Next Page

OMB Control Number: 0694-0119
Expiration Date: September 30, 2025

DEFENSE INDUSTRIAL BASE ASSESSMENT OF THE U.S. MICROELECTRONICS INDUSTRY: SEMICONDUCTOR MANUFACTURING EQUIPMENT, MATERIALS, AND INPUTS

SCOPE OF ASSESSMENT

The U.S. Department of Commerce (DOC), Bureau of Industry and Security (BIS) is conducting a survey and assessment of the U.S. Microelectronics Industry, specific to semiconductor manufacturing equipment, materials, and inputs in continuation of efforts pursuant to Section 9904 of the National Defense Authorization Act (NDAA) of Fiscal Year 2021 (15 USC § 4654).

This survey is not part of the application for funding under Section 9902 of the 2021 NDAA (15 USC § 4652).
Individual survey responses will not affect your organization's eligibility and/or consideration for CHIPS Act or other government funding.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law under the authority and provisions of the Defense Production Act of 1950 (DPA) (50 U.S.C. § 4555), as amended, and Executive Order 13603. Failure to respond can result in a maximum fine of $10,000, imprisonment of up to one year, or both. Information furnished herein is deemed confidential and will not be published or disclosed except in accordance with Section 705(d) of the DPA. Section 705(d), Executive Order 13603, and DOC's implementing regulations (15 C.F.R. § 702.3) prohibit the publication or disclosure of this information unless the President, Secretary of Commerce, or Under Secretary for Industry and Security determines that its withholding is contrary to the national defense. Unless such a determination has been made, information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 20 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694-0119), Washington, D.C. 20503.

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

Previous Page Next Page

Table of Contents

Previous Page Next Page

	General Instructions
A.	Your organization is required to complete this survey on the U.S. Microelectronics industrial base. You must complete the survey using the DOC/BIS template which is Microsoft Excel-based and can be downloaded at https://www.bis.doc.gov/SemiconductorSurvey. If you are not able to download the survey document, at your request BIS staff will email the Excel survey template directly to you.
B.	Respond to every question. Surveys that are not fully completed will be returned for completion. Use the comment boxes to provide any information to supplement responses provided in the survey form. Make sure to record a complete answer in the space provided, even if the space does not appear to expand to fit all of the information.
C.	This survey is not part of the application for funding under Section 9902 of the 2021 NDAA (15 USC § 4652). Individual survey responses will not affect your organization's eligibility and/or consideration for CHIPS Act or other government funding. Any forecasts requested in this survey are understood to be speculative and for aggregate, statistical purposes.
D.	Your organization has the option to provide a single Corporate level response or separate Business Unit/Division level responses for each of its semiconductor-related businesses. Note, if your organization is completing Business Unit/Division level surveys, any reference to "your organization" should be inferred as business unit or division. The reporting level must remain consistent throughout the survey, unless instructed otherwise.
E.	**DO NOT disclose any U.S. Government (USG) classified information in this survey form.**
F.	Submit your completed survey in a Microsoft Excel file via [email address to come] Note that the survey submission email is different from the general correspondence email. This is to provide survey responses with a higher level of protections than general email.
G.	Questions related to the survey content should be directed to BIS survey support staff at SemiconductorStudy@bis.doc.gov.
H.	For questions related to the overall scope of the industrial base survey and assessment, contact: Katherine Reid Acting Director, Defense Industrial Base Division BIS/Export Administration/Office of Strategic Industries & Economic Security 1401 Constitution Avenue, NW, Room 3876 Washington, DC 20230 DO NOT submit completed surveys to Ms. Reid's postal or personal email address. All surveys must be submitted electronically.

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

Previous Page Next Page

Section 1: Organization Information

Indicate the reporting level for this survey before proceeding:
(a) Corporate/Organizational Level Response or (b) Business Unit/Division Level Response *(select from drop-down)*
To ensure consistency of data, the entire survey be completed at the same reporting level

- CORPORATE/ORGANIZATIONAL LEVEL RESPONSE
- BUSINESS UNIT/DIVISION LEVEL RESPONSE

Identify the portion of the value chain your organization supports at the reporting level indicated above:
Semiconductor Manufacturing Equipment (SME); Materials, Gases, and Chemicals (MGCs); or both SME and MGCs *(select from drop-down)*

- SEMICONDUCTOR MANUFACTURING EQUIPMENT (SME)
- MATERIALS, GASES, OR CHEMICALS (MGCS)
- BOTH SME AND MGCS

A.

Corporate Information		Business Unit/Division Information	
Organization Name		Business Unit/Division Name	
Street Address		Street Address	
City		City	
State/Province		State/Province	
ZIP or Postal Code		ZIP or Postal Code	
Country of Global Headquarters		Country	

Contact Information

B. Provide your organization's primary point of contact for completion of this survey.

Point of Contact Name	Official Title	Phone Number	Email Address	State/Province

Ownership Structure

1. Is your organization publicly traded or privately held?

- PUBLICLY TRADED
- PRIVATELY HELD

1.a. If your organization is publicly traded, provide its stock ticker symbol:

2. Is your organization owned, in whole or in part, by another entity?

- YES
- NO

2.a. If your organization is wholly owned, or ultimately beneficially owned, who is your parent company?

Parent Company Name	Street Address	City	State/Province	Zip or Postal Code	Country

2.b. Provide all entities that, directly or indirectly, own or have beneficial ownership of five percent or more of your organization in descending order in the table below.

C.

Entity Name	Percent Held	Voting Percent	Board Seat *(Yes/No)*	Street Address	City	State/Province	Zip or Postal Code	Country

- YES
- NO

Government and Industry Codes

1. Provide the Ultimate Parent Unique Entity Identifier (UEI) assigned to your organization by SAM.gov, if applicable:

2. Provide any other primary UEIs, DUNS, and/or NAICS code(s) associated with your organization, as applicable.

D.

Unique Entity Identifier(s) (UEI)		Data Universal Numbering System (DUNS):		NAICS (6-digit) Code(s):	
Find UEIs at: https://sam.gov/		Find DUNS numbers at: https://www.dnb.com/		Find NAICs codes at: https://www.census.gov/naics/	

Comments	

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

Previous Page Next Page

Facility Information

Section 2a: Location and Operations

Identify each of your organization's owned, leased, rented, or operated facilities related to your semiconductor equipment or input business, in operation since 2019, including facilities that are idle/standby, have since closed, or are planned/expected (e.g., facilities that are or will be under construction or development).

Include relevant manufacturing, design and/or R&D, and distribution facilities. For any closed facilities, report only those closed within the last five years. Do not include facilities that are solely engaged in sales and/or marketing activities.

Provide **(1)** the name of the facility (or other facility identification), **(2)** the city, **(3)** state or province, and **(4)** country where the facility is located, **(5)** the current status of operations for the facility, **(6)** the year that the facility initiated operations even if currently closed [if "Planned/Expected" in the future, provide the anticipated year operations will begin], **(7)** the primary semiconductor-related business operations performed at the facility, **(8)** any additional semiconductor-related business operations performed at the facility separated by semi-colon [e.g., Additional Operation 1; Additional Operation 2], **(9)** the estimated total number of full-time equivalent employees [include direct hire, contractor, and part-time] working regularly at the facility during normal operations, and **(10)** the Commercial And Government Entity (CAGE) Program Code assigned to the facility by the Defense Logistics Agency, if applicable.

CAGE Codes can be found at: https://cage.dla.mil/

		Facility Location			Facility Operations					Facility CAGE Code
	(1) Facility Name	(2) City	(3) State/Province	(4) Country	(5) Operating Status	(6) Initial Year of Operations (yyyy)	(7) Primary Operation	(8) Additional Operations	(9) Number of Employees	(10) Facility CAGE Code (if applicable)
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- OPERATING
- IDLE/STANDBY
- CEASED OPERATIONS/CLOSED
- PLANNED/EXPECTED

- CHEMICAL FEEDSTOCK/PRECURSORS
- COMPONENTS/PARTS
- DESIGN
- DISTRIBUTION
- FINISHED SME
- GASES
- PROCESSED/FINISHED MATERIALS
- R&D
- SOFTWARE
- WET CHEMICALS
- OTHER (WRITE-IN)

Comments	

Previous Page

Next Page

Facility Information

Section 2b: Future Outlook

For each of your organization's facilities identified in Section 2a, **(1)** estimate the percentage (%) share of total operations at the facility which are related or attributable to support for the semiconductor industry or your semiconductor business operations. For each facility indicate **(2)** any planned closure, **(3)** planned physical expansion, or **(4)** planned modernization (e.g., upgrade or retooling) within the next 10 years; and estimate **(5)** the anticipated percent (%) increase or decrease in production capacity in the next five years. Provide **(6)** a brief explanation of your organization's planned closures, expansions, modernizations, and/or anticipated increase/decrease in production capacity for each facility, as applicable.

A.

	Facility Name *(auto-populated from Section 2a)*	Semiconductor Operations	Planned Activity				
		(1) Estimate (%)	(2) Planned Closure	(3) Planned Physical Expansion	(4) Planned Modernization	(5) Anticipated Production Capacity (%)	(6) Explanation
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- YES, IN 1 TO 2 YEARS
- YES, IN 3 TO 4 YEARS
- YES, IN 5 TO 10 YEARS
- NO

Comments	

Previous Page Next Page

Sections 3a-3e: Semiconductor Manufacturing and ATP Equipment (SME)

Your response in Section 1 indicates your organization produces semiconductor manufacturing equipment or components. Complete the following Sections 3a-3e.

PROCEED TO SECTION 3a

Previous Page Next Page

Semiconductor Manufacturing and ATP Equipment (SME)

Section 3a: Semiconductor Industry Support

Common semiconductor manufacturing process steps are listed below divided between Front End Of the Line (FEOL) manufacturing and Back End Of the Line (BEOL) Assembly, Test, and Packaging (ATP) of the manufactured chip.
For each process step listed in Parts A (FEOL) and B (BEOL), indicate **(1)** your organization's level of participation in producing equipment used for the process step, **(2)** whether your organization serves as a distributor of equipment made by other companies, **(3)** whether your organization is currently performing research & development. Then, **(4)** provide a description of your organization's products/services or other activities for the process step, and **(5)** estimate the share of your organization's total [both semiconductor and non-semiconductor related] business operations the process step accounts for.

