SIEMENS

DIGITAL INDUSTRIES SOFTWARE

Siemens EDA empowers education

Empowering lifelong learners to create a more innovative and sustainable future

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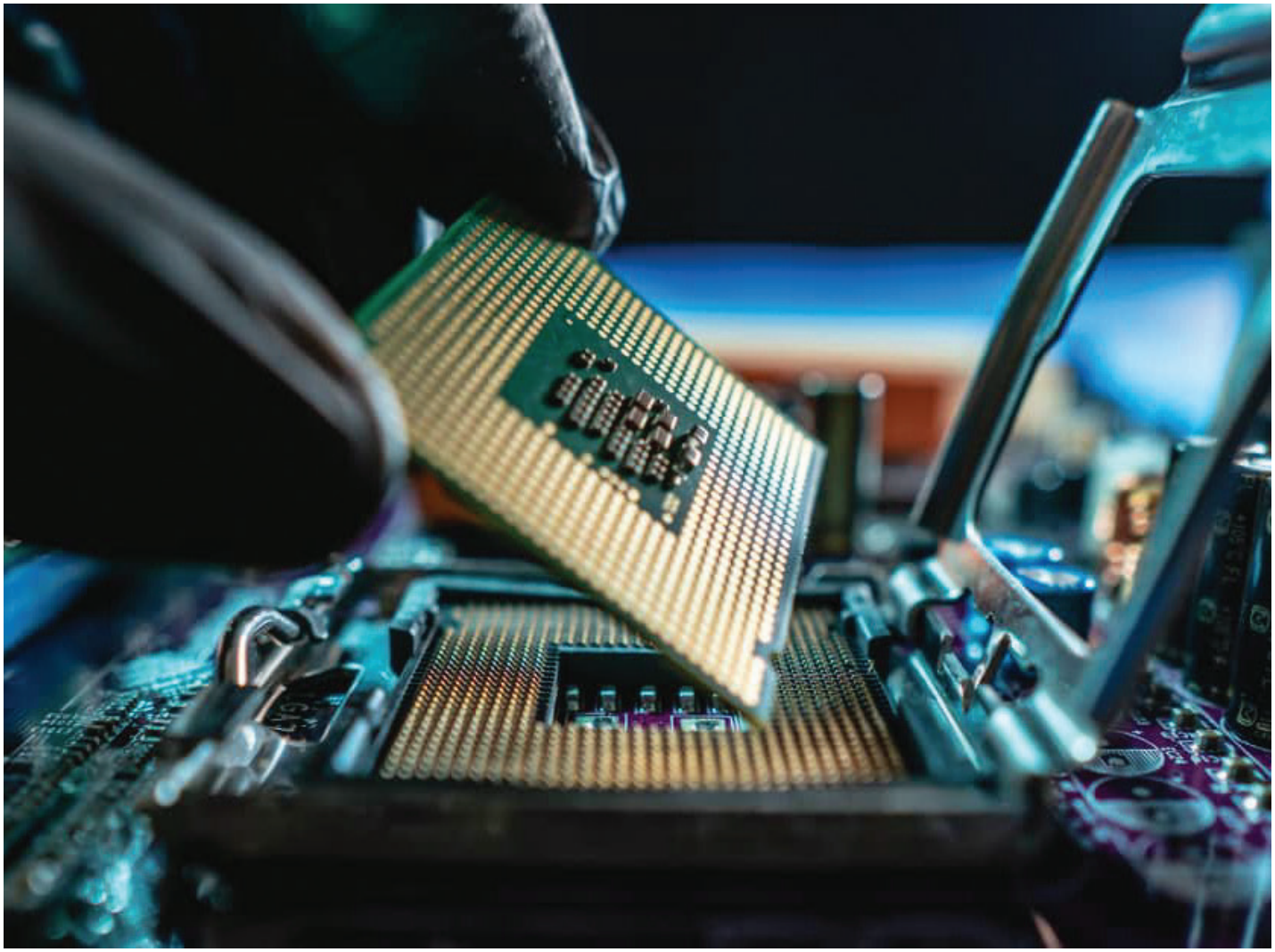

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Empowering Siemens lifelong learners to create a more innovative and sustainable future

Siemens Digital Industries Software provides colleges and universities with cutting-edge design tools for classroom instruction and academic research. Our academic program aims to empower educators and learners to create a more innovative and sustainable future, with state-of-the-art tools and techniques.

