



June 16, 2022

Dear Members of Congress:

On behalf of the members of IPC International, Inc. ([IPC](#)), the Printed Circuit Board Association of America ([PCBAA](#)), and the U.S. Partnership for Assured Electronics ([USPAE](#)), we urge you to support H.R. 7677, the *Supporting American Printed Circuit Boards Act of 2022*.

What H.R. 7677 Does

This bill would spur the domestic manufacturing of printed circuit boards (PCBs) by incentivizing purchases of domestically produced PCBs as well as industry investments in factories, equipment, workforce training, and research and development. Some provisions of the bill are modeled on the kinds of support provided to the closely related semiconductor sector under the CHIPS for America Act of 2021.

What are PCBs?

PCBs are as integral to the electronics ecosystem as semiconductors. They are the highly technical physical platform upon which microelectronic components such as semiconductors and capacitors are mounted and interconnected. Electronic systems cannot function without PCBs. Simply stated, chips don't float, but rather must be assembled with an advanced technology PCB to create a functioning electronic system.

State of the U.S. PCB Industry

Despite their importance to electronic systems, domestic PCB production has dropped to dangerously low levels over the last two decades, and the United States has lost its historic dominance in the fabrication of PCBs. A recent [report](#) published by IPC noted that since 2000, the U.S. share of global PCB production has fallen from over 30 percent to just four percent, with China now dominating the sector at more than 50 percent.

While U.S. companies have seen the PCB market share move to China, bolstered by Chinese subsidies, offshore manufacturers are outpacing U.S. firms in technology advancement in PCB technology at an alarming rate, making it harder for U.S. firms to compete in the global marketplace. The report emphasized that any loss of access to non-domestic sources of PCBs would be "catastrophic." Furthermore, a 2018 Department of Commerce [report](#) characterized the PCB sector as "dying on the vine," and the Department's February 2022 [Assessment of the Critical Supply Chains Supporting the Information and Communication Technology Industry](#) noted the same supply chain risks.

Complexity of PCB Manufacturing

PCBs are highly advanced microelectronics that require precise manufacturing capability, multiple types of costly capital equipment, well-trained workers, and up to 100 steps in the manufacturing process.

PCBs are custom-designed and fabricated to provide the unique electrical routing, impedance, and signal integrity required for each product's performance.

Relying on Foreign Sources Poses Economic and National Security Risks

If the United States wants to build a wide variety of critical microelectronic products and systems, it must maintain a domestic PCB industrial base because, unlike other components, there is no easy "drop in" replacement if a particular source of PCBs is cut off. Any interruptions in global trade would present a real risk of the United States losing the ability to produce electronics for weapons systems, communications equipment, medical devices, energy systems, and more because of our reliance on PCBs supplied from Asia and that the United States has no back-up plan. This threat was realized at the onset of the COVID-19 pandemic when the United States could not get enough PCBs to ramp-up ventilator production because China was diverting supply to fill its own needs.

H.R. 7677 will stimulate critical investments in PCB research and manufacturing capacity and capability in the United States. Specifically, the bill provides both tax and direct financial incentives that will spur domestic production and increase access to this critical electronic component, which will help ease an already strained U.S. supply chain and improve national security.

By solely focusing on semiconductors, the United States would not be solving the problem that it seeks to resolve. The U.S. Government needs to take a holistic approach to the electronics industry, and we urge you to support and cosponsor this legislation to bolster a critical microelectronic part of that system, the Printed Circuit Board.

Sincerely,



John Mitchell
President & CEO
IPC



Travis Kelly
Chairman
PCBAA



Chris Peters
Executive Director
USPAE