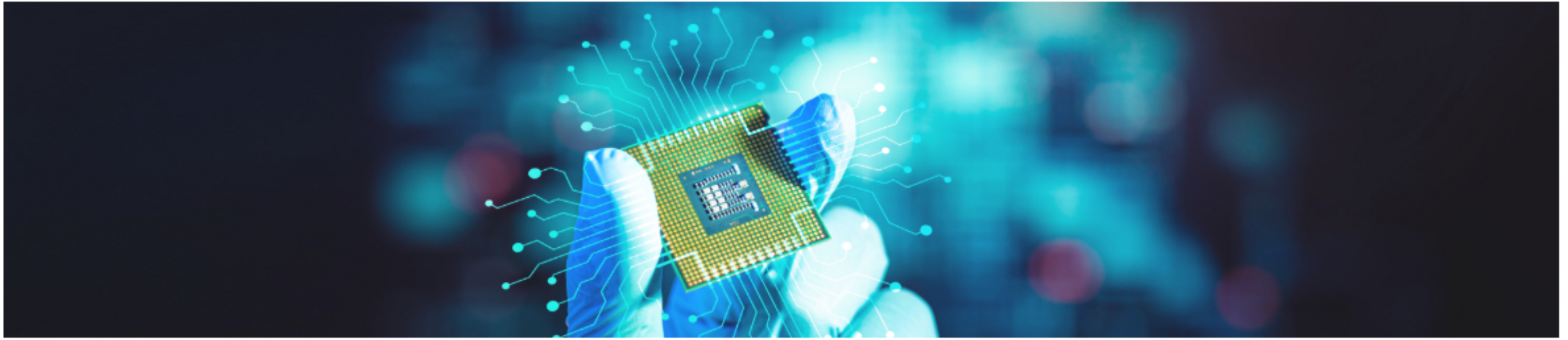


## India's Evolving Semiconductor Industry Landscape



With growing demand for electronic devices in daily life and the ongoing digital transformation of operations across industries, semiconductors have become a critical component across all sectors. For many years, India primarily imported finished products such as smartphones, computers and robotic devices. However, recent initiatives/schemes by the Government of India have led to the establishment of OSAT (Outsourced Semiconductor Assembly and Test) facilities across several end-use sectors.

Over the last five years, India's semiconductor sector recorded a CAGR of 10.5% in investments, reaching US \$ 37.1 million in 2024. This upward trend is projected to continue, with investments expected to increase to US\$ 109.6 million by 2030. This growth is being driven by increased domestic manufacturing in automotive electronics, telecom infrastructure, industrial automation and consumer electronics, fuelled especially by the expansion of 5G and AI-based technologies.

### The Impact

In 2024, the biggest demand for semiconductors came from the automotive sector (33%), boosted by the EV revolution. The second-largest demand for semiconductors in India was from the telecom equipment sector (24%), fuelled by the 5G rollout, followed by segments such as data centres (14%) and industrial automation (14%), which saw growth on account of increasing digital transformation of companies' operations.

India's exports of semiconductor components and devices reached US\$ 4.21 billion in 2024, growing at a healthy CAGR of 7.4% over the 10-year period from 2015 to 2024. Key products include IC chips, capacitors, printed circuit boards and PV cells, with over 200 countries importing from India. Strong export growth in PV panels and telecom equipment reflects India's rising stature in the global market.

### Policies Driving the Semiconductor Ecosystem

India has laid out a compelling policy framework under the *Make in India* programme and the India Semiconductor Mission initiative to support its semiconductor ambitions, with the key aspects of support as follows:

- Up to 50% fiscal support against the project cost for display and semiconductor fabrication units.
- PLI scheme for large-scale electronics manufacturing (mobile phones) with an incentive of 4% to 6% on incremental sales of manufactured goods.
- PLI scheme for IT hardware includes an incentive up to 5% on incremental sales of manufactured goods.
- Support in upgradation of existing semiconductor assembly, testing, marking and packaging facilities.
- Design Linked Incentive (DLI) scheme with 50% support on eligible R&D expenditure.
- Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECES) offers financial incentives to promote the manufacturing of electronic components and semiconductors.
- The EMC 2.0 scheme supports the creation of electronics manufacturing clusters that provide state-of-the-art facilities and ecosystem support to companies operating in the sector.
- The Chips to Startup (C2S) programme will train 85,000 engineers in Very Large Scale Integration (VLSI) and embedded systems.

These initiatives collectively aim to build a world-class semiconductor manufacturing ecosystem within India, from R&D to design to fabrication and assembly.

### The Way Ahead

With the entry of global chipmakers, expanding domestic capabilities and a surge in R&D investments, India is at the edge of a semiconductor breakthrough. The focus on sustainable and inclusive growth, alongside cutting-edge technological development, positions India not just as a manufacturing hub but a leader in innovation.