

PCB Converter for SketchUp

The latest design tool from RS Components

User's Guide

Google SketchUp



Into the 3rd dimension with Google Sketch-up

Ever have a design that did not quite fit the mould? You have laid out the PCB and made sure that your design is clear of grounding or signal-integrity problems. You have managed to squeeze a couple of layers out of the design despite having to work with dense ball-grid arrays. Everything is going fine until someone points out that a stiffening bar needed to strengthen the outer casing fouls a connector or the heat sink needed to prevent the host processor from going into thermal shutdown

These are the moments when the worlds of mechanical computer aided design (MCAD) and electronic (ECAD) collide. For years, they have proceeded along parallel lines and only intersecting through the language of engineering change orders when someone recognises, other than that is desirable, that a design modification has knock-on effects on the domain.

If you are working to the dimensions of a standard packaging format, there is less to governing. You can rely on the standard measurements for mounting holes to be confident that the PCB will go in the space provided – just as long as you have not used some very old components. But this safe approach can only get you so far.

“A hot-running processor will need a large heatsink that might block the cooling flow of air for other critical components. It is hard to see how airflow might be constricted from the pure 2D view of a PCB layout package. A much clearer picture emerges only when you move into the 3D world to see how the PCB, components, connectors and packaging fit together. The ability to do this earlier in the design – rather than waiting

Heat is a concern for many designs. A hot-running processor will need a large heatsink that might block the cooling flow of air for other critical components. It is hard to see how airflow might be constricted from the pure 2D view of a PCB layout package. A much clearer picture emerges only when you move into the 3D world to see how the PCB, components, connectors and packaging fit together. The ability to do this earlier in the design – rather than waiting

Continued page 68 >



Electrocomponents plc

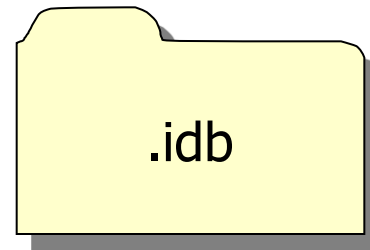
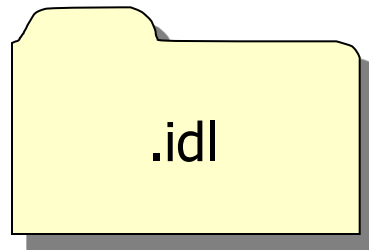


Creating the IDF

PCB Converter for SketchUp will convert a Printed Circuit Board design in the IDF format into a COLLADA file, which is recognised by Google SketchUp

Most PCB design packages will allow the exporting of designs in the IDF format. This is usually accomplished using the “Output” or “Export” menus

The process of exporting an IDF will create **two** files:



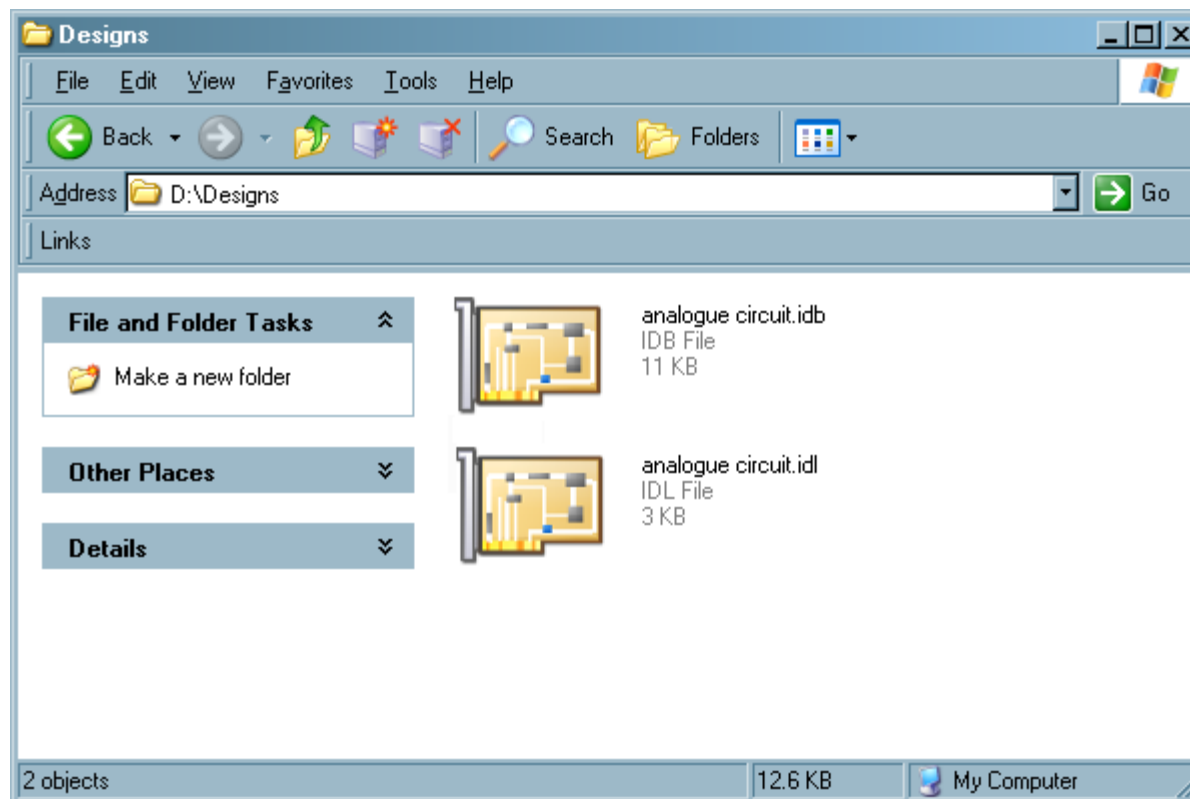
PCB Converter for SketchUp uses the .idb file

