GerbView
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Reference manual

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Contributors

The KiCad Team.

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- About KiCad document: https://github.com/KiCad/kicad-doc/issues
- About KiCad software: https://bugs.launchpad.net/kicad
- About KiCad software i18n: https://github.com/KiCad/kicad-i18n/issues

Publication date and software version

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1 Introduction to GerbView

GerbView is a Gerber file viewer (RS 274 X format), and is also able to display drill files from Pcbnew (in Excellon format).

It accepts up to 32 files (Gerber and/or Drill files)

Files can be displayed using a transparency mode or stacked mode.

For more information about the Gerber file format please have a read at the specification in The Gerber File Format Specification - Ucamco.

2 Main Screen
# 3 Top toolbar

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Clear all layers" /></td>
<td>Clear all layers</td>
</tr>
<tr>
<td><img src="image" alt="Load Gerber files" /></td>
<td>Load Gerber files</td>
</tr>
<tr>
<td><img src="image" alt="Load drill files" /></td>
<td>Load drill files (Excellon format from Pcbnew)</td>
</tr>
<tr>
<td><img src="image" alt="Set page size for printing" /></td>
<td>Set page size for printing and show/hide page limits</td>
</tr>
<tr>
<td><img src="image" alt="Open print dialog" /></td>
<td>Open print dialog</td>
</tr>
<tr>
<td><img src="image" alt="Zoom in and out" /></td>
<td>Zoom in and out</td>
</tr>
<tr>
<td><img src="image" alt="Refresh screen" /></td>
<td>Refresh screen</td>
</tr>
<tr>
<td><img src="image" alt="Zoom fit in page" /></td>
<td>Zoom fit in page</td>
</tr>
<tr>
<td><img src="image" alt="Layer selection" /></td>
<td>Layer selection</td>
</tr>
<tr>
<td><img src="image" alt="D Code selection" /></td>
<td>D Code selection (highlight items that use this dcode)</td>
</tr>
<tr>
<td><img src="image" alt="Info about Gerber file options" /></td>
<td>Info about Gerber file options loaded in the current layer</td>
</tr>
</tbody>
</table>
4 **Left toolbar**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Grid on / off" /></td>
<td>Grid on / off</td>
</tr>
<tr>
<td><img src="image" alt="Display polar coordinates on / off" /></td>
<td>Display polar coordinates on / off</td>
</tr>
<tr>
<td><img src="image" alt="Units selection to display coordinates" /></td>
<td>Units selection to display coordinates</td>
</tr>
<tr>
<td><img src="image" alt="On grid cursor shape selection" /></td>
<td>On grid cursor shape selection</td>
</tr>
<tr>
<td><img src="image" alt="Display mode selection (solid or outlines) for flashed items" /></td>
<td>Display mode selection (solid or outlines) for flashed items</td>
</tr>
<tr>
<td><img src="image" alt="Display mode selection (solid or outlines) for lines" /></td>
<td>Display mode selection (solid or outlines) for lines</td>
</tr>
<tr>
<td><img src="image" alt="Display mode selection (solid or outlines) for polygons" /></td>
<td>Display mode selection (solid or outlines) for polygons</td>
</tr>
<tr>
<td><img src="image" alt="Show negative objects in ghost color" /></td>
<td>Show negative objects in ghost color</td>
</tr>
<tr>
<td><img src="image" alt="Show / hide D Codes values (for items using a dcode)" /></td>
<td>Show / hide D Codes values (for items using a dcode)</td>
</tr>
<tr>
<td><img src="image" alt="Mode used by Gerbview to show layers." /></td>
<td>Mode used by Gerbview to show layers.</td>
</tr>
</tbody>
</table>
5 Commands in menu bar

5.1 File menu

It is possible to load gerber and drill files into Gerbview. There is also an auxiliary option to export gerbers to pcbnew. Previously (a long time ago) it was also possible to load so called Dcodes, but those are now obsolete and is therefore not possible anymore.

5.1.1 Export to Pcbnew

GerbView has a limited capability to export Gerber files to Pcbnew. The final result depends on what features of RS 274 X format are used in Gerber Files. RS 274 X format has raster oriented features that cannot be converted (mainly all features relative to negative objects). Flashed items are converted to vias. Lines items are converted to track segments (or graphic lines for non copper layers) So the usability of the converted file is very dependent upon the way each Gerber file was built by the original Pcb tool.

5.2 Preferences menu

Gives access to the hot keys editor, and some options to display items.
5.3 Miscellaneous menu

- List Dcodes shows the Dcodes in use and some of Dcode parameters.
- Show Source displays the Gerber file contents of the active layer in a text editor.
- Clear Layer erases the contents of the active layer.
6 Layer Manager

The layer manager has 2 purposes:

• Select the active layer

• Show/hide layers

The active layer is drawn after the other layers.

When loading a new file, the active layer is used (the new data replace the previous data)

Note:

• Mouse left click on a line: select the active layer

• Mouse right click on the layer manager: show/hide all layers

• Mouse middle click on a icon: select the layer color.
6.1 Modes to show Gerber layers

- **Raw mode**

Each gerber file and each item in files are drawn in the order files are loaded.

However the **active layer** is drawn last.

When Gerber files have negative items (drawn in black) artefacts are visible on already drawn layers.

- **Stacked mode**

Each gerber file is drawn in the order files are loaded.

The **active layer** is drawn last.

When Gerber files have negative items (drawn in black) there are no artefacts on already drawn layers, because this mode draws each file in a local buffer before it is shown on screen. Negative items do not create artefacts.
6.2 Effect of layer selection for drawings

This effect is visible only in raw or stacked mode.

The layer 1 (green layer) is drawn after the layer 2

The layer 2 (blue layer) is drawn after the layer 1
7 Print layers

7.1 Print dialog access

To print layers, use the tool, or the main menu (files)

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Caution

⚠️ But be sure items are inside the printable area (select by a suitable page format).
Do not forget photoplotters can use a large plottable area, much bigger than the page sizes used by printers.
Moving (by block move command) the entire layers is often needed.

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7.2 Move block command

You can move items by selecting them (drag the mouse with left button down) and then moving the selected area on screen.
Click the left button to finally place the area you are moving.