

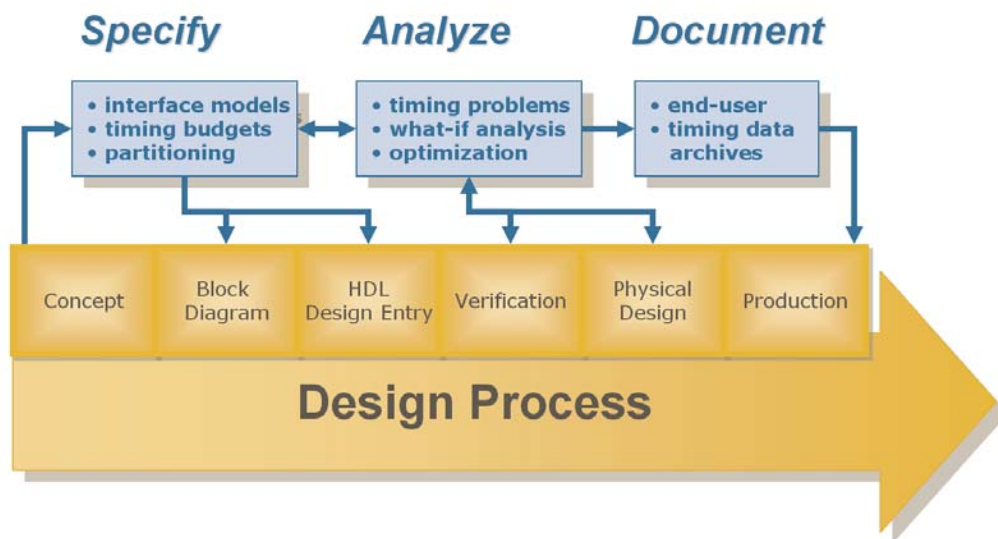
TimingDesigner

The industry's most accurate static timing analysis

Timing

TimingDesigner Key Features

- Easy-to-use timing diagram editor enables rapid specification of design requirements including: timing constraints, cause-and-effect relationships, delays, and sequence protocols.
- Dynamically linked timing spreadsheet with patented technology allows accurate parameterized modeling of timing complexities.
- Powerful timing analysis engine quickly identifies worstcase timing margins to identify and correct trouble spots.
- Instant updates of intelligent timing diagrams support quick evaluation of design alternatives.
- Robust project manager organizes component diagrams within a single project tree.
- Extensive import/export support eases exchange of waveform and timing data between 3rd party tools.
- TimingDesigner Design Kits: pre-assembled parameterized component diagrams that include specific libraries for speed and voltage ratings. Each kit includes manufacturers' data sheets, assembly notes, and all pertinent documentation—allows for accelerated assembly of any timing project.



Static Timing Analysis Tool

The Timing's Right!

That's what designers expect and deserve. TimingDesigner® is the interactive timing analysis tool users trust to deliver fast and accurate results for timing critical designs.

Specify—Analyze—Document

TimingDesigner is ideal for high-speed, multi-frequency designs where it is essential to accurately model and analyze signal relationships between devices on a board or between embedded functions on an ASIC or programmable IC. It can evaluate comprehensive sets of timing alternatives and provide direction to the most complex of timing challenges, enabling designers to manage and monitor timing margins through the design process. TimingDesigner excels in using an intuitive timing diagram approach for developing specifications to drive the design process, analyzing timing to answer critical design questions, and documenting results to clearly illustrate and communicate the design implementation.

Putting TimingDesigner to Work

TimingDesigner models complex digital circuit timing by combining an interactive timing diagram editor with a patented, dynamically-linked timing spreadsheet. The timing diagram editor is used to define key elements of a proposed design including waveforms (sequences of events), delays (cause and-effect relationships), and timing constraints. The parameter spreadsheet, coupled with selectable library spreadsheets, is used to establish min/nom/max values for each critical signal relationship based on device speed grade or voltage rating. TimingDesigner also provides the option to model path delays, rise/fall times, effects of loading and temperature, and other complex formulas.