Using the tool

1. Open PCB Converter for SketchUp by double clicking on the programme icon

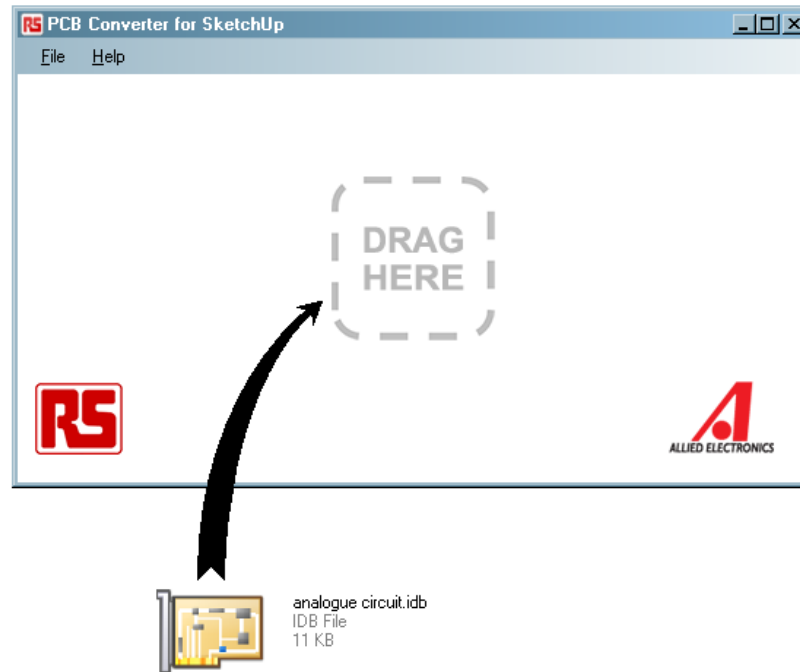


2. Using Windows Explorer, navigate to where the idl and idb files have been saved



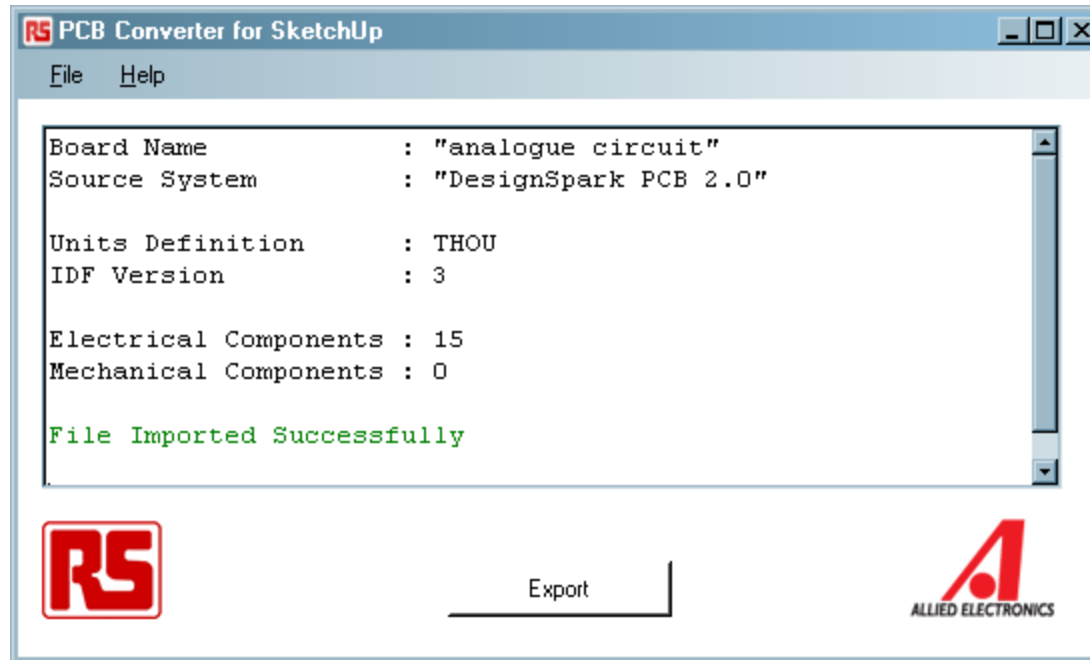
Using the tool

3. Click and hold the idb file. Drag the file onto the PCB Converter tool, and release.



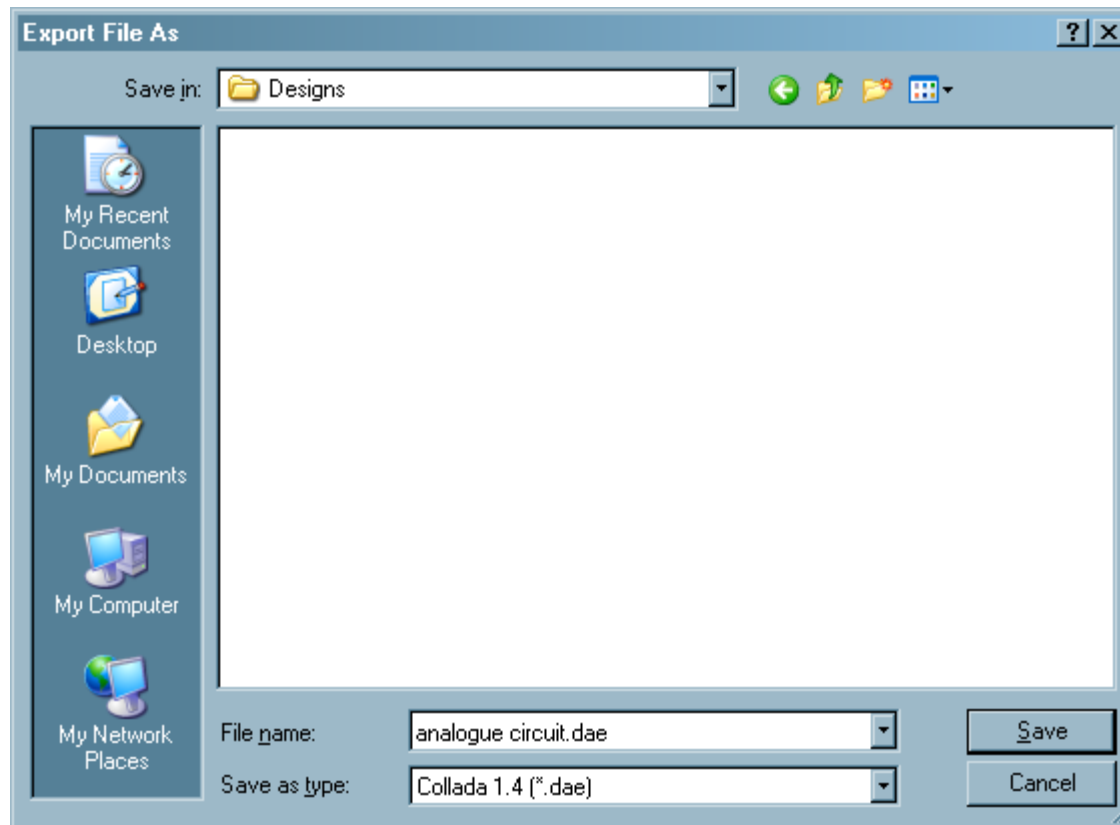
Using the tool

4. The tool will change, and show the “Export” button.



Using the tool

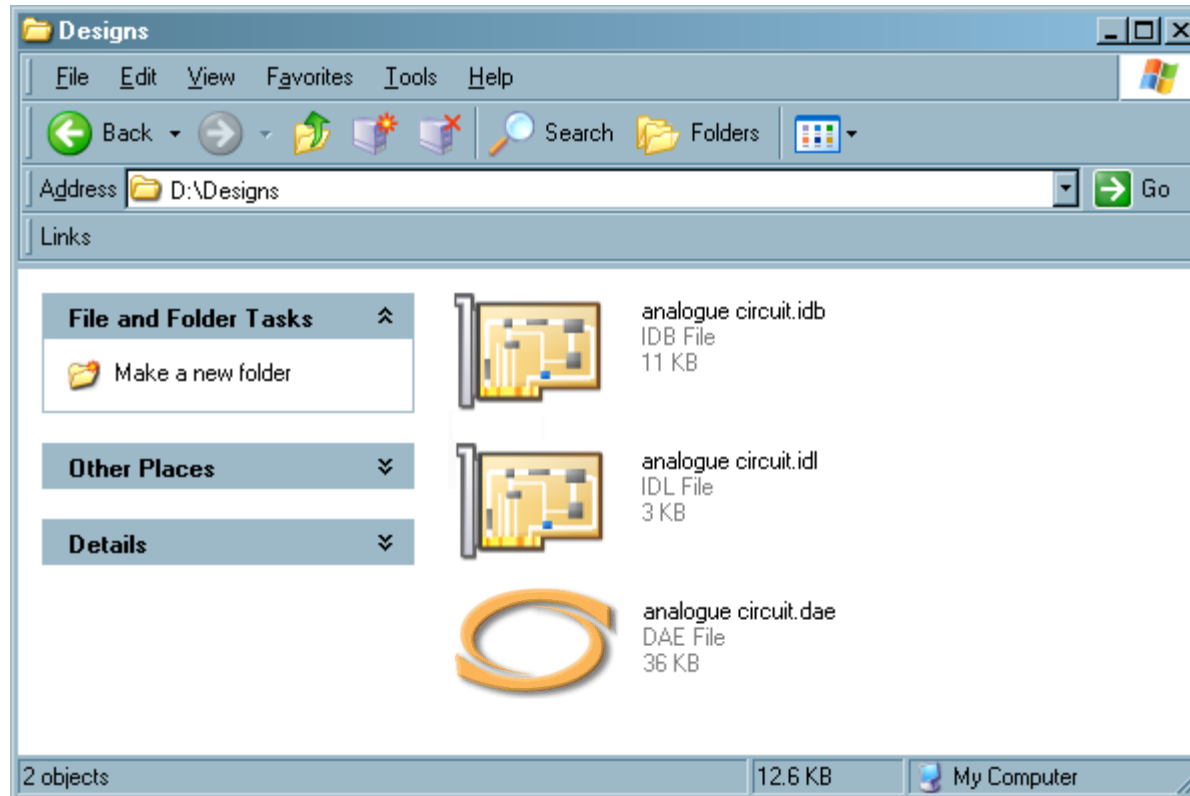
5. Click the “Export” button and choose a location to save the COLLADA (.dae) file



6. Click “Save”

Viewing the COLLADA file

7. The COLLADA file is now ready to be imported into Google SketchUp. This can be accomplished using the “File/Import...” command.



Further information

For further information, visit DesignSpark.com or rswww.com

