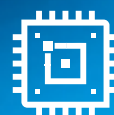




# Funding the CHIPS for America Act: A Matter of Economic and National Security



lead with  
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## Semiconductors are foundational technology, but America's share of chip manufacturing is just 12 percent.

- Semiconductors power our military's advanced weapons systems and support almost every American industry—no automaker, retailer, computer, farm or factory floor can operate without chips.
- Among the many lessons of COVID-19 is that chip shortages can sideline entire segments of the economy. Without U.S. investment in our domestic semiconductor manufacturing capacity, our economy, our military and our society as a whole will remain vulnerable to disruption.
- Despite the growing importance of this technology to the U.S. economy and our technological leadership, America's share of domestically-produced semiconductors declined from 37 percent to 12 percent since 1990, driven by substantial incentives offered by countries in East Asia which created a 30-50 percent cost disadvantage to manufacturing chips in the U.S.

## Support of the semiconductor industry is a matter of national security and securing America's future.

- Modern defense systems rely directly and indirectly on sophisticated electronics powered by advanced semiconductors. The Department of Defense and Congress identified semiconductor-powered technologies as strategic investment areas, including AI, quantum computing, robotics and automation.
- The Pentagon unequivocally called for federal investment in the semiconductor industry. In its 2020 Industrial Capabilities Report to Congress, the DoD wrote that if America does not start investing at the national level, it will create "frightening vulnerability to foreign cut-offs whose impact would make our COVID-related shortages look miniscule."
- Future economic growth depends on semiconductor investment. The U.S. currently does not have any production capacity for leading-edge chips, which will power 5G networks, cloud infrastructure, AI, clean energy, autonomous mobility and quantum computing.



### Time is of the essence:

American businesses in every sector across the economy are facing a semiconductor shortage. The only way to alleviate the current supply-demand imbalance and to prevent future shortages is to increase manufacturing capacity; funding the CHIPS for America Act is a critical component to enable that.

**Now, the House of Representatives must take action to fund the CHIPS Act.**

- The People's Republic of China has invested over \$150 billion in semiconductor manufacturing subsidies, and \$1.4 trillion in pursuit of technology supremacy. During the next decade, China is projected to add 40 percent of new global capacity, becoming the largest semiconductor manufacturing location in the world.

## The U.S. semiconductor industry is an important economic driver and source of American jobs.

- The U.S. semiconductor industry directly supports 250,000 jobs, indirectly supports another one million jobs, and supplies digital infrastructure to countless employers across the country. Federal investment would protect these critical jobs, unlock additional private investment in domestic manufacturing, ensure our military has reliable access to advanced technologies, and secure supply chains across the economy.



**Semiconductor investment has bipartisan support and widespread approval.**

- Nationwide polling indicates overwhelming support of the semiconductor industry—73 percent of Americans recognize that having a strong chipmaking industry is important to national security, 77 percent believe it’s important for the U.S. to reduce reliance on Asia for chip manufacturing and 83 percent of Americans support a proposal to fund domestic chip manufacturing and R&D.

**Congress recognizes the importance of semiconductor technology to the U.S. national security, economy, and technological leadership.**

- In January 2021, the CHIPS for America Act was enacted via the NDAA for FY2021, which authorized new semiconductor incentive programs.
- In June 2021, the Senate included \$52 billion in emergency supplemental appropriations for the CHIPS for America Act in the U.S. Innovation and Competition Act (USICA), passing with a strong 68-32 bipartisan vote.



**The Senate passed funding for the CHIPS Act in June. It’s time for the House of Representatives to act.**

Programs authorized by the CHIPS for America Act (Public Law No. 116 – 283)	Appropriations in the U.S. Innovation and Competition Act (USICA, S. 1260)
Commerce Dept. Financial Assistance Program (Sec. 9902) – grants for semiconductor manufacturing and R&D	\$39B over 5 years, including \$19B in FY22 and \$5B each year for following 4 years
National Semiconductor Technology Center (Sec. 9906(c)) - research and prototyping of advanced semiconductor technology	\$2B in FY22 (Plus \$500,000 for other related R&D) (Plus \$5.5B over time shared with Advanced Packaging and other programs \$2B in FY23, \$1.3B In FY24, \$1.1B in FY25 and FY26)
National Advanced Packaging Manufacturing Program (Sec. 9906(d)) - semiconductor advanced test, assembly and packaging capabilities	\$2.5B in FY22 (Plus \$5.5B over time shared with NSTC and other programs \$2B in FY23, \$1.3B In FY24, \$1.1B in FY25 and FY26)
DoD Public-Private Partnership/Consortium (Sec. 9903(a)) - develop and produce secure microelectronics for DoD, IC, and CI	
National Microelectronics Network for R&D (Sec. 9903(b)) - commercialization of microelectronics R&D	\$2B over 5 years at \$400M annually
Multilateral Semiconductors Security Fund (Sec. 9905) – international support for development and adoption of secure semiconductors and supply chains, including R&D collaborations	\$500M over 5 years at \$100M annually

## Intel is making substantial investments in American leadership

**But the private sector cannot succeed alone. Federal investment is essential to level the playing field and support American jobs.**

As the American leader in semiconductor production, Intel is doing its part to support domestic semiconductor manufacturing.

- In September 2021, Intel **broke ground** on two new leading edge manufacturing facilities in Arizona, investing \$20 billion in advanced semiconductor manufacturing and new foundry capacity.
- In May 2021, Intel **announced** a \$3.5 billion investment in New Mexico for advanced packaging facilities.
- Intel has also announced plans to invest \$60-\$100 billion over 10 years at a new fabrication hub within the U.S., contingent on funding for the CHIPS Act.



# 53,000+

Intel employs more than 53,000 people at U.S.-based innovation hubs in Oregon, Arizona, California, New Mexico and Texas, supporting America's technological edge with advanced research and development and semiconductor manufacturing capacity.

## Additional resources on the need for investment in U.S. semiconductor manufacturing

Why Congress Must Fund CHIPS now: [youtube.com/usachipmaking](https://www.youtube.com/usachipmaking)

- Video overview of fabs and semiconductor manufacturing: [YouTube: Massive Factories Make Tiny Tech](#)
- [Background and resources](#) on the need for U.S. investment in domestic semiconductor manufacturing
- Intel [nationwide polling](#) about Americans' strong support for an investment in U.S. Chipmaking
- Study on [Intel's economic impact](#) in the U.S.
- SIA 2021 State of the U.S. Semiconductor Industry [Report](#)
- SIA 2021 Industry [Fact Sheet](#)
- SIA [economic impact study](#) on proposed federal incentives
- SIA White Paper: [Taking Stock of China's Semiconductor Industry](#)
- Follow us on Twitter [@usa\\_chipmaking](#) for breaking news and updates



## BUILDING A FAB

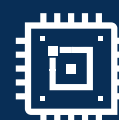
An Intel semiconductor factory, or fab, is a 70-foot-tall structure that produces millions of computer chips.

A fab includes, on average, 1,200 multimillion-dollar tools and 1,500 pieces of utility equipment and takes about three to four years, \$10 billion and 6,000 construction workers to complete. To understand the scale of these facilities, consider that Intel's Ronler Acres fab location (pictured above) is larger than 325 football fields.



[youtube.com/usachipmaking](https://youtube.com/usachipmaking)

Invest in U.S. Chipmaking Now



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