

India's Semiconductor Vision Gathers Momentum with 3nm Chip Design and Large-Scale Talent Development Initiatives

Government Pushes for End-to-End Chip Ecosystem with Talent and Industry Support

Enhancing domestic capabilities in critical technologies, creating high-value jobs, enabling indigenous digital infrastructure, and positioning India as a trusted global partner in semiconductors

Posted On: 25 JUL 2025 4:34PM by PIB Delhi

India is home to nearly 20% of the world's chip design engineers. Building on this strong talent base, the Government is facilitating the development of a complete semiconductor ecosystem in India.

Leading semiconductor companies have established chip design and research centers in India. A 3nm semiconductor chip designed in India was recently unveiled. It showcases the technical capabilities of Indian engineers and importance of Indian design centres in global semiconductor industry.

To foster talent development in the semiconductor chip design, the Government has launched several initiatives, as outlined below:

- New curriculum by All India Council for Technical Education (AICTE) for VLSI Design & Technology, Integrated Circuit (IC) manufacturing

- Developing 85,000 skilled manpower in semiconductor design sector & providing EDA tools to design semiconductor chips

- 45,000+ students from 100 institutions enrolled so far

- Skilled Manpower Advanced Research and Training (SMART) Lab at NIELIT Calicut to train 1 lakh engineers nation-wide with 44,000+ engineers already trained

- Collaboration with industry and universities such as Lam Research, IBM and Purdue University

Leveraging the country's large talent pool, global semiconductor design companies are now rapidly expanding their workforce in India to design cutting-edge chips.

Other initiatives undertaken by Government to promote semiconductor ecosystem:

Semicon India programme

Approved with a total outlay of Rs 76,000 crore for catalysing semiconductor and display manufacturing ecosystem in India

Six (6) semiconductor manufacturing and 22 design-linked incentive (DLI) projects have been approved

72 companies are provided chip design infrastructure such as EDA tools & FPGA (Field Programmable Gate Array) boards from Synopsys, Cadence, Siemens, etc.

Access to the Post Silicon Validation & Testing and Packaging Support is also being provided

This information was submitted by Union Minister of State for Electronics and Information Technology, Shri Jitin Prasada, in the Lok Sabha today.

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(Release ID: 2148393)