

DESIGN

ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise



ENOVIA® Collaborative Design for Mentor Graphics Expedition Enterprise enables companies to accelerate product development and delivery by allowing designers to easily share information regarding their electrical designs throughout the product life cycle. The product facilitates concurrent printed circuit board (PCB) design for Mentor Graphics Expedition Enterprise, resulting in fewer engineering changes, shorter development times and lower production costs.

Key Benefits

- Reduce the number of design iterations by enabling enterprise collaboration throughout the design process between electrical and mechanical designers, purchasing, manufacturing, and partners.
- Reduce scrap and re-work costs by minimizing data transfer errors between engineering and manufacturing.
- Reduce ramp up production lead times by providing component information to your supply chain earlier in the development process through preliminary BOMs.

Product Overview

Ensuring that the right designs are being properly shared and managed across the value chain—a company’s suppliers, partners and customers— is vital to a company’s ability to bring products to market quickly and correctly the first time. In PCB designs, this effort is complicated by several factors including that electronic designs are growing exponentially in complexity (creating several gigabytes of data) and that corporations have dispersed design teams globally across multiple time zones. As design and manufacturing functions continue to occur outside the walls of an organization, it is increasingly critical that all members contributing to the PCB design process have full access to the most recent design data, when they need it and wherever they are located. ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise allows PCB development teams to collaborate during the board design process, and to collect, track, protect, and deliver product design information seamlessly across ECAD (Electronic Computer Aided Design) systems and other enterprise applications.

ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise provides a simple, yet secure, workgroup and enterprise data management system that integrates directly into ECAD design environments, allowing a designer to easily share electronic design data with other designers, enterprise users and partners.

ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise is intended to work with ENOVIA® Designer Central™ in order to create a collaborative environment for managing design data from multiple electronic and/or mechanical computer-aided-design (CAD) tools. Users are able to:

- Manage both DxDesigner schematic and Expedition PCB layout data as a single object.
- Enable project managers to release the entire design as one CAD model.
- Create derived outputs (i.e. manufacturing data automatically generated by the ECAD application).
- Manage design variants as defined in the ECAD application, each with its own derived outputs.
- Assign the design to workspace folders to facilitate collaboration.
- Synchronize attributes between the design and the CAD model in ENOVIA.

Product Highlights

ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise enables electronic designers to share design information with the extended enterprise, thereby shortening development times, reducing design errors and introducing products to market faster.

Desktop Cockpit Interface

Users can easily access their ECAD design data and common Product Lifecycle Management (PLM) commands through a desktop application and still work in their native design application.

Task Oriented Commands

Commands are organized into folders depending on the stage the design is in during the development process. Within each stage, the most relevant commands are easily accessible. For example, the command to generate a bill of material (BOM) only makes sense if a schematic design exists. Therefore, the command only exists during the schematic development stage.

Event Window

An event window allows the user to see the status of a task or command in ENOVIA or the design tool. The events can be saved to a log file to record events automatically in order to provide an audit trail that can be used to diagnose problems.

Flexible Design and Variant Configuration Management

ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise enables better control of design data through check-in and checkout of electrical design data and flexible configuration management. The product also supports unlimited board assembly variants without having to maintain duplicate schematics or manually edit BOMs. This ensures there is one source of the truth for manufacturing.

BOM Management

A BOM can be generated automatically anytime during the design process for review by designers, procurement, and component engineers to estimate cost, part status, and availability. A preliminary BOM can be created for early concept design collaboration even before an ECAD design is managed formally in ENOVIA. The design BOM can be modified by adding and removing parts manually or automatically by importing a parts list in a comma delimited format (CSV). The design BOM can be verified to ensure that the parts are available for production. When it is ready for collaboration, the BOM can then be made available to users of ENOVIA Engineering Central to create markups and add comments of proposed changes. Once approved, BOM markups can be applied to an Engineering Change Order (ECO) to implement the change automatically.

Library Information Management

By synchronizing part data between ENOVIA and ECAD libraries, designers can make smarter component choices early in the design process reducing design iterations and product development times. This feature allows bi-directional transfer of part information, ensuring that data is synchronized as changes are made in either ENOVIA or ECAD libraries. Therefore, designers can use native CAD tools to find PCB components and display ENOVIA attributes. Furthermore, enterprise users can use ENOVIA to find CAD parts and display CAD parameters. Synchronization is based on ENOVIA® Engineering Central™ part types or ENOVIA® Library Central™ classes. Batch mode allows updates to be made periodically or as needed.

Derived Outputs

Derived outputs such as netlists, drawing plots, milling data, artwork, drill data, and other manufacturing information can be generated automatically and stored with the design. This data can then be securely shared with production engineering and contract manufacturers to facilitate the ramp to production.

The Role of ENOVIA V6 and PLM 2.0

ENOVIA Collaborative Design for Mentor Graphics Expedition Enterprise supports PLM 2.0, product lifecycle management online for everyone, and the ENOVIA V6 values, which are:

- Global collaboration innovation
- Single PLM platform for intellectual property (IP) management
- Online creation and collaboration
- Ready to use PLM business processes
- Lower cost of ownership.



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