

MatrixOne Designer Central for PCB Design™

Ensuring that the right design data 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 Printed Circuit Board (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 geographically dispersed design teams that cross over 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. MatrixOne Designer Central for PCB Design allows PCB development teams to collaborate during the board design process, and to collect, track, protect and deliver product design information seamlessly across EDA (Electronic Design Automation) systems and other enterprise applications.

MatrixOne Designer Central for PCB Design provides a simple, yet secure, workgroup and enterprise data management system that integrates directly into EDA design environments, allowing a designer to easily share electronic design data with other designers, enterprise users and partners. The solution facilitates concurrent PCB design, resulting in fewer engineering changes, shorter development times and lower production costs. With MatrixOne Designer Central for PCB Design, schematic and layout designers can work concurrently on either the same design while keeping design databases synchronized (i.e. components, connectivity, properties, etc.) or on different hierarchical blocks of the schematic design, independently revising their designs in the same project. Other benefits of this solution include the ability to:

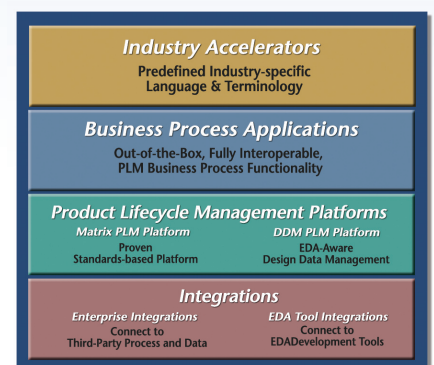
- Independently manage modules which facilitates design reuse
- Grant access for other stakeholders across the company (mechanical engineering, software engineering, manufacturing, purchasing, etc.) to design data in real time throughout the entire product lifecycle
- Have project leaders create team workspace folders, defining access level for members and making design information easy to find
- Provide collaboration capabilities such as workflow, online meetings, subscriptions and discussion threads, making it possible for dispersed design teams to productively collaborate on the same design

Business Process Application

With MatrixOne Designer Central for PCB Design, you can:

- Decrease the time to develop printed circuit boards (PCBs) by enabling concurrent schematic and layout design
- Manage complex design projects by enabling team-based schematic design using hierarchical design methodology
- Reduce the number of design iterations by enabling enterprise collaboration throughout the design process between electrical and mechanical designers, purchasing, manufacturing and partners
- Choose your preferred front and back-end EDA design tool for mixed PCB design flow
- 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 Bills-of-Material (BOMs)

ENOVIA MatrixOne PLM Environment



Accelerate PCB Development

MatrixOne Designer Central for PCB Design enables electronic designers to collaborate on complex designs as well as share design information with the extended enterprise, thereby shortening development times, reducing design errors and introducing products to market faster.

Features and Capabilities

Concurrent PCB Schematic and Layout Design

Schematic and layout designers have the freedom to work concurrently to shorten development times. As changes are made to the schematic and layout, synchronization is accomplished through forward and backward annotation files that can be accessed through shared workspace folders in Matrix. Subscriptions allow the layout designer to be notified when the schematic design is checked-in by the logic designer. Matrix keeps track of the relationship between schematics and layout so traceability is never lost even when working with third party designers.

Manage Team Based Hierarchical Schematics

Top-down design methodology enables several designers to work concurrently on complex PCB projects. In this method, a PCB design is divided into logical, manageable blocks, and each team member is allocated a block to capture and verify. MatrixOne Designer Central for PCB Design manages block-based designs within the same project. Project managers have visibility into multi-level and multi-page designs and can assign team members to implement the functionality underlying each block.

Collaboration with Design Teams

From within their EDA application of choice, designers can easily find and access data vaulted in Matrix. Users can create folders within each workspace with access privileges for secure content, and share them with team members inside and outside of their organization. MatrixOne Designer Central embeds visualization capabilities to allow electrical and mechanical designers to markup and redline schematics, PCB layouts and MCAD models without requiring the native authoring tool. Furthermore, users can define workflows (or routes) for designs or documents that require review or approval. Routes can be defined with serial or parallel tasks.

Mixed Design Flows

Heterogeneous design environments comprised of multiple EDA vendors' software tools are no problem for MatrixOne Designer Central for PCB Design. In the age of mergers and acquisitions, organizations can hardly afford to consolidate their PCB design

flow on a single vendor. Schematic and layout designers can work in the EDA tool of their choice and still keep their designs synchronized.

Flexible Design and Variant Configuration Management

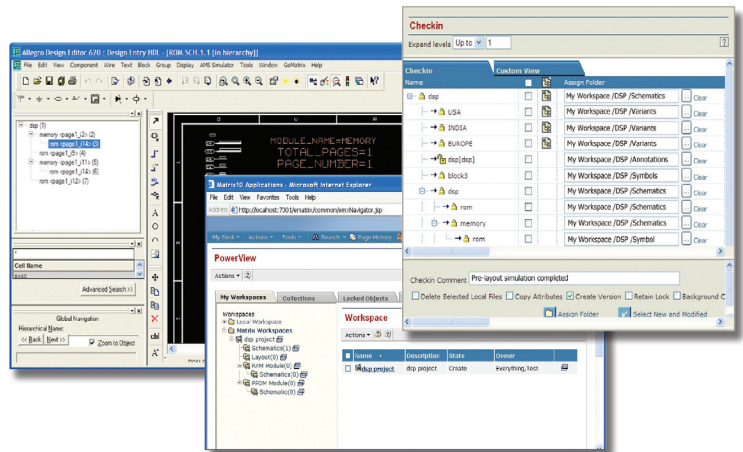
MatrixOne Designer Central for PCB Design enables better control of design data through check-in and check-out of electrical design data and flexible configuration management. Users have the option to manage the complete PCB project (schematic and layout), schematic or layout only and individual schematic modules. The solution 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 and Derived Outputs

A BOM can automatically be generated from the schematic anytime during the design process for review by designers, procurement and component engineers to estimate cost, part status and availability. With MatrixOne Engineering Central™ users can markup and add comments of proposed changes to the BOM. Once approved, BOM markups can be applied to an Engineering Change Order (ECO) to automatically implement the change. Derived outputs such as netlists, drawing plots, milling data, artwork, drill data and other manufacturing information can be automatically generated and stored with the design.

Supported EDA Platforms

Cadence, Mentor Graphics, Zuken.



About ENOVIA MatrixOne

MatrixOne, Inc. was acquired by Paris-based Dassault Systèmes in May, 2006 and today is part of its ENOVIA PLM Collaborative Environment family of solutions. The ENOVIA MatrixOne solutions enable companies to accelerate product innovation to achieve top line revenue growth and improve bottom line profitability. ENOVIA MatrixOne is focused on helping companies across the automotive, aerospace & defense, consumer, machinery, medical device, semiconductor and high-tech industries solve their most challenging new product development and introduction problems. More than 850 companies use ENOVIA MatrixOne solutions to drive business value and gain a competitive advantage, including industry leaders such as BAE Systems, Bosch, Comau, General Electric, Honda, Johnson Controls, Linde AG, NCR, New Balance, Nokia, Philips, Porsche, Procter & Gamble, REI, Sony Ericsson, STMicroelectronics and Toshiba. ENOVIA MatrixOne (www.MatrixOne.com) is headquartered in Westford, Massachusetts, with locations throughout North America, Europe and Asia-Pacific.



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