

华秋发行版 AI Copilot 与云端库实践

AI Copilot & Cloud Library in KiCad



We make the world's most popular EDA available to more users.

What is the Difference between KiCad and Huaqiu's Distribution

KiCad 与华秋发行版有什么不同？

Cloud-based Component Library and Module Library

云端器件库及模块电路库

AI Copilot and Application within KiCad

KiCad 中 AI 助手及其应用

Why we need a Huaqiu's Distribution?

为什么需要华秋发行版？

A complement for official version and designed for Chinese users.

为中国用户设计，作为 KiCad 主版本的补充

- To address some issues which could not be merged to main branch for some reason but yet important for end users

解决一些因某种原因无法合并到主干但对中国用户来讲非常重要的问题

- Act as a trial-run playground for some new features(Eg. AI)

作为一些新功能的测试场地(比如 AI)

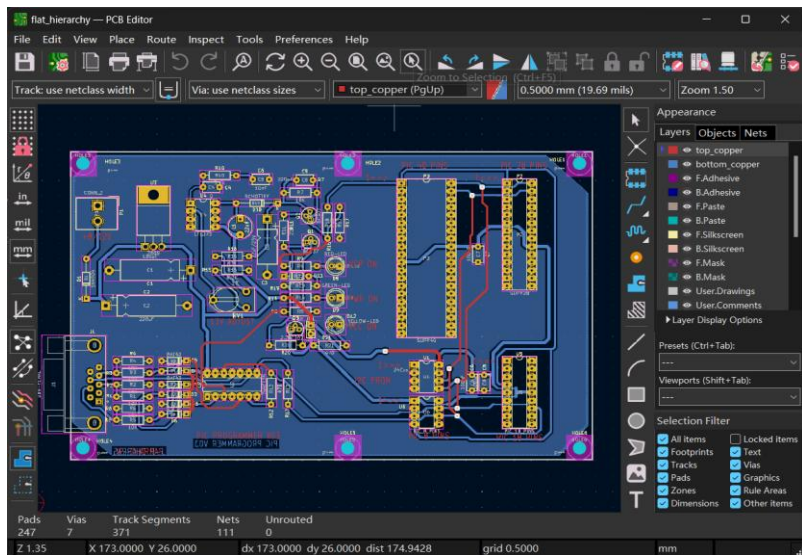
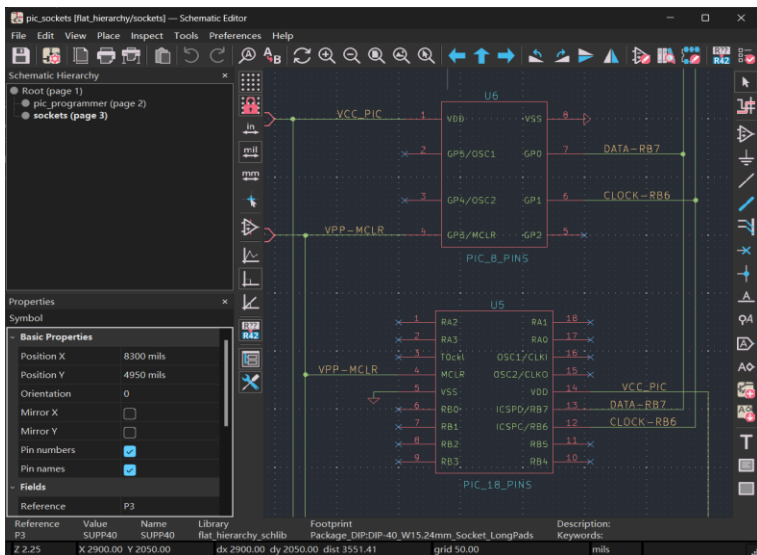
- To connect supply chain, design and manufacturing

打通供应链、设计到制造的壁垒

Dark Mode for Windows (暗黑模式)

Linux & Mac users cannot feel the pain. But >80% Chinese users are still using Windows... So we fix it.

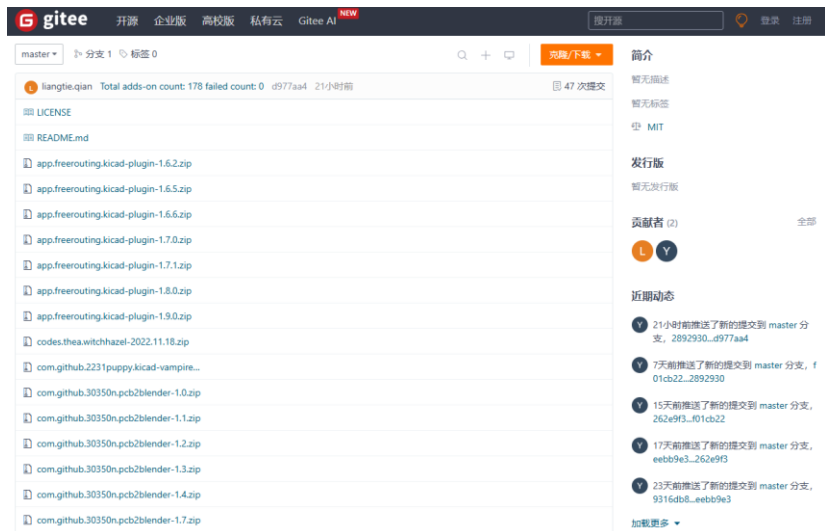
Linux 和 Mac 用户可能感受不到，但超过 80% 的中国用户是 Windows 用户... 所以我们增加了这个模式



