




India and US Sign Deal to Set Up Semiconductor Plant in Uttar Pradesh


India and the US coming together to set up a manufacturing facility for semiconductors. It will be India's first Multi-material defense fab.

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India and the US to set up a new semiconductor fabrication plant in UP, India



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In a landmark agreement, India and the US have signed a deal to establish a new [semiconductor](#) fabrication plant in Jewar, Uttar Pradesh. This cutting-edge facility, named 'Shakti', will be the first of its kind in India and one of the world's first Multi-material Fab for national security. The announcement was made on September 21, 2024, in a joint statement released by the White House after a meeting between [Prime Minister Narendra Modi](#) and President Joe Biden in Delaware.

Collaborative efforts for advanced technologies

The US Space Force will collaborate with India Semiconductor Mission, Bharat Semi, and 3rdiTech to set up the manufacturing facility for infrared, gallium nitride, and silicon carbide semiconductors. This strategic partnership aims to develop semiconductors that will be utilized in advanced sensing, communication, and power electronics, with a specific focus on national security, self-driven vehicles, and green energy.

The Fab will focus on three essential pillars for modern warfighting—advanced sensing, advanced communications, and high voltage power electronics—which have crucial applications not only in defense but also in commercial sectors such as railways, telecom infrastructure, data centers, and green energy.

The birth of Bharat Semi: A success story

From its humble beginnings at the Indian Institute of Technology in Delhi to securing a place at a prestigious accelerator at the University of California in Berkeley, Bharat Semi, and its holding entity 3rdiTech, has come a long way. This Indian start-up, founded by Vrinda Kapoor, Vinayak Dalmia, and Mukul Sarkar, is dedicated to designing chips, especially for military and defense purposes.

The firm's journey culminates in being at the forefront of designing chips and manufacturing them at India's first fabrication plant focused on national security, with assistance from cutting-edge technology and equipment provided by the United States.

Vrinda Kapoor, a biologist and the firm's cofounder told The Indian Express: "With the latest deal with the US, we will get manufacturing technology to India, so that we can design and manufacture chips for our military right here in India. We have committed to the government that any Indian company that wants to work in this space, we will give them capacity (at the fab)."

Strengthening supply chains and research collaboration

Under the partnership, Global Foundries (GF) will establish a GF Kolkata Power Center to ensure resilient, secure, and sustainable semiconductor supply chains. The Kolkata facility will conduct research that propels chip technology forward, facilitating advancements in pollution control, connected vehicles, IoT, AI, and data centers.

Additionally, the US-India Advanced Materials R&D Forum has been established to foster collaboration between American and Indian universities, national laboratories, and private-sector researchers.

This collaboration will not only benefit defense applications but will also lead to significant commercial applications in various sectors such as railways, telecom infrastructure, data centers, and green energy.

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