			SME Supporting:	Level of Participation (1) Participation	(2) Distribution	(3) R&D	(4) Description	Business Operations (5) Percent (%) of Total
A.	FEOL	1	Blank Wafer Preparation					
		2	Material Removal and Cleaning					
		3	Etching (Dry, Wet)					
		4	Chemical Mechanical Planarization					
		5	Deposition					
		6	Epitaxy					
		7	Rapid Thermal Processing					
		8	Oxidation					
		9	Photoresist Processing					
		10	Lithography Equipment					
		11	Lithographic Materials Manufacturing Equipment (e.g., Masks)					
		12	Diffusion and Ion Implantation (e.g., Doping)					
		13	Process Control (e.g., Metrology and Inspection)					
		14	Manufacturing Automation (Front-End of the Line)					
		15	Diagnostic and Test Related Equipment					
		16	Other (specify here)					
B.	BEOL	1	Dicing					
		2	Wire Bonding					
		3	Hybrid Bonding					
		4	Wafer Bonding					
		5	Die Attachment					
		6	Packaging					
		7	Plating					
		8	ATP Process Control (e.g., Metrology and Inspection)					
		9	Diagnostic and Test Related Equipment					
		10	Printed Circuit Board Assembly/Attachment					
		11	Manufacturing Automation (Back End of the Line)					
		12	Other (specify here)					

- FINISHED EQUIPMENT
- COMPONENTS/SUB-SYSTEMS
- BOTH FINISHED EQUIPMENT AND COMPONENTS
- OTHER

- YES
- NO

- YES
- NO

Comments

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

Previous Page Next Page

Semiconductor Manufacturing and ATP Equipment (SME)

Section 3b: SME Products

List the top 25 product types your organization provides relevant to the semiconductor industry, by highest revenue for the 2023 fiscal year. Provide **(1)** the unique product type name as applicable [Do not list multiple variations of the same product type. Equipment with significant differences in capability and application should be listed as different product types.], **(1)(a)** a brief description of the product and its function, **(2)** the primary semiconductor manufacturing step the product supports [if the product supports more than one semiconductor manufacturing steps, include the ancillary steps supported in the "(1)(a) Description" column], **(3)** whether the equipment is used in the manufacture of Advanced Computing Chips (see definition), **(4)** the primary facility [select from section 2a dropdown] where the equipment is produced, **(5)(a)** the percent (%) of total revenue for fiscal year 2023 attributable to the sale of the finished product, **(5)(b)** the percent (%) of total revenue for fiscal year 2023 attributable to after sales servicing provided for the product, **(6)** the total number of units produced in fiscal year 2023, **(7)** the average lead time in fiscal year 2023 of production for the product in weeks, **(8)** the finished inventory level (in units) maintained on average in fiscal year 2023 for the product, **(9)(a)** whether your organization provides installation and or assembly of your product, and **(9)(b)** whether your organization uses direct employees, contractors it hires, or other parties to do so, and **(10)** whether any version of the product type falls under U.S. Export Control regulations [whether currently exported by your organization or not].

A.

	Product Information					Attributable Revenue		Production and Inventory			Install and/or Assembly		Export
	(1) General Product Type	(1)(a) Description	(2) Primary Step	(3) Advanced Computing	(4) Primary Facility	(5)(a) Product as % of Total Revenue	(5)(b) Servicing as % of Total Revenue	(6) Units Produced	(7) Lead Time (weeks)	(8) Finished Inventory Level	(9)(a) Install and/or Assembly	(9)(b) Performer of install and/or assembly?	(10) U.S. Export Controlled
1			*[LIST POPULATED FROM SECTION 3A]*	- YES - ONLY ADVANCED COMPUTING SEMICONDUCTORS - YES - AND OTHER CHIPS - NO - ONLY OTHER CHIPS - UNKNOWN	*[LIST POPULATED FROM SECTION 2A]*						- ALWAYS - USUALLY - SOMETIMES - RARELY - NEVER	- DIRECT EMPLOYEES - CONTRACTORS YOUR ORGANIZATION HIRES - OTHER PARTIES	- YES - NO
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Comments	

Previous Page Next Page

Semiconductor Manufacturing and ATP Equipment (SME)

Section 3c: Customers

For each of your organization's product types [listed in section 3b] provide as a percent (%) estimate of total sales for the past five fiscal years [2019-2023] sales attributable to **(1)(a)** customers located in the U.S., **(1)(b)** customers located in China (including Hong Kong and Macau), **(1)(c)** identify the primary other country of customer location, and **(1)(d)** customers located in that location.

Then for each of your organization's products provide the top three customers [including third-party distributors] of that product by total revenue for the past five fiscal years [2019-2023] and list each customer's **(2)** Name ["NOTE" the same customer may be listed more than once for different products], **(3)** the type of customer [e.g. semiconductor manufacturer, third-party distributor, or "other"], **(4)** the country of corporate headquarters for the customer (i.e., the country of billing), **(5)** the country of end use where the customer will use your product [if known], and **(6)** the percent (%) of total revenue attributable to the customer for the indicated product for the last five fiscal years [2019-2023] "NOTE" percentages will NOT necessarily total 100%.

A

	Your organization's product types *(auto-populated from Section 3b)*	Sales Shipment Location				Customer Information					
		(1)(a) U.S. %	(1)(b) China %	(1)(c) Other (Identify Country)	(1)(d) Other %	(2) Name	(3) Type	(4) Country of Headquarters	(5) Primary Country End Use	(6) % of Total Revenue
1						1 2 3	- MANUFACTURER - DISTRIBUTOR - OTHER			
2						1 2 3				
3						1 2 3				
4						1 2 3				
5						1 2 3				
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Comments	

Previous Page Next Page

Semiconductor Manufacturing and ATP Equipment (SME)

Section 3d: Suppliers

For each of your organization's product types [listed in section 3b] indicate **(1)(a)** the input type for the top three critical inputs, components, and/or subsystems sourced from an outside supplier, **(1)(b)** specify the sourced input name, and provide **(2)** a brief description of the sourced input as it relates to your organization's product, **(3)** your organization's level of concern in your ability to acquire the input in the next five years [2024-2029], and **(4)** your organization's average lead time in weeks for sourcing the input.

Then for each identified critical input for your organization's products provide the input supplier's, **(5)** Name ["NOTE" the same supplier may be listed more than once for different products], **(6)** the country of corporate headquarters for the supplier, **(7)** the country where the supplier manufactures the sourced input [if known], **(8)** the percent (%) of Total Cost of Goods Sold attributable to this supplier for the indicated product for the last five fiscal years [2019-2023] "NOTE" percentages will NOT necessarily total 100%, **(9)** the primary reason why your organization selected this particular supplier, and **(10)** your organization's assessment of the availability and location of alternative suppliers for the input related to each of your organization's products.

			Critical Inputs, Components, or Subsystems					Primary Supplier Information					
	Your organization's product types *(auto-populated from Section 3b)*		(1)(a) Sourced Input Type	(1)(b) Sourced Input Name	(2) Description	(3) Future Sourcing Concern (2024-2029)	(4) Average Lead Time (Weeks)	(5) Name	(6) Country of Headquarters	(7) Country of Manufacture	(8) % of Total Cost of Goods Sold	(9) Primary Reason for Selection	(10) Availability of Alternative
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- BULBS OR OTHER LIGHT SOURCES
- CRYOGENIC PUMPS AND LOW TEMPERATURE CHILLERS
- DC POWER SUPPLIES
- ELECTRON EMITTERS
- ELECTROSTATIC CHUCKS
- ENCODERS
- GAS DELIVERY SYSTEMS
- GASES OR CHEMICALS
- IMAGE SENSORS
- LASERS
- MATERIAL INPUTS
- OPTICS
- PROCESS GAS MASS FLOW CONTROLLERS
- PYROMETERS
- RF POWER GENERATORS
- SUSCEPTORS
- VACUUM PRESSURE TRANSDUCERS, CONTROLS, OR PUMPS
- VALVES
- OTHER

- NONE
- MINOR
- MODERATE
- GREAT
- EXTREME

- COST
- DELIVERY TIME
- EXISTING RELATIONSHIP
- EXPORT CONTROLS
- PROXIMITY
- QUALITY / TECHNICAL SPECIFICATION
- SOLE SOURCE
- OTHER (WRITE-IN)

- NONE - SOLE GLOBAL SOURCE
- YES - U.S. ALTERNATE AVAILABLE
- YES - ONLY NON-U.S. ALTERNATE AVAILABLE
- YES - BOTH U.S. AND NON-U.S. ALTERNATES AVAILABLE

Comments	

Previous Page Next Page

Semiconductor Manufacturing and ATP Equipment (SME)

Section 3e: Servicing

Complete the subsections **(A)** regarding servicing of your organization's equipment following initial installation and servicing contracts your organization offers, **(B)** estimating the percent (%) of servicing completed by direct employees of your company, contractors your organization oversees, or other parties to your service agreement for each product your organization reported receiving servicing related revenue in fiscal year 2023, and **(C)** regarding after sales and installation movement or resale of your organization's equipment by your customers.

A. Servicing Contracts

1. Does your organization typically provide a service contract for its equipment after installation?
- ALWAYS
- USUALLY
- SOMETIMES
- RARELY
- NEVER

1.a. Provide an explanation of the level of service typically provided.

1.b. What timeframe do your organization's service contracts usually cover?
- 1 YEAR AFTER INSTALLATION
- 2-4 YEARS AFTER INSTALLATION
- 5-10 YEARS AFTER INSTALLATION
- OTHER (WRITE-IN)

2. Does your organization receive remote diagnostics and other regular notification of your equipment's use, uptime, and service requirements?
- YES
- NO

2.a. If yes, provide an explanation of the remote diagnostic system and information provided to your organization.

2.b. At what intervals does your organization receive notification?
- DAILY
- WEEKLY
- MONTHLY
- OTHER (WRITE-IN)

2.c. How is your organization notified?
- AUTOMATED REPORTING SYSTEM
- CUSTOMER NOTIFIES
- OTHER (WRITE-IN)

2.d. Does your organization receive notification if an outside vendor services your equipment?
- YES
- NO

2.e. Does your organization perceive its remote diagnostic system to be a potential cyber security threat vector?
- YES
- NO

3. Does your organization's typical service contract include emergency visits?
- YES
- NO

4. Have export controls affected your organization's servicing processes for the equipment it manufactures?

4.a. If yes, provide an explanation.

5. Does your organization's servicing performed in China differ from servicing performed in the U.S. and/or other countries?
- YES
- NO
- NO SERVICING PERFORMED IN CHINA

5.a. If yes, provide an explanation.