KiCad Plugin Mirror (插件镜像)

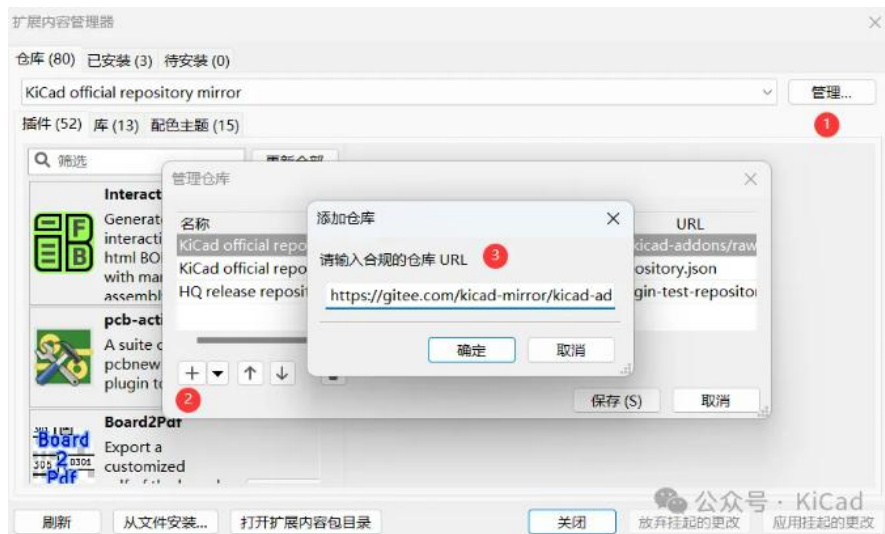


Ouch! Why downloading plugin always fail?



<https://gitee.com/kiCad-mirror/kiCad-addons>

为什么下载 KiCad 插件老是失败呀?



<https://gitee.com/kiCad-mirror/kiCad-addons/raw/master/repository.json>

A Portable Version of KiCad (便携版 KiCad)

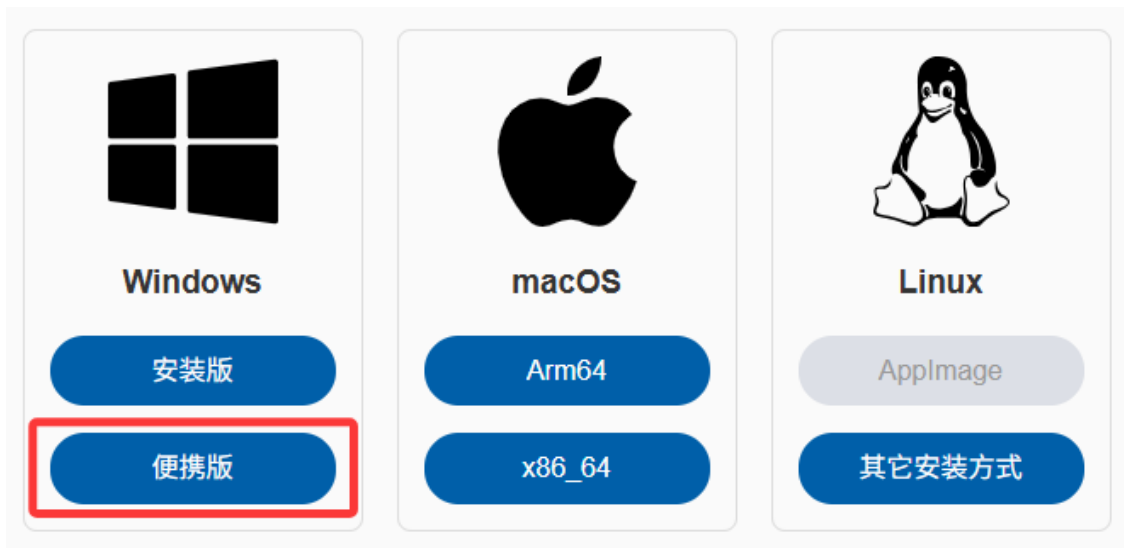


Can I install different version of KiCad? Yes, you can. But...

电脑上可以装多个版本的 KiCad 吗？可以，但是.....

