



EZwave mixed-signal waveform viewer and analyzer

Siemens Digital Industries Software analog/ mixed-signal verification

Benefits

- Fast and powerful
- Multiple language support
- Multiple domain support
- Displays dynamic graphic waveform data
- Supports observation and investigation of signal transition for "what-if" analysis
- High-performance viewer
- Fast-loading database
- Multiple format support
- Intuitive interface
- Complete waveform calculator
- Multi-domain measurement tools
- Multi-cursors
- Event search tool
- Advanced post-processing
- Mixed-signal comparison tool
- Automatic database reloading

High-performance analog, RF, and mixed-signal analyzer The Siemens Digital Industries Software

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EZwave™ software is an advanced

graphical waveform viewer that displays and analyzes analog, digital, and mixedsignal simulation results. The Joint Waveform DataBase (JWDB) used by EZwave is a high-performance waveform database. EZwave can manipulate huge waveform databases from leading simulators, loading gigabytes of data in seconds.

EZwave provides native support of Siemens Digital Industries Software Eldo® Classic, Eldo RF, Eldo Premier, ADIT™, Questa® ADMS, Questa, and HyperLynx simulation results as well as support to other simulator data formats including Synopsys HSPICE® output, Novas FSDB, vcd, and raw files.



The EZwave viewer provides dynamic graphical display of data produced by a variety of Siemens Digital Industries Software applications.

EZwave mixed-signal waveform viewer and analyzer

Benefits continued

- Design platform connectivity
- Regression scripting
- Parametric analyzer
- Questa ADMS native viewer

Various display for various domains

EZwave provides analysis for various time and frequency domain waveform types:

- Analog and digital
- Eye diagram
- Smith chart
- Polar or complex chart
- Histogram

Intuitive waveform viewer

The EZwave intuitive interface allows you to:

- Load multiple databases in a single session.
- Display the database in either a hierarchical (tree) or flat (list) format in the waveform list panel.
- Search and filter signals with pattern-matching and wildcards.
- Drag and drop signals to display the waveforms.

- Quickly zoom to a specified enlargement magnification and scroll along the horizontal or vertical axis.
- View multiple analog waveforms using multiple y-axes in an overlaid display.
- View multiple waveforms and databases through multiple graph windows.
- Create multiple tabbed workspaces for organizing graph windows.

Parametric analyzer

EZwave can handle multiple parametric runs. Results sweeps can be displayed merged or separated by variables and values. EZwave provides a parameter table to manage all sweeps. You can choose or highlight which sweeps to display.

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The EZwave WaveForm Calculator provides a large number of functions to build expressions for measuring design characteristics.

Advanced graphical waveform calculator

The EZwave waveform calculator is an integral part of post-processing and viewing mixed-signal simulation results. The waveform calculator provides a large palette of mathematical, complex, statistical, RF, and logical functions to build expressions. Complex expressions can be saved as macros to be replayed on new simulation results.

Cursors and measurement tool

EZwave provides multiple cursors so you can move around the displayed waveforms and to return x-y/ Delta-x-Delta-y/slope information.



Eye Diagram Analyzer automated measurements display.

The EZwave measurement tool allows you to:

- Measure between transition points through the use of multiple cursors and interactive event search.
- Perform a variety of analog and mixed-signal measurement operations on displayed waveforms.
- Annotate the results from measurements along with measured waveforms in the graph window.
- Create and plot the result waveforms in the active graph window if the results of measurements produce other waveforms.
- Dynamically update measurements while the simulation is running and the results are updated.

Waveform post-processing

EZwave facilitates signal transformation utilities, including D/A and A/D conversion, busing, and splitting a bus to bits.

EZwave supports a number of charting and analysis features such as:

- Accurate FFT/DFT with various windowing functions.
- Complete eye diagram analysis and measurements for high-speed data analysis.

Powerful mixed-signal waveform Comparison tool

The advanced waveform comparison tool can be used to automatically compare simulation result, analog or digital waveform, to a known-good waveform.



Mixed-signal graphical waveform comparison report.

The graphical comparison provides a useful wizard to assist designers and produces a visual indication of differences with the capability of stepping through differences with a cursor.

The batch utility compares two sets of simulation runs and produces a text report of the differences. This capability helps to reduce manual effort for analyzing large number of waveforms.

Ezwave output files

EZwave supports saving and restoring a database session. Graph window configuration and measurements can be replayed. Flexible database reduction is offered as well to save disk space. In addition to JWDB format, EZwave can output files in text-format (.txt), comma-separated value format (.csv), and SPICE PWL format (.sti).

EZwave can export displayed waveforms to various output formats including JPEG, PostScript, and PNG.

Automatic reloading

EZwave supports multiple modes to keep and replace previous simulation results with new ones.

New simulation results can be displayed automatically to be compared with previous results while the designer is doing modifications. Measurements are automatically replayed against new simulation results.



Scripting for more automation EZwave scripting environment is

a TCL-based extension language.

EZwave provides hundreds of functions (measurements and post-processing) to automate design verification. Designers can write additional customdefined functions to be added to builtin functions.

Customizing EZwave

EZwave provides a large set of preferences to customize the interface, colors, and fonts of the graphical elements. Multiple customizable schemes are provided to improve display and printing experience.

Design platform integration

EZwave fully integrates to industrystandard design platform such as Design Architect IC, ICStation Schematic, and Cadence Virtuoso Composer/ADE using the Artist Link integration kit provided.

This integration offers interactive cross-probe, crosshighlight, and cross-select nets from schematic to waveform window.

Siemens Digital Industries Software siemens.com/software

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