B. Servicing Performance

For each of your organization's product types that you indicate your organization receives Servicing Revenue provide the estimated percentage (%) breakout for servicing revenue provided by direct employees of your organization, contractors supervised by your organization, and/or other parties to your service agreement.

	Your Organization's Product Types Receiving Servicing Revenue *(auto-populated from Section 3b)*	(1) Percent (%) Direct Employees	(2) Percent (%) Contractors	(3) Percent (%) Other Parties
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C. Redistribution & Resale

1. Does your organization have visibility into the redistribution of your equipment by the customer to a different facility after initial sale to a company?
- YES
- NO

1.a. If yes, provide an explanation.

2. Does your organization have visibility into the resale of your equipment after initial sale to a company?
- YES
- NO

2.a. If yes, provide an explanation.

Comments	

Previous Page Next Page

Sections 4a-4d: Semiconductor Manufacturing Materials, Gases, and Chemicals (MGCs)

Your response in Section 1 indicates your organization produces semiconductor manufacturing materials, gases, or chemicals (MGCs). Complete the following Sections 4a-4d.

PROCEED TO SECTION 4a

Previous Page Next Page

Semiconductor Manufacturing Materials, Gases, and Chemicals (MGCs)

Section 4a: Semiconductor Industry Support

Common semiconductor manufacturing Materials, Gases, and Chemicals (MGCs) are listed below divided between Front End of the Line (FEOL) manufacturing and Back End of the Line (BEOL) Assembly, Test, and Packaging (ATP) of the manufactured chip. For each material category listed in Parts A (FEOL) and B (BEOL), indicate **(1)** whether your organization manufactures within the listed MGC type, **(2)** whether you serve as a distributor for the listed MGC type made by other companies, **(3)** whether you are currently performing research & development for the listed MGC type. Then, **(4)** provide a description of your organization's products/services or other activities related to the listed MGC type, and **(5)** estimate the share of your organization's total [both semiconductor and non-semiconductor related] business operations the listed MGC type accounts for.

		MGC Types:	Level of Participation (1) Manufacture	(2) Distribution	(3) R&D	(4) Description	Business Operations (5) Percent (%) of Total
A.	FEOL	1 Wafers, Silicon	- YES - NO	- YES - NO	- YES - NO		
		2 Wafers, SOI					
		3 Wafers, Other (i.e., GaN, GaAs, etc.)					
		4 Photoresist Solutions					
		5 Photoresist Ancillaries					
		6 Photomasks and Reticles					
		7 Gases					
		8 CMP Slurries					
		9 CMP Pads					
		10 PVD (Sputtering) Targets					
		11 ALD/CLD Materials					
		12 Electroplating Metals					
		13 Spin-on Dielectrics					
		14 Wet Chemicals (not covered in other categories)					
		15 Other (specify here)					
B.	BEOL	1 Leadframes					
		2 Wire Bonding Materials					
		3 Die Attach Materials					
		4 Interposer					
		5 Packaging Substrates					
		6 Ceramics					
		7 Encapsulation Resins					
		8 Plating Materials					
		9 ATP Cleaning Materials					
		10 ATP Process Control (e.g., Metrology and Inspection)					
		11 Diagnostic and Test Related Materials					
		12 Printed Circuit Board Assembly/Attachment Materials					
		13 Other (specify here)					

Comments

Previous Page Next Page

Semiconductor Manufacturing Materials, Gases, and Chemicals (MGCs)

Section 4b: MGC Products

List the top 25 product types your organization provides supporting the semiconductor industry, by highest revenue for the 2023 fiscal year. Provide **(1)** the unique product type name as applicable [different sizes of the same Material, Gas, or Chemical (MGC) should be treated as a single entry (e.g., five gallons versus 50 gallons)], **(1)(a)** a brief description of the product and its function, **(2)** the primary type of MGC used in semiconductor manufacturing which the product supports [if the product supports more than one semiconductor manufacturing steps include the ancillary steps supported in the "(1)(a) Description" column], **(3)** whether the product is used in the manufacture of Advanced Computing Chips (see definition), **(4)** the primary facility [select from section 2a dropdown] where the product is produced, **(5)** the percent (%) of total revenue for fiscal year 2023 attributable to the sale of the finished product, **(6)(a)** the standard unit size at the point of sale for the product, **(6)(b)** the total number of units produced in fiscal year 2023, **(7)** the average lead time in fiscal year 2023 of production for the product in weeks, **(8)** the finished inventory level (in units) maintained on average in fiscal year 2023 for the product, and **(9)** whether any version of the product type falls under U.S. Export Control regulations [whether currently exported by your organization or not].

A.

	Product Information					Revenue	Inventory				Export
	(1) Product Type	(1)(a) Description	(2) Primary MGC Type	(3) Advanced Computing	(4) Primary Facility	(5) Percent (%) of Total Revenue	(6)(a) Standard Unit Size	(6)(b) Units Produced	(7) Lead Time (weeks)	(8) Finished Inventory Level	(9) U.S. Export Controlled
1			*[LIST POPULATED FROM SECTION 4A]*	- YES - ONLY ADVANCED COMPUTING SEMICONDUCTORS - YES - AND OTHER CHIPS - NO - ONLY OTHER CHIPS - UNKNOWN	*[LIST POPULATED FROM SECTION 2A]*						- YES - NO
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
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18											
19											
20											
21											
22											
23											
24											
25											

Comments	

Previous Page Next Page

Semiconductor Manufacturing Materials, Gases, and Chemicals (MGCs)

Section 4c: Customers

For each of your organization's product types [listed in section 3b] provide as a percent (%) estimate of total sales for the past five fiscal years [2019-2023] sales attributable to **(1)(a)** customers located in the U.S., **(1)(b)** customers located in China (including Hong Kong and Macau), **(1)(c)** identify the primary other country of customer location, and **(1)(d)** customers located in that location.

Then for each of your organization's products provide the top three customers within the semiconductor manufacturing industry [including third-party distributors] of that product by total revenue for the past five fiscal years [2019-2023] and list each customer's **(2)** Name "NOTE" the same customer may be listed more than once for different products, **(3)** the type of customer [e.g. semiconductor manufacturer, third-party distributor, or "other"], **(4)** the country of corporate headquarters for the customer (i.e., the country of billing), **(5)** the country of end use where the customer will use your product [in known], and **(6)** the percent (%) of total revenue attributable to the customer for the indicated product for the last five fiscal years [2019-2023] "NOTE" percentages will NOT necessarily total 100%.

		Sales				Customer Information				
	Your organization's product types *(auto-populated from Section 4b)*	(1)(a) U.S. %	(1)(b) China %	(1)(c) Other (Identify Country)	(1)(d) Other %	(2) Name	(3) Type	(4) Country of Headquarters	(5) Primary Country End Use	(6) % of Total Revenue
1						1	- MANUFACTURER - DISTRIBUTOR - OTHER			
						2				
						3				
2						1				
						2				
						3				
3						1				
						2				
						3				
4						1				
						2				
						3				
5						1				
						2				
						3				
6						1				
						2				
						3				
7						1				
						2				
						3				
8						1				
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9						1				
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15						1				
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21						1				
						2				
						3				
22						1				
						2				
						3				
23						1				
						2				
						3				
24						1				
						2				
						3				
25						1				
						2				
						3				

A

Comments	

Previous Page

Next Page

Semiconductor Manufacturing Materials, Gases, and Chemicals (MGCs)

Section 4d: Suppliers

For each of your organization's product types [listed in section 3b] provide **(1)** the name or type of the top three critical raw and/or precursor material required for each of your organization's products sourced from an outside supplier, **(2)** a brief description of the sourced material as it relates to your organization's product, **(3)** your organization's level of concern in your ability to acquire the material in the next five years [2024-2029], and **(4)** your organization's average lead time in weeks for sourcing the material.

Then for each identified critical material for your organization's products provide the material supplier's, **(5)** Name "NOTE" the same supplier may be listed more than once for different products, **(6)** the country of corporate headquarters for the supplier, **(7)** the country where the supplier manufactures the sourced material [if known], **(8)** the percent (%) of Total Cost of Goods Sold attributable to this supplier for the indicated product for the last five fiscal years [2019-2023] "NOTE" percentages will NOT necessarily total 100%, **(9)** the primary reason why your organization selected this particular supplier, and **(10)** your organization's assessment of the availability and location of alternative suppliers for the material related to each of your organization's products.

	Your organization's product types *(auto-populated from Section 4b)*		Critical Raw or Precursor Materials				Primary Supplier Information					
			(1) Raw/Precursor Material	(2) Description	(3) Future Sourcing Concern (2024-2029)	(4) Average Lead Time (Weeks)	(5) Name	(6) Country of Headquarters	(7) Country of Manufacture	(8) % of Total Cost of Goods Sold	(9) Primary Reason for Selection	(10) Availability of Alternative
A.	1	1										
		2										
		3										
	2	1										
		2										
		3										
	3	1										
		2										
		3										
	4	1										
		2										
		3										
	5	1										
		2										
		3										
	6	1										
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	7	1										
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		3										
	23	1										
		2										
		3										
	24	1										
		2										
		3										
	25	1										
		2										
		3										

- NONE
- MINOR
- MODERATE
- GREAT
- EXTREME

- COST
- DELIVERY TIME
- EXISTING RELATIONSHIP
- EXPORT CONTROLS
- PROXIMITY
- QUALITY / TECHNICAL SPECIFICATION
- SOLE SOURCE
- OTHER (WRITE-IN)

- NONE - SOLE GLOBAL SOURCE
- YES - U.S. ALTERNATE AVAILABLE
- YES - ONLY NON-U.S. ALTERNATE AVAILABLE
- YES - BOTH U.S. AND NON-U.S. ALTERNATES AVAILABLE

Comments	

Previous Page Next Page

Section 5: Per- and Poly- Fluoroalkyl Substances (PFAS) Impacts

Complete the Subsections **(A)** or **(B)** on PFAS impacts as applicable (i.e., complete Subsection **(A)** for Semiconductor Manufacturing Equipment and Subsection **(B)** for Semiconductor Materials, Gases, and Chemicals). Next, complete Subsection **(C)** on PFAS criticality.

A. Semiconductor Manufacturing Equipment

1. Is your organization aware of any inputs/components to the production of your equipment that contain any PFAS?

- YES
- NO

		Response	Explanation
A. a	Are there alternative inputs/components available that do not use or contain PFAS?		
A. b	Does your organization have a plan to mitigate these risks or replace these components to continue production?		
A. c	Given current plans, how long would it would take to remove the use of PFAS from all products?		
A. d	Under the most optimistic scenarios, how long would it take to remove the use of PFAS from all products?		
A. e	What are the expected impacts of any loss of available inputs/components that contain PFAS on your organization's equipment production? Provide an explanation of the expected impacts and your organization's planned mitigation, as applicable.		

