

FabLink XE

Preparing Designs for Manufacturing

D A T A S H E E T

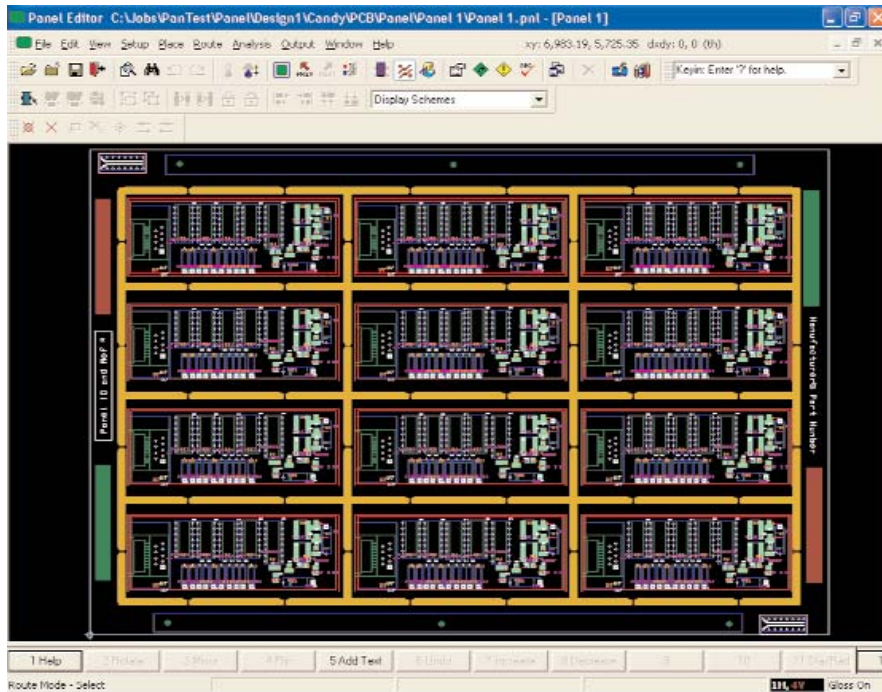


Figure 1: FabLink XE's panelization functionality allows for tight integration with Expedition PCB and allows for user notification when designs are modified.

Major product benefits:

- Integrated PCB and panel level design ensures design integrity
- Manage design and creation of manufacturing output at the panel level
- Documentation creation and maintainability is simplified and automated
- Create repeatable and consistent manufacturing data sets
- Prepare both PCB and panel level designs for increased fabrication yield

Overview

Manufacturing and fabrication have always been an extremely integral part of PCB design. The ability for designers to have more control over the fabrication data has been needed for some time. Previously, designers had to use multiple applications to create schematics, layouts and prepare designs for manufacturing. To make the process easier, Mentor Graphics® presents FabLink XE™, an integrated manufacturing data creation, generation and verification environment powered by AutoActive® technology. FabLink XE, available in Mentor's Expedition™ flow, was created specifically for designers to control their fabrication data at either the board or panel level, thus ensuring design and manufacturing data integrity.

FabLink XE provides a stand alone panel creation and editing environment for creating manufacturing data at the panel level that operates on a panel design database. In addition, it provides additional board level functionality, including detailed data views, searchable PDF output, copper balancing, various data outputs and Gerber In/Drill In capabilities. FabLink XE interacts with design data at three levels: Manufacturing Preparation, Manufacturing Output and Documentation.

Manufacturing Preparation

Panelization

Through tight integration with the Expedition PCB™ design database, panel designs may now be created using the original PCB design data rather than relying on manufacturing related data, such as Gerber and Drill files. When changes are made to the PCB design database, the user is notified when opening the panel design.

Multiple copies of a single PCB design database may be placed individually or by automatic step and repeat. Full PCB manipulation is available to move, rotate and push to other side of the panel to automatically create a flip-flop panel.

Panel specific cells, such as skyhooks and test coupons, are supported. Panel Templates may be used to pre-configure standard panel sizes, outlines, cells, associated dimensioning, and other drafting details. The Panel Wizard quickly and easily creates a new panel using the existing templates, with the PCB design placement the only remaining operation necessary prior to generating the manufacturing outputs.

Copper Balancing

Copper balancing may be used to create a balanced design at both the PCB design and panel level. Full control over the hatching spacing, clearances and layers is provided including the ability to add round, square or diamond shaped patterns.

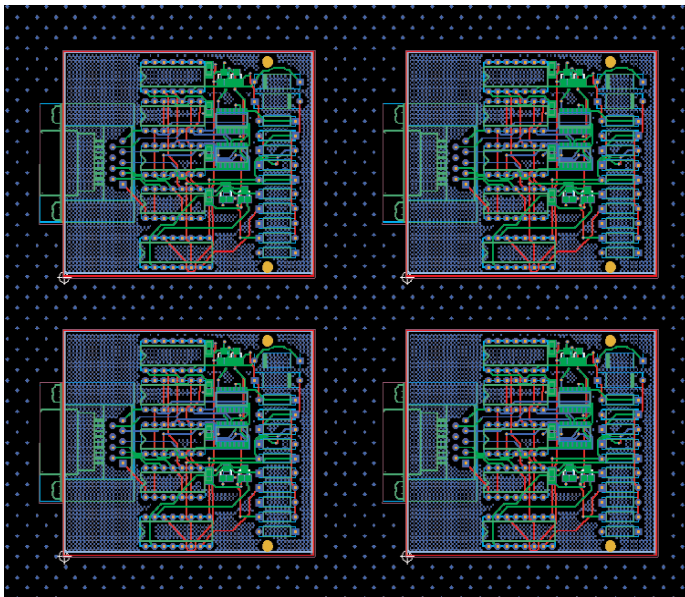


Figure 2: Copper Balancing aids designers in producing designs that are balanced at all levels.

