

INTEGRATED CIRCUIT (IC) DESIGN SUMMER CAMP

15-18 JULY 2025



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The Integrated Circuit (IC) Design Summer organized the Singapore Camp, by Semiconductor Industry Association (SSIA), is a transformative initiative designed to introduce students to the exciting world of IC design while bridging the gap between academic learning and industry demands. This immersive program provides a comprehensive understanding of IC design, blending theoretical foundations with real-world applications to equip participants with the essential skills needed for success in the semiconductor sector.

Through hands-on projects and mentorship from industry experts, students will gain valuable insights into the intricacies of IC design, enhancing their problem-solving abilities and technical expertise. More than just a learning experience, this camp serves as a stepping-stone toward a rewarding career in one of the most critical fields driving global innovation.

AMD micron.





SEMICONDUCTOR AND ELECTRONIC CHIPS IN OUR DAILY LIVES



WHAT IS AN INTEGRATED CIRCUIT AND HOW IT SHAPES THE FUTURE

An integrated chip (IC) is a microchip that combines hundreds to millions of electronic components - such as transistors, resistors, and capacitors—on a semiconductor substrate like silicon to perform essential functions in logic, processing, and memory. Built using technologies like Bipolar, CMOS, and BiCMOS, ICs are the foundation of modern electronics.

As semiconductor innovation advances, smaller, faster, and more efficient chips drive breakthroughs in **5G**, **AI**, **IoT**, **smart devices**, **robotics**, **autonomous vehicles**, **and more**, powering the future of connectivity, automation, and intelligent systems.

SMARTER FUTURE AHEAD

ELECTRONICS ENABLE OUR TECHNOLOGIES



Artificial Intelligence



Big Data



Augmented Reality and Virtual Reality



5G



Cloud Computing



Internet of Things



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AMD

AMD, a global leader in highperformance and adaptive computing, is shaping the future of technology - redefining how billions live, work, and play through cutting-edge innovations.

What you will learn at AMD:

- Gain firsthand insights from AMD experts on the semiconductor industry.
- Debunk common myths and explore career opportunities in IC design.
- Dive into a dedicated session on IC design, showcasing AMD's latest technologies.
- Experience a day in the life of an IC designer and learn about real-world applications.
- Network with AMDers and explore career paths in the world of semiconductors.

15-Jul

micron.

Micron leads in memory and storage solutions, is revolutionizing the semiconductor industry with state-of-the-art NAND technology and advanced manufacturing.

What you will learn at Micron:

- Get exclusive, first-hand insights into Micron's cutting-edge innovations.
- Experience the Fab viewing gallery, showcasing NAND product manufacturing.
- Develop technical skills and enhance troubleshooting and critical thinking.
- Learn about emerging industry trends from Micron experts.
- Engage with industry professionals and explore future career opportunities.

16-Jul



Marvell is a leader in custom silicon solutions for AI data infrastructure, enabling hyperscalers with chip designs that maximize performance, minimize latency, and deliver high-speed connectivity.

What you will learn at Marvell:

- Gain insights into Marvell's pivotal role in Al-driven semiconductor advancements
- Experience the "Own What's Next" culture, fostering individual growth, learning and innovation
- Network with young engineers and hear their career journeys
- See firsthand how Marvell employees leverage AI to enhance their work and innovation

17-Jul



Infineon Technologies Asia Pacific, a regional hub with 2,500+ employees, drives innovation across R&D, Sales, Marketing, Advanced Test Manufacturing, Supply Chain, and Corporate Functions.

What you will learn at Infineon:

- Explore Driving Decarbonization and Digitalization through Infineon's cutting-edge technologies.
- Gain insights from expert-led sessions, panel discussions, and virtual factory tours.
- Experience the role of an IC Design Engineer firsthand.
- Witness real-world applications in the lab+demo tour, showcasing Infineon's innovations.
- A unique opportunity to discover the future of semiconductors.

18-Jul