- YES, ALTERNATIVES FOR ALL
- YES, BUT ONLY ALTERNATES FOR SOME
- NO KNOWN ALTERNATES AVAILABLE
- UNKNOWN

- YES, FOR ALL
- YES, BUT ONLY FOR SOME
- NO PLANS FOR MITIGATION OR REPLACEMENT

- UNDER 1 YEAR
- 1-2 YEARS
- 3-5 YEARS
- 6-10 YEARS
- OVER 10 YEARS
- NOT POSSIBLE
- UNABLE TO ESTIMATE

B. Semiconductor Materials, Gases, and Chemicals

1. Does your organization use, produce, or provide any PFAS compounds in the production of your MGCs for semiconductor manufacturing?

- PRODUCE
- USE INTERNALLY
- BOTH
- NEITHER

		Response	Explanation
B. a	What impact would decreased availability and/or potential regulations on PFAS usage have on your organization's ability to produce MGC products?		

- NONE
- MINOR
- MODERATE
- GREAT
- EXTREME

2. PFAS Usage

		Response	Explanation
B. a	Does your organization have a plan to mitigate or replace the use of PFAS compounds in your production activities?		
B. b	Given current plans, how long would it would take to remove the use of PFAS from all production activities?		
B. c	Under the most optimistic scenarios, how long would it take to remove the use of PFAS from all production activities?		
B. d	Describe any risk mitigation efforts is your organization is pursuing and/or considering related to the use of PFAS compounds.		

- YES, FOR ALL
- YES, BUT ONLY FOR SOME
- NO PLANS FOR MITIGATION OR REPLACEMENT

- UNDER 1 YEAR
- 1-2 YEARS
- 3-5 YEARS
- 6-10 YEARS
- OVER 10 YEARS
- NOT POSSIBLE
- UNABLE TO ESTIMATE

3. PFAS Provision

		Response	Explanation
B. a	If your organization provides PFAS compounds for sale, what (if any) efforts are underway to identify and produce alternatives?		
B. b	Given current plans, how long would it would take develop alternative compounds to be used in the same/similar applications of the semiconductor industry?		
B. c	Under the most optimistic scenarios, how long would it would take develop alternative compounds to be used in the same/similar applications of the semiconductor industry?		
B. d	Describe any risk mitigation efforts is your organization is pursuing and/or considering related to the provision of PFAS compounds.		

- SIGNIFICANT EFFORTS
- LIMITED EFFORTS
- NO EFFORTS
- PLAN TO CEASE PRODUCTION
- OTHER

- UNDER 1 YEAR
- 1-2 YEARS
- 3-5 YEARS
- 6-10 YEARS
- OVER 10 YEARS
- NOT POSSIBLE
- UNABLE TO ESTIMATE

C. PFAS Criticality

1. For each year, **(1)** indicate the current or expected levels of criticality of PFAS to your organization's business (high, medium, or low), and **(2)** provide an explanation.

Year	(1) Criticality	(2) Explanation
2024		
2029		
2034		

- HIGH
- MEDIUM
- LOW

2. What other inputs or chemicals may present similar safety, availability, or regulatory challenges as PFAS?

3. What type of public or federal support would your organization need to transition to safer chemicals and/or methods of manufacturing?

Comments	

Previous Page

Next Page

Section 6: U.S. Export Controls

Complete Subsection **(A)** on U.S. Export Control Impacts to your organization and Subsection **(B)** on your organization's U.S. Export Controlled products.

A. U.S. Export Control Regulation Impact

1. Indicate the extent to which U.S. export control regulations have impacted your organization in any of the ways listed below. Select all that apply, then provide a brief explanation of the impact.

		Item	Impact	Explain
A.	1	Altered your organization's research and development program		
	2	Changed the composition of your organization's product lines		
	3	Led to increased R&D investment by non-U.S. competitors		
	4	Led to innovative breakthroughs by non-U.S. competitors		
	5	Limited the sales of your organization's export controlled items		
	6	Limited the sales of your organization's items not currently export controlled		
	7	Spurred non-U.S. organizations to offer "ITAR-free" or "EAR-free" products or services		
	8	Other (specify here)		

- GREAT IMPACT
- MODERATE IMPACT
- LITTLE IMPACT
- NO IMPACT
- UNKNOWN

2. What products, if any, are not currently sufficiently export controlled by the United States or allies?

	Item	Country	Explain
1			
2			
3			

3. Explain the impact of U.S. export controls on your organization's production, competitiveness, and viability.

B. Product Specific U.S. Export Controls

For each of your organization's export-controlled product types (identified in Sections 3b and/or 4b), **(1)** indicate if the product type is under U.S. Export Control but your organization does not export the product outside of the U.S. **(2)** list the Specific U.S. Export Control Classification Number (ECCN), **(3)** indicate whether your organization was denied an Export License (yes/no), and **(4)** whether your organization experienced a loss of sales opportunities due to U.S. export controls (yes/no), and **(4)(a)** provide a brief explanation of the loss, if applicable. Next, **(5)** indicate whether a foreign produced product of Comparable Quality [an item that possesses the same characteristics as your organization's product] is available in regions your organization is precluded or restricted from selling in due to U.S. Export Controls. If a Comparable Quality product exists in such regions, **(5)(a)** list the regions where the Comparable Quality Product is available separated by semi-colon [e.g., Region 1; Region 2]; **(5)(b)** list the organizations that produce the Comparable Quality Product separated by semi-colon [e.g., Organization 1; Organization 2], and **5(c)** list any known customers for the Comparable Quality Product separated by semi-colon [e.g., Customer 1; Customer 2].

Provide responses for the past five years (2019 to 2023).

		U.S. Export Control Details					Foreign Availability of Comparable Quality Product			
	Your organization's export-controlled product types *(auto-populated from Sections 3b and/or 4b)*	(1) Controlled Not Exported	(2) ECCN	(3) Export License Denied?	(4) Loss of Sales Opportunities	(4)(a) Explanation	(5) Available?	(5)(a) Regions	(5)(b) Producers	(5)(c) Customers
B.	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
	11									
	12									
	13									
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	41									
	42									
	43									
	44									
	45									
	46									
	47									
	48									
	49									
	50									

- YES
- NO

Comments	

Previous Page Next Page

Supply Chain Risk Management (SCRM)

Section 7a: SCRM Programs and Concerns

Complete Subsection **(A)** on your organization's Supply Chain Risk Management program, Subsection **(B)** on concern over future sourcing for Critical Inputs, Components, and Subsystems specific to Semiconductor Manufacturing Equipment (SME) production and/or Raw and Precursor Materials specific to Materials Gases and Chemicals (MGC) production, and Subsection **(C)** on concerns regarding shipping and distribution both upstream and downstream.

A. Supply Chain Risk Management Programs

1. Does your organization maintain a Supply Chain Risk Management (SCRM) program? — [ ] - YES - NO

1.a. Is your organization's SCRM program certified by or based on the International Organization for Standardization (ISO) or some other standardizing body? — [ ] - YES - ISO CERTIFIED - YES - BASED ON ISO STANDARDS - YES - OTHER CERTIFYING BODY - NO

1.b. Provide detail on your SCRM program and list any certifications held.

B. Future Sourcing Concerns for Critical Raw and Precursor Materials

1. Over the past five years (2019-2023) has your organization experienced issues sourcing critical inputs, components, subsystems, and/or raw and precursor materials from China and/or Russia? — [ ] - YES - NO

1.a. Was your organization able to find alternative suppliers located outside of China and/or Russia? — [ ] - YES - NO

1.b. Did your organization need to identify and source alternative replacement inputs, components, subsystems, and/or raw and precursor materials due to sourcing issues from China and/or Russia? — [ ] - YES - NO

1.c. List the specific inputs, components, subsystems, and/or raw and precursor materials and explain the issues experienced by your organization in sourcing them as well as any implemented solutions.

2. In the next five years (2024-2028), does your organization anticipate sourcing issues for critical inputs, components, subsystems, and/or raw and precursor materials from China and/or Russia? — [ ] - YES - NO

2.a. Is your organization searching for alternative suppliers located outside of China and/or Russia? — [ ] - YES - NO

2.b. Is your organization looking to identify and source alternative replacement inputs, components, subsystems and/or raw and precursor materials due to anticipated sourcing issues from China and/or Russia? — [ ] - YES - NO

2.c. If yes, list the specific inputs, components, subsystems, and/or raw and precursor materials and explain the anticipated issues and any possible solutions your organization is currently working on to rectify the potential sourcing issues.

3. Identify (if applicable) the top three inputs for which China and/or Russia currently maintain market dominancy or sole sourcing (regardless of your ability to currently source the input), and provide a brief explanation of your organization's concerns regarding future sourcing for these inputs.

	Input Name	Explanation
1		
2		
3		

C. Distribution Concerns

1. Over the past five years (2019-2023) has your organization experienced issues with its *upstream* distribution network from its suppliers of inputs, components, subsystems, and/or raw and precursor materials? — [ ] - YES - NO

1.a. Did oceanic shipping delays and shipping lane closures contribute to or exacerbate the issues experienced? — [ ] - YES - NO

1.b. Provide detail on the upstream distribution issues your organization experienced and any applied solutions.

2. Over the past five years (2019-2023) has your organization experienced issues with its *downstream* distribution network to its customers of inputs, components, subsystems, and/or raw and precursor materials? — [ ] - YES - NO

2.a. Did oceanic shipping delays and shipping lane closures contribute to or exacerbate the issues experienced? — [ ] - YES - NO

2.b. Provide detail on the downstream distribution issues your organization experienced and any applied solutions.

3. What transportation safety challenges does your organization face due to the nature of both upstream and downstream distribution of safety regulated materials?

Comments	

Previous Page Next Page

Supply Chain Risk Management (SCRM)

Section 7b: Critical Inputs

Complete Subsection **(A)** on the supply chain risks of those critical inputs of greatest concern to your organization, Subsection **(B)** on the most critical pieces of equipment your organization uses for the production of its products, and Subsection **(C)** on the most critical semiconductor devices used in your organization's products, as applicable.

