MOSart Labs

Art of VLSI

Advanced RTL Design Program

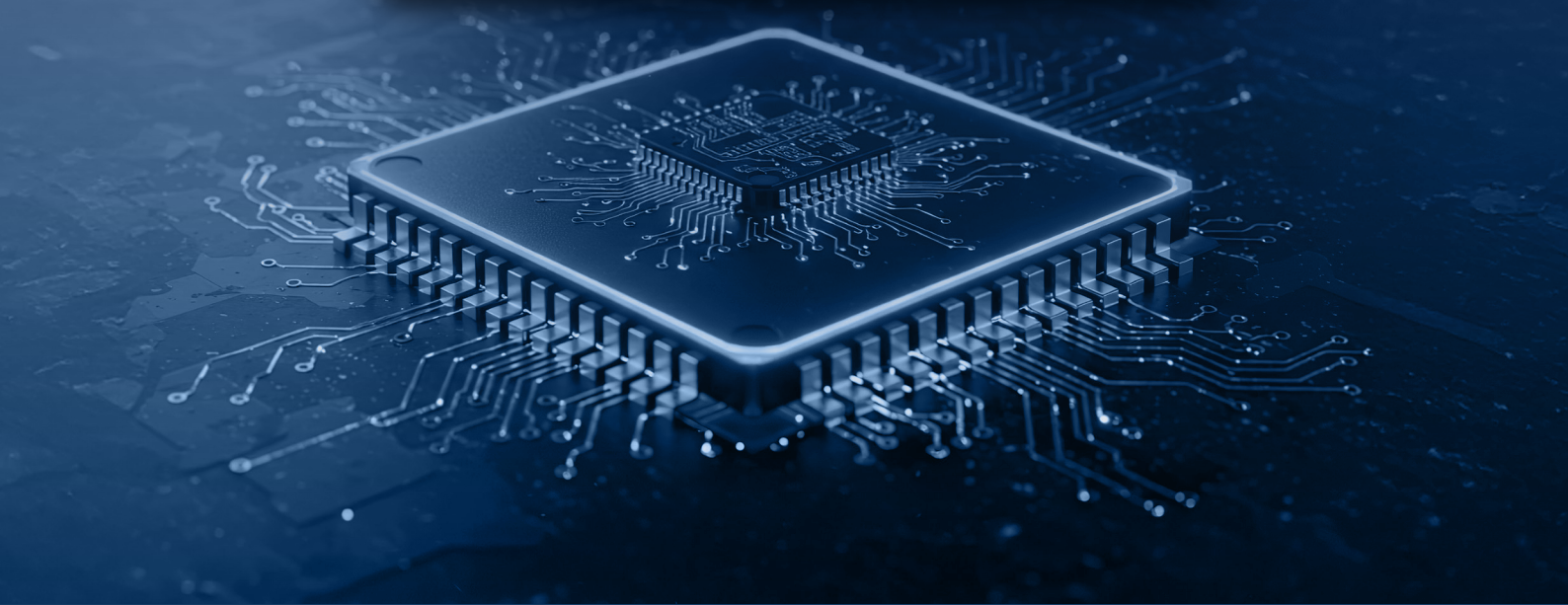
(Offline Mode at our Hyderabad Centre)

Your Gateway to Semiconductor World

- 6 Months Industry Ready Program
- 100% Placement-Oriented Program
- Full-time offline course
- Real chip design projects
- 2 Months Internship included (IP/industry project)
- Hands-on training with industry-standard tools

Get trained by **India's leading chip design experts**

ams OSRAM · Micron · intel



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About RTL Design Program

The semiconductor industry is rapidly expanding, creating strong demand for skilled RTL Design Engineers. MOSart Labs is an active chip design company, not just a training institute, offering the Advanced RTL Design Offline Program to help students build industry-ready RTL design skills.

Learn directly in a real chip design environment with hands-on training in Verilog, System-Verilog, RTL Coding, Synthesis, STA, FPGA, and industry-standard EDA tools while working on practical design projects.

