

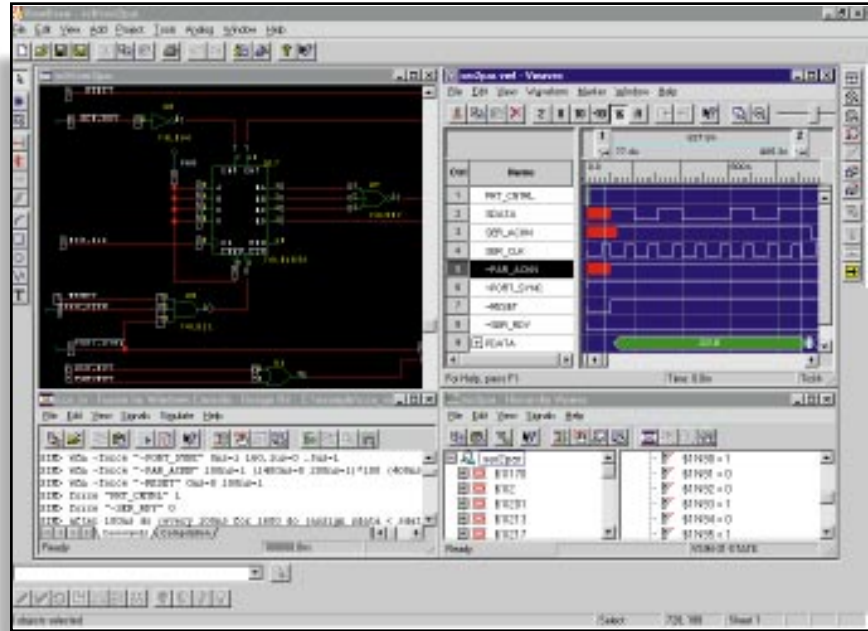


ViewDraw®

Design Capture and Analysis Tools

Highlights

- Design entry tool for graphics and text, combining schematics, block diagrams, state diagrams, VHDL, Verilog HDL, ABEL, and JEDEC
- Hierarchical design representation for capture and analysis of systems, boards, ASICs, PLDs, and FPGAs
- Dynamic links with synthesis, simulation, and timing analysis for graphical design debugging
- Open database for easy design transfer
- Integrated design rule checking and intelligent drawing features for designer productivity
- Intuitive, user-configurable environment for individual efficiency
- Powerview® and Workview Office® integration for close coupling with all Viewlogic and third-party tools
- Easy to learn and use



Product Overview

ViewDraw is Viewlogic's graphical tool for design capture and analysis. Going beyond traditional schematic capture, ViewDraw supports a wide range of graphical and textual design entry methods and serves as an effective front end for any design methodology. ViewDraw is also tightly linked to synthesis, simulation, timing analysis, and layout, supporting dynamic analysis, verification, and debugging throughout the design process.

Designers can use ViewDraw for digital, analog, or mixed-signal circuitry, and it seamlessly operates at the system, printed circuit board, or integrated circuit levels.

ViewDraw has an effective user interface that is easy to learn and use and complies with all CAD Framework Initiative (CFI) and Motif standards. It is flexible and feature-laden, and can be customized to suit the needs of each individual designer.

Single Point of Design Entry

ViewDraw provides a single point of design entry for all designs, whether system, board, ASIC, PLD, or FPGA.

Designs can be represented graphically—using block diagrams, schematics, or state diagrams—or textually, using VHDL, Verilog HDL, ABEL, JEDEC, or truth tables. ViewDraw can hierarchically combine design components using any or all of these forms of representation, integrating the work done by separate designers using diverse methodologies and allowing the most productive technique to be used for each type of design. ViewDraw elegantly merges the models constituting a complete design, and the designer can, for example, select a box in a functional block diagram and immediately see the structural schematic or VHDL code that defines the component.



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An integrated hierarchy manager—ViewNavigator™—provides graphic aids to help the designer move through the design hierarchy. A context window shows a miniaturized version of a full sheet, providing “you are here” functionality while supporting operations like zoom and component selection.

ViewDraw includes a comprehensive library of components, and designers can create their own symbols with graphics, labels, and attributes. ViewDraw employs a totally open ASCII database. Designers can readily use C programs or interactive editing to transfer ViewDraw design data, and standard VHDL, Verilog, and EDIF import and export facilities are provided.

Interactive Design Analysis

ViewDraw serves as the hub of a complete design environment. Real-time back-annotation and cross probing link ViewDraw to all phases and all tools in the design process. For example, designers can:

- Dynamically view simulation, waveform analysis, layout, and fault simulation values on schematics
- Click on textual timing violation reports and graphically see the offending component
- Specify signals for simulation and analysis from schematics
- Define synthesis attributes and placement constraints in schematics
- Display generated schematics after synthesis or netlist import
- Automatically insert full component information from a central corporate database

Designers can achieve these links with both Viewlogic and third-party tools, driving, for example, all popular PCB layout tools right from ViewDraw.

Power Features for Designer Productivity

ViewDraw's special features help the designer work smarter and faster:

- An on-line design rule checker—ViewDRC™—performs electrical rule checks at the symbol and schematic level across all the pages of a design. Designers can add design rules using C or the ViewScript™ language
- Fast Draw accelerates repetitive operations and anticipates the designer's next step, enabling complex operations to be initiated with simple actions
- Gesture mode interprets mouse movements as commands: drawing a “C” copies, an “M” moves, and a box zooms in on the chosen area
- Component arrays let the designer do simple, unexpanded group editing of repetitive column-and-row arrangements of components
- A pass-through pins feature eliminates the clutter of routing around or over components by connecting nets through a component to pins on the other side
- Routing support includes avoidance, orthogonal, and straight modes, and routed nets can automatically snap to the closest pin
- ViewDraw users also enjoy: infinite undo/redo; dynamic pan and autoscroll; autosave; component rotation, inversion, and reflection; cut and paste editing across sheets and across windows; automatic connection of abutting pins; rubber banding of connected nets with dynamic redraw and staggering; and Kanji annotation

ViewDraw supports most printers and plotters, providing rotation, scaling, and positioning; PostScript font and line width selection; and on-command printing of the full design hierarchy.

Intuitive Design and Customization for Individual Efficiency

ViewDraw has an icon and menu-driven user interface that makes it easy for designers to understand and control the tool. On-line help and electronic documentation ensure rapid learning and effective use over time.

The user interface is very flexible, and can be readily configured to match the taste and work style of each individual user. Designers can enter commands through pull-down or pop-up menus, keyboard entries and function keys, a command line interface, or with Fast Draw and gestures. Designers have a wide range of choices for display colors, line styles, solder dot sizes, fill patterns, bus widths, and grid dots. Designers can even customize the menu system, adding, deleting, reordering, or graying-out menu items as they see fit.

Designers save time by recording and replaying repetitive or complex tasks using ViewDraw's macro feature. Keystrokes, mouse operations, menu selections, and gestures can be recorded—even across multiple windows and multiple processes—and macros can be added to menus, where they function like standard ViewDraw commands.

For accuracy, repeatability, and user convenience, all menu and command key can be customized by the user.

Full Design Environment Integration

ViewDraw is available standalone for integration with other systems, or as an integral part of Viewlogic's Powerview® and Workview Office® environments. It runs on the most popular UNIX systems from Sun Microsystems, Hewlett Packard, IBM, and other manufacturers. ViewDraw is also available on Windows® 95 and Windows® NT as part of Viewlogic's Workview Office environment.



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