A. Critical Input Supply Chain Risks

Of the sourced inputs and/or raw or precursor materials (identified in Sections 3d and/or 4d) for which your organization indicated moderate to extreme future sourcing concern, **(1)** select the top ten critical inputs. Then, for each critical input indicated, **(2)** select the supply chain risk category that best describes the anticipated future sourcing concern [see Definitions], **(3)** provide a brief explanation of the future sourcing concern and the potential impacts to your organization, **(4)** indicate the time frame in which the concern is anticipated to manifest, and **(5)** provide a brief explanation of your organization's proposed solutions to address the anticipated concern. Lastly, **(6)(a)** select the business impact concern and **(6)(b)** business impact level for each input if future sourcing concerns are not addressed.

	Critical Inputs of Concern	Supply Chain Risk and Impact		Timeframe & Resolution		Business Impact	
	(1) Input	(2) Risk Category	(3) Explanation (i.e., future sourcing concern and potential impact)	(4) Timeframe	(5) Explanation (i.e., proposed solutions)	(6)(a) Concern	(6)(b) Level
A. 1							
2	*[LIST POPULATED FROM SECTIONS 3D/4D]*						
3							
4							
5							
6							
7							
8							
9							
10							

- FOREIGN OWNERSHIP CONTROL OR INFLUENCE
- POLITICAL & REGULATORY
- ECONOMIC
- ENVIRONMENT
- PRODUCT QUALITY & DESIGN
- MANUFACTURING & SUPPLY
- TRANSPORTATION & DISTRIBUTION
- FINANCIAL
- COMPLIANCE
- TECHNOLOGY & CYBER SECURITY
- HUMAN CAPITAL
- INFRASTRUCTURE

- CURRENT CONCERN
- 1-3 YEARS
- 3-5 YEARS
- 5-10 YEARS

- FINANCIAL
- OPERATIONS
- BOTH

- MINOR
- MODERATE
- EXTREME

B. Critical Equipment

Identify the most critical pieces of equipment your organization uses for the production of its products. Provide **(1)** the equipment name, **(2)** a description of the equipment, **(3)** the reason for its criticality, **(4)** the equipment provider name, **(5)** the country of origin, and indicate **(6)** the availability of alternative suppliers for the equipment, and **(7)** the time to replace the equipment (in weeks).

	Equipment Detail			Equipment Origin			Time
	(1) Equipment	(2) Description	(3) Reason for Criticality	(4) Equipment Provider Name	(5) Country of Origin	(6) Availability of Alternatives	(7) Time to Replace (weeks)
B. 1							
2							
3							
4							
5							

- SOLE GLOBAL SOURCE
- ONE KNOWN ALTERNATE
- MULTIPLE KNOWN ALTERNATES

C. Critical Semiconductor Devices

Identify the most critical semiconductor devices used in your organization's products. Provide **(1)** the semiconductor device name, **(2)** the name of the semiconductor device manufacturer, **(3)** the reason for its criticality, **(4)** a description of the criticality and any challenges in sourcing the semiconductor device, and indicate **(5)** the availability of alternative suppliers for the semiconductor device, and **(6)** its lead time (in weeks).

	Semiconductor Detail			Semiconductor Sourcing Challenges		Time
	(1) Semiconductor Name	(2) Semiconductor Manufacturer	(3) Reason for Criticality	(4) Description of Criticality and Any Challenges in Sourcing	(5) Availability of Alternatives	(6) Lead Time (weeks)
C. 1						
2						
3						
4						
5						

- SOLE GLOBAL SOURCE
- ONE KNOWN ALTERNATE
- MULTIPLE KNOWN ALTERNATES

- FOREIGN OWNERSHIP CONTROL OR INFLUENCE
- POLITICAL & REGULATORY
- ECONOMIC
- ENVIRONMENT
- PRODUCT QUALITY & DESIGN
- MANUFACTURING & SUPPLY
- TRANSPORTATION & DISTRIBUTION
- FINANCIAL
- COMPLIANCE
- TECHNOLOGY & CYBER SECURITY
- HUMAN CAPITAL
- INFRASTRUCTURE

Comments	

Previous Page Next Page

Section 8: Workforce

Respond to the following questions regarding your organization's employment and workforce development in the U.S. In Subsection **(A)** provide the total number of your organizations employees, Subsection **(B)** provide the current and estimated future count of employees by education level, Subsection **(C)** provide details by occupation category, Subsection **(D)** your organization's recruitment and/or training efforts, and Subsection **(E)** workforce challenges experienced.

A. Full Time Equivalent (FTE) Employee Count

Record the total number of U.S. Citizen and non-U.S. Citizen full time equivalent (FTE) employees and contractors at your U.S. facilities for each year from 2019 to present. Provide the annual turnover rate for U.S. Citizen and non-U.S. Citizen FTE employees, and indicate the primary visa type, as applicable.

		2019	2020	2021	2022	2023	2024	Annual Turnover Rate
1	U.S. Citizen							
2	Non-U.S. Citizen							

								Primary Visa Type
2.1	China							
2.2	Iran							
2.3	North Korea							
2.4	Russia							

- GREEN CARD
- H-1B
- L-1
- F-1
- O-1
- OTHER

B. Education Qualification Count

Record the total number of current and expected (estimate) FTE employees by educational qualification.

Educational Qualification	2024	2029 (estimate)	2034 (estimate)
No Educational Requirement			
High School/GED			
Certification or Partial College			
B.S./B.A.			
M.S./M.A.			
Doctorate			

C. Occupation Category Details

For each occupational category that your organization employs indicate **(1)** the minimum educational qualification required, **(2)** the average salary in the current year [2024], **(3)** the average STARTING salary in the current year [2024], **(4)** the current year [2024] count of employees within each occupational category, **(5)** the current year [2024] count of vacancies within each occupational category, **(6)** the estimated total count of employees that will be in each occupational category in the next five years [2029], and **(7)** the estimated total count of employees that will be in each occupational category in the next ten years [2034].

		Minimum Education	Average Salaries		Current Counts		Estimated Counts	
	Occupational Categories	(1) Minimum Education	(2) Average Salary ($)	(3) Starting Salary ($)	(4) Employees (2024)	(5) Vacancies (2024)	(6) Total Employees (2029)	(7) Total Employees (2034)
	Production Occupations							
1	Production Line Assembly							
2	Machining, Welding, Grinding, etc.							
3	Inspection, Testing, Quality Control							
	Engineering, Computer, and Mathematical							
	Management and Financial Operations							
	Sales, Office, and Administration							
	All Other							

- NO EDUCATIONAL REQUIREMENT
- HIGH SCHOOL/GED
- CERTIFICATION OR PARTIAL COLLEGE
- B.S./B.A.
- M.S./M.A.
- DOCTORATE

D. Recruitment & Training

For each program or method listed below, **(1)** indicate which your organization currently uses (select yes or no), then **(2)** rank the top five by their value to your organization's recruitment and/or training efforts, and **(3)** provide an explanation, as applicable.

	Program/Method		(1) Use	(2) Rank	(3) Explanation
1	Internships				
2	Apprenticeships				
3	Outreach to K-12				
4	Partnership with local high schools				
5	Partnership with local community college				
6	Partnership with local university				
7	Partnership with sector-related trade or industry associations				
8	Participation in career fairs				
9	Direct advertising				
10	Outreach to specific communities (e.g., veterans)				
11	Partnership with local American Job Centers				
12	Other	(specify here)			
13	Other	(specify here)			
14	Other	(specify here)			

- YES
- NO

E. Workforce Challenges

1. Identify the skills that impact your industry overall that are currently least available:

2. What key workforce programs is your organization undertaking to build/rebuild the semiconductor workforce in the U.S.?

3. What steps would you recommend the U.S. government pursue to assist industry in addressing difficulties obtaining and retaining necessary skilled employees?

4. What are the most effective workforce retention efforts your organization offers to employees (e.g. salary/wage increases, bonuses, tuition reimbursement, etc.)?

5. What difficulties (if any) does your organization face in retaining essential non-U.S. citizen employees?

Comments	

Previous Page Next Page

Financials

Section 9a: Income Statement, Balance Sheet, and Human Capital Expenditures

Indicate the financial reporting level and provide the select financial line items for each year from 2019 to present (estimate) on a Calendar Year basis. Complete Subsections (A), (B), (C), and (D).
Note: Any forecasts requested in this survey are understood to be speculative and for aggregate, statistical purposes only.

Reporting Level (select from drop-down):	

- CORPORATE/ORGANIZATIONAL LEVEL RESPONSE
- BUSINESS UNIT/DIVISION LEVEL RESPONSE

A. Income Statement (Select Line Items)

			Record $ in Thousands, e.g. $12,000.00 = Survey Input of $12	2019	2020	2021	2022	2023	2024 (Estimate)
A.	1	Total Net Sales (and Other Revenue)							
		Total U.S. Sales	**1.1** % U.S. Sales from U.S. Locations *(as a % of line 1)*						
			1.2 % U.S. Sales from Non-U.S. Locations *(as a % of line 1)*						
		Total Non-U.S. Sales	**1.3** % Non-U.S. Sales from U.S. Locations *(as a % of line 1)*						
			1.4 % Non-U.S. Sales from Non-U.S. Locations *(as a % of line 1)*						
		Note: Lines 1.1, 1.2, 1.3, and 1.4 should sum to 100%, each line represented as a % of line 1, i.e., Total Net Sales (and Other Revenue).		0%	0%	0%	0%	0%	0%
		1.5 % Semiconductor-Related Sales *(as a % of line 1)*							
	2	Cost of Goods Sold							
	3	Total Operating Income (Loss)							
	4	Earnings Before Interest and Taxes							
	5	Net Income							

Data Confirmation
2024 Net Sales
None

B. Balance Sheet (Select Line Items)

		Record $ in Thousands, e.g. $12,000.00 = Survey Input of $12	2019	2020	2021	2022	2023	2024 (Estimate)
B.	1	Cash						
	2	Inventories						
	3	Current Assets						
	4	Total Assets						
	5	Current Liabilities						
	6	Total Liabilities						
	7	Retained Earnings						
	8	Total Owner's Equity						

C. Human Capital Expenditure

		Record $ in Thousands, e.g. $12,000.00 = Survey Input of $12	2019	2020	2021	2022	2023	2024 (Estimate)
C.	1	Total Salary and Wages (Including Benefits)						
	2	Estimated Costs Associated With Recruitment						
	3	Estimated Costs Associated With Workforce Training						

D. Financial Health Estimate

D. On a scale of 1 to 10, estimate your organization's overall financial health (1 being imminent failure and 10 being highly profitable for the foreseeable future).