With portable version, you can download and play without installation

使用便携版 KiCad，您可以下载后直接运行，无需安装



Note: Different version shares the same configuration files

注意：同一个大版本不同小版本共享一套配置文件。

比如，所有 KiCad 9 共享一套配置文件

<https://kicad.eda.cn/download>

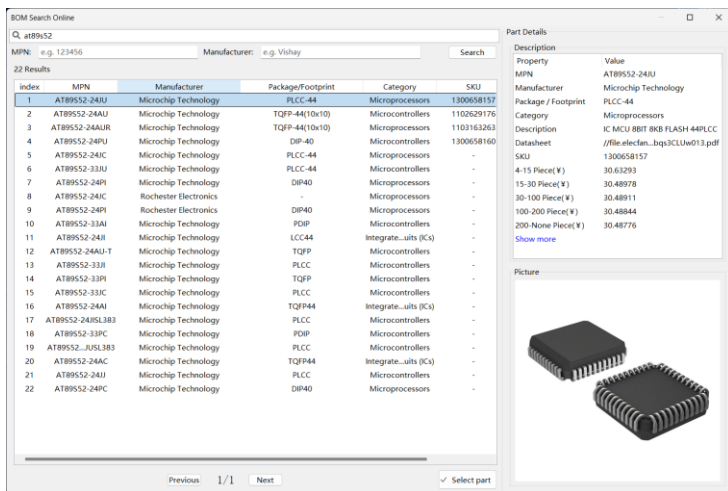
Component Search Plugin (器件搜索插件)



- Component search within KiCad

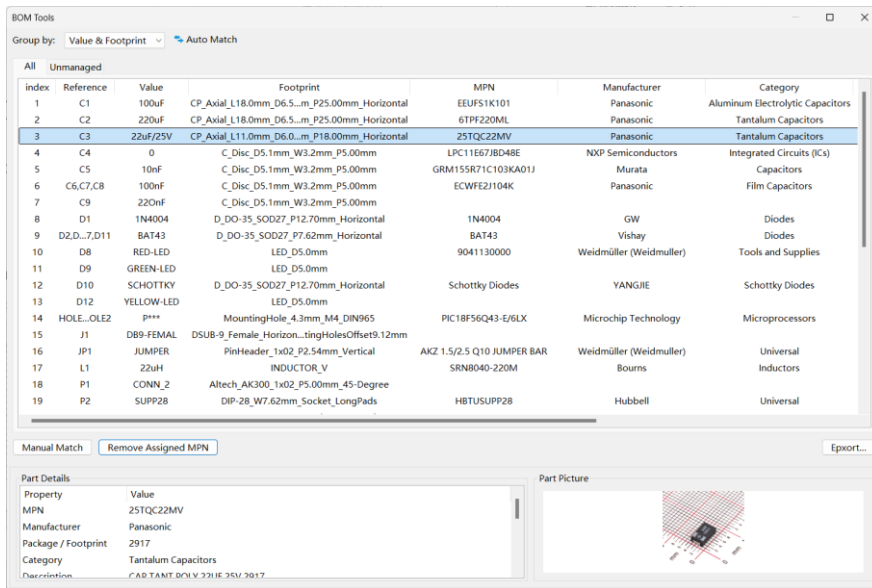
- ✓ Parameters & Datasheet
- ✓ Price & Stock

- Smart parametric search algorithm



- 在 KiCad 中进行器件搜索

- ✓ 参数及数据手册
- ✓ 价格和库存



DFM Plugin (DFM 插件)



- DFM during design

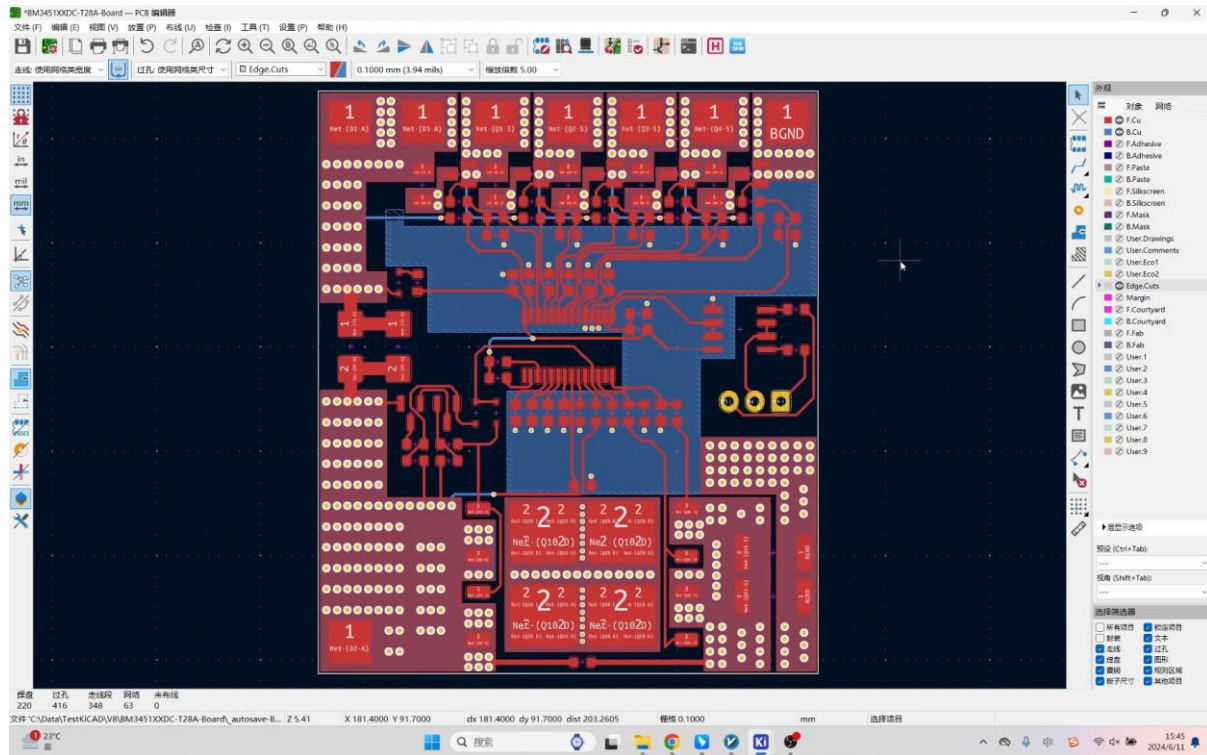
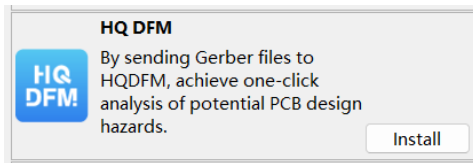
设计阶段检查DFM

