



*DxDesigner™, the Complete Solution for Design Definition.*

### Major product benefits:

- Extensive hierarchical support enables design reuse
- Design browser provides view of entire design, including hierarchy
- Design navigator allows component search based on reference designator, value, part number or any other attribute
- Design navigator displays all nets, net equivalences and connections
- Attribute editor provides simultaneous editing of multiple component attributes or nets across all sheets and hierarchical blocks
- Constraint editor allows entry of physical and electrical constraint definitions into the design during design creation
- Automated net labeling reduces errors and saves time
- Integrated digital, analog, and mixed signal simulation support
- Integrated library browser searches for, adds and characterizes parts
- Integrated variant manager creates variant bills of materials (BOMs)
- Integrated data management enables team design through file locking and version updating
- Support for most popular PCB layout packages

## DxDesigner — A Complete Solution

Creating competitive products is about more than capturing a schematic and passing the design to layout. Libraries must be managed so that the optimal parts with the lowest cost and shortest lead-time are used in the design. Sections of designs must be reused to reduce development time and improve reliability. Simulation and signal integrity analysis must be performed to ensure that the design will function properly and can be manufactured. Constraints must be applied early in the process so that fewer design iterations are required. Finally, the design data must be distributed and integrated with the purchasing and manufacturing operations so that a complete product can be produced with the fewest errors in the least amount of time.

The DxDesigner tool provides a complete solution for design creation, definition, and reuse. It provides everything needed for circuit design and simulation, component selec-

tion, library management, signal integrity planning, project management and team-based design.

### Design Reuse

Design reuse is a powerful methodology for reducing development cost and time while increasing product functionality and reliability. DxDesigner has many features that were created with design reuse in mind. For instance, the library browser can be used to search for IP reuse blocks that may be available from other design projects. Sophisticated hierarchy support allows for multiple instantiations of a reuse block, and supports the ability to import the instance-specific data to a new top-level design. A complete cross-referencing tool can cross reference nets across hierarchical blocks, and can even identify the sheet number in the drawing package where a particular block is defined. Specialized attributes can identify a block for reuse, limiting the repackaging of components and adding a unique prefix to all the components in the block. An

intuitive design navigator simplifies the search for parts and nets in a hierarchical design, making this design methodology practical and effective.

Design variants can also be defined in DxDesigner. A component (or block) can be uninstalled or substituted for another component while maintaining the integrity of a user-specified characteristic such as the PCB footprint. This flexibility allows multiple variants to be produced from a single-base design. If changes are made, all the variants inherit the changes, thus reducing the required rework and maintenance of design data.

Finally, reusable design data can be stored in a repository where it is managed and available to other designers. A user can check a design out from the repository over the Internet, then use that design as-is or modify it (the original design stored in the repository remains intact for future designers). All of these features combine to make design reuse accessible to any project team.

### Integration with the Enterprise

In order to optimize a product development cycle, design data must be integrated with the rest of the corporate enterprise. DxDesigner has the ability to publish schematics, library data and other design data through a web server, so any user with the appropriate permissions can gain access to this information using a web browser. DxDesigner is also integrated with several product lifecycle management systems, making design data, PDF schematics, and BOMs available throughout the company. It also supports a centralized, Internet-based library so that only one version of the corporate library needs to be maintained.

### Constraint-Based Design

In order to build successful products the first time, designs must be constrained early in the design process. This prevents the production of designs using parts that cannot be sourced or are cost-prohibitive, or the production of boards that do not meet speed or manufacturing requirements. DxDesigner provides designers with the status of all component data so that they can choose the right part. It can also verify an entire design against the corporate database to ensure that all data is consistent and correct. The DxDesigner integrated constraint editor specifies physical and electrical constraints that can be

read directly by Mentor Graphics signal integrity tools. Once analysis is complete, these constraints are automatically passed to the target layout system.

### Powerful Features for High Productivity

DxDesigner includes many additional features that lead to higher design productivity. Specialized pins for block input and output, power and ground, and on and off sheet connectors are automatically added. Borders with user-customizable annotations are also automatically added to new schematics. Tool tips provide users with design information without requiring them to zoom, pan or open dialogs. Finally, an open object model provides complete access to DxDesigner data and commands through standard VBScript or JScript languages, allowing for extensive customization.

### DxDesigner Components

DxDesigner can be configured several ways to support your specific design needs. It is based on ViewDraw<sup>®</sup>, one of the most widely used and easy to learn schematic capture tools. Additional components include DxDataBook<sup>™</sup> for centralized library access, DxPDF<sup>™</sup> for creating a PDF schematic, DxVariantManager<sup>™</sup> for variant design definition, DxDataManager<sup>™</sup> for design file management, DxViewOnly<sup>™</sup> for viewing schematics through a Web plug-in, and PCB interfaces to support a specific PCB layout system.

### Minimum Hardware Requirements

- 400 MHz Processor
- 128 MB RAM

### Minimum OS Requirements

- Microsoft Windows 2000, Windows XP Professional or Windows NT Version 6
- Sun Solaris 2.7 or 2.8
- HP HPUX 11

**To learn more about how DxDesigner can help improve your system design process, call Mentor Graphics to schedule a complete product demonstration, or visit our web site at [www.mentor.com/pcb](http://www.mentor.com/pcb) for the latest product news.**

Copyright © 2002 Mentor Graphics Corporation.

Mentor Graphics and ViewDraw are registered trademarks, and DxDataBook, DxDataManager, DxDesigner, DxPDF, DxVariantManager and DxViewOnly are trademarks of Mentor Graphics Corporation.

All other trademarks mentioned in this document are trademarks of their respective owners.

**Corporate Headquarters**  
Mentor Graphics Corporation  
8005 SW Boeckman Road  
Wilsonville, OR 97070-7777  
Phone: 503-685-7000

**Sales and Product Information**  
Phone: 800-547-3000  
503-685-8000

**Silicon Valley Headquarters**  
Mentor Graphics Corporation  
1001 Ridder Park Drive  
San Jose, CA 95131 USA  
Phone: 408-436-1500  
Fax: 408-436-1501

**North American Support Center**  
Phone: 800-547-4303

**Europe Headquarters**  
Mentor Graphics Corporation  
Immeuble le Pasteur  
13/15, rue Jeanne Bracconier  
92360 Meudon La Forêt  
France  
Phone: 33 (0) 1-40-94-74-74  
Fax: 33 (0) 1-46-01-91-73

**Pacific Rim Headquarters**  
Mentor Graphics (Taiwan)  
Room 1603, 16F  
International Trade Building  
No. 333, Section 1, Keelung Road  
Taipei, Taiwan, ROC  
Phone: 886-2-87252000  
Fax: 886-2-27576027

**Japan Headquarters**  
Mentor Graphics Japan Co., Ltd.  
Gotenyama Hills  
7-35, Kita-Shinagawa 4-chome  
Shinagawa-Ku, Tokyo 140  
Japan  
Phone: 81-3-5488-3030  
Fax: 81-3-5488-3021



Printed on Recycled Paper

JH-11-02

P/N: 1021190