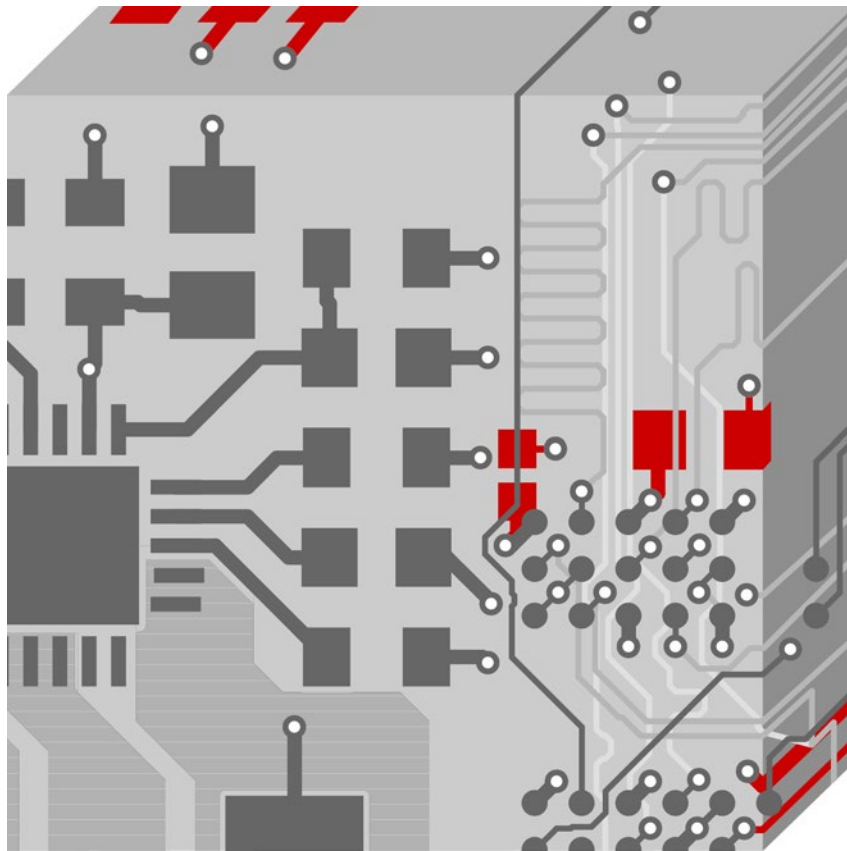


How to Work With Sub-Drawing



OrCAD / Allegro PCB Editor
Application Note | V2.0

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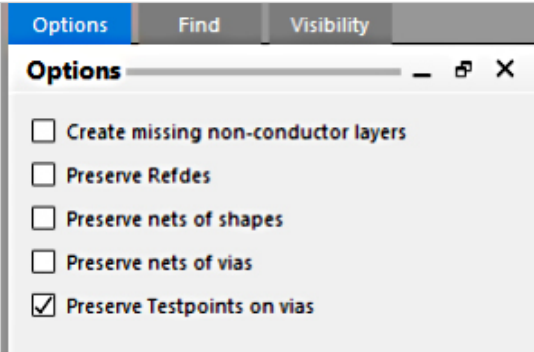
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1 Export Sub-Drawing

Copies design elements from one design or symbol drawing into a clipboard (.clp) file for pasting into other designs or drawings. It is also possible to create a library of clipboard files.

Export Sub-Drawing can be found in PCB Editor under **File > Export > Sub-Drawing**.

1.1 Options



Options Tab for Export Sub-Drawing Command

Create missing non-conductor layers	Non existing subclasses are added to the target board, during import, when this option is set.
Preserve Refdes	Choose to preserve the reference designator information in the clipboard file.
Preserve Nets on Shapes	Choose to allow shapes to retain their net associations when a .clp file is read in.
Preserve Nets of Vias	Choose to allow vias to retain their net associations when a .clp file is read in.
Preserve Testpoints on Vias	Choose to allow vias to retain their testpoint associations when a .clp file is read in.

Note

Options **Preserve Refdes**, **Preserve Nets on Shapes**, **Preserve Nets of Vias**, **Preserve Testpoints on Vias** are not available when exporting a Sub-Drawing out of a symbol drawing.

1.2 Procedure

Copying Elements to a Clipboard File

1. Click **File > Export > Sub-Drawing**
2. Set Find Filter and Visibility to the required objects and layers. Typically, you can only choose visible elements. The exceptions are:
 - Pins or vias. If any part of a pin or via is visible, all applicable information for the pin or via is selected.
 - Symbols. All applicable elements of symbols are selected.

3. Set the export options in the Options tab according to your needs.
4. To copy multiple elements to the clipboard file, do one of the following, otherwise proceed to step 5.

To choose all elements within a specific area:

- Drag the cursor over the elements you want to select.
- Choose a coordinate in the work area as the origin point for the elements.
- Proceed to step 5.