- Plugin in KiCad

KiCad 插件

- Highlight result

高亮检查结果



Click [here](#) for source code or report issue

I'd also recommend you to use HQDFM directly as it now support KiCad PCB format

建议您尝试下华秋DFM，现在已经支持打开 KiCad 原生 格式

- Use it as a Viewer (support AD/Allegro/KiCad/Pads/Gerber/ODB++)

可以当查看器使用，支持源生的 AD/Allegro/KiCad/Pads/Gerber/ODB++

- One click to check bare board or assembly issue

一键检查裸板或装配问题

- Gerber/ODB++ Compare

比较不同版本的 Gerber/ODB++ 文件

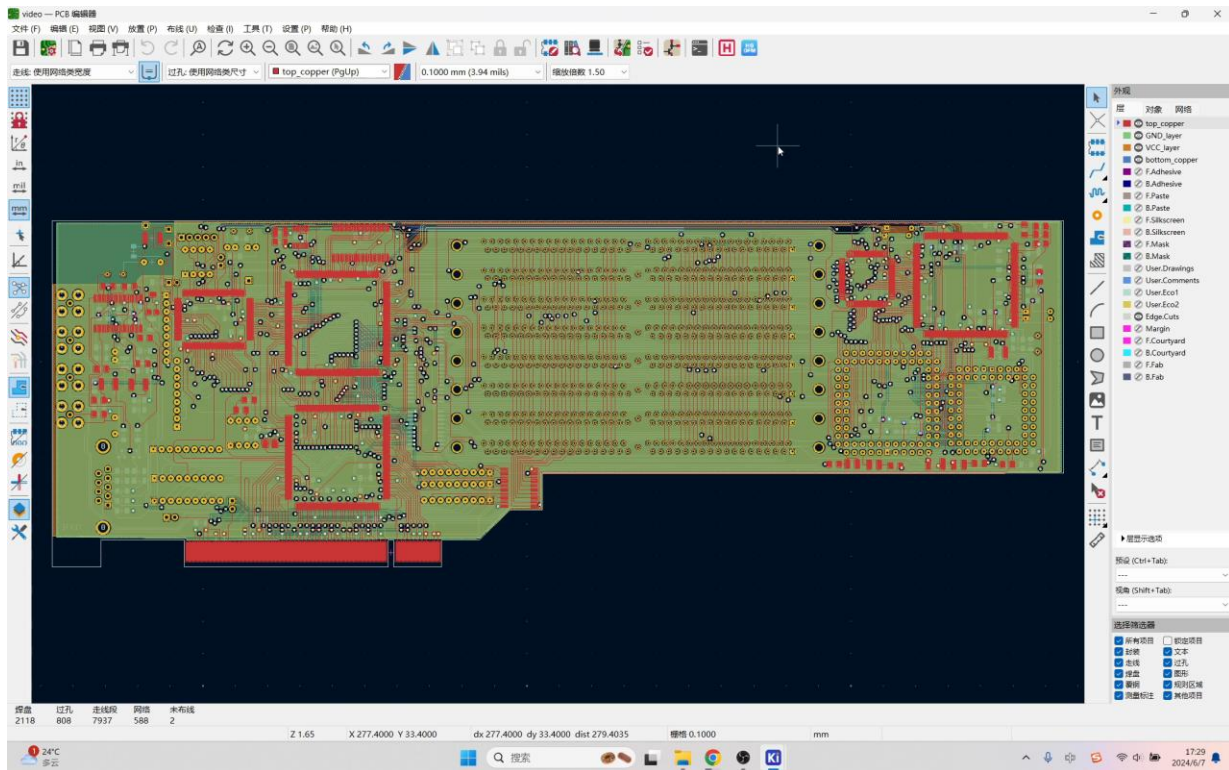


<https://dfm.elecfans.com/downloads>

Manufacturing Plugin (一键下单插件)



