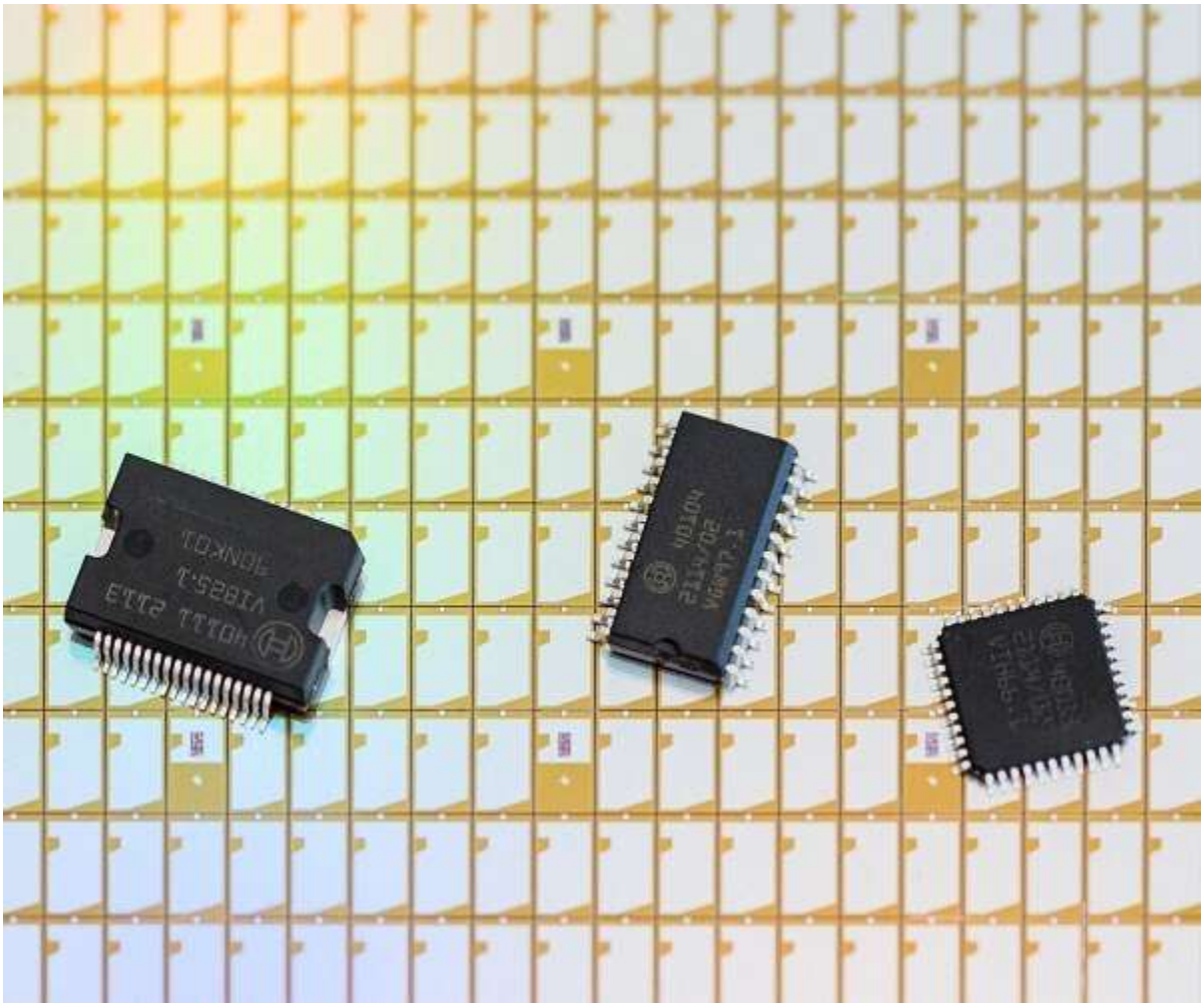
Semiconductor Shortages Mean Longer Waits, Higher Prices for Consumers



(JENS SCHLUETER/AFP via Getty Images)

By Marisa Herman | Wednesday, 08 September 2021

Major automakers are reeling from a COVID-created global shortage of essential semiconductor chips that's likely to last into 2023 and could have wide-ranging repercussions as manufacturers struggle to meet orders for big rigs used in nationwide shipping amid a surging online market.

Car manufacturers, in the U.S. and abroad, have suffered major production setbacks due to the chip shortage that developed amid lockdowns and restrictions enacted worldwide during the pandemic. But the auto-industry is far from the only one that depends on the chips.

"The chip shortage is impacting many industries from auto-manufacturing, smart phone products, appliance manufacturing, and virtually all other consumer electronic products," said financial analyst John Boyd, principal of Florida-based The Boyd Company. "Proliferation of the use of computer chips in both high-tech applications like smart phones and low-tech applications like washing machines and children's toys have created a situation where demand far exceeds supply. It is almost impossible to buy a PS5 video game console today and even companies far removed from high tech are impacted by the chip shortage."