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Comments	

Previous Page | Next Page

Financials

Section 9b: Research, Development, and Capital Expenditures

Indicate the financial reporting level and provide the select financial line items for each year from 2019 to present (estimate) on a Calendar Year basis, as well as forward looking estimates for the next five to ten years (2029 and 2034 estimates). Complete Subsections (A), (B), (C), (D), and (E). **Note:** Any forecasts requested in this survey are understood to be speculative and for aggregate, statistical purposes only.

Reporting Level (select from drop-down):	

- CORPORATE/ORGANIZATIONAL LEVEL RESPONSE
- BUSINESS UNIT/DIVISION LEVEL RESPONSE

A. Research & Development (R&D) Expenditure

	Record $ in Thousands, e.g. $12,000.00 = Survey Input of $12	2019	2020	2021	2022	2023	2024 (estimate)	2029 (estimate)	2034 (estimate)
A. 1.	Total R&D Expenditure								
1.1.	% Expenditure in R&D Carried Out in the U.S. *(as a % of line 1)*								
1.2.	% Expenditure in R&D Carried Out outside of the U.S. *(as a % of line 1)*								
	Note: Lines 1.1 and 1.2 should sum to 100%, each line represented as a % of line 1, i.e., Total R&D Expenditure.	0%	0%	0%	0%	0%	0%	0%	0%

2. Did your organization utilize the federal R&D Tax Credit from 2019 to 2023? — **2.a.** If yes, identify the primary qualifying expenditure.

2.b. Provide a description of your organization's qualifying activities.

- YES
- NO

- CONTRACT RESEARCH - CONSORTIA
- CONTRACT RESEARCH - NON-CONSORTIA
- IN-HOUSE SERVICES
- IN-HOUSE SUPPLIES
- IN-HOUSE WAGES
- OTHER (WRITE-IN)

B. Government-Funded R&D

	Record $ in Thousands, e.g. $12,000.00 = Survey Input of $12	2019	2020	2021	2022	2023	2024 (estimate)	2029 (estimate)	2034 (estimate)
B. 1.	Total R&D Funding Received from U.S. Government								
1.1.	% R&D Funding from U.S. Federal Government *(as a % of line 1)*								
1.2.	% R&D Funding from U.S. State and Local Governments *(as a % of line 1)*								
	Note: Lines 1.1 and 1.2 should sum to 100%, each line represented as a % of line 1, i.e., Total R&D Funding Received from U.S. Government	0%	0%	0%	0%	0%	0%	0%	0%
2.	Total R&D Funding Received from Foreign Government								

3. Provide details on any R&D Funding your organization has received from the U.S. Government since 2019.

4. Provide details on any R&D funding your organization has received from foreign governments since 2019.

C. R&D Priorities

Of your organization's products supporting the manufacture of advanced computing chips, **(1)** identify your organization's top anticipated R&D priorities and **(2)** provide a brief description of each. Next, **(3)** indicate the percent (%) of funding your organization anticipates receiving from government (both U.S. and non-U.S.) overall, and **(4)(a)-(4)(b)** indicate the primary country source of funding and the percent (%) of funding.

C.

	(1) Priority	(2) Description	(3) % Funding	(4)(a) Country	(4)(b) %
1					
2	*[LIST POPULATED FROM SECTIONS 3B/4B]*				
3					
4					
5					

D. Capital Expenditure (CapEx)

	Record $ in Thousands, e.g. $12,000.00 = Survey Input of $12	2019	2020	2021	2022	2023	2024 (estimate)	2029 (estimate)	2034 (estimate)
D. 1	Total CapEx Investment								
1.1	% CapEx Investment in the U.S. *(as a % of line 1)*								
1.2	% CapEx Investment Outside of the U.S. *(as a % of line 1)*								
	Note: Lines 1.1 and 1.2 should sum to 100%, each line represented as a % of line 1, i.e., Total CapEx Investment	0%	0%	0%	0%	0%	0%	0%	0%

E. CapEx Investments

1. Identify your organization's top anticipated CapEx priorities over the next ten years - **(1)** select the option from the drop down menu that best aligns with your organization's investment. If the options provided do not represent your organization's investment priority, write in your response. For each priority identified, **(2)** provide a brief description, **(3)** indicate the primary facility, and **(4)** the anticipated year of completion. Then, **(5)** provide the anticipated total cost, **(6)(a)** percent (%) government-funded, and **(6)(b)** the primary country source of government funding anticipated for each, as applicable.

E.

	(1) CapEx Priority	(2) Description	(3) Primary Facility	(4) Year Completed	(5) Anticipated Total Cost ($)	(6)(a) % Funded	(6)(b) Country
1							
2							
3							
4							
5							

- FACILITY RENOVATION
- BUILDING OF A NEW FACILITY
- EXPANSION OF EXISTING FACILITY
- EQUIPMENT
- OTHER (WRITE-IN)

2. Have any of your recent investment projections increased in the past year due to unexpected disruptions such as construction delays, licensing issues, labor shortages/increased wages, etc.?

- YES
- NO

2.a. If yes, **(1)** list the type(s) of delay (select from the drop-down or write-in) and indicate **(2)** the percent of budget increase attributed to the delay, **(3)** the number of days delayed, and **(4)** provide an explanation for each.

	(1) Type of Delay	(2) Budget Increase (%)	(3) Days	(4) Explain
1				
2				
3				
4				
5				

- NO ACCESS TO GOVERNMENT FUNDING
- LICENSING ISSUES
- LABOR SHORTAGES
- MATERIALS SHORTAGE
- CONSTRUCTION DELAYS
- OTHER (WRITE-IN)

3. Are any of your investment plans contingent on, on hold, or pending until government funding is available? Provide an explanation.

- YES, U.S.
- YES, NON-U.S.
- YES, BOTH U.S. AND NON-U.S.
- NO

4. If U.S. Government funding is unavailable, does your organization expect to seek and receive non-U.S. government funding? Provide an explanation.

- YES
- NO

5. Does your organization expect to use the investment tax credit included in Section 107 of the CHIPS Act of 2022 (also known as the FABS Act)? Provide an explanation.

- YES
- NO
- NOT ELIGIBLE

5.b. If yes, estimate the expected total value of the applicable investment, and provide an explanation.

Estimated Total Value ($):	

5.c. If your organization were to be eligible, would your organization expect to use the investment tax credit included in Section 107 of the CHIPS Act of 2022? Provide an explanation.

- YES
- NO

Comments	

Previous Page

Next Page

Section 10a: Joint Ventures, Acquisitions, Divestitures, and Mergers

Complete Subsection **(A)** on your organization's current Joint Ventures (JV) and JVs exited in the last five years; and Subsection **(B)** on your organization's mergers, acquisitions, and divestitures in the last five years.

A. Current Joint Ventures (JV)

1. How many JVs does your organization currently participate in (both semiconductor related and non-semiconductor related)?

1.a. For each of your organization's current JV relationships, including public/private R&D partnerships, provide **(1)** the name of the JV partner organization (including government agencies), **(2)** the JV partner's country of headquarters (HQ), **(3)** the primary country where the JV operations are physically located, **(4)** the percent (%) owned by the JV partner, **(5)** the year the JV was initiated, **(6)** the primary purpose of the JV relationship, and indicate **(7)** whether the JV is semiconductor-related, **(8)** the primary product or service group involved, and **(9)** provide an explanation, as required.

A	Partner Organization	Countries		JV Details					
	(1) Name	(2) Partner HQ Country	(3) JV Country	(4) % Owned by Partner	(5) Year Initiated (YYYY)	(6) Primary Purpose	(7) Semiconductor-Related	(8) Primary Product Involved	(9) Explanation
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

- ACCESS TO FINANCIAL RESOURCES
- ACCESS TO GOVERNMENT CONTRACTS
- ACCESS TO INTELLECTUAL PROPERTY
- ACCESS TO SUPPLIERS OR REDUCED LEAD TIMES
- BROADEN CUSTOMER BASE
- CREATION OF NEW TECHNOLOGIES OR PRODUCT IMPROVEMENTS
- DEVELOP NEW CAPABILITIES IMPROVED ACCESS TO FOREIGN MARKETS (REQUIRED)
- IMPROVED ACCESS TO FOREIGN MARKETS (VOLUNTARY)
- IMPROVED ACCESS TO U.S. MARKETS
- OTHER OBJECTIVE/PURPOSE (EXPLAIN)
- OVERCOME MARKET ENTRY BARRIER/GEOPOLITICAL CONCERNS
- R&D ACCESS/COORDINATION
- REDUCE COSTS
- RISK SHARING
- SHARED/IMPROVED TECHNOLOGY OR SKILLS
- TAX-RELATED

- YES
- NO

[LIST POPULATED FROM SECTIONS 3A/4A]

2. Has your organization exited a JV in the last five years (2019-2023)?

- YES
- NO

2.a. For each of your organization's JV relationships, including public/private R&D partnerships, exited in the last five years (2019-2023), provide **(1)** the name of the JV partner organization (including government agencies), **(2)** the JV partner's country of headquarters (HQ), **(3)** the primary country where the JV operations were physically located, **(4)** the percent (%) owned by the JV partner, **(5)** the year the JV was initiated, and **(6)** the primary purpose of the JV relationship. Indicate **(7)** whether the JV was semiconductor-related, and **(8)** the primary product or service group involved. Provide **(9)** the year your organization exited from the JV, **(10)** the reason for your organization's exit, **(11)** whether the JV was successful in achieving its intended purpose (yes or no), and **(12)** any further detail on the success and/or value of the JV relationship.

Partner Organization	Countries		JV Details								
(1) Name	(2) Partner HQ Country	(3) JV Country	(4) % Owned by Partner	(5) Year Initiated (YYYY)	(6) Primary Purpose	(7) Semiconductor-Related	(8) Primary Product Involved	(9) Year Exited (YYYY)	(10) Reason for Exit	(11) Success	(12) Details
1											
2											
3											

- YES
- NO

[LIST POPULATED FROM SECTIONS 3A/4A]

- YES
- NO

B. Mergers, Acquisitions, & Divestitures

1. How many mergers, acquisitions, and/or divestitures has your organization participated in over the last five years (2019-2023)?