- Real-time quote for
✓ PCB/SMT
- One- click manufacture
package & Order
- 实时查询价格
✓ 裸板/组装
- 一键生成制造包、下单

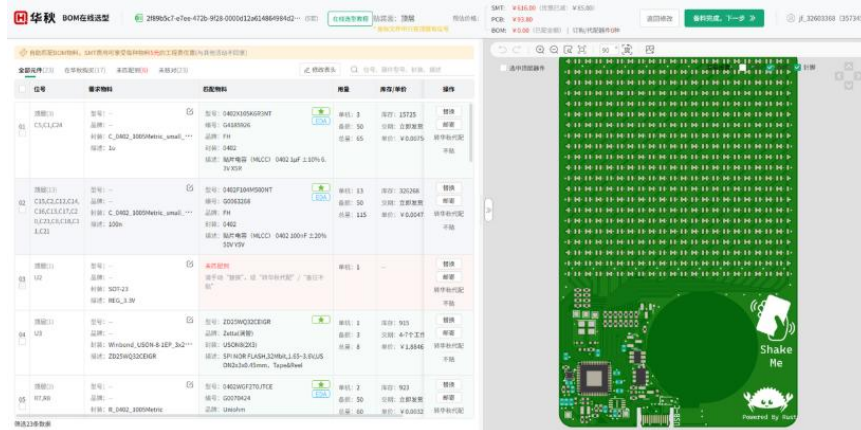
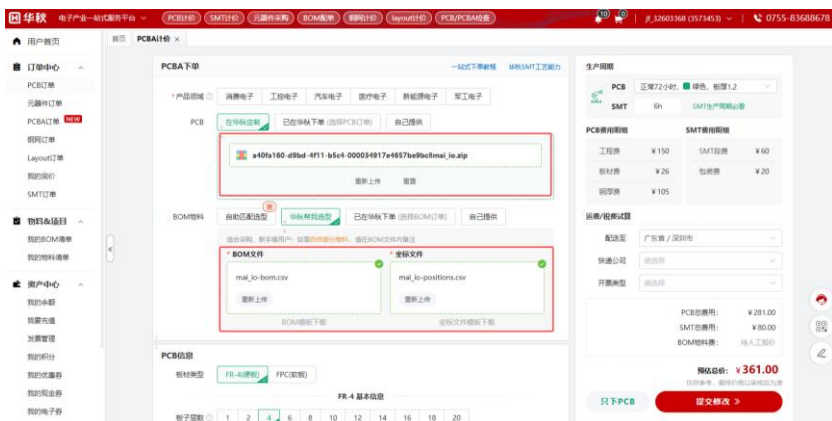


Integrate HQPCB/NextPCB (集成华秋PCB)

