


# OPCUG

**Ottawa PC Users' Group**

DoubleCAD and KiCAD

By Jocelyn Doire


*Users helping users*



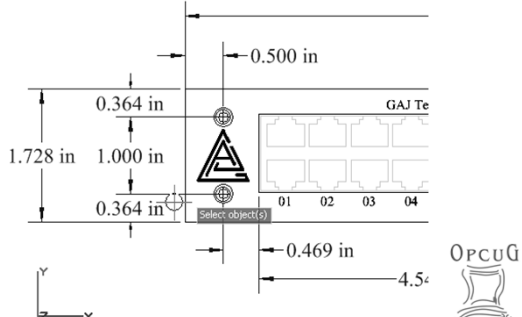
## What is CAD?

Computer Aided Design

- If you need a part to be fabricated, you need drawings that are accurate and complete, and is understood by the industry.
- There are CAD programs to draw a house for example, a Printed Circuit Board, and many more.



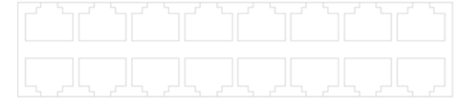
## DoubleCAD



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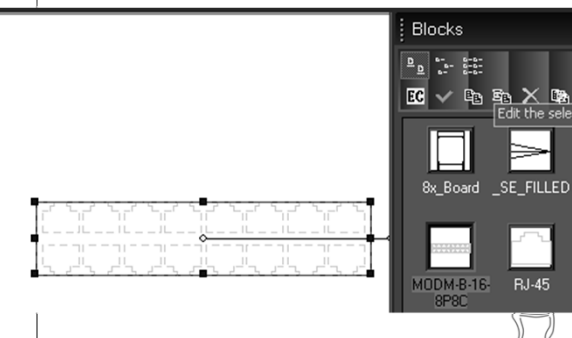
## Library

Create a library of parts, for example a connector, and then insert it as many times as needed in the main drawing



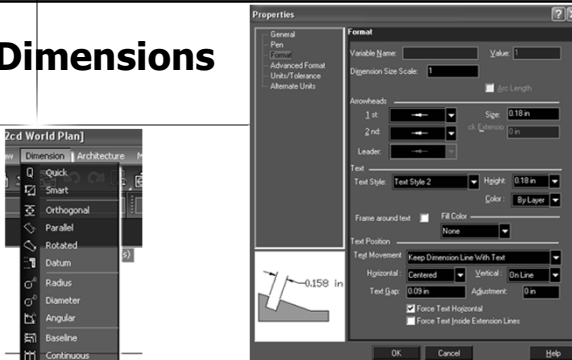
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## Insert and adjust the block



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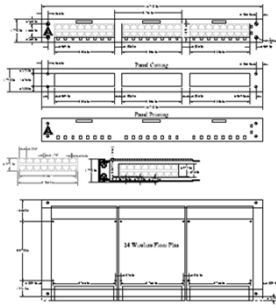
## Dimensions



- Length
- Circle: radius, angle
- format

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## Views

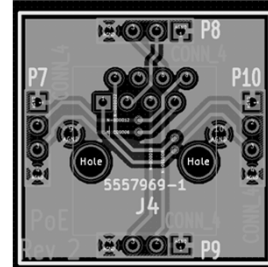


- Different views for different uses
  - Front panel for painting
  - Floor plan for mechanical assembly

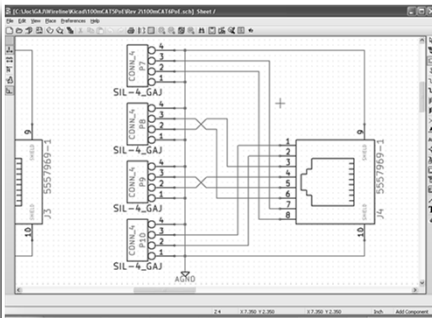


## KiCAD

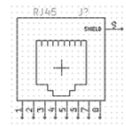
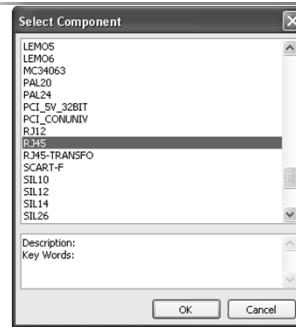
### ■ Design of Printed Circuit Board



## Schematic

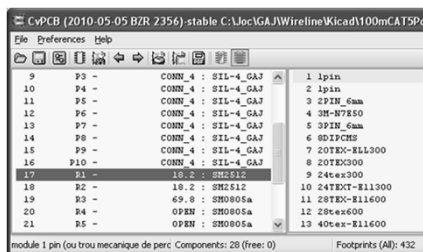


## Library of components



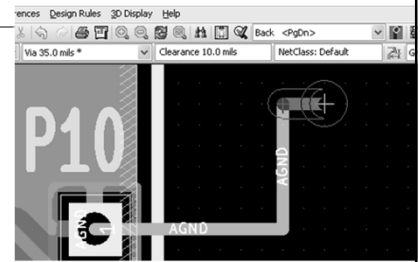
## Component to Module

- Associate a schematic component to a physical part



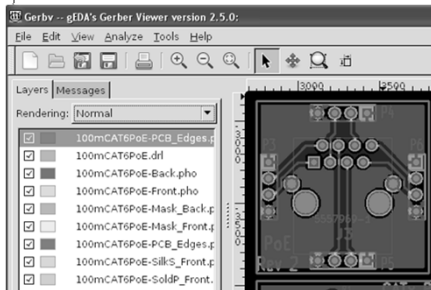
## PCB Design

- Add components
- Add tracks
- add vias
- add board dimensions



## Send for manufacturing

### ■ Gerber File



## Q & A

### Computer Aided Design

- **DoubleCAD**  
<https://www.turboCAD.com/content/doubleCAD-xt-v5>
- **KiCAD** <http://kicad-pcb.org/>