- YES
- NO

1.a. For your organization's five most recent mergers, acquisitions, and/or divestitures in the last five years (2019-2023), provide **(1)** the name of the target or divestment entity, **(2)** the type of activity (i.e., merger, acquisition, or divestiture), **(3)** the deal amount, **(4)** the country of the target or divestment entity, and **(5)** the year the deal closed. For each divestiture listed, provide **(6)** the name of the acquiring entity and **(7)** the acquiring entity's country of headquarters. Last, indicate **(8)** the primary product or service performed by the target or divestment and the **(9)(a)** the deal's primary objective; and **(9)(b)** provide an explanation, including an evaluation of your organization's success throughout the deal process towards meeting that objective.

B -	Target or Divestment Entity	Deal Details				Divestment Details		Deal Objective		
	(1) Name	(2) Deal Type	(3) Deal Amount ($)	(4) Country	(5) Year Closed (YYYY)	(6) Acquiring Entity	(7) Country of Acquirer	(8) Primary Product Involved	(9)(a) Objective	(9)(b) Explanation of Objective
1										
2										
3										
4										
5										

- MERGER
- ACQUISITION
- DIVESTITURE

[LIST POPULATED FROM SECTIONS 3A/4A]

Comments	

Previous Page Next Page

Section 10b: Foreign Government Interaction

Complete Subsection **(A)** on your organization's experience with foreign government actions; Subsection **(B)** on your organization's experience with solicitation for partnership from foreign state-affiliated entities; Subsection **(C)** on Potential Intellectual Property (IP) and/or Technology Transfer Concern; and Subsection **(D)** on Foreign Government Practices negatively impacting your organization's business.

A. Actions

1. Has your organization felt mandated or strongly encouraged by a foreign government entity to engage in certain actions or face disruptive and/or preventative repercussions in the last five years (2019-2023)? (e.g., sales or licensing agreements, partnerships, mergers, acquisitions, joint ventures, etc.)

- YES
- NO

1.a. Identify the **(1)** action(s), **(2)** the country of the government(s) involved, **(3)** the results of the action, and **(4)** provide an explanation.

A.

	(1) Actions	(2) Country	(3) Result(s)	(4) Explain
1				
2				
3				
4				
5				

B. Solicitations and Requests

1. Has your organization received solicitations or requests for partnership from entities that are known/suspected of being state owned or affiliated with a foreign government (e.g., universities, research laboratories, foreign companies, etc.) in the last five years (2019-2023)?

- YES
- NO

1.a. Identify the five most recent solicitations/requests and provide **(1)** the name of each entity, **(2)** the country of the corresponding foreign government, and **(3)** a description of the solicitation and your organization's response.

B.

	(1) Entity Name	(2) Foreign Government	(3) Description
1			
2			
3			
4			
5			

C. Potential IP Loss & Technology Transfer Concern

Identify your organization's technologies and/or products with the highest concern of potential loss to other entities and/or foreign governments. Indicate **(1)** the primary product group, **(2)** the level of concern, and **(3)** the primary foreign government of concern (if applicable). Provide **(4)** a description of the methods your organization anticipates foreign governments are employing to acquire the technology and **(5)** an explanation of approaches taken to ensure your organization's IP is protected during the life of a partnership, as applicable.

C.

	(1) Primary Product	(2) Level of Concern	(3) Foreign Government of Concern	(4) Methods Employed by Foreign Government	(5) Approaches to Protect IP
1					
2					
3					
4					
5					

[LIST POPULATED FROM SECTIONS 3A/4A]

- NONE
- MINOR
- MODERATE
- GREAT
- EXTREME

D. Foreign Government Practices

Identify the countries with government practices and/or requirements with the largest negative impact on your business. Select from the list of U.S. Arms Embargoed Countries and/or specify any other such countries. For each country, indicate **(2)** the primary product group impacted and **(3)** provide an explanation of the government practices and/or requirements, including their impact.

D.

	(1) Country	(2) Primary Product Impacted	(3) Explanation
1			
2			
3			
4			
5			

[LIST POPULATED FROM SECTIONS 3A/4A]

Comments	

Previous Page Next Page

Competitive Factors

Section 11a: Advantages and Costs

Complete Subsection **(A)** on factors with the greater Competitive Advantage in other countries compared to the U.S., and Subsection **(B)** on business operations with the largest Cost Disadvantage in the U.S.

A. Competitive Advantage

For each of the factors listed, **(1)** indicate whether locating the factor inside the U.S. or outside the U.S., or neither, provides the greater competitive advantage. If the location is outside the U.S., **(2)** indicate the country with the greatest advantage. Next, **(3)** rank your organization's top five factors (1 being the most important; 2 being the next most important, etc.) when deciding on a location to invest in the expansion or construction of facilities, and **(4)** provide an explanation.

A.

	Factor	(1) Location with Greatest Advantage	(2) Country with Greatest Advantage (if not the U.S.)	(3) Rank	(4) Explanation
1	Labor Cost				
2	Labor Availability				
3	Labor Quality				
4	Material Cost				
5	Material Availability				
6	Material Quality				
7	Equipment Cost				
8	Equipment Availability				
9	Equipment Quality				
10	R&D Cost				
11	R&D Quality				
12	Energy Reliability				
13	Environmental Compliance Cost				
14	Export Control Compliance Cost				
15	Export Control Policies				
16	Energy Cost				
17	Renewable Energy Accessibility				
18	Construction Time				
19	Construction Cost				
20	Proximity to Customers				
21	Tax Costs				
22	Government Incentives				
23	Collaboration Benefits				
24	Ability to Protect IP				
25	Other (specify here)				

- U.S.
- NON-U.S.
- NEITHER

B. Cost Disadvantage

Identify the portions of your business with the largest cost disadvantage in the U.S., in descending order. Select or specify **(1)** the business operation and **(2)** provide an explanation of the cost disadvantage.

B.

	(1) Business Operations	(2) Explanation
1		
2		
3		
4		
5		

- LABOR/WAGES
- RAW/PRE-CURSOR CHEMICALS
- SYSTEM COMPONENTS
- COMPLETED SUB-SYSTEMS
- ENERGY/ELECTRICITY
- WATER/WASTE MANAGEMENT
- TRANSPORTATION/SHIPPING
- OTHER (WRITE-IN)

Comments	

Previous Page Next Page

Competitive Factors

Section 11b: Key Issues

A.

Identify the challenges or issues that have impacted your organization from 2019 to present day, and those that you anticipate will impact your organization between 2024 and 2029. Next, rank your organization's top five for both time frames (1 being the most important; 2 being the next most important, etc.).

Explain the affirmative issues where examples and narrative will aid the U.S. Government's (USG) understanding of your concerns and provide any suggestions for ways the USG can help mitigate these issues.

	Type of Issue		2019 to 2024 -Yes/No- (- YES - NO)	2019 to 2024 Rank	2024 to 2029 -Yes/No- (- YES - NO)	2024 to 2029 Rank	Explanation of Issue	Suggested USG Solution/Mitigation
1	Aging equipment, facilities, or infrastructure							
2	Aging workforce							
3	Competition - domestic							
4	Competition - foreign							
5	Counterfeit parts and/or materials							
6	Cybersecurity							
7	Environmental regulations/remediation							
8	Export controls - EAR/ITAR							
9	Financing/credit availability							
10	Government acquisition process							
11	Government purchasing volatility							
12	Government regulatory burden							
13	Healthcare costs							
14	Industrial espionage - domestic							
15	Industrial espionage - foreign							
16	Input availability (e.g., materials)							
17	Input quality							
18	Intellectual property/patent infringement							
19	Labor availability/costs							
20	Lack of infrastructure							
21	Lack of public R&D partnerships (e.g., universities)							
22	Natural disasters (including disease/quarantine)							
23	Obsolescence							
24	Pension costs							
25	Proximity to customers							
26	Proximity to suppliers							
27	Qualifications/certifications							
28	R&D costs							
29	Reduction in USG demand							
30	Taxes							
31	Trade disputes							
32	Worker/skills retention							
33	Other	(specify here)						
34	Other	(specify here)						
35	Other	(specify here)						

Comments	

Previous Page Next Page

Competitive Factors

Section 11c: Direct Competition

Complete Subsection **(A)** on your organization's perceived R&D effectiveness, Subsection **(B)** on entities that consider themselves direct competitors to your organization, and Subsection **(C)** on your organization's nearest Chinese competitors, as applicable.

A. R&D Effectiveness

A. How effective is your organization's R&D programming in keeping ahead of competitors? Rank from 1 to 10 (1 being the least effective) and provide an explanation.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

B. Direct Competitors

List the top five entities that consider themselves direct competitors to your organization. Provide **(1)** the entity name, **(2)** the entity's country of corporate headquarters, and **(3)** describe the entity's R&D focus. Indicate **(4)** whether the entity listed or your organization (i.e., self) is more advanced in technology, or if both are equivalent. Estimate **(5)** the number of years of R&D development between your organization and the entity listed (i.e., how many years one is further advanced than the other), as applicable.

B.

	(1) Name	(2) Country of Corporate Headquarters	(3) Description of R&D Focus	(4) More Advanced	(5) Years (estimate)
1					
2					
3					
4					
5					

- ENTITY
- SELF
-EQUIVALENT

C. China-Based Competitors

Compare your organization to its nearest Chinese competitors (if not listed above). Provide **(1)** the entity name and **(2)** describe the entity's R&D focus. Indicate **(3)** whether the entity listed or your organization (i.e., self) is more advanced in technology, or if both are equivalent. Estimate **(4)** the number of years of R&D development between your organization and the entity listed (i.e., how many years one is further advanced than the other), as applicable.

C.

	(1) Name	(2) Description of R&D Focus	(3) More Advanced	(4) Years (estimate)
1				
2				
3				

- ENTITY
- SELF
-EQUIVALENT

Comments	

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

Previous Page | Next Page

Section 12: Product Safeguards and Improvements

Complete Subsection **(A)** on your organization's use of Digital Twins, Machine Learning, and/or Artificial Intelligence (AI), Subsection **(B)** on Intellectual Property (IP) Security, Subsection **(C)** on Cybersecurity, and Subsection **(D)** on Emerging Technologies.

A. Digital Twins, Machine Learning, and/or AI

1. Is your organization currently using/developing digital twins, machine learning, and/or AI systems to enhance/improve design and/or manufacturing of its goods and services?

- YES
- NO

1.a. If yes, provide an explanation.

2. Is your organization considering the future implementation and use of digital twins, machine learning, and/or AI systems to enhance/improve design and/or manufacturing of its goods and services?

- YES
- NO

2.a. If yes, provide an explanation.

B. IP Security

1. Given your organization's current practices, how is your organization securing its IP from foreign access and/or theft?