KiCad

华秋
www.huaqiu.com

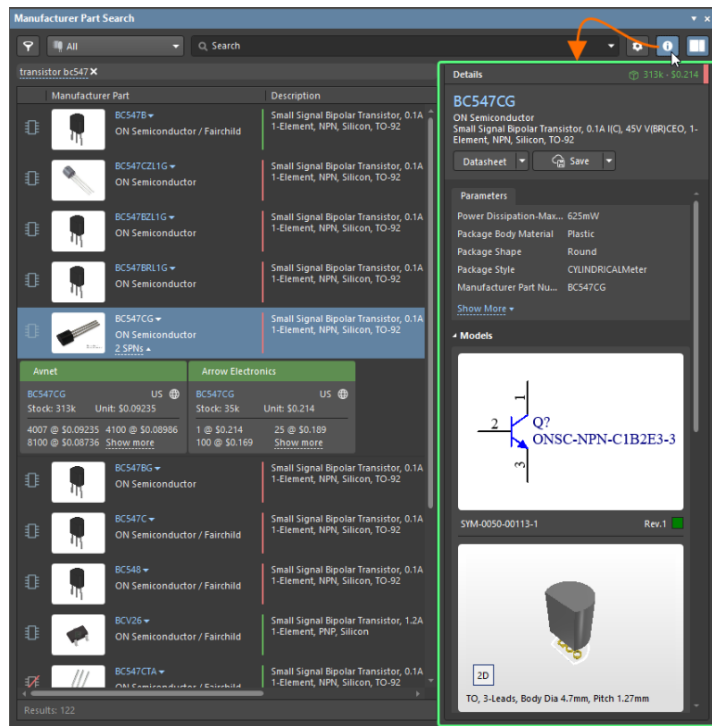
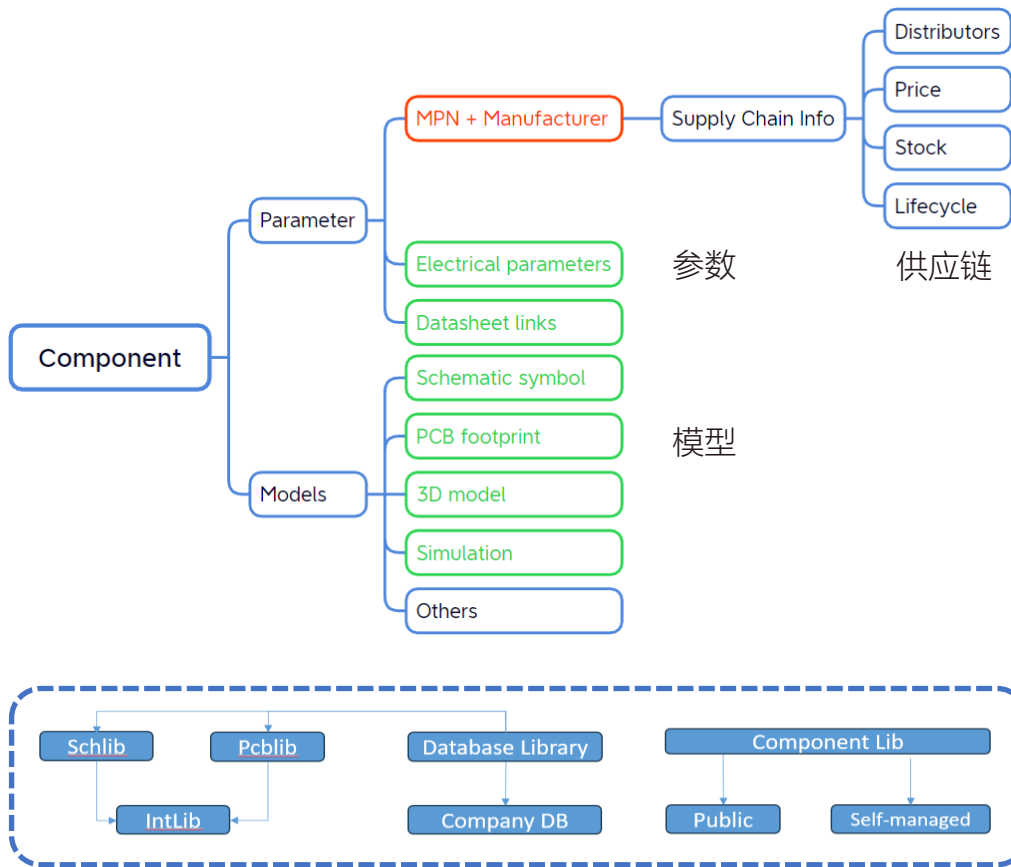
- Real-time quote for PCB/SMT
- One- click manufacture package & Order
- 实时查询价格: 裸板/组装
- 一键生成制造包、下单



Cloud-based Component Library and Module Library

云端器件库及模块电路库

What is Component(什么是完整元器件?)

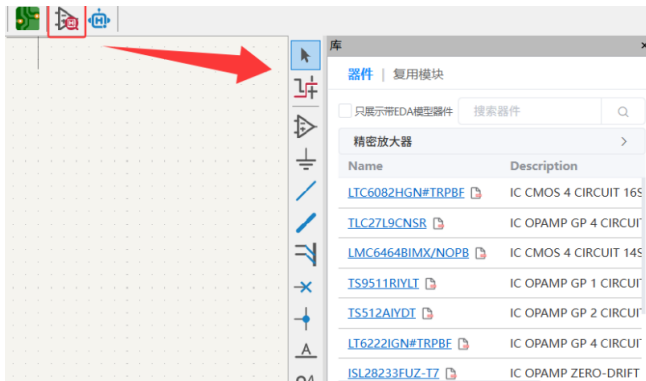


Component Library (元器件库)



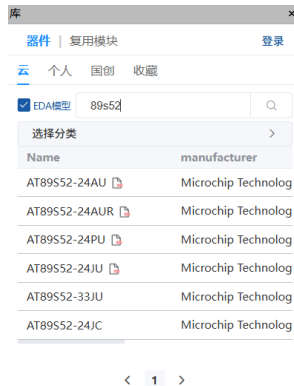
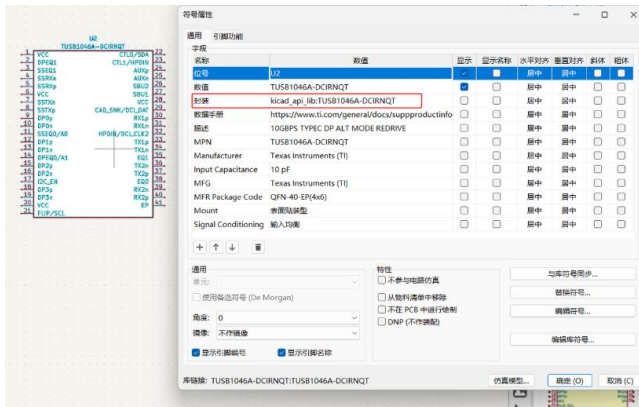
- Library Panel

