



INTERNATIONAL NEWS

Samsung elbows its way into chip foundry business

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Samsung Electronics Co. Ltd. plans to double the capacity at its chip foundry subsidiary by the end of this year and become a potent new rival in the made-to-order chip business, a senior Samsung executive said Tuesday.

The subsidiary, Samsung Semiconductor Inc., is targeting customers requiring the most advanced production methods available, aided by a technology alliance with IBM Corp. and Chartered Semiconductor Manufacturing Ltd. that will take it to a cutting edge, 45-nanometer manufacturing process.

"Our focus is on 90-nanometer and below, including 65-nanometer. Now we have [130-nanometer] and below in production," said Ana Hunter, Samsung's new vice president of technology at the U.S. subsidiary.

Working at IBM's facility in Fishkill, New York, joint development teams have already completed work on 65-nanometer manufacturing technology and are moving it into Samsung's chip factory in South Korea. Around 30 Samsung engineers remain in Fishkill, hard at work on 45-nanometer technology. A nanometer is a measurement of the size of transistors and other parts that are etched onto chips.

Samsung has also invested in a state-of-the-art chip factory for the foundry venture. Output is at around 15,000 silicon wafers per month now, Hunter said, but capacity will double to 30,000 by year's end. Ultimately, output will reach 70,000 wafers per month. Hundreds or thousands of chips can be made on one wafer, depending on the chips' size.

Heavy investment is required for such plants, which cost around US\$3 billion, but Hunter declined to give a figure.

"Samsung is one of the few companies able to invest at the leading edge for volume production," she said.

The deal to join the technology alliance with IBM and Chartered also provides a boost, in part because doing R&D jointly is less expensive than going it alone. Developing technology together also makes it easier for a customer to choose any of the three companies for its chip production. Chips are designed to be made on a specific production line, which is why once a customer chooses a foundry for a specific product, they rarely switch.

The new chip factory and R&D alliance make Samsung a potent new rival for foundry industry leaders Taiwan Semiconductor Manufacturing Co. Ltd. (TSMC) and United Microelectronics Corp.

"Samsung's track record speaks for itself. The memory giant has taken over a strong position in everything they've committed themselves to," said Joanne Itow, an analyst at Semico Research Corp. in a report Monday.

The Taiwanese foundry leaders have fended off competition before, but in recent years several Japanese companies have moved into their territory, and new entrants are targeting the most advanced chip production. TSMC is watching the new competitors carefully: "We respect them, but we do not fear them," TSMC Chairman Morris Chang has said.

For Samsung Semiconductor, this year is about moving forward. So far, it has gained orders from its parent company and from mobile phone chip developer Qualcomm Inc. But the company faces challenges.

Hunter said there has been some hesitancy among potential customers to work with Samsung because of its roots as a chip developer and producer. Companies that create and make their own chips have a history of renting out excess production lines to smaller companies when times are lean, but taking them back when demand spikes. It's an arrangement that doesn't work well for small customers because they miss out on hot demand. The foundry industry was developed by TSMC to solve this problem.

"We have to prove ourselves to the market. ... It has not been a major business area for us in the past," said Hunter, who worked at Chartered Semiconductor for 15 years before taking her new role at Samsung.