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OC LEADER BOARD Opinion, Analysis, Insight

What the CHIPS Act Misses



By Shane Whiteside and Travis Kelly



Editor's Note: Laguna Hills resident Shane Whiteside is president and chief executive of Anaheim-based Summit *Interconnect*, the largest privately held printed circuit board manufacturer in North America, focused on quick-turn manufacturing for aerospace, defense and other commercial sectors. Travis Kelly is chairman of the Printed Circuit Board Association of America and CEO of circuit board parts maker Isola Group. The Business Journal's Special Report on Technology and Cybersecurity begins on page 15.

California has long been at the forefront of semiconductor technology. The CHIPS Act is helping the industry bring thousands of high-tech jobs to the state. While the CHIPS

Act was a great first step in restoring a balanced and resilient semiconductor supply chain, it doesn't address the supporting microelectronics ecosystem.

Computer chips don't float. Every chip needs a printed circuit board, or PCB, to function. PCBs are sometimes mistaken for simple green pieces of plastic. In fact, PCBs are complex and delicately engineered and can include dozens of layers and millions of connections. Everything in modern life-from dishwashers to electric vehicles-requires printed circuit boards to function.

Right here in Orange County, the 400 employees at Summit Interconnect's three factories produce a significant portion of the nation's output of PCBs. The men and women working these lines at Summit and other smaller PCB manufacturers in the county understand their important contribution to the microelectronics ecosystem. The PCBs that they make drive critical infrastructure and national defense systems.

The problem is they are part of an industry headed in the wrong direction.

The Issue

We once made 30% of the world's supply of PCBs in America. Today our share has dwindled to barely 4%. This means that despite inventing and leading in PCB technology, America depends on China and other Asian nations to manufacture over 90% of the worldwide supply.

For the CHIPS Act to have the intended impact, Congress must take strong action to support the whole ecosystem. Otherwise, most of those new semiconductors about to be built around the country will be shipped to Asia to be packaged with PCBs and substrates before being connected to an end use device. Without strong action, the resiliency of our supply chain remains at risk.

We appreciate what Congress did in the CHIPS Act. It provided the initial investment that attracted private investment in the semiconductor industry. It means jobs and prosperity for our state. But our dependence on other nations puts at risk an uninterrupted supply of PCBs for critical infrastructure like telecommunications, banking, medical, space and national security systems. All it would

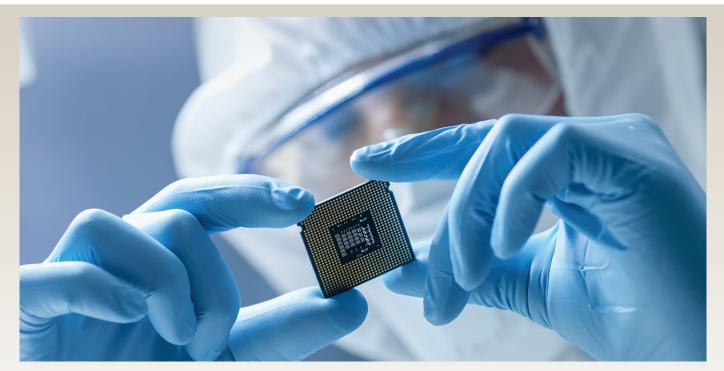
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take is one political decision or natural disaster to choke off the supply of these vital microelectronic components.

A Possible Solution

To nurture and grow the entire microelectronics ecosystem, we call on Congress to pass H.R. 3249, the **Protecting Circuit Boards and Substrates** (PCBS) Act. The PCBS Act calls for 25% tax credit for companies buying American-made PCBs along with a \$3

billion investment in research and development, physical plant, and workforce development. California businesses need this support to reverse many decades of offshoring these critical technologies and create the trusted, secure, and resilient supply chain our nation needs.

Now is the time to finish the work that the CHIPS Act started and help level the playing field for American companies and for California.