Siemens EDA is widely known for its best-in-class electronic design automation (EDA) tools across the full flow including physical verification, functional verification, very large-scale integration (VLSI) test, electronic board design and other integrated circuit (IC) EDA categories.

EDA ODT Libraries

Siemens EDA provides educators and students with self-paced training courses sponsored by EDA Learning Services. For the complete list of available titles please refer to OneGlance Map: https://eda.sw.siemens.com/en-US/eda-training/ Learners can showcase their EDA expertise by completing certification exams in Siemens Xcelerator Academy and earning digital badges. These badges for courses or seminars can be claimed, shared, and viewed by employers for recruitment and hiring purposes in the Credly Talent Directory: https://www.credly.com/organizations/siemens-sw/directory

For academic use our EDA tools are organized in bundles described in the table or quick reference matrix. On-demand training including industry recognized certifications and badging, is available for each software product on request. Please contact EDAAcademic.Industry@siemens.com for more information.

HEP bundle name	Main product components	Self-Paced Training / ODT Libraries
IC Nanometer Design	Custom IC Design, Solido SPICE, Solido Design Environment, S-Edit, L-Edit, Symphony, Calibre	IC Physical Verification, Custom IC Design
Design, verification and test	Catapult Ultra, Vista, ReqTracer (replaced by Questa VIQ Solution), Innexis Virtual, Mpower Analog and Digital, PowerPro, Questa, Precision Synthesis, Leon ardo Spectrum ASIC, Tessent Silicon Test	Functional Verification, Catapult, Tessent
Questa Advanced Formal	Questa Inspect, Questa Verify Property, Questa Equivalent RTL, Questa Verify Secure	Functional Verification, Catapult
Aprisa P&R Platform	Aprisa P&R, Aprisa P&R Hierarchy, Aprisa FinFet	Aprisa
Advanced AMS verification	Solido SPICE, Symphony, Solido Waveform Analyzer	Analog/Mixed Signal (AMS) and Eldo Platform
PCB design and analysis	Xpedition, HyperLynx	Xpedition, Xpedition (Modern UX), Hyper Lynx High-Speed PCB Design, HyperLynx High-Speed PCB Design (Modern UX)
Valor PCB Design Verification	Valor NPI	Valor NPI, Valor NPI (Modern UX), Valor Process Prep, Valor Process Prep (Modern UX)
Tessent Embedded Analytics	Debug & functional monitoring IPs with software, Tessent UltraSight-V, EA VIP	Tessent
Solido Design Environment	Solido Design Environment, Solido Waveform Analyzer	Custom IC Design
Solido Characterization Suite	Solido Analytics, Solido Generator	Analog/Mixed Signal (AMS) and Eldo Platform
Solido IP Validation Suite	Solido Crosscheck, Solido IPdelta	Analog/Mixed Signal (AMS) and Eldo Platform
3D IC Design	Innovator 3D IC, Calibre 3D [Stack, Thermal, Stress, PERC], mPower, HyperLynx Packaging	Xpedition, Functional Verification, IC Physical Verification, Custom IC Design, Tessent
Z-Planner	HyperLynx field solver en-gine, Real laminate supplier data, DFM/DFSI checks for fabricator validation	Xpedition