- ✓ Metadata
- ✓ Datasheet
- ✓ Symbol/Footprint/3D
- ✓ Price & Stock



- 元器件库面板

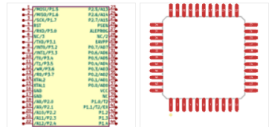
- ✓ 电气参数
- ✓ 数据手册
- ✓ 符号/封装/3D
- ✓ 价格和库存



器件参数

Function	
频率	24 MHz
输入/输出数据量	32
访问时间	24 μs
规格	8-Bit
程序存储器类型	FLASH

EDA模型



商品编号: G0093488
现货库存: 50
批次: 2年内年
1+ ¥17.5845
10+ ¥15.0195
30+ ¥13.4995
[购买更多数量请点击>](#)

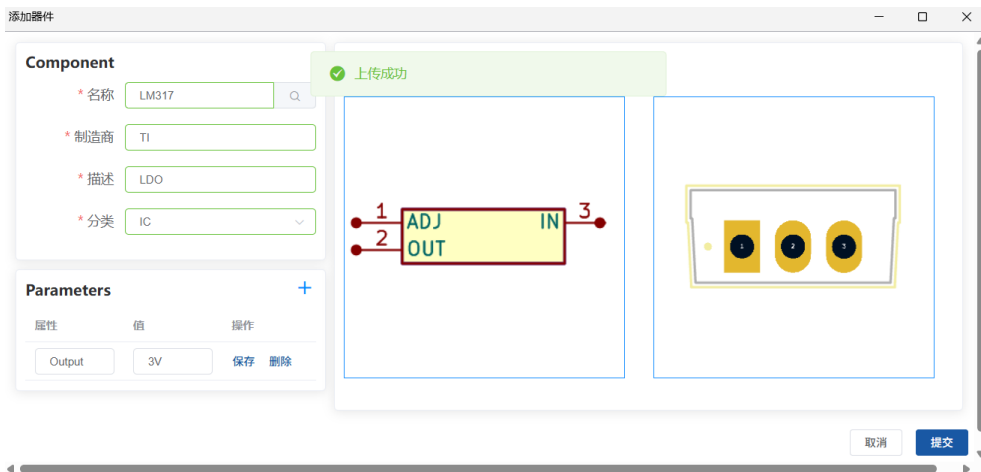
Private Component Library (私有元器件库)



- Private Library
 - ✓ Cloud-based
 - ✓ Customized category
 - ✓ Managed library



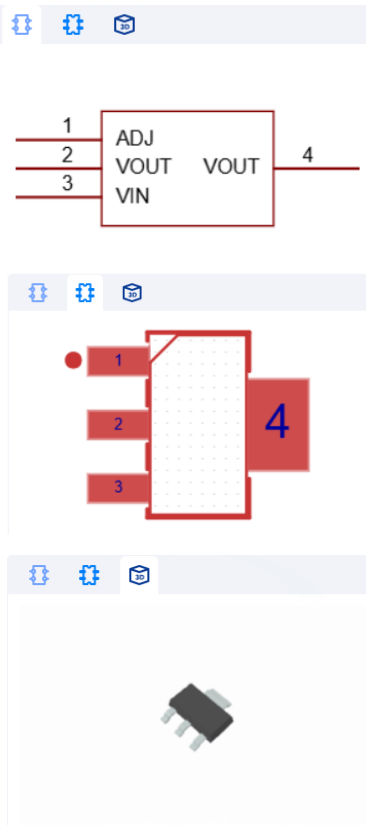
- 私有元器件库
 - ✓ 云端保存
 - ✓ 自定义分类
 - ✓ 可管理的器件库



Integrate Bocang Library(集成泊沧库)



- Bocang Library
 - ✓ "UltraLibrarian" oriented
 - ✓ 3D Step for all components
 - ✓ Ready to place in KiCad
- 泊沧元器件库
 - ✓ 对标"UltraLibrarian"
 - ✓ 所有器件带3D Step模型
 - ✓ 在 KiCad 中直接调用



Module Library(模块电路库)

