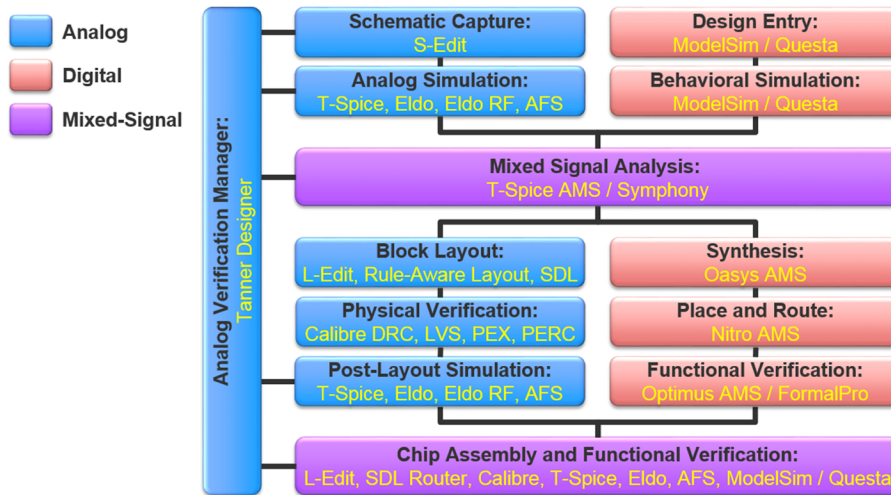


# Tanner Analog/Mixed-Signal IC Design Flow

ANALOG/MIXED-SIGNAL  
DESIGN AND VERIFICATION

D A T A S H E E T



End-to-end design flow for analog/mixed-signal IC Design.

## The Full Flow AMS Solution

Tanner EDA provides a complete end-to-end analog/mixed-signal (AMS) design flow for IC design. The flow is optimized for creating custom analog or “Analog on Top” mixed-signal ICs, working at 28nm and above. The flow is used in a wide variety of markets including: automotive, Internet of Things (IoT), imaging/display, industrial control, medical, sensors, automotive, RF, space, and power management.

The Tanner AMS IC design flow consists of highly-integrated front and back-end tools, from schematic capture, to mixed-signal simulation and waveform probing, viewing, and RTL netlist synthesis; to physical layout, place and route, static timing analysis, and foundry-certified physical verification.

Considered together, these tools comprise a suite that is interoperable with many popular industry tools and industry-standard file formats and the suite minimizes risk by providing foundry support. The tools are intuitive, easy to use, and accessible from anywhere because they are available for both Windows® and Linux®.

## FEATURES AND BENEFITS:

- Complete, full-flow analog/mixed-signal IC design suite
- OpenAccess native database
- Simulate combined netlists at various abstraction levels: behavioral models, block-level RTL, gate- and transistor-level blocks
- Debugging and advanced verification with SystemVerilog, Verilog, Verilog-AMS, Verilog-A, and VHDL
- Rule-aware layout editor
- Run Calibre® nmDRC™, nmLVS™, RVE™, xRC™, xACT™, 3DSTACK™, PERC™, DFM™ directly From L-Edit
- Full digital flow with Oasys™ synthesis and Nitro™ place and route
- Static timing analysis with Optimus™
- Flexible revision control interface, including direct integration with ClioSoft®
- Foundry PDK support
- Available on Windows and Linux
- Intuitive and easy to use; quick learning curve

## Complete IC Design Capture Environment

Tanner S-Edit is an easy-to-use design environment for schematic capture and design entry. It provides the powerful features necessary to handle the most complex mixed-signal IC design capture, including:

- AMS simulation integration and waveform cross-probing
- Direct viewing of operating point simulation results in the schematic
- Cross-probing between schematic, layout, and LVS report with net/device highlighting
- Configurable schematic Electrical Rule Checks (ERC)
- Advanced array and bus support
- Integrated with Tanner L-Edit IC to speed the layout and ECO process

## Complete IC Physical Design Environment

Tanner L-Edit IC is an AMS IC physical design environment that provides all the features necessary to quickly and efficiently finish the layout of the design, including:

- Fast rendering
- Rule-Aware Layout to quickly create a compact layout
- Parameterized layout generators for fast device layout that is DRC correct
- Schematic Driven Layout (SDL) capability that automatically generates parameterized cells and instances in the layout from the schematic including flylines and assisted manual routing
- Node highlighting for connectivity visualization

## Fast, Accurate Simulations for AMS IC Designs

Tanner T-Spice AMS simulation provides fast and accurate simulation for AMS IC designs. T-Spice AMS not only simulates circuits quickly and with a high degree of accuracy, but it is also compatible with industry leading-standards and it integrates easily with the Tanner S-Edit schematic capture tool and Tanner Waveform Viewer.

Co-simulation combines the high speed of event-driven digital simulation for the digital portions of the design with detailed continuous-time analog modeling in the SPICE engine for maximum mixed-signal performance.

## Complete Digital Design Flow

Tanner Digital Implementer (TDI), powered by the Oasys Synthesis and Nitro Place and Route engines, is integrated into L-Edit IC to address the physical implementation of the digital portion of "Analog on Top" designs.

TDI provides a cost-effective, easy to use digital synthesis and place & route solution with powerful features including:

- Intuitive and quick learning curve for synthesis and place and route
- Oasys optimizes RTL partitions for placement, timing, power, area, and congestion with fast run time. Its power-aware synthesis and power analysis can achieve comprehensive power management solutions, including clock gating and multi-threshold leakage optimization
- Nitro Place and Route provides high-capacity architecture and timing-driven and best-in-class physical implementation engines
- The Optimus static timing analysis tool validates all timing violations in full-chip, gate-level designs and checks all path timing violations using static timing analysis

**For the latest product information, contact us at: [www.mentor.com](http://www.mentor.com), (800) 547-3000**

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**Corporate Headquarters**  
**Mentor Graphics Corporation**  
8005 SW Boeckman Road  
Wilsonville, OR 97070-7777  
Phone: 503.685.7000  
Fax: 503.685.1204

**Sales and Product Information**  
Phone: 800.547.3000  
[sales\\_info@mentor.com](mailto:sales_info@mentor.com)

**Silicon Valley**  
**Mentor Graphics Corporation**  
46871 Bayside Parkway  
Fremont, CA 94538 USA  
Phone: 510.354.7400  
Fax: 510.354.7467

**North American Support Center**  
Phone: 800.547.4303

**Europe**  
**Mentor Graphics**  
Deutschland GmbH  
Arnulfstrasse 201  
80634 Munich  
Germany  
Phone: +49.89.57096.0  
Fax: +49.89.57096.400

**Pacific Rim**  
**Mentor Graphics (Taiwan)**  
11F, No. 120, Section 2,  
Gongdao 5th Road  
HsinChu City 300,  
Taiwan, ROC  
Phone: 886.3.513.1000  
Fax: 886.3.573.4734

**Japan**  
**Mentor Graphics Japan Co., Ltd.**  
Gotenyama Trust Tower  
7-35, Kita-Shinagawa 4-chome  
Shinagawa-Ku, Tokyo 140-0001  
Japan  
Phone: +81.3.5488.3033  
Fax: +81.3.5488.3004

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