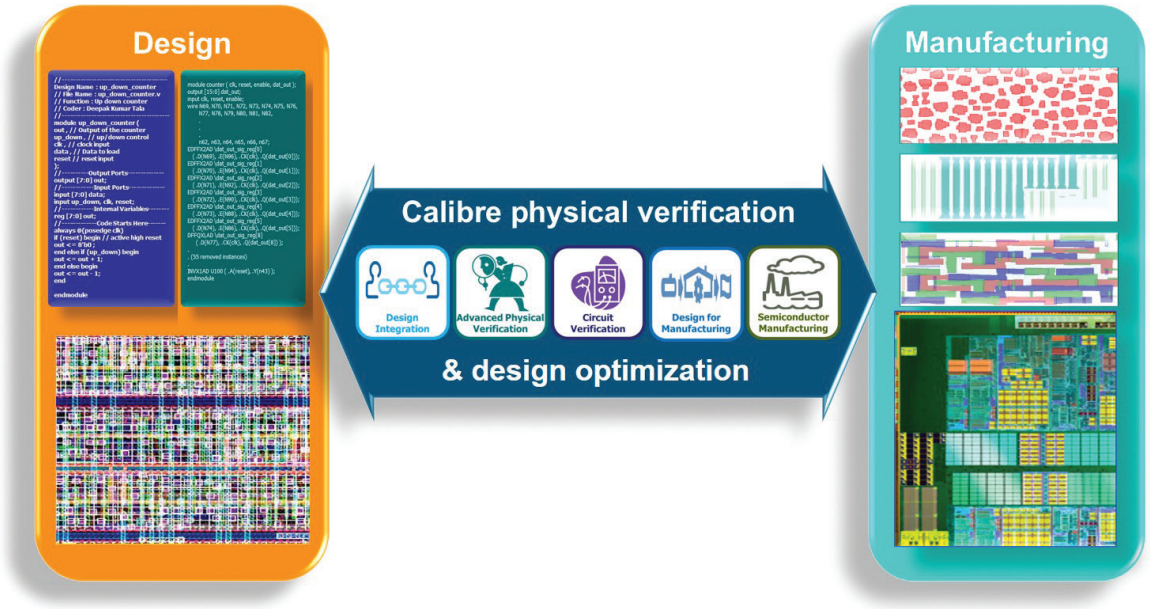
HEP Academic Bundles – Teaching and research quick reference matrix

