

NIELIT and SCL Mohali Collaborate to Make Indigenous 1.2 μm Process Design Kit Available on eChipHub

eChipHub serves as a comprehensive national platform for semiconductor design education and capacity building

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National Institute of Electronics and Information Technology (NIELIT), an autonomous scientific society under the Ministry of Electronics and Information Technology (MeitY), Government of India, takes a significant step towards strengthening India's semiconductor ecosystem and advancing the objectives of the India Semiconductor Mission (ISM) by doing a collaboration with the Semiconductor Laboratory (SCL), Mohali, an autonomous organization under MeitY, to make the indigenous 1.2 μm Process Design Kit (PDK) available through eChipHub.



The initiative will provide students, researchers, faculty members, startups, MSMEs and industry professionals across the country with access to an indigenous semiconductor process technology for integrated circuit (IC) design and prototyping, thereby promoting practical semiconductor design education and innovation.

eChipHub has been implemented and is being managed by NIELIT under the MeitY-funded project titled "Development of EdTech Platform in Semiconductor Space to Democratize Chip Design and Development Ecosystem for Masses." The platform has been jointly developed by NIELIT and

SoCTeamup Semiconductors Pvt. Ltd. and serves as a comprehensive national platform for semiconductor design education and capacity building. Under the ongoing MeitY-funded EdTech project, NIELIT aims to train nearly 30,000 students in semiconductor design through structured courses, bootcamps, faculty development programmes, internships and industry-academia collaborative initiatives.

As part of the collaboration, the SCL 1.2 μm Process Design Kit (PDK) has been integrated with eChipHub and will be made available through a secure Aadhaar-authenticated download mechanism, ensuring responsible access while encouraging wider adoption across the semiconductor ecosystem.

The integration of the indigenous open-source PDK with open-source EDA toolchains creates one of India's first indigenous design-to-fabrication learning pathways. It enables learners and innovators to undertake the complete semiconductor design workflow—from RTL design and simulation to synthesis, physical implementation and fabrication-oriented design—using indigenous process technology.

The collaboration further strengthens eChipHub by complementing its implementation-oriented courses, cloud-based virtual laboratories, Faculty Development Programmes (FDPs), workshops, internships, hackathons, Academic Alliance initiatives and collaborative chip design projects.

Through this collaboration, NIELIT and SCL are laying the foundation for an integrated design-to-fabrication learning and prototyping ecosystem, empowering students, researchers, innovators, startups, MSMEs and academic institutions to transform ideas into fabrication-ready integrated circuit designs using indigenous technologies, thereby contributing to India's vision of becoming a global hub for semiconductor design, innovation and product development.

On 25 April 2025, in the presence of Shri S. Krishnan, Secretary, MeitY, NIELIT signed a Memorandum of Understanding (MoU) with the Semiconductor Laboratory (SCL), Mohali to foster collaboration in semiconductor research and development, innovation, and skilling. The partnership aims to strengthen India's semiconductor ecosystem by promoting indigenous technology development, enhancing capacity building, supporting academia-industry collaboration, and creating a skilled workforce.



About NIELIT

National Institute of Electronics & Information Technology (NIELIT), an Autonomous Scientific Society of the Ministry of Electronics and Information Technology (MeitY), Government of India, has been a pioneer in skill development and digital empowerment.

With its extensive presence through 56 NIELIT centers, over 700 accredited institutes, and 8,000+ facilitation centers, NIELIT has skilled and certified millions of students in emerging technologies in the E&ICT domain.

NIELIT has been conferred the status of "Deemed to be University" under the distinct category by the Ministry of Education having its main campus at Ropar (Punjab) and eleven constituent campuses located in Aizawl, Agartala, Calicut, Chhatrapati Sambhajnagar, Gorakhpur, Imphal, Itanagar, Ajmer, Kohima, Patna and Srinagar, aims to revolutionize higher education in E&ICT domain using digital technologies.

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