2. When considering future implementation of advanced digital manufacturing processes like those listed above, how does your organization anticipate securing its IP from foreign access and/or theft?

C. Cybersecurity

1. For each of the following cybersecurity frameworks, indicate your organization's level of adoption.

1.a.	NIST Cybersecurity Framework	
1.b.	ISO/IEC 27001:2022 - Information Security Management Systems	
1.c.	SEMI E187: Specification for Cybersecurity for Fab Equipment	
1.d.	SEMI E188: Specification for Malware Free Equipment Integration	

- TIER 1- PARTIAL
- TIER 2 - RISK INFORMED
- TIER 3 - REPEATABLE
- TIER 4 - ADAPTIVE
- PLAN TO ADOPT
- NOT ADOPTED

- ADOPTED
- PARTIALLY ADOPTED
- PLAN TO ADOPT
- NOT ADOPTED

2. Does your organization carry out software assurance/code review for externally procured electronic items?

3. Does your organization impose requirements on the cybersecurity practices of vendors when buying from or subcontracting to them?

4. Does your organization evaluate the cybersecurity practices of vendors before making a decision to buy from or subcontract to them?

- ALWAYS
- SOMETIMES
- NEVER

5. Based on your organization's cybersecurity history, describe future concerning vectors of incursion for which your organization is preparing.

D. Emerging Technologies

1. Identify the primary, secondary, and tertiary Emerging Technologies most critical to your organization's future competitive position in the semiconductor supply chain by priority. For each, indicate your organization's adoption of the technology and provide an explanation, as applicable.

	Critical Emerging Technologies	Adoption	Explain
a			
b			
c			

Adoption:
- CURRENTLY ADOPTED
- PLAN TO ADOPT
- NOT ADOPTED

Critical Emerging Technologies:
- ADVANCED COMPUTING
- ADVANCED ENGINEERING MATERIALS
- ADVANCED GAS TURBINE ENGINE TECHNOLOGIES
- ADVANCED MANUFACTURING
- ADVANCED AND NETWORKED SENSING AND SIGNATURE MANAGEMENT
- ADVANCED NUCLEAR ENERGY TECHNOLOGIES
- ARTIFICIAL INTELLIGENCE
- AUTONOMOUS SYSTEMS AND ROBOTICS
- BIOTECHNOLOGIES
- COMMUNICATION AND NETWORKING TECHNOLOGIES
- DIRECTED ENERGY
- FINANCIAL TECHNOLOGIES
- HUMAN-MACHINE INTERFACES
- HYPERSONICS
- NETWORKED SENSORS AND SENSING QUANTUM
- INFORMATION TECHNOLOGIES
- RENEWABLE ENERGY GENERATION AND STORAGE
- SEMICONDUCTORS AND MICROELECTRONICS
- SPACE TECHNOLOGIES AND SYSTEMS
- OTHER (WRITE-IN)

2. Identify the leading products/capabilities benefiting from developments in Emerging Technologies and the corresponding Emerging Technology. Provide an explanation of the benefit, be it current or prospective.

	Products/Capabilities	Emerging Technology	Explain
a			
b			
c			

3. Identify the primary barriers to your organization's adoption of Emerging Technologies in its semiconductor-related production processes and/or general operations. Provide an explanation for each, as applicable.

	Barriers	Explain
a		
b		
c		

Barriers:
- COST TO DEVELOP OR PURCHASE, AND IMPLEMENT
- LACK OF INFORMATION ON EMERGING TECHNOLOGY
- LACK OF TECHNICAL TALENT
- MODERNIZATION TIME BURDEN
- OLD/INCOMPATIBLE EQUIPMENT OR IT INFRASTRUCTURE
- REGULATORY BURDEN
- OTHER (WRITE-IN)

Comments

Previous Page Next Page

Section 13: Long-Term Development and Investment

This section presents an opportunity for your organization to provide broader, more nuanced input on long-term development and investment needs in the microelectronics industry to help inform U.S. Government policies. Provide responses in Subsection **(A)** U.S. Government Actions and Subsection **(B)** CHIPS Act Impacts.

A. U.S. Government Actions

1. Are there any regulations inhibiting your organization from constructing, expanding, or modernizing any of its facilities in the United States?

- YES
- NO

2. What can the U.S. government do to promote higher and more effective investment in microelectronics manufacturing in the United States?

3. How can economic development organizations better coordinate with your organization to help facilitate investment?

4. How can the U.S. government help facilitate the long-term competitiveness of your organization?

5. What other economic clusters (other than microelectronics) should the U.S. Government invest in that would help strengthen your industry? How could these investments benefit your organization?

6. How can the U.S. Government better facilitate partnerships between research institutions and the semiconductor field and related sectors (e.g., metals, materials, etc.)?

B. CHIPS Act Impacts

1. Has your organization applied or is your organization considering applying for CHIPS Act funding?*

- YES, APPLIED
- YES, CONSIDERING APPLYING
- NO
- NOT ELIGIBLE

2. Is your organization seeing any benefit from the CHIPS Act directly or indirectly?*

- YES, DIRECT BENEFIT
- YES, INDIRECT BENEFIT
- YES, BOTH DIRECT AND INDIRECT BENEFIT
- NO BENEFIT

2.a. Provide an explanation of the overall impact on your organization, including any benefit or negative impact.

3. Has the CHIPS Act incentivized your organization to re-shore or on-shore operations to the U.S.?

- YES, HAVE RE-SHORED OR ON-SHORED
- YES, WILL RE-SHORE OR ON-SHORE
- NO
- NOT APPLICABLE

3.a. Provide an explanation.

**Note: This survey is not part of the application for funding under Section 9902 of the 2021 NDAA (15 USC § 4652). Individual survey responses will not affect your organization's eligibility and/or consideration for CHIPS Act or other government funding.*

Comments	

Previous Page Next Page

Section 14: Certification

The undersigned certifies that the information herein supplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States Government as to any matter within its jurisdiction (18 U.S.C. 1001 (1984 & SUPP. 1197))

Once this survey is complete, save it to your computer and then upload the document to the secure survey portal.

Organization Name	
Organization's Internet Address	
Name of Authorizing Official	
Title of Authorizing Official	
E-mail Address	
Phone Number and Extension	
Date Certified (MM/DD/YYYY)	

In the box below, provide any additional comments or any other information you wish to include regarding this survey assessment.

How many hours did it take to complete this survey?	

Previous Page

Glossary of Terms	
Advanced Computing	(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; or (C) Dynamic random-access memory (DRAM) integrated circuits using a “production” technology node of 18 nanometer half-pitch or less.
Artificial Intelligence	As set forth in 15 U.S.C. 9401(3): A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. Artificial intelligence systems use machine- and human-based inputs to perceive real and virtual environments; abstract such perceptions into models through analysis in an automated manner; and use model inference to formulate options for information or action.
Authorizing Official	An executive officer of the organization or business unit or another individual who has the authority to execute this survey on behalf of the organization.
Capability	The ability to perform standardized design and/or manufacturing steps for producing products within an organization's own facilities and its own employees with little or no outsourcing.
Capital Expenditures	Investments made by an organization in buildings, equipment, property, and systems where the expense is depreciated. This does not include expenditures for consumable materials, other operating expenses, and salaries associated with normal business operations.
Commercial and Government Entity (CAGE) Code	A unique identifier for companies doing or seeking to do business with the U.S. Federal Government. The code supports mechanized government systems and provides a standardized method of identifying a given facility at a specific location. Find CAGE codes at https://cage.dla.mil/search/.
Customer	An entity to which an organization directly delivers the product or service that the facility produces. A customer may be another organization or another facility owned by the same parent organization. The customer may be the end user for the item but often will be an intermediate link in the supply chain, adding additional value before transferring the item to yet another customer.
Data Universal Numbering System (DUNS)	A nine-digit numbering system that uniquely identifies an individual business. Find DUNS codes at http://dnb.com.
Deemed Export	The release of controlled technology or information to a foreign person in the U.S. This includes technology made available to foreign nationals for visual inspection, exchanged orally, and made available by practice or application under the guidance of persons with knowledge of the technology.
Export Administration Regulation (EAR)	U.S. Government regulation designed to control the export of “dual-use” goods, that is, those that have both commercial and military applications, administered by the U.S. Department of Commerce.
Export Controls	(1) Regulations administered by the Bureau of Industry and Security (BIS), U.S. Department of Commerce governing the export of dual-use technologies; (2) International Traffic in Arms Regulations (ITAR) administered by the U.S. Department of State governing products and services provided specifically for defense applications.
Full Time Equivalent (FTE) Employees	Employees who work for 40 hours in a normal work week. Convert part-time employees into "full time equivalents" by taking their work hours as a fraction of 40 hours.
Global Headquarters	A location that serves as the organization’s hub of worldwide operations with all global branches or divisions reporting to it.
Inventory	The goods or materials an organization holds for its own use or for the ultimate goal of sale.
Joint Venture	A joint commercial enterprise taken by two or more distinct business entities.
Non-U.S. Facility	A facility that is physically located outside of the United States.
North American Industry Classification System (NAICS) Code	A unique identifier for the category of product(s) or service(s) provided by an organization. Find NAICS codes at https://www.census.gov/naics/
Outsource	To obtain goods and/or services by contract from a supplier (domestic or foreign) outside the organization.
Production	The process of transforming inputs (raw materials, semi-finished goods, subassemblies, fill finish) into goods or services.
Research and Development (R&D)	Basic and applied research in the engineering sciences, as well as design and development of prototype products and processes.
Service	An intangible product (contrasted to a good, which is a tangible product). Services typically cannot be stored or transported, are instantly perishable, or come into existence at the time they are bought and consumed. Includes testing, maintenance, and repair of equipment previously sold to the customer.
Sole Source Supplier	An organization that is the only source for the supply of parts, components, materials, or services. No alternative U.S. or non-U.S. based suppliers exist other than the current supplier.
Supplier	An entity from which your organization obtains inputs, which may be goods or services. A supplier may be another firm with which your organization has a contractual relationship, or it may be another facility owned by the same parent organization.
Supply Chain Risk Management (SCRM) Program	A coordinated effort within an organization to help identify, monitor, detect and mitigate threats to the supply chain.
U.S. Facility	A facility that is physically located within the United States.
Unique Entity Identifier (UEI)	The Unique Entity ID or UEI is a 12-character alphanumeric ID assigned to an entity by SAM.gov. Find UEIs at https://sam.gov.
United States	The "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, Guam, the Trust Territories, and the U.S. Virgin Islands.