The screenshot shows the DesignSpark website homepage. At the top, there is a navigation bar with links for Home, Explore, Ask, Connect, Partner, Blog, and Events. Below this is a large banner for "Download DesignSpark PCB for FREE now". The main content area is divided into several sections: "Dev Kits" featuring Spartan-3E, mTouch, and Evaluation Module for TRF7960; "Upload your PCB libraries" with a promotional message; "Spark Store" listing various design tools like DesignSpark PCB, eTech iPad app, Tektronix Probe Select, Component Chooser, and Power Stage Designer; and "Latest dev kit reviews" with a user review for the Spartan-3AN evaluation kit.

PCB Converter for SketchUp

Convert your PCB Design into 3D

The RS PCB Converter for SketchUp is a simple yet powerful tool that allows designers to import IDF files into Google SketchUp.

Using this tool, engineers can combine both electronic and mechanical designs, opening the door to collaboration. Design changes can be made immediately without having to wait for concept drawings, expensive prototypes or extensive reviews. With the addition of 3D models downloaded from the RS website, there is now no barrier to true integrated design.



Download PCB Converter for SketchUp

Click here to download the tool now!



PCB Converter
for SketchUp

[Download PCB Converter for SketchUp](#)

Google SketchUp

[Download Google SketchUp](#)

View the Tutorial Video

Click onto the video tutorial to see how it works...



[See already asked questions and answers](#)

Feedback:

How have you found the PCB Converter experience? Send us your suggestions or give us some feedback using the link below.

[Give us your Feedback](#)