HEP bundle name	Primary use case	Key tools	Ideal for (academic and research use)
IC Nanometer Design	Analog / Mixed Signal IC design; complete custom IC flow	S-Edit, L-Edit, Symphony, Solido SPICE, Calibre (DRC/LVS/PERC), Solido DE	**Academic Teaching**: PG modules in Analog IC Design, AMS verification, MEMS, Photonics. **Research:** PDK development, variation aware design, yield optimization, reliability analysis. **Academic Use Case:** Run custom/analog IC labs with foundry style signoff.
Design, verification and test	Digital design + simulation, verification, DFT/ATPG, HLS	Questa One Sim, Lint/CDC/RDC, VIQ, Catapult, SLEC, Tessent (ATPG/MBIST/IJTAG), Precision	**Academic Teaching:** 3rd/4th year UG and PG courses on digital design, verification, UVM, and DFT. **Research:** Safety critical verification, power integrity, coverage-driven methodologies. **Academic Use Case:** Teach UVM and DFT.
Questa Advanced Formal	Formal and property based verification; security & trust	Questa Verify Property, Check X, Inspect, Verify Secure/Trust, Formal VIP (AMBA/on chip), Catapult Formal, SLEC	**Academic Teaching:** PG courses on formal methods, hardware safety/security, trusted computing. **Research:** Secure hardware verification, architectural proofs, formal analysis for RISC-V and AI accelerators. **Academic Use Case:** Teach formal methods (ABV, equivalence, secure verification).
Aprisa P&R Platform	Digital physical design (P&R, CTS, timing closure)	Aprisa P&R, Hierarchical P&R, FinFET flows	**Academic Teaching:** PG VLSI backend design, physical design labs. **Research:** P&R algorithms, congestion analysis, timing optimization. **Academic Use Case:** Teach digital backend P&R concepts.
Advanced AMS verification	Mixed-signal simulation & waveform analysis	Solido SPICE, Symphony	**Academic Teaching:** AMS design, mixed signal courses, and RF basics. **Research:** Analog/RF model verification, yield optimization.
PCB design and analysis	PCB capture/layout; SI/PI analysis	Xpedition, HyperLynx, FPGA IO Optimizer	**Academic Teaching:** UG/PG PCB courses, senior design/capstone, Formula Student/Robotics competition teams. **Research:** Highspeed PCB, power integrity, co-simulation. Academic Use Case: Run PCB curriculum with SI/PI analysis.
Valor PCB Design Verification	Manufacturing-aware PCB checks, DFM/NPI workflows	Valor NPI	**Academic Teaching:** DFM, PCB manufacturing, CAM workflows. **Research:** Yield improvement, DFM analytics, PCB manufacturing optimization. **Academic Use Case:** Add DFM for PCB / NPI to complement PCB layout courses.
Tessent Embedded Analytics	On chip functional monitoring & SoC debug	UltraSightV, EA VIP, EA instrumentation IP	**Academic Teaching:** Advanced SoC design and architecture courses. **Research:** On chip monitoring, runtime security, debug visibility, anomaly detection.
Solido Suites	AI driven variation, characterization & IP QA	Solido DE, Solido Analytics, Crosscheck, IPdelta	**Academic Teaching:** AI for EDA, modern AMS variation courses. **Research:** Machine learning for circuit design, statistical characterization, and fast yield prediction.
3D IC Design	Chiplet integration, 2.5D/3D IC design, multi die DFT	Innovator3D, Calibre 3D Stack/Thermal/Stress/PERC, Tessent TestKompress/IJTAG/MemoryBIST, HyperLynx Packaging	**Academic Teaching:** PG 3D IC design, thermal co-optimization, advanced packaging courses. **Research:** Chiplet architectures, thermal modeling, multidie reliability, package SI/PI. **Academic Use Case:** Explore chiplets / multidie 3D IC architectures.
Z-Planner	PCB stackup planning and materials selection prior to layout; predict impedance, insertion loss, and manufacturability early to reduce redesigns and accelerate time-to-production.	HyperLynx field solver engine, Real laminate supplier data, DFM/DFSI checks for fabricator validation, large dielectric materials library for accurate early planning	**Academic Teaching:** 3rd/4th year UG and PG courses, stack-up fundamentals for highspeed design, intro to signal integrity (controlled impedance, loss paths), materials & manufacturing considerations in PCB design. **Research:** SI/PI characterization and stack-up optimization studies, cost–performance modeling with real supplier data, aerospace/advanced digital systems design methodology research. **Academic Use Case:** Projects and capstone for High speed multilayer and rigid flex boards.

Server configuration: Most products require 4 cores and 32 GB RAM as basic to moderate with Windows 11 OS and RHEL 8/9. For each additional concurrent users add 1.5 core and 16 GB RAM.

IC Nanometer Design

The **IC Nanometer Design** bundle provides a complete environment for the design, capture, layout and verification of analog, digital and mixed-signal integrated circuits.



The **Custom IC design software AMS IC** design flow is a complete end-to-end design flow for analog/mixed- signal (AMS) IC designs. Custom IC Design is the updated and improved product designation for the former Tanner suite. The flow consists of highly integrated front and back-end tools, from schematic capture, mixed-signal simulation and waveform probing to physical layout and foundry-compatible physical verification.

The **L-Edit MEMS** design flow delivers 3D micro-electro-mechanical systems (MEMS) design and fabrication support in one unified environment and makes it easy to integrate MEMS devices with analog/mixed-signal processing circuitry on the same IC.

The **Symphony™** platform is a highly configurable mixed-signal solution to accurately verify design functionality, connectivity, and performance across A/D interfaces at all levels of the design hierarchy and for all IC applications. Symphony's modular architecture leverages Siemens' Solido™ SPICE software and other Solido simulation technologies to provide fast mixed-signal simulation performance with configurable accuracy and high capacity.

The **Calibre®** platform delivers a complete IC verification and DFM optimization platform that speeds designs from creation to manufacturing, addressing all sign-off requirements.

