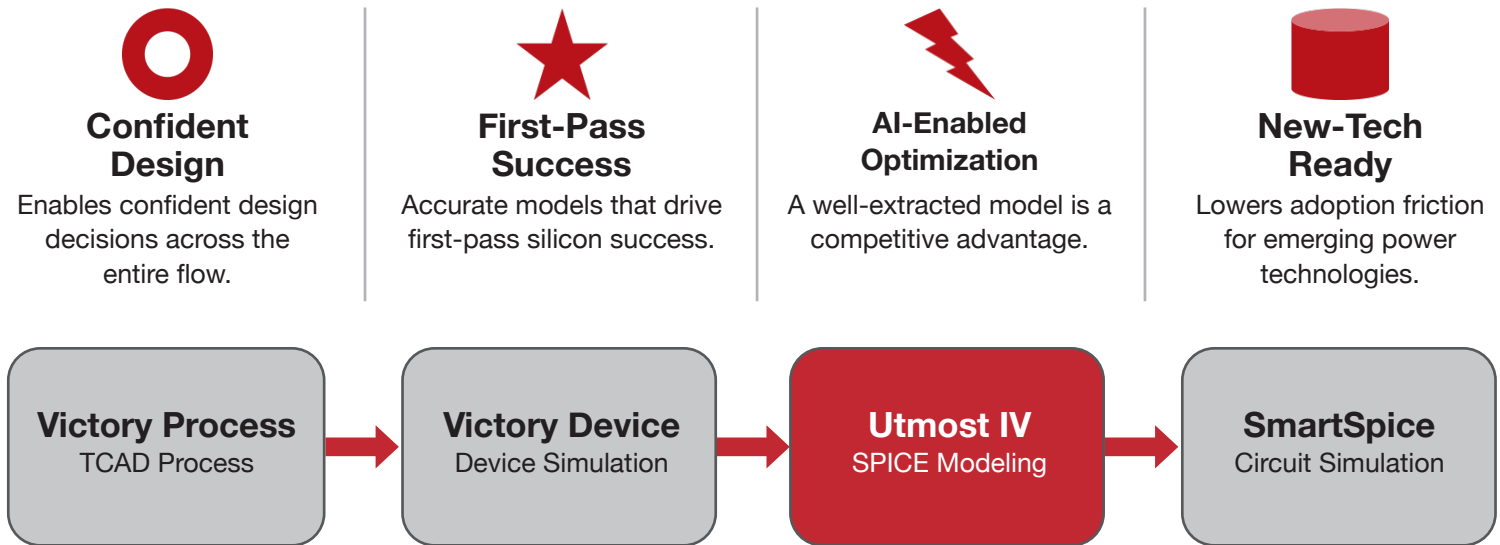


From Measurement to Production-Ready SPICE Models

Utmost IV is Silvaco's 4th-generation device characterization and SPICE modeling platform — an AI-enabled flow that unites automated acquisition, advanced optimization, and TCAD-aware extraction to deliver confident, first-pass-correct compact models.



DTCO Integrated characterization • TCAD-aware extraction • production-ready compact models

Why Silvaco **Utmost IV**?

Foundation

- Multi-decade expertise in TCAD and SPICE modeling with deep multi-physics device understanding.

Workflow Authority

- Integrated into Silvaco DTCO workflows; models informed by process, device, and system constraints.

Execution Advantage

- Simulator-independent with AI-enhanced optimization for modern model complexity.

Built on the same physics-based foundation used to develop the devices themselves.

Utmost IV Capabilities

Flexible Data Format

- Import from Utmost datasets, live acquisition, TCAD logs, and third-party files — no equally-spaced-data requirement.

Advanced Optimizers

- Levenberg-Marquardt, Hooke-Jeeves, Particle Swarm, Genetic, Simulated Annealing, and AI-enhanced methods.

Automated Acquisition

- 100+ instruments, smart measurement sequences, and drag-and-drop wafer mapping.

High-Speed Simulation

- Parallel SPICE engines and a 500 simulations/sec direct SmartSpice interface.

Quick-Start Templates

- Ready model flows for MOSFET, GaN HEMT, TFT, BJT, IGBT, and diode devices.

Broad Model Support

- BSIM3/4, BSIM-BULK, HiSIM, PSP, ASM-HEMT, CMC standard, and Verilog-A models.

Interactive Rubberband

- Real-time sliders to explore and tune any number of parameters across devices.

Proven, Trusted Accuracy

- Used by tier-1 customers and IDMs across multiple technologies.

Confident design. First-pass success. A competitive advantage.