Analyze

Interfaces between embedded processors, memory, and logic functions on a chip or between devices on a circuit board are often the source of difficult-to-locate timing violations, especially for high-speed designs.

TimingDesigner's robust timing engine uses a timing diagram specification to accurately analyze parameters and identify violations that may otherwise go undetected until late in the design process. The ability to quickly evaluate design alternatives and compute worst-case timing margins makes TimingDesigner an excellent choice to help develop solutions for specific problem areas.

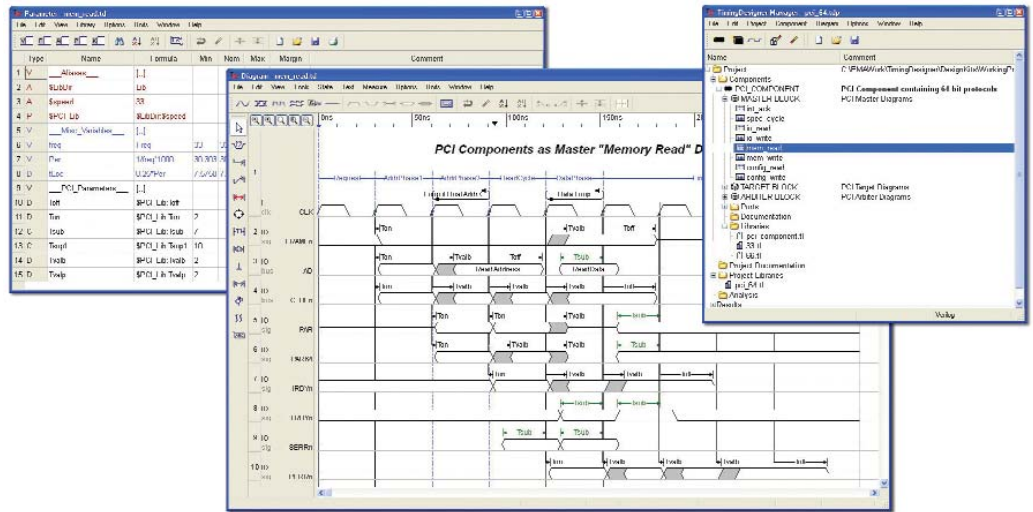
Document

TimingDesigner delivers the ability to clearly and accurately communicate design details by exporting or linking timing diagram files generated during the design process through OLE support or in its native format. The standard, easy-to-interpret format of timing diagram specifications improves the communication of complex design information.

Specify

Evaluating alternatives is key to developing specifications that can accurately convey design details and timing budgets. TimingDesigner supports the early investigation of timing options and provides a straightforward means to clearly specify the sequence of events and timing relationships required for modules or subsystems to communicate as expected.

With larger and more complex designs, monitoring and managing the analysis of critical timing objectives across project teams is not a trivial task. With the built-in project management features that TimingDesigner offers, you have a logical way to organize multiple timing diagrams associated with specific devices or functional blocks of a design and a simple way to exchange timing margin information with team members at any stage in the design process.



The Static Timing Analysis Engine

TimingDesigner traces all delay paths specified in the timing diagram, removes common uncertainties, adjusts for track delays, selects critical paths, and then computes worst-case timing margins. The effects of complex design changes can be instantly visualized.

Automatically calculated timing constraints identify timing violations in easy-to-distinguish red, as well as in a convenient Violations Report window, so problem areas can be addressed quickly. A configurable format to generate reports and export timing constraint information is available using the Dynamic Text Window.

Through linked access to timing analysis results, reports and constraint information are automatically updated and saved. Alternatively, results can be cut and pasted into third-party constraint editors. TimingDesigner also eases the project management challenges of designing complex timing interfaces. The project manager provides a logical way to

organize multiple timing diagrams as components within one project. It eases the exchange of timing data among team members and provides a way to easily manage and monitor timing margins throughout the design process

TimingDesigner's proven technology is straightforward to use, providing a clear and consistent methodology for analyzing designs and communicating critical timing information. It's the productivity tool designers rely on to get the right design at the right time.

Call Us Today!

For additional information, visit us at www.ema-eda.com or call 877.362.3321.

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