

Sector	Prohibited Transactions	Notifiable Transactions
Semiconductors	<p>(1) Develops or produces any electronic design automation software for the design of integrated circuits or advanced packaging;</p> <p>(2) Develops or produces any:</p> <ul style="list-style-type: none"> a. Front-end semiconductor fabrication equipment designed for performing the volume fabrication of integrated circuits; b. Equipment for performing volume advanced packaging; or c. Commodity, material, software or technology designed exclusively for use in or with extreme ultraviolet lithography fabrication equipment. <p>(3) Designs any integrated circuit that meets or exceeds the performance parameters in Export Control Classification Number 3A090.a, or integrated circuits designed for operation at or below 4.5 Kelvin;</p> <p>(4) Fabricates any of the following:</p> <ul style="list-style-type: none"> a. Logic-integrated circuits using a non-planar transistor architecture or with a production technology node of 16/14 nanometers or less; b. NOT-AND (NAND) memory-integrated circuits with 128 layers or more; c. Dynamic random-access memory (DRAM) integrated circuits using a technology node of 18 nanometer half-pitch or less; d. Integrated circuits manufactured from a gallium-based compound semiconductor; e. Integrated circuits using graphene transistors or carbon nanotubes; or f. Integrated circuits designed for operation at or below 4.5 Kelvin; <p>(5) Packages any integrated circuit using advanced packaging techniques;</p>	Designing, fabricating or packaging any integrated circuit.
Supercomputers	Develops, installs, sells or produces any supercomputer enabled by advanced integrated circuits that can provide a theoretical compute	None

	capacity of 100 or more double-precision (64-bit) petaflops or 200 or more single-precision (32-bit) petaflops of processing power within a 41,600 cubic foot or smaller envelope;	
Quantum	<p>Develops a quantum computer, or produces any of the critical components required to produce a quantum computer such as a dilution refrigerator or two-stage pulse tube cryocooler;</p> <p>Develops or produces any quantum sensing platform designed for, or which the relevant covered foreign person intends to be used for, any military, government intelligence or mass-surveillance end use;</p> <p>Develops or produces quantum network or quantum communication system for networking to scale up capabilities; secure communications; military, government intelligence or mass-surveillance end use.</p>	None
Artificial Intelligence (AI)	<p>Develops any AI system that is designed to be <i>exclusively used for</i>, or which the relevant covered foreign person intends to be used for, any:</p> <ul style="list-style-type: none"> (1) Military end use, or (2) Government intelligence or mass-surveillance end use; <p>Develops any AI system that is trained using a quantity of computing power greater than:</p> <ul style="list-style-type: none"> (1) 10^{25} computational operations (e.g., integer or floating-point operations), or (2) 10^{24} computational operations (e.g., integer or floating-point operations) using primarily biological sequence data. 	<p>Develops any AI system not otherwise covered by the prohibited transaction definition, where such AI system is:</p> <ul style="list-style-type: none"> (1) Designed to be used for any military end use or government intelligence or mass-surveillance end use; (2) Intended to be used for any of the following: <ul style="list-style-type: none"> a. cybersecurity applications, b. digital forensics tools, c. penetration testing tools, or d. the control of robotic systems; or (3) Trained using a quantity of computing power greater than 10^{23} computational operations (e.g., integer or floating-point operations).