

OrCAD Panel Editor

Intelligent panel design and documentation

OrCAD® Panel Editor intelligently automates the complex process of panel definition and documentation, simplifying the design process. This solution enables designers to quickly create electronic manufacturing documents that clearly articulate the panel specification and instructions for successful fabrication, assembly, and inspection of their designs.

Overview

OrCAD Panel Editor is a PCB assembly (“array”) panel design tool that intelligently automates the panel definition and documentation process to produce simple or complex PCB assembly panels in a fraction of the time versus traditional manual methods. OrCAD Panel Editor enables you to quickly design your panel and create the manufacturing drawings that drive fabrication and assembly.

Electronics manufacturers often panelize single-board designs into arrays or sub-panels to facilitate their PCB assembly process. PCB CAD tools are very good at designing the single board design or “one-up” PCB, but lack the necessary functionality to design the varied complexities and details that are required for panels. Beyond simply stepping and repeating a design, PCB panel design requires adding panel and manufacturing features such as pinning holes, milling, score lines, and breakaway tabs—which can be difficult and time consuming or simply unavailable in today’s CAD tools.

OrCAD PCB designers need a panel environment that is purpose-built for the challenges and requirements of PCB panel design. OrCAD Panel Editor addresses these challenges, providing intelligent panel drawing elements and automated functionality that significantly simplifies the panel design and documentation process. It streamlines the path to panel manufacturing by enabling deliverables that include a “one-up” Gerber of the PCB along with a PCB assembly panel drawing that most fabricators require.

Highlights

- Intuitive use-model and intelligent automation methods increase productivity and ease of creation for PCB panel design, saving hours or even days defining a PCB panel and creating documentation
- Eliminates manual drawing of tedious document elements by automatically creating arrays, PCB views, details, and tables directly from the OrCAD PCB CAD data
- Links to PCB source data dramatically reduce or eliminate the amount of time associated with panel engineering change order (ECO) updates due to PCB database changes

OrCAD Panel Editor “knows” it is creating PCB documentation. Utilizing the OrCAD PCB CAD data, it creates intelligent linked PCB views, drawing details, document notes, drill charts, parts lists, and other crucial documentation details. The result is an electronic manufacturing document that better articulates the panel specification and instructions for successful fabrication, assembly, and inspection of your design and contains all the data necessary to build, view, and archive the final product.

Key Panel Design Features

OrCAD Panel Editor has all the automation, intelligence, and functionality required to design and document PCB assembly panels.

- Automatic array creation in spreadsheet or auto-calculate mode using imported, intelligent OrCAD PCB design data results in an optimized panel that includes as many PCBs as possible

- Allows quick placement of top, bottom, drill pattern, or custom panel arrays on a drawing, as well as drill charts, note blocks, mill and V-score details
- Panel-level drill and coordinate charts reflect all PCBs contained in a panel and define all components, hole sizes, locations, symbols, and quantities for the entire panel
 - Pinning holes added to the panel are automatically included in the drill chart
 - Coordinate charts or the panel can be exported in CSV format to drive pick-and-place machinery
- Automatic NC milling definition allows the route path around a PCB to be defined within a panel as well as the break out tabs, then the NC milling can be automatically applied to all the PCBs within the panel as well as merged route information for one unified NC milling path
- Panel Drawing Detail wizards use the existing PCB and NC milling data to automatically depict mill tab and V-score details

Ease of Drawing Creation

PCB designers often turn to computer-aided manufacturing (CAM) tools for their PCB assembly panel design, tools created specifically for the CAM engineer at the PCB fabricator that for most PCB designers are difficult to use. OrCAD Panel Editor is designed for ease-of-use, with drag-and-drop drawing elements—including PCB views, charts, details, text boxes, and note blocks—that are treated as drawing elements and can be quickly added and modified. Each element may be independently scaled, formatted, and transformed (e.g., rotated, mirrored, flipped). There is no limit on the number of elements that can be placed on a drawing.

Data Importation

OrCAD Panel Editor uses the IPC-2581-format OrCAD PCB CAD data to drive the panel definition and documentation creation process. External content such as JPEGs, BMPs, GIFs, and TIFFs may be imported and incorporated in the drawings. OLE objects, audio, and video files can also be imported and linked within the documentation drawings and stored with the documentation release package. In addition, RS274X files can be imported and DXF can be imported and exported.

Engineering Change Orders (ECOs)

The panel definition and all the drawing elements are derived from the source OrCAD PCB CAD data and always remains linked to that source data. This allows you to perform lightning-fast ECOs by simply refreshing only the source CAD data. When refreshed, all instances of the original OrCAD PCB CAD data (array instances, PCB views, tables, details, drill charts, etc.) are refreshed to display the new design data changes. All unique user settings defined for each instance are maintained during the refresh, further minimizing ECO documentation rework.

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