the first in Europe—"is scheduled to begin (construction) in Q4 this year", he said.

The company also reported a 19.3 percent drop in net profits for the October-December period to Tw$238.7 billion ($7.6 billion), while its revenues were "essentially flat".

CEO C.C. Wei said that while 2023 was a "challenging year" for the global semiconductor industry, the rising demand for generative AI technology also means "we expect 2024 to be a healthy growth year for TSMC".

The chip industry has been performing sluggishly, which companies attribute to high inflation and slowing global economic growth caused in part by geopolitical tensions.

TSMC had sought to quell investor fears in the past by pointing to the increasing demand for AI-related products, like ChatGPT, which needs high-performing silicon wafers to function.