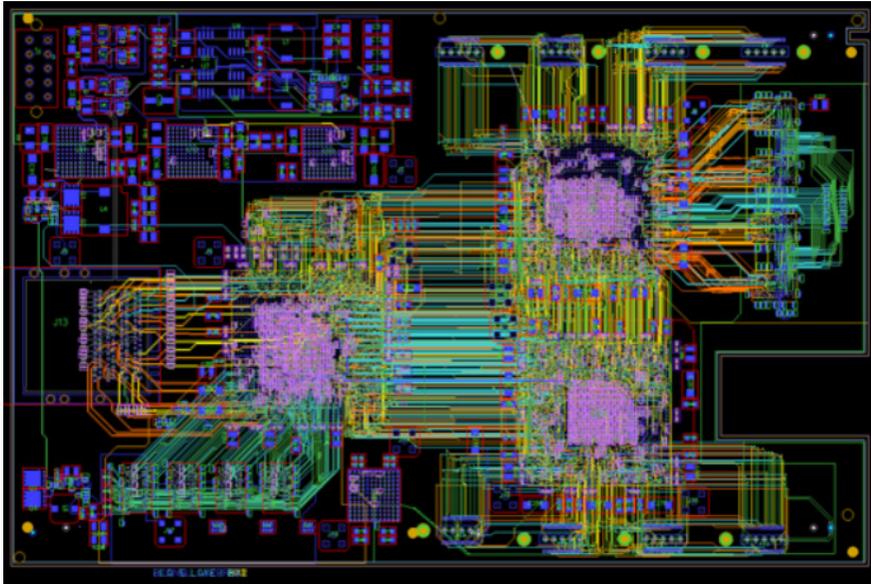


ODB++Design

Intelligent data exchange between design and manufacturing

PCB Manufacturing

D A T A S H E E T



ODB++Design contains all the information needed for fabrication, assembly, and test.

Overview

ODB++Design is a manufacturing-oriented PCB product model data format, containing all data necessary to fabricate, assemble and test in a single file structure. ODB++Design is the most widely used intelligent data exchange format in the PCB industry, making it the de facto standard for intelligent PCB data exchange.

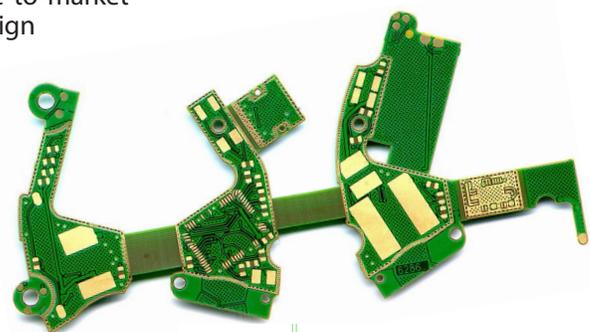
ODB++Design is a major step beyond traditional data exchange between PCB design and the PCB manufacturing process. Significant improvements in product quality, PCB fabrication, and assembly time, and time-to-market can be achieved using the intelligent data format of ODB++Design as compared to legacy formats such as Gerber. It can often take several days of work to create and validate the manufacturing package using legacy formats. With ODB++Design, the manufacturing data can be validated and released in a matter of hours.

Mentor Graphics recommends ODB++Design data as the best-practice method to export fabrication, assembly, and test data from its PCB design tools. With Mentor's leading position in PCB CAD/CAM, customers can be confident that ODB++Design will be supported and improved to meet emerging technological challenges as they arise.

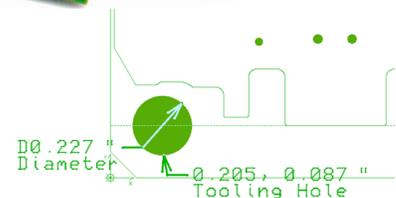
In addition, the ODB++Design Partners Program supports inclusion of ODB++Design and updates for other EDA tool vendors, and the solution is open to the entire PCB industry.

BENEFITS

- All design data needed for fabrication, assembly, and test in a single file
- Supports integrated DFM at all levels for faster new product introduction (NPI)
- Streamlines the design-to-manufacturing process
- Minimizes supply-chain risks related to data transfer errors
- Reduces communications delays between design and manufacturing
- Eliminates potential introduction of errors from the manufacturer re-integrating old-style data to a manufacturable PCB model
- Enables highest-possible levels of automation in PCB NPI from design through all phases of manufacturing
- ODB++Design is supported by all major vendors of CAD, DFM, and CAM tools

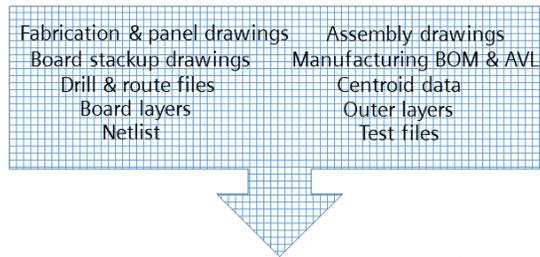


ODB++Design now includes explicit modeling of flex and rigid-flex circuits and can convey dimensioning data.



Open Format, Yet Controlled IP

The ODB++Design format is an open, ASCII file structure that was conceived by Valor, now Mentor, in 1995 and has been accepted and proven at thousands of companies worldwide. Anyone can download for free the ODB++Design format specification at www.odbplusplus.com/design. Furthermore, we continue to support all software development partners on their application use of ODB++Design.



10+ steps, several days:
Create, check, validate, and output files individually

OR

ODB++Design

4 steps, done in hours:

Create ODB++Design product model containing all the data
Validate the single product model
Output the data needed for fabrication
Output the data needed for assembly

All fabrication and assembly data contained in one data model

And while the format is open, you have total control of what design content, if any, to exclude from the data package when the ODB++Design output is generated.

You may, for example, wish to neutralize the net names of your design to protect the design intent. Or you may choose to output only the board layers to your fabricators because they do not need to know the component level data. All of this is controlled by you, the sender of the ODB++Design data.

Continuing Improvement to Meet PCB Needs

Since its conception, the format has been continuously improved to meet the evolving needs of PCB designers, fabricators, and assemblers. Among the latest enhancements released are:

- Definition of flex and rigid-flex circuits
- Intentional shorts
- Dimensioning
- PCB buildup information
- Manufacturing product modeling
- Wire bond data

Proven Results

Mentor supplies automated graphical tools integrated into your ODB++Design output process so you can prove to yourself that the ODB++Design is equivalent or superior to the design-intent of the legacy formats you are moving away from. After checking 10 designs like this, you will be convinced that there is no need to continue using the outdated Gerber, Excellon, netlist, and BOM outputs.

Free ODB++Design Viewer

You can also download the free ODB++Design Viewer from the ODB++Design website: www.odbplusplus.com/design. With the free viewer you can see how your design is represented in the ODB++Design format. You can also measure features and distances as well as query components and nets for attributes.

For the latest product information, call us or visit: www.odbplusplus.com/design

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