

ELECTRONIC DESIGN AUTOMATION SOFTWARE

What We Offer

Design &
Simulation



Prototyping &
Fabrication



Testing &
Characterization



VILNIUS TECH and Kaunas University of Technology provide a comprehensive design and research environment for CMOS and GaN integrated circuits and advanced electronic systems. Comprehensive services cover the entire microelectronics development cycle, from system-level modeling and schematic creation to layout, verification, and fabrication-ready data generation. The team operates with industrial-grade EDA tools and process design kits (PDKs).

Key applications

Custom integrated
circuit design

High-frequency
engineering

Multi-layer PCB design

Capabilities and services

1. Analog, mixed-signal, RF, and microwave circuit design
2. Digital and embedded-system development
3. Multilayer PCB architecture design and validation
4. Transistor-level modelling and electromagnetic analysis
5. Design-rule and layout-versus-schematic (DRC/LVS) verification
6. Generation of GDSII and manufacturing-ready deliverables compliant with foundry specifications
7. Specification and datasheet preparation, project cost and NRE estimation, and risk-controlled planning to ensure successful transition from concept to fabrication

Altium Designer Academic License

Electronic Design Automation (EDA) Software for PCB Design

- Design domains: schematic capture, PCB layout, 3D modelling, and simulation
- Supported layers: up to 32 signal layers and 16 plane layers
- Integrated MCAD collaboration (STEP/3D export, mechanical clearance)
- Real-time design rule checking (DRC) and electrical validation
- Signal integrity and power integrity analysis tools included
- Integration with version control (SVN, Git) and cloud workspace (Altium 365)
- Output formats: Gerber, ODB++, IPC-2581, BOM, Pick & Place data

Contact person:

Šarūnas Jankauskas

Proto Lab, M-Lab

Kaunas University of Technology

sarunas.jankauskas@ktu.lt

Contact person:

Dr. Vaidotas Barzdėnas

Faculty of Electronics

Vilnius TECH

vaidotas.barzdenas@vilniustech.lt

Keysight EESof EDA / PathWave Design Academic License

Electronic Design Automation (EDA) Software for RF, Microwave, and High-Speed Design

- Design domains: RF, microwave, analog/mixed-signal, and high-speed digital
- Frequency range: DC to 110 GHz (depending on license and model)
- Simulation types: linear, harmonic balance, transient, envelope, EM (Momentum/FEM)
- Integrated layout, DRC/LVS, and EM co-simulation (3D EMPro interface)
- System-level design and verification using PathWave SystemVue
- Schematic-driven PCB and MMIC design with foundry PDK integration
- Supported PDKs: GaN, GaAs, CMOS, SiGe (IHP, WIN, TSMC, UMS, etc.)

Contact person:

Šarūnas Jankauskas

Proto Lab, M-Lab

Kaunas University of Technology
sarunas.jankauskas@ktu.lt

Contact person:

Dr. Vaidotas Barzdėnas

Faculty of Electronics

Vilnius TECH

vaidotas.barzdenas@vilniustech.lt

Cadence IC Package Academic License

Integrated Circuit Design Software Suite

- Design domains: Analog, Digital, RF, and Mixed-Signal ICs
- Supported technologies: 180 nm – 3 nm CMOS/BiCMOS nodes
- Simulation engines: Spectre, APS, QRC, and ADE-XL integrated flow
- Layout and physical verification: Virtuoso Layout Suite, Assura, and PVS
- Packaging design: Allegro Package Designer with SiP codesign capability
- Schematic-driven layout, parametric cells, and design reuse automation
- Process Design Kit (PDK) integration for TSMC, GF, IHP, and UMC technologies

Contact person:

Šarūnas Jankauskas

Proto Lab, M-Lab

Kaunas University of Technology
sarunas.jankauskas@ktu.lt

Contact person:

Dr. Vaidotas Barzdėnas

Faculty of Electronics

Vilnius TECH

vaidotas.barzdenas@vilniustech.lt

IC Nanometer Design Software Suite Academic License

Software Package for Integrated Circuit Design

- Custom IC design and layout – IC Station, Aprisa, Calibre Design Enhancer for schematic entry, floor-planning, and physical design
- Analog, mixed-signal, and digital simulation – Analog FastSPICE Platform, Eldo, Questa ADMS, and ModelSim / Questa Sim
- Physical verification and sign-off – Calibre DRC, LVS, xACT, and Calibre PERC for design rule checking, layoutvs-schematic comparison, and parasitic extraction
- Timing, power, and reliability analysis – PowerPro, Timing Designer, Calibre Reliability tools for performance optimisation and low-power design
- Design-for-manufacturability (DFM) and yield enhancement – Calibre DFM and YieldAnalyzer modules
- Library and cell-based design – Library Characterisation Suite for creating and validating standard-cell and I/O libraries
- Integration with foundry process design kits (PDKs) and support for nanometer-scale CMOS and FinFET technologies

Contact person:

Šarūnas Jankauskas

Proto Lab, M-Lab

Kaunas University of Technology
sarunas.jankauskas@ktu.lt

Contact person:

Dr. Vaidotas Barzdėnas

Faculty of Electronics

Vilnius TECH

vaidotas.barzdenas@vilniustech.lt

If you have any questions, please contact us by email:

info@chips2.lt



Co-funded by
the European Union