To choose only specific elements:

- From the pop-up menu, choose **Group**.
 - Choose each element you want to copy.
 - When you have selected all specified elements, choose **Complete** from pop-up menu.
 - Choose a coordinate in the work area as the origin point for elements. The tool displays the coordinates of the last pick and displays the Clipboard Filename dialog box.
 - Proceed to step 5.
5. In the Clipboard Filename dialog box, enter the file's name and click **OK**.

Notes

The clipboard copy command does not consider pin escapes (clines and vias) as part of the package / part symbol. To copy a package / part symbol with its pin escapes to a clipboard file use the select by group or window options to include the clines and vias.

If you do not enter a filename, the tool uses the default standard.clp. If you enter a filename without an extension, the tool adds the default extension .clp.

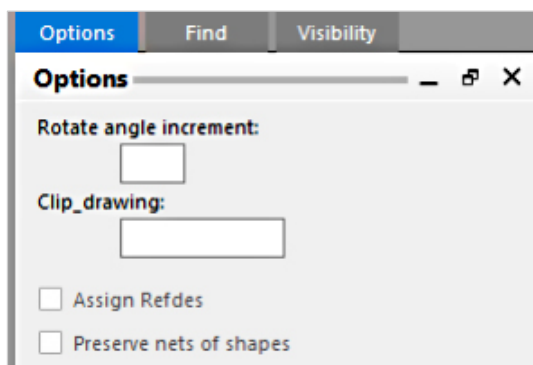
If you enter the name of an existing clipboard file, the tool displays a confirmation window and asks if you want to overwrite the existing file.

2 Import Sub-Drawing

Pastes design elements from a clipboard (.clp) file into designs or drawings.

Export Sub-Drawing can be found in PCB Editor under **File > Import > Sub-Drawing**.

2.1 Options



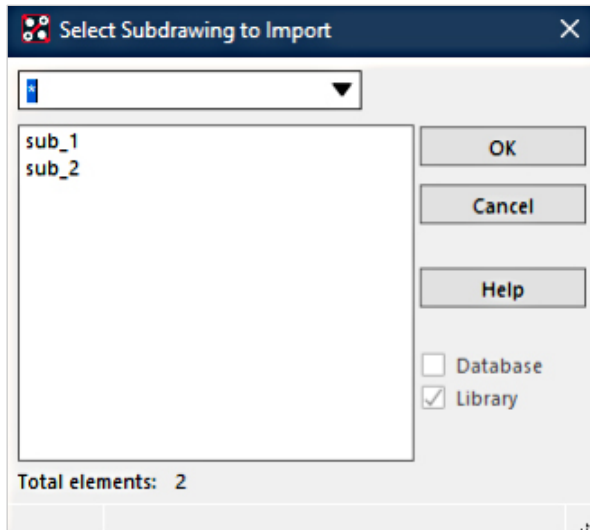
Options Tab for Import Sub-Drawing

Rotate angle increment	Defines the angle of rotation for placing the sub-drawing in the design when Rotate from the RMB menu is used before placing the sub-drawing.
Clip_drawing	<p>Defines a CLIP_DRAWING name to identify the element or group of elements that make up the clip file.</p> <p>When you paste elements from a clipboard, the tool attaches a CLIP_DRAWING Property to each item (except text). The default property value is CLIP_n, where n represents the number of times the paste operation has been performed on the drawing. You can override the default value by entering a name here.</p> <p>The value can have no more than 32 characters. The exclamation point (!) and single quotation marks (') are not allowed.</p> <p>Note</p> <p>The tool maintains the current CLIP_DRAWING property value after you save, exit, and re-opens the drawing.</p>
Assign Refdes	<p>Specifies whether you want to include reference designator information from the clip file.</p> <p>This option appears only if the Preserve Refdes option was selected when the clip file was created.</p> <p>Note</p> <p>If a reference designator pasted into the design causes a duplicate, the tool does not assign the reference designator. Instead, it places a message in the clipboard.log file indicating the reference designator in conflict and the X, Y location of the pasted symbol.</p> <p>If the reference designator pasted into the drawing is not in the logical data, a message appears in the clipboard.log file indicating the reference designator could not be assigned and the X, Y location of the pasted symbol.</p>
Preserve Nets on Shapes	Choose to allow shapes to retain their net associations when a .clip file is read in. Only databases with nets support this capability as symbols do not support the preservation of nets. This option appears only if the Preserve Refdes option was selected when the clip file was created.

2.2 Procedure

Pasting Elements from a Clipboard File

1. Run the **File > Import Sub-Drawing** command



2. In the **Select Sub-Drawing** to import dialog box, enter or choose the name of the clipboard file whose contents you want to paste, and click **OK**.
A rectangle representing the boundaries of the elements in the clipboard file appears attached to the cursor, and the Options tab displays the clip paste controls.
3. Enter settings in the **Options** tab.
4. Position the cross-hair cursor where you want the origin point of the pasted element(s) to be, and then click to paste.

The tool:

- Performs a DRC check on the new elements.
- Writes the clipboard.log file to the current directory.
- Displays the Clipboard Log File window if any warning or error messages resulted from the paste operation.