The 6-Month Offline Program, including a 2-Month Industry Internship Project, combines expert mentorship, real-world project experience, and industry exposure to prepare you for a successful career in VLSI RTL Design.

Learn Inside a Chip Design Company

Train inside an active chip design company with real industry workflows.

Full-Time Classroom Learning

Offline instructor-led training with personalized mentoring and continuous practical lab sessions.

500+ Hours of RTL Labs

Gain extensive hands-on RTL coding, simulation, synthesis, and debugging experience.

2-Month Industry Internship

Work on real RTL projects with expert guidance and practical exposure.

Learn from Industry Veterans

Learn directly from experienced VLSI professionals with decades of industry expertise.

High-Paying Career Opportunities

Build job-ready RTL skills for rewarding careers in top semiconductor companies.

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Inside MOSart Labs







Offline Classes | 9:30 AM to 5:30 PM











100+ Potential Hiring Companies

Texas Instruments · ams OSRAM · Micron · NVIDIA · cadence · SYNOPSYS® · QUALCOMM®

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2 Month Industry Project Internship

At MOSart Labs, an active chip design company, learning extends beyond the classroom. During the 2-month internship, you'll work on a complete RTL Design project following industry-standard development methodologies.

From Project Setup & Architecture Design to RTL Design & Coding, Functional Simulation & Debugging, Synthesis & RTL Optimization, Design Validation & Quality Checks, and Industry Project Presentation, you'll experience the complete RTL design lifecycle under the guidance of experienced VLSI engineers.

Build practical project experience, strengthen your portfolio, and graduate with the confidence to contribute to real semiconductor design teams from day one.

Internship Project

A 2-month industry-oriented RTL design project where students design, simulate, optimize, and validate a digital IP from specification to synthesis using industry-standard EDA tools.

1
Project Setup & Architecture Design
Understand specifications, define the microarchitecture, and prepare the design environment.

2
RTL Design & Coding
Develop synthesizable Verilog/SystemVerilog RTL modules following industry coding standards

3
Functional Simulation & Debugging
Simulate, verify functionality, and debug the RTL design using professional EDA tools.

4
Synthesis & RTL Optimization
Perform synthesis and optimize the design for timing, area, and power.

5
Design Validation & Quality Checks
Validate the design through lint, CDC, code reviews, and functional quality checks.

6
Industry Project Presentation
Present the complete RTL project with technical documentation and design review.

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A 6 Months Journey - Advanced RTL Design

Phase 1 (Offline)
2 Months (RTL Design Foundation) with Course Project

- Learn the fundamentals of RTL Design.
- Master Verilog, FSMs, simulation, synthesis, and debugging.
- Build a strong RTL design foundation.

Phase 2 (Offline)
2 Months (Advanced RTL Design) with Course Project

- Learn System Verilog, AMBA, and IP Integration.
- Apply advanced RTL concepts through hands-on projects.

Phase 3 (Offline)
2 Months (Internship Project)

- Get your internship project reviewed by industry experts.
- Work on an industry-level Advanced RTL Design internship project.
- Gain real semiconductor industry experience.

Phase 4
Internship Project Review

- Extended internship project with hands-on experience on real-world design challenges.
- Weekly 1:1 mentorship sessions with design experts for personalized guidance and feedback.

Phase 5
Job Interview Preparation

- Build your portfolio and attend mock interviews.
- Prepare thoroughly for placement opportunities.

Phase 6
Get Placed

- Attend interviews scheduled by our placement team.
- Crack your interviews and enter the semiconductor industry.