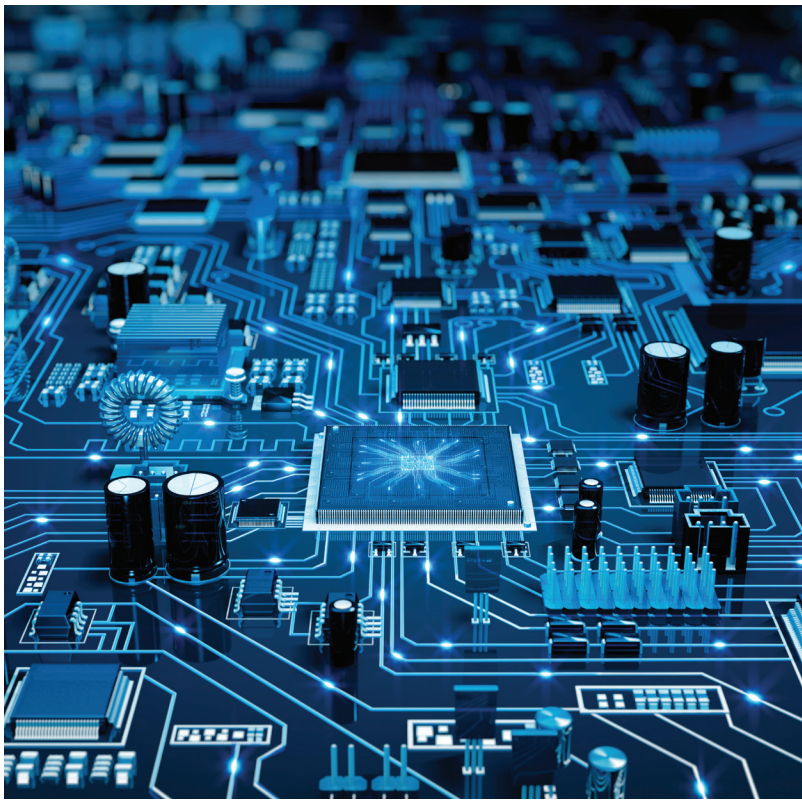
Design, verification and test

Siemens launched a revolutionary portfolio of design and verification solutions called **Questa™ One** software in 2025.

- Questa One includes its flagship simulator called Questa One Sim. It is an indisputable market leader in DFT simulations for complex multi-die SoCs achieving performance gains that are multi-fold over competition
- Questa One Avery VIP is a market leader in verifying cutting edge IP protocols, and it also helps in reducing the turnaround time from verification to emulation
- Questa One Stimulus Free Verification augments the total design coverage by using mathematical, stimulus-free analyses to verify complex, high-speed ASIC and FPGA designs
- FPGA design and verification – a complete solution comprising HDL design, simulation, hardware/software co-verification and leading FPGA logic and physical synthesis
- Tessent Silicon Test – a comprehensive, industry-leading suite for design-for-test automation, enabling advanced scan, boundary scan, memory test, and high-efficiency automatic test pattern generation to ensure robust testability
- System Modeling – a complete environment for creating and verification of mixed-signal and multilanguage systems, prevalent in aerospace and other industries

Questa Advanced Formal

The **Questa Advanced Formal** bundle provides access to the best in-class and flagship products of newly announced Questa One Stimulus Free Verification. Applications for security and coverage analyses are included in this bundle. This includes Analyze Fault, Equivalence FPGA, Check Register, Inspect, Verify Secure & Trust, Verify Property, Increase Coverage for ASICs and FPGA applications.



Aprisa P&R Platform

The detailed route-centric **Aprisa™ software automatic digital P&R system** offers complete functionality for top-level hierarchical design and block-level physical implementation for complex digital IC design proj- ects. It includes cutting-edge technologies in proto- typing, floor planning, chip assembly, placement, clock tree synthesis (CTS), routing, optimization and embedded analysis engines.

The core of this technology is the detailed-route centric architecture and hierarchical database, specifically developed to address the design challenges with advanced fin field-effect transistor (FinFET) technology.

