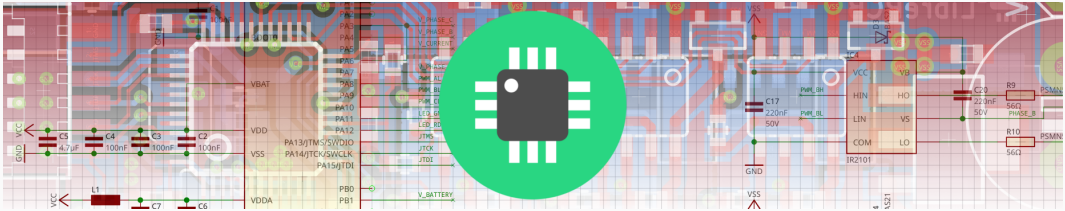
LibrePCB

FOSDEM'24 Status Update

Urban Bruhin

February 4, 2024

About LibrePCB



Free (GPLv3) EDA suite, started in 2013

- Cross-platform: | x86/ARM/M1
- Intuitive & easy-to-use UI, for beginners, hobbyists & professionals
- Powerful library concept, to save time and maximize reusability
- Human readable file format, optimized for version control
- Focus on usability and stability rather than bleeding-edge features

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- Sponsorships & donations in 2023 (without NGI0): ~8k USD

Thank you! ♥

New Website, Documentation & Video Tutorials

End of 2022:

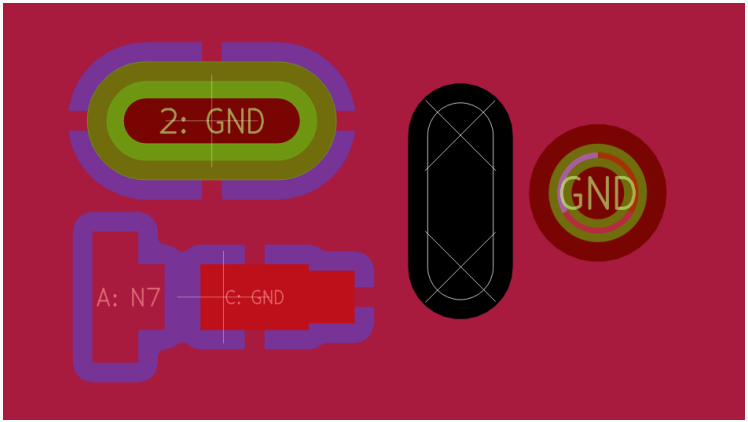
- Completely new website (made from scratch with Hugo & Bootstrap)
- New online documentation (made with AsciiDoc & Antora)

End of 2023:

- First official video tutorials

September 2023: LibrePCB 1.0.0

- Advanced PCB features (thermal reliefs, blind & buried vias, slotted pads, . . .)



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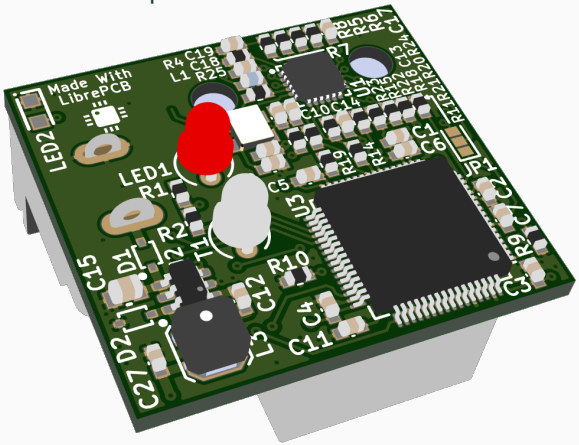

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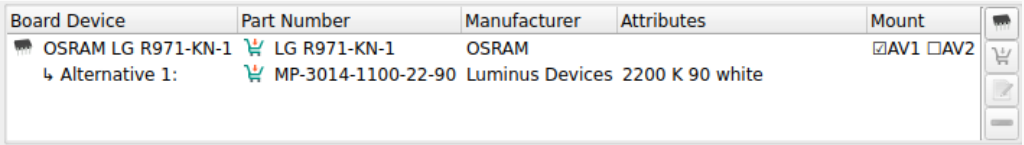
  - Adding MPNs to libraries
  - Specifying MPNs in schematics
  - Alternate (second-source) MPNs
  - Different parts in each assembly variant
  - Separate BOM for each assembly variant



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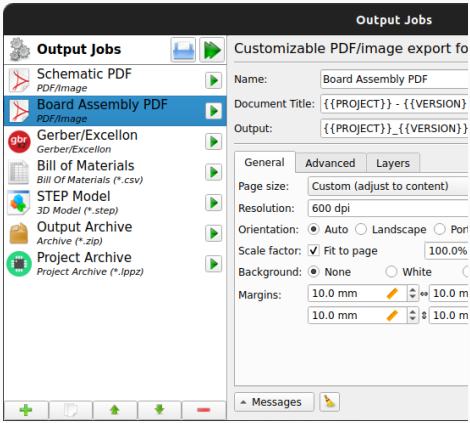
- Output jobs
  - Unified export for any kind of production data
  - Highly customizable
  - 100% reproducible/portable
  - Runnable from GUI and CLI



Demo Time!

Project Status

Library Management		
Library Editor		
Schematic Editor		(except buses & hierarchical sheets)
Board Editor		(functional, but rather basic editing tools)
Data Import		
Data Export		
Available Libraries		

Next Steps

Short term:

- EAGLE project import as it is now abandoned by Autodesk
- Live part information (part status, stock availability, prices, ...)
- Under the hood: Qt6, C++17, 64-bit Windows binaries, ...

Long term (in arbitrary order):

- Improve trace routing tool (differential pairs, push&shove router, ...)
- Hierarchical schematics & buses
- Many UI improvements
- Extend part libraries
- Technology updates: OpenGL 2D renderer? QtQuick/QML? Rust?
- ...

Contributing

It's a huge, very time consuming task to develop an EDA software...

If LibrePCB is useful for you, a donation would be greatly appreciated ❤
It helps to keep full-time development ongoing, making it more and more powerful.

Other ways to contribute: `https://librepcb.org/contribute/`

Currenty looking for help:

- Wikipedia article: `https://en.wikipedia.org/wiki/Draft:LibrePCB`
- Share your feedback: `https://show.forms.app/librepcb/feedback`

Getting Started

Download

https://librepcb.org/download/

(or by package manager on Ubuntu, Arch Linux, NixOS, FreeBSD, ...)

Quickstart Video Tutorials

https://www.youtube.com/@LibrePCB

Quickstart Guide

https://librepcb.org/docs/quickstart/

Thank you!

https://librepcb.org