GSAS MICRO SYSTEMS — ISO 9001:2015 CERTIFIED

KEYSIGHT

GSAS Micro Systems Pvt Ltd (GSASMSPL) has partnered with Keysight to promote their PathWave Design software, a collection of electronic design automation software tools that accelerates product development by reducing the time engineers spend in the design and simulation phase. Its libraries and customized simulators reduce setup time. The software seamlessly integrates circuit design, EM simulation, layout capabilities, and system level modeling, reducing time spent in importing and exporting designs and fixing errors associated with changing tools. Improvements in data analytics allow for faster analysis and more timely design decisions. Automation improvements reduce manual work.

PathWave Design Accelerates Workflows in 5 Key Industry Segments

RF & Microwave

RF & microwave designs today require complex multi-chip modules, intricate interconects, and advanced packaging. 5G's higher frequencies and wider modulation bandwidth further increases the complexity. Analyzing simulation and measurement data takes more time, but designers must accelerate time-to-market and stay competitive.

High-Speed Digital

High-speed digital standards are evolving rapidly to accommodate 5G, IoT, AI, VR, and autonomous vehicles, with faster data transfer rates and new features. Signal and power integrity engineers are crucial in ensuring reliable device operation and achieving desired BER for chip-to-chip links.

Power Electronics

Power electronics is the technology of handling power for various industries. The need for energy conservation and reduced emissions is driving the growth of power converters. Silicon-based power devices are reaching their limits in efficiency and reliability. Wide band gap (WBG) power devices like silicon carbide (SiC) and gallium nitride (GaN) offer promising solutions to overcome these limitations and drive innovation in energy-efficient applications.

System-Level Design

The increasing complexity of RF and baseband interactions has led system designers to rely on modeling tools in 5G NR, aerospace/defense, and autonomous driving applications. Co-design of circuits and systems is essential for first-pass success in 5G NR development. Aerospace/defense innovations require sophisticated signal generation and analysis for multiple emitter scenarios.

Device Modeling
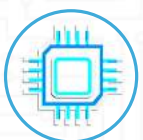
The semiconductor industry confronts ongoing challenges in optimizing product performance, yield, time-to-market, and production costs. As devices become smaller, precise models and statistical variation control in processing are increasingly vital. Circuit frequencies advance into RF and microwave ranges, underscoring the significance of accurate device models for simulation precision and convergence.

❑ PathWave Advanced Design System (ADS)

PathWave ADS software bundles provide designers with pre-configured combinations targeted to a specific design workflow. These software bundles can provide up to 3 different simulation technologies, System, Circuit, and Electromagnetic (EM), for Communication System, GaAs MMIC, RFIC, RF System-in-Package (SiP), RF Board, and Signal integrity designers.
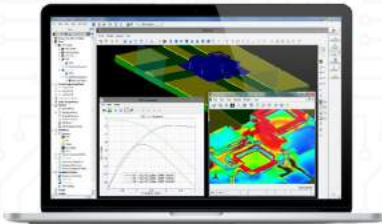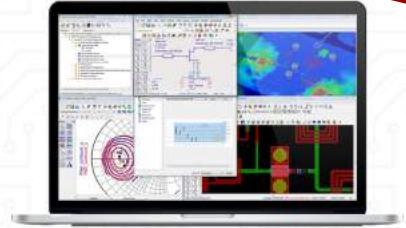
❑ PathWave EM Design (EMPro)

Electromagnetic (EM) simulation brings you insight before physical prototyping. Customize EM simulations for speed and accuracy. Integrate EM analysis with your circuit simulations.

❑ PathWave System Design (SystemVue)

PathWave System Design offers the most advanced prototyping and design platform for complex RF systems with faster simulation speed, near-circuit fidelity, libraries for radar, electronic warfare, satellite, 5G, and WiFi, plus enterprise integration with numerous partners.
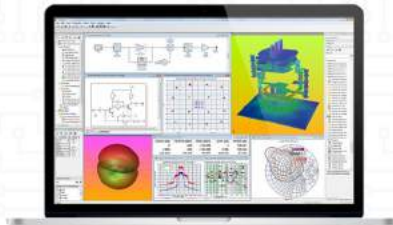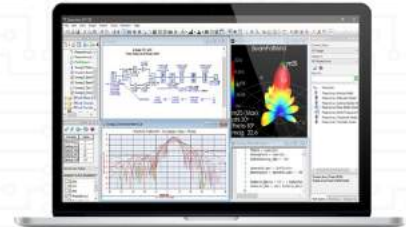
❑ PathWave RF Synthesis (Genesys)

Analyze RF and microwave circuits and systems with fast simulation and powerful optimization tools. Explore performance trade-offs with automatic circuit synthesis technology. PathWave RF Synthesis (Genesys) provides entry-level functionality suitable for all RF and microwave circuit board and subsystem designers.

❑ PathWave RFIC Design (GoldenGate)

Go beyond traditional RF simulation to design, analyze, and verify radio frequency integrated circuits (RFICs). Achieve confidence with steady-state and nonlinear solvers for design and verification. Wireless standard libraries accelerate the validation of complex RFICs.

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