Advanced AMS verification

The **Advanced AMS Verification** bundle offers a comprehensive solution for analog and mixed-signal simulation and waveform analysis. **Solido SPICE** is Siemens' next-generation, feature-rich SPICE simulation technology, providing 2-45X speedup for analog, mixed-signal, RF and 3D IC verification, with foundry certified accuracy. It supports DC, Transient, Transient noise, AC, RF Periodic Steady State (PSS), and RF Harmonic Balance (HB) analyses. The Solido Waveform Analyzer offers an interactive graphical representation of data resulting from mixed-signal simulations and is useful for visualizing, measuring, and analyzing simulation waveforms.

PCB design and analysis

Siemens EDA delivers a comprehensive, industry-leading integrated platform for **PCB system design and analysis**, bridging academia and real-world engineering excellence. By partnering with Siemens EDA, colleges and universities equip students, designers, and engineers with the same cutting-edge solutions trusted by global technology leaders.

The PCB system design and analysis solution includes:

- Seamless schematic capture & circuit design. A fully integrated, intuitive environment designed for rapid capture, simulation, intelligent component selection, and streamlined library management, enabling students to focus on creativity and engineering fundamentals from day one.
- Industry-leading PCB layout tool. Combine ease of use with powerful, automated routing capabilities to master both simple and advanced designs. Benefit from state-of-the-art 3D layout and MCAD collaboration, fostering skills critical for today's multidisciplinary engineering challenges.
- Integrated constraint management. Enable design precision with "correct-by-construction" workflows that greatly reduce costly board re-spins and prototypes, honing students' ability to deliver quality from concept to production.
- AI-enhanced workflow with predictive commands. Benefit from intelligent features such as command prediction and natural language-assisted design support that streamline workflows, reduce manual effort, and accelerate learning – enabling users to intuitively navigate complex PCB design processes with greater efficiency and confidence.

Unmatched analysis and verification with HyperLynx

The PCB system design and analysis solution is powered by HyperLynx™ software, the industry's leading analysis suite. Students gain hands-on experience with:

- Signal and power integrity analysis
- Electrical rule checking
- Full-wave and 3D electromagnetic simulation

HyperLynx equips future engineers to proactively identify and solve critical PCB issues early, drastically reducing iteration cycles.

Valor PCB Design Verification

Valor New Product Introduction (NPI) is the industry-leading **PCB Design verification** tool for all ECAD platforms. It helps PCB designers and manufacturers accelerate NPI, improve product quality and eliminate unnecessary design iterations, by identifying issues which could affect PCB fabrication, assembly, or test and allowing them to be corrected early in the design flow, before design data is handed off to manufacturing.

Tessent Embedded Analytics

Tessent™ Embedded Analytics software integrates smart on-chip functional monitoring, communications hardware and software, APIs and application software. It provides a holistic, system-level approach to functional analysis of any complex SoC, allowing engineers to view and analyze the interactions of hardware, firmware, and software at any level of abstraction. Embedded Analytics encompasses real-time, protocol-aware monitoring of any type of on-chip interconnect or hardware structure (including custom logic), making it a particularly powerful tool for analysis and optimization of complex ICs.

The bundle contains Embedded Analytics silicon IP and software for advanced chip debug and analysis, functional data insights, anomaly detection and more.

Solido Design Environment

Solido Design Environment (Solido DE) is a comprehensive AI-powered design environment for analog, memory, and standard cell flows that provides a single unified solution for nominal and variation analysis, as well as Solido Waveform Analyzer, an integrated modern waveform viewer. Integrated AI-powered variation-aware verification and optimization technologies enable designers to achieve 3–6+ sigma yield verification orders-of-magnitude faster than traditional brute-force or manual methods, with full SPICE accuracy. Solido Design Environment is silicon-proven and has been used in

production by the world's top semiconductor companies across thousands of tapeouts over 20+ years. Solido continues to innovate in the era of AI with new disruptive technology such as Solido Additive Learning, which retains and reuses AI models from initial verification runs to speed up subsequent iterative verification jobs, providing 3X-20X additional speedups and weeks of production savings, backed by customer case studies.