Experts say problems in chip production have persisted for several reasons, including: 1). Several semiconductor factories have had to shut down for virus outbreaks due to being in areas with low vaccination rates; 2). There is now a shortage in raw materials, like silicon, which is necessary to build the chips; 3). A push to get more drivers to ditch gas-powered vehicles for electric ones, which require more chips to operate, has further exacerbated the shortage.

Semiconductor chips can be found in most electronic devices, from gaming consoles to electric toothbrushes, and are used in computing, memory, and storage operations, among other tasks.

In vehicles, they're used for standard functions — such as emergency braking, touchscreen displays, and air bags — and electric vehicles rely on even more chips to operate than gas-powered cars. According to CNBC, a Ford Focus requires about 300 chips, while a new electric vehicle needs as many as 3,000 chips to operate.

When the pandemic forced many manufacturers across the globe to shutter operations at least temporarily, the plants producing the chips were not immune, as lockdowns led to slowdowns in pumping out products.

The supply chain became completely disrupted when companies that use chips reduced their orders expecting demand to plummet in the middle of the pandemic. Then, when the economy began to reopen, the factories that manufacture the chips struggled to keep up with the sudden demand.

"The bottom line is that the pandemic only exacerbated an already difficult situation due to the tech boom and widespread use of computer chips," Boyd said.

While many economists expected the shortage to ease this summer, car makers are now sounding the alarm that the chip shortage may be around for years to come.

During the Munich Motor Show on Monday, several automakers, including Volkswagen, Daimler, and Ford Europe, told CNBC that they aren't sure when the chip shortage will end.

Gunnar Herrmann, the chairman of the management board for Ford Europe, told the outlet that the shortage could continue into 2024.

Volkswagen CEO Herbert Diess told CNBC that the company has suffered losses in China because of the scarcity of chips.

"We are relatively weak because of semiconductor shortages," he said. "We are hit more in China than the rest of the world. That's why we are losing market share."

Last week, General Motors Co. and Ford Motor Co. both announced that chip shortages forced them to curtail operations at several plants. GM said two of its plants that produce pickups and SUV models would be suspended for a few weeks. Ford officials announced changes in operations for F-150 truck plants.

But the chip shortage isn't just impacting production of vehicles that people use to get around town – it's also affecting heavy-duty truck production.

According to The Wall Street Journal, the number of big rigs, which are responsible for transporting most domestic freight, dropped this summer to the lowest level since May 2020.

The Journal reported that North American production of Class 8 trucks in July came in under 15,000 units and the backlog of trucks ordered but not built almost tripled from July 2020 to 262,100, according to transportation data provider ACT Research.

While trucking companies are on an ordering spree — with nearly 37,000 heavy-duty trucks ordered in August, which ACT figures show is the most in five months — the chips needed to fulfill the orders are causing delays.

With a shortage of big rigs, it is likely that consumers will face continued shipping delays on products. As the economy has reopened, consumer demand has increased in-turn — and a shortage of trucks has squeezed shipping efforts.

Financial expert David Peters, founder and owner of David Peters Financial Group and Peters Tax Preparation & Consulting, PC, said consumers shouldn't be surprised if it takes longer or costs more to get a product delivered to them as the chip shortage impacts big rigs.

He said he wouldn't be surprised if certain items that require microchips are prioritized over others — at least for the time being.

He recommends consumers consider "getting by on the tech they have" to avoid price hikes or delays on receiving items that use microchips.

"The real issue is that it's not a problem we can take care of fast," he said. "You can't just start a factory right away. It's a gigantic investment that takes a few years."

To help combat the chip shortage, the Biden administration said it hopes to open as many as eight semiconductor chip factories in the U.S. within 18 months of the Innovation and Competition Act being signed into law. The bill, which proposes setting aside $52 billion for semiconductors, has passed the Senate and is working its way through the House.

Kir Kshetri, a professor at the Bryan School of Business and Economics at the University of North Carolina-Greensboro, said government support is critical to the growth of the industry, especially because a single fabrication plant can cost between $10-20 million to build.

"Building a vibrant semiconductor manufacturing industry is, however, easier said than done," he said. "Some form of public support is thus critical to develop this industry. One important lesson from economies such as Taiwan and South Korea that have been successful in semiconductor manufacturing is that government support played a key role in the growth of this industry."

While the creation of more factories would help the U.S. produce more chips at home in the long run, it is unlikely that the law would solve the current crunch because it would take years before the plants are fully operational.

Intel has already announced plans to construct two new chip facilities in Arizona, but neither will be ready until at least 2024.