OUR LEADERSHIP TEAM



Rajesh Gupta
27 Years Experience
Ex- Country Head
Micron & ams OSRAM



Dr. Krishna Kanth
23 Years Experience
Ex-Director
ams OSRAM

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What You Will Learn

Foundation Module

RTL Design

- Digital System Design
- Verilog HDL Programming
- RTL Coding Techniques
- Combinational Logic Design
- Sequential Logic Design
- Finite State Machines (FSM)
- RTL Simulation & Debugging
- Synthesis & Optimization
- RISC-V Processor BasicsRISC-V Processor Basics
- Design for Test (DFT)

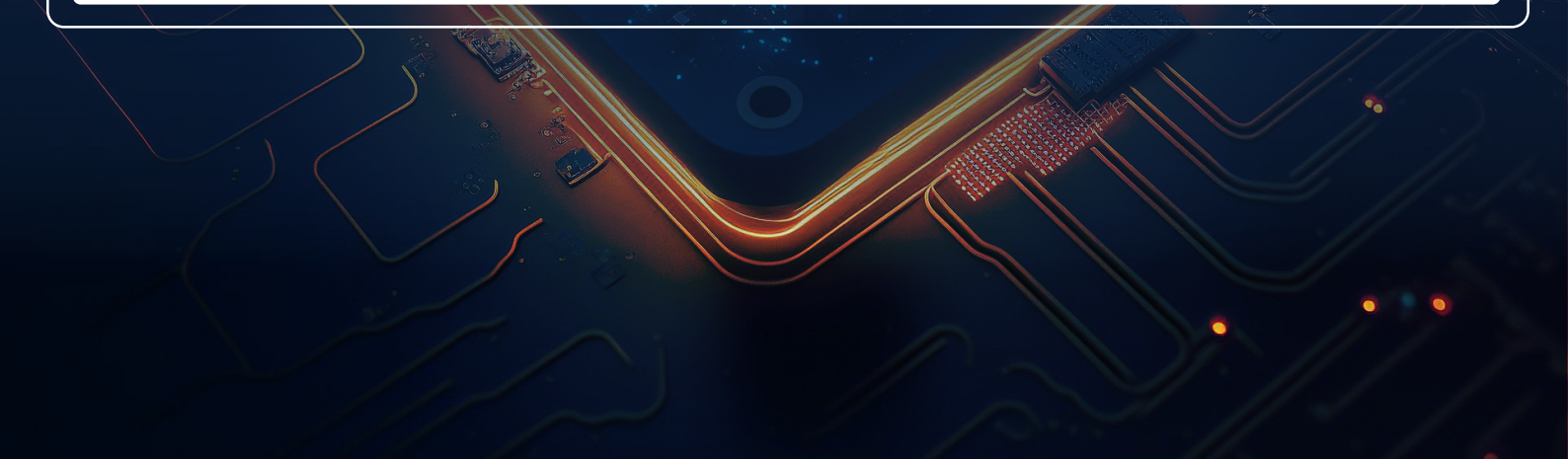
Specialization Module

Advanced RTL Design

- System Verilog Programming
- SoC Architecture Design
- IP Integration Techniques
- AMBA Bus Protocols
- Pipelining & Parallelism
- Multi-Clock Domain Design
- Processor Design Concepts
- Performance Optimization
- Advanced RTL Debugging
- Industry RTL ProjectIndustry RTL Project

Career Opportunities

- RTL Design Engineer
- FPGA Design Engineer
- ASIC Design Engineer
- Digital Design Engineer
- Verification Engineer
- SoC Design Engineer



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Program Outcomes

By the end of this program, you'll have the technical skills, practical experience, and confidence to begin your career in RTL Design.

Become an Industry-Ready RTL Engineer
Master RTL design using Verilog/SystemVerilog with hands-on project experience.

Master the Complete RTL Design Flow
Gain expertise from architecture design to RTL coding, simulation, synthesis, and validation.

Build a Strong Industry Portfolio
Showcase industry-level RTL projects completed during coursework and internship.

Industry Internship Experience
Gain real-world exposure by developing industry-grade RTL designs.

Master Industry-Standard EDA Tools
Gain practical experience with leading semiconductor design and verification tools.

SYNOPSYS® cadence®