Solido Characterization Suite

The **Solido Characterization Suite** provides fast and accurate library characterization tools powered by artificial intelligence (AI) technologies. This suite reduces standard cell, custom cell, and memory characterization time and resources, while delivering production accurate .lib models and statistical data, and performing comprehensive validation for characterized .lib files.

Solido IP Validation Suite

IP has many different views (logical, physical, timing, SPICE, etc.) that must be validated standalone and across design views. In addition, with frequent IP revisions, PDK changes, and updates, unexpected alterations in newer versions can lead to costly rollbacks or re-spins. Managing the IP data library is critical to ensure correct and consistent integration. **Solido IP Validation Suite** consists of **Solido Crosscheck** and **Solido IPdelta**, offering in-view and cross-view IP QA, as well as version-to-version IP QA, respectively. Used together, these solutions create a robust IP QA flow, accelerating IP production cycles and helping to maintain a high level of IP quality with each iteration.

3D IC Design

The **3D IC Design** bundle enables the design and heterogeneous integration of chiplets. The bundle contains software for full flow 3D IC development including Tessent, Aprisa place and route, Innovator 3D technology and Calibre 3D tools. This integrated suite provides an unparalleled environment for designing, verifying, and optimizing complex 3D Integrated Circuits, from initial architectural exploration to final manufacturing sign-off. Featuring advanced solutions like Tessent for robust test and debug, Hyperlynx Packaging SI EM/IR for signal and power integrity, and the complete Calibre 3DStack and mPower platforms for multi-die verification, thermal analysis, and power integrity, this package empowers engineers to overcome the intricate challenges of 3DIC. Accelerate innovation, ensure reliability, and achieve unprecedented levels of performance and power efficiency by leveraging industry-leading tools for layout, integration, and comprehensive physical verification across the entire 3D-IC design flow.

Z-Planner

Z-planner Enterprise is an industry grade PCB stackup planning and materials selection platform used to design the physical and electrical foundation of modern printed circuit boards. By combining a proven electromagnetic field solver with real laminate suppliers' material data, Z-planner enables accurate prediction of impedance, signal loss, and manufacturability before PCB layout begins. This early insight helps ensure designs meet performance, cost, and fabrication requirements the first time, reducing redesign cycles and accelerating time to production.

Widely adopted in highspeed electronics, aerospace, and advanced digital systems, Z-planner connects engineering theory to real world practice. For academic programs, it provides students with hands on exposure to professional PCB design workflows, helping them understand how materials science, electromagnetic theory, and manufacturing constraints intersect in industry ready designs.

To access your Siemens account and self-paced ODT libraries:

Get Started: Suggested Next Steps
To make the most of your On-Demand training, we recommend completing the steps below.

1. Create your Siemens account

Create your account at:
https://support.sw.siemens.com/en-US/
Your Siemens account is your gateway to the Siemens ecosystem. It allows you to:

- Download software and access support
- Participate in the Siemens community
- Access Siemens Learning Center
- Download free classroom and learning resources

After registering, check your email for a verification message from webtech.plm@siemens.com.

2. Access your On-Demand training

- Log in using your Siemens account.
- If you received a direct library link, click the link to access your training.
- If your administrator registered you, you may skip this step.

3. Launch your Learning Center Dashboard

- Navigate to your Learning Center Dashboard.
- Scroll to the bottom of the page to view the training libraries available to you.

Helpful Resource:
Watch this short video to learn how to navigate your Dashboard and get started quickly.

Student Competition Teams

We support student competition teams in robotics, autonomous systems, and automotive engineering—such as Formula Student, Formula SAE, FIRST Robotics, the European Rover Challenge, Hyperloop teams, and Eurobot—by granting access to our latest software through our academic bundles, which also include complimentary on-demand training to help students build industry-ready skills.

Siemens Digital Industries Software helps organizations of all sizes digitally transform using software, hardware and services from the Siemens Xcelerator business platform. Siemens' software and the comprehensive Digital Twin enable companies to optimize their design, engineering and manufacturing processes to turn today's ideas into the sustainable products of the future. From chips to entire systems, from product to process, across all industries, Siemens Digital Industries Software – Accelerating transformation.

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For additional numbers, click here.

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