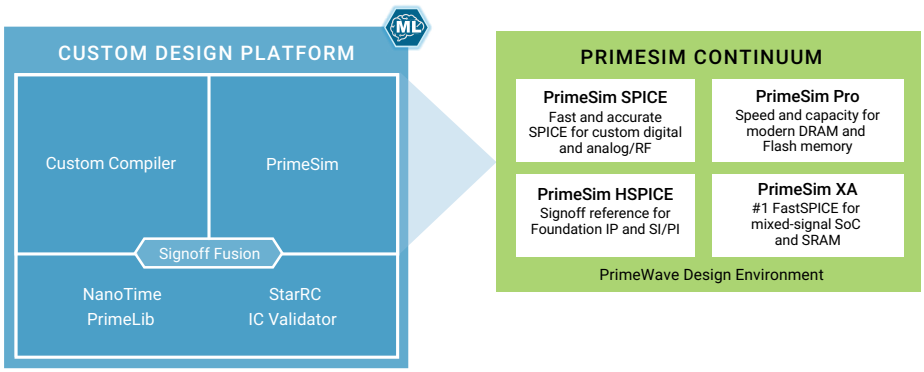
PrimeWave Design Environment

Flexible environment for simulation setup and result post-processing across all PrimeSim engines

Overview

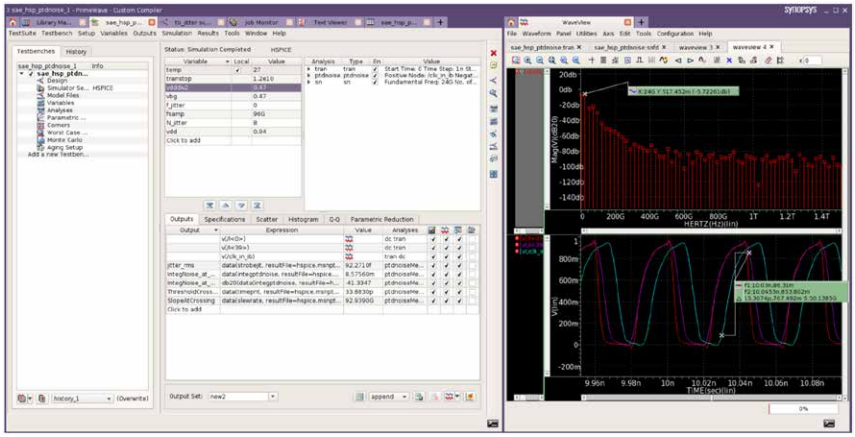
PrimeWave Design Environment is a comprehensive and flexible environment for simulation setup and analysis of analog, RF, mixed-signal design, custom-digital and memory designs within the Synopsys Custom Design Platform. It delivers a seamless simulation experience around all the engines of Synopsys PrimeSim Continuum, with comprehensive analysis, improved productivity, and ease of use. PrimeWave Design Environment also offers powerful Tcl-based scripting capability enabling easy regressions across thousands of corners.



Key PrimeWave Design Environment Benefits

- Unified workflow across all PrimeSim engines for all types of analysis
- Tightly integrated with Custom Compiler™ for analog, RF, and mixed-signal analysis or available in a command-line mode for custom-digital and memory flows
- High-capacity waveform viewing capable of handling large waveform files in a multitude of file formats
- Efficient post-processing with more than a hundred built-in functions and support for HSPICE measure statements
- Open environment for integration and customization
- Flexible Tcl-based scripting capability for programming complex testbenches for regression and post-processing

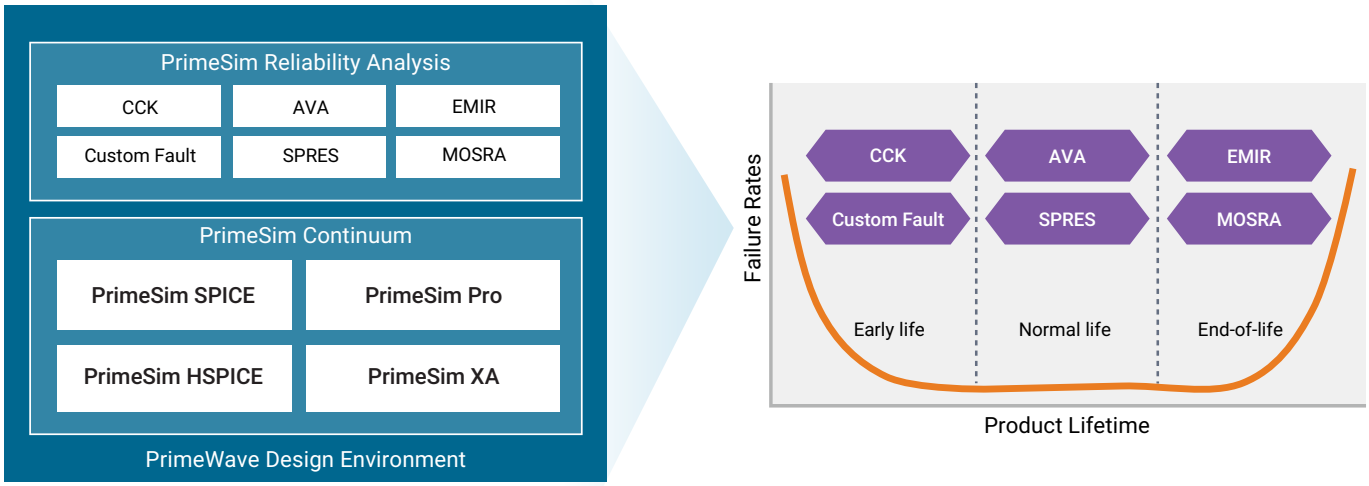
Comprehensive Environment



The PrimeWave Design Environment is a comprehensive environment for all Synopsys simulation engines and analysis capabilities. It provides an easy-to-use simulation setup cockpit, support for grid-based job distribution and monitoring of simulation jobs, and a powerful graphical waveform viewer. Whether designing analog, mixed-signal, or RF designs on mature or advanced nodes, PrimeWave is a unified solution for all applications.

- For mixed-signal applications, PrimeWave offers support for both analog and digital waveforms.
- For RF designs such as VCOs, LNAs, and Mixers, PrimeWave offers built-in phase-noise, jitter, intermodulation distortion, and gain compression measurement functions.
- For signal integrity, PrimeWave supports built-in measurements for statistical eye simulations as well as specific applications such as PAM4 and DDR.

PrimeWave supports the PrimeSim 3DIC flow as well as advanced capabilities such as static and dynamic circuit-checks and post-layout analyses such as Electromigration analysis and IR-drop analysis.



With the Sequential Testbench feature, PrimeWave allows dependencies to be created between testbenches and measurements, allowing measurements from one testbench to be used in another for a specification-driven flow. The powerful parameterization capability allows any design variable or view to be transformed into a variable that the design environment can iterate through, to allow exhaustive characterization of any design.

Flexible and Programmable Environment

A modern design environment requires a robust mechanism for running batch-mode simulations and regressions. The PrimeWave Design Environment is open and extensible and can be controlled in either GUI or Batch mode with scripting. The GUI is also extensible, allowing CAD teams to craft custom measurements and create bindkey settings and release them across their organizations. PrimeWave allows any simulation setup to easily be saved as a Tcl script, allowing all the capabilities in interactive mode to be also used in batch-mode. Users can also define pre-and post-run procedures for performing calibrations and other processing of simulation data.

The results viewing and post-processing capabilities are also available as a standalone viewer with WaveView and WaveView Elite.

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