Gerber-In and Drill-In

After generating the manufacturing data, such as Gerber and Drill, it is common practice to review that data before finalizing release to fabrication. All Gerber and Drill data is imported to user defined layers and now can verify that the manufacturing data within the original design database, both for the PCB and Panel design.

Manufacturing Output

FabLink XE provides the following outputs:

- Gerber 274D and 274X
- NC Drill/Mill
- ODBG/ODB++
- ASCII Import and Export
- DXF Import and Export
- GenCAD

Documentation

Detailed Views

A Detailed View may be used to selectively create a detailed and/or scaled view of a specific area of the PCB or Panel design. The Detail View(s), when created, can be mirrored, rotated, named and have a Display Control that is independent of the actual design itself.

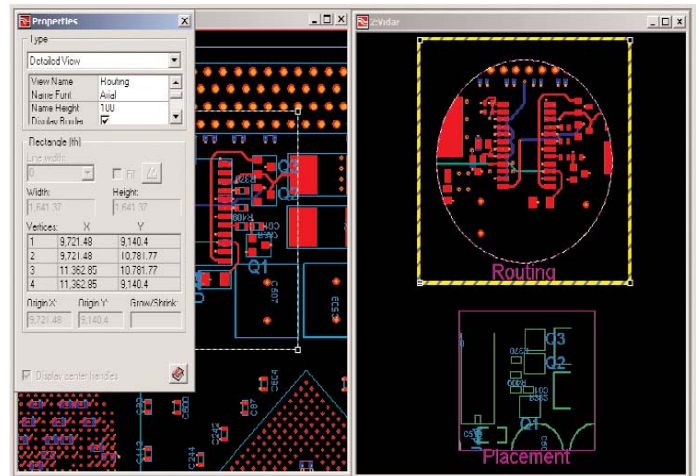


Figure 3: The detailed views functionality gives designers a view of their designs independent of the actual design.

Searchable PDF Output

All text on commonly used layers, such as assembly, drill drawing, silkscreen, soldermask, solderpaste and user defined layers, are rendered as searchable text instead of strokes. The generated PDF document displays physical layer items, including Board (Traces) Cell (Pads) and user defined items.

PDF plot output schemes can be saved and reused to ensure consistency and repeatability when generating PDF documents.

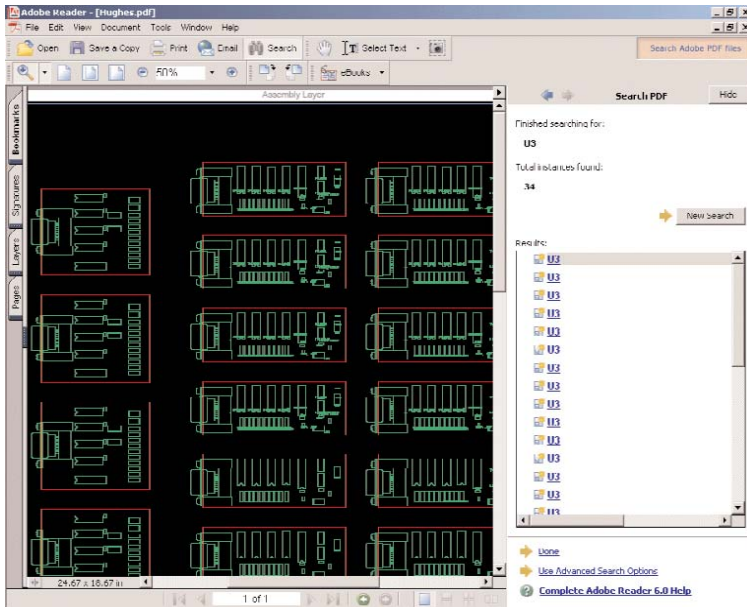


Figure 4: FabLink XE's searchable PDF ability gives designers a consistent output of schemes and other user defined items.

FabLink XE Pro

FabLink XE Pro, which includes all of the functionality and benefits of FabLink XE, also provides the following additional functionality:

Multiple PCB board Panel design

Just like FabLink XE has the capability to create Panel designs with multiple copies of a single PCB design database, FabLink XE Pro enables multiple copies of different PCB design databases in a single Panel design. All interactive and automatic placement and manipulation functions are available.

Manufacturing Output Validation (MOV)

Quickly and easily identify out of date manufacturing data compared to the design data. Has something changed in the design file (missing, additional or differing elements) since the data was last generated? Use in conjunction with Gerber-In and Drill-In to both identify and review the data immediately within the design database.

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BoardStation™ Neutral file format output

Many 3rd party tools and customer specific downstream processes utilize or are dependant on this file format.

System Requirements

Hardware Requirements

- Pentium® III or higher
- Memory: 256 MB RAM Minimum
- 512MB RAM Recommended

System Requirements

- Windows XP Professional (SP1 or SP1a)
- Windows 2000® (SP4)
- Red Hat Enterprise Linux 3

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