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New Semiconductor Chip Restrictions

Legal Update

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The United States Department of Commerce has recently issued new regulations that are already having a global impact on companies involved with advanced semiconductor chips. The new regulations seek to limit China's access to these chips by restricting the ability of international companies and U.S. nationals to provide goods and services related to the design, fabrication and access to advanced semiconductor chips as well as computers and assemblies containing such chips.

China has been a large and fast-growing market for such goods and services. In addition, many companies and individuals providing such goods and services have operations in China that serve customers around the world. The new requirements are quite complex and detailed, but it is very important for companies in this industry to quickly consider whether and to what extent the new requirements apply to their business.

Overview and Summary of the New Requirements

The new requirements were issued by the US Department of Commerce's Bureau of Industry and Security (BIS) and contain the following provisions:

1. Requires a license for the sale to China of certain advanced and high-performing chips, typically designed for artificial intelligence (AI) and supercomputing, computers, assemblies and components containing those chips.
2. Requires a license for the sale of manufacturing equipment and other items used in supercomputers or for semiconductor development or production in China.
3. Expands the scope of foreign-produced items that are restricted for sale to Chinese companies on the BIS Entity List.
4. Explicitly forbids U.S. companies and citizens from working with Chinese entities on advanced semiconductor research, design or fabrication.
5. Establishes a Temporary General License to permit certain limited manufacturing activities in China related to restricted items that are destined for use outside China and a related model compliance certificate.

6. All companies engaged in the sale of advanced chips and computers, assemblies and components that contain such chips as well as manufacturing equipment and services related to semiconductor research, design or fabrication should carefully consider the new requirements.

Background

The Department of Commerce's Bureau of Industry and Security announced on October 7, 2022, that it is implementing updates that, in the words of an agency spokesman, are intended to "restrict the People's Republic of China's (PRC's) ability to both purchase and manufacture certain high-end chips used in military applications." According to Assistant Secretary of Commerce for Export Administration Thea D. Rozman Kendler, "The PRC has poured resources into developing supercomputing capabilities and seeks to become a world leader in artificial intelligence by 2030. It is using these capabilities to monitor, track and surveil their own citizens, and fuel its military modernization. Our actions will protect U.S. national security and foreign policy interests while also sending a clear message that U.S. technological leadership is about values as well as innovation."

Specific Actions Taken

The new rules take the following actions:

1. Adds certain advanced and high-performance computing chips and computer commodities that contain such chips to the Commerce Control List, which is a list of restricted products.
2. Adds new license requirements for items destined for a supercomputer or semiconductor development or production end use in China.
3. Expands the scope of the Export Administration Regulations over certain foreign-produced advanced computing items and foreign-produced items for supercomputer end uses.
4. Expands the scope of foreign-produced items subject to license requirement to 28 existing entities on the BIS restricted Entity List that are located in China.
5. Adds certain semiconductor manufacturing equipment and related items to the Commerce Control List.
6. Adds new license requirements for items destined for a semiconductor fabrication facility in China that fabricates specified integrated circuits:
 - a. Logic chips with non-planar transistor architecture (e.g., FinFET or GAAFET) of 16nm or 14nm or below.
 - b. DRAM memory chips of 18nm half-pitch or less.
 - c. NAND flash memory chips with 128 layers or more.
7. Restricts the ability of U.S. persons to support the development or production of integrated circuits at certain China-located semiconductor fabrication facilities.
8. Adds new license requirements to export items to develop or produce semiconductor manufacturing equipment and related items.

9. Establishes a Temporary General License intended to minimize the short-term impact on the semiconductor supply chain in China that supplies non-Chinese customers by allowing specific limited manufacturing activities related to items that are destined for use outside China.

Conclusions and Recommendations

The new requirements impose restrictions on virtually all companies and individuals involved in the design, manufacture, sale and distribution of certain high-end semiconductor chips in China. The new requirements contain a highly detailed and complicated set of interrelated restrictions, but also leave many questions to be resolved during the course of implementation with few clearly safe harbors.

Companies and individuals potentially subject to the new requirements will need to carefully analyze whether the new requirements apply to their operations and, if so, the measures that should be taken to ensure full compliance.