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Business

U.S. Chip Equipment Suppliers Suspend Business Activities at Yangtze Memory

According to people familiar with the matter, U.S. chip equipment suppliers are evacuating employees from Yangtze Memory, a leading Chinese memory chip maker, and suspending business activities there.

Yoko Kubota / Raffaele Huang
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U.S. export control measures restrict companies from exporting chips and chipmaking equipment to China.
Image source: FLORENCE LO / REUTERS

According to people familiar with the matter, U.S. chip equipment suppliers are evacuating employees from a leading Chinese memory chip maker and suspending business activities there. These suppliers are currently stepping up their assessment of the impact of the U.S. Department of Commerce's new semiconductor export restrictions.

These people said that China's state-owned enterprise Yangtze Memory Technologies Co. Ltd. is facing a suspension of support from key suppliers such as KLA Corp. (KLAC) and Lam Research Co. (LRCX). The suspension comes after the United States imposing sweeping restrictions on China's chip industry last week. The restriction measures are aimed at preventing U.S. technology from being used to advance China's military power, but they could have more far-reaching implications for China's chip industry.

The aforementioned people familiar with the matter said that these U.S. suppliers have suspended support for Yangtze Memory's installed equipment and suspended the installation and debugging of new equipment in recent days. These people said that these suppliers have also temporarily evacuated their employees from Yangtze Memory plants.

On Wednesday, Applied Materials Inc. (AMAT), a supplier of chipmaking equipment, lowered its sales forecast for the current fiscal quarter by about USD 400 million, citing restrictions. This company is one of the world's largest chip equipment producers and has a wide range of customers including major Chinese chipmakers. More than 27%, or nearly USD 1.8 billion, of its second-quarter sales came from China. A large portion of these sales go to multinational companies operating in China, which are expected to be exempt from controls targeting Chinese chipmakers.

Applied Materials Inc. said it was working on export licenses and authorizations but added that it expected a similar sales impact in the first quarter of next year.

American chip equipment manufacturers have at least dozens of employees stationed at Yangtze Memory's plants. The people familiar with the matter said that they play a key role in running the plants and developing manufacturing capabilities by bringing expertise in high-tech chip production tools. If the suspension is extended, customers such as Yangtze Memory will be unable to access future technologies that are needed to upgrade, maintain expertise and develop chips.

Yangtze Memory, KLA and Lam Research did not respond to requests for comment.

While these moves may be temporary, they directly reflect the business disruptions faced by Chinese chipmakers and U.S. technology suppliers as the U.S. escalates efforts to curb China's emerging semiconductor industry. The restrictions imposed by the United States on China's semiconductor industry in recent days, including export control measures restricting the supply of chips and chip production equipment to China, are the most extensive repressive actions taken by the United States to date. In contrast, previous actions taken by the United States have tended to target individual companies and narrow technology categories.

The new restrictions announced by the U.S. Department of Commerce last Friday require new licenses to supply advanced semiconductors and chipmaking equipment to Chinese factories. If the plant in question is owned by a U.S. or ally company, then license applications will be decided on a case-by-case basis, while if the plant in question is owned by a Chinese company, then license applications will face a presumption of denial.

Some companies from U.S. allies are expected to receive exemptions that will allow them to keep their plants in China running, with South Korea's SK Hynix Inc. (000660.SE) as the first one to disclose on Wednesday that it had received such an exemption.

The people familiar with the matter said that U.S. equipment makers are evaluating what steps they need to take to comply with the new restrictions on working with Chinese customers, and the medium- and long-term impact remains uncertain.

According to an analysis by Boston Consulting Group, U.S. companies dominate the global chip production equipment supply chain, with a total share of 41%, while China's share does not exceed 5%.

The U.S. Department of Commerce's measures are far-reaching because they restrict the ability of "Americans" to support the development or production of some of the most cutting-edge chips in China.

Kevin Wolf, a former official of Department of Commerce and partner at Akin Gump Strauss Hauer & Feld LLP, said "Americans" would include people with U.S. passports and green cards, as well as U.S. companies.

KLA is known for its inspection and testing equipment, while Lam Research is known for its etching machines. Applied Materials Inc. (AMAT), another major U.S. supplier to China's chip industry, makes tools including those that deposit layers of material on the surface of wafers, a key step in producing chips. China is the largest market for these three U.S. chip equipment suppliers, contributing about 30% of these companies' revenue.

The shares of Applied Materials Inc., KLA and Lam Research have all fallen more than 20% in the past month.

In addition to imposing broad new restrictions on China's chip industry, the United States last week added Yangtze Memory to its so-called unverified list of companies of concern to the U.S. Department of Commerce. If the U.S. Department of Commerce's concerns are not alleviated, the companies on this list may be included in another more restrictive blacklist for exports to China.

Yangtze Memory, based in China's Hubei province, is a manufacturer of flash memory chips for storage and the largest memory chip manufacturer in China. This company accounts for about 6% of global memory chip production, according to the data of market tracker TrendForce.

Yangtze Memory last year began delivering an advanced-process memory chip with 128 layers, putting the company within the target range of the new U.S. restriction measures. The more layers a chip has, the more data it can store.

Yangtze Memory is controlled by the Hubei Provincial Government and the China National Integrated Circuit Industry Investment Fund. This company was previously a business unit of Chinese chipmaker Tsinghua Unigroup, which had been heavily indebted in recent years and completed a year-long asset restructuring in July of this year.

(Update completed)

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