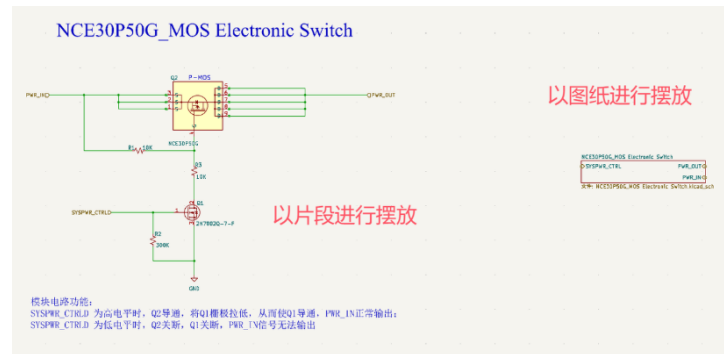
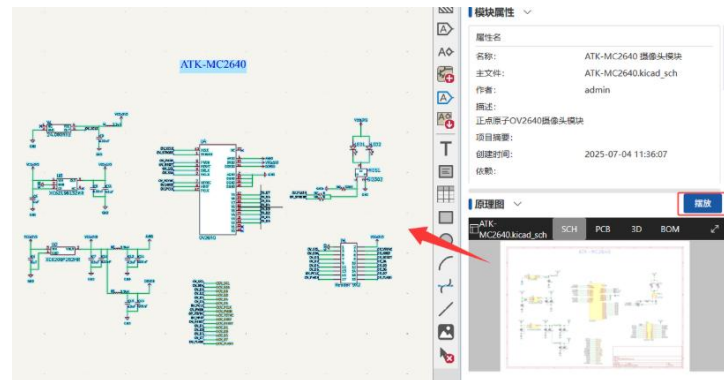


- Module Library

- ✓ Cloud-based
- ✓ Ready-to-use
- ✓ Personal Library

- 模块电路库

- ✓ 云端库
- ✓ 直接可用
- ✓ 支持个人库



AI Copilot and Application within KiCad

KiCad 中的 AI 智能体及应用



Hi, I'm KiCad Copilot — your intelligent design assistant to help you work more efficiently in circuit design.

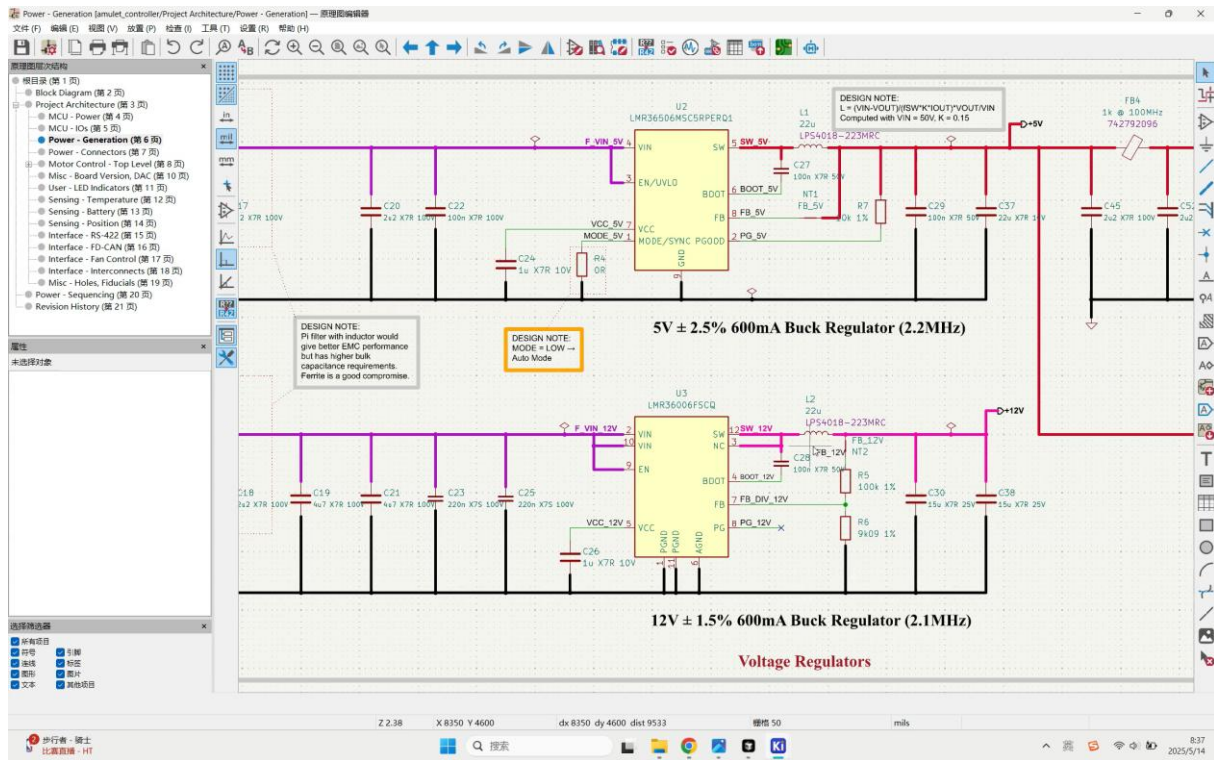
你好，我是 KiCad Copilot，你的智能设计助手，帮助你更高效地完成电路设计。

Chat with your design(和图纸对话)

KiCad

华秋
www.huaqiu.com

- Embedded in KiCad
- Prompt with Context
- SCH/PCB Enabled
- 内嵌在 KiCad 中
- 图纸内容加入提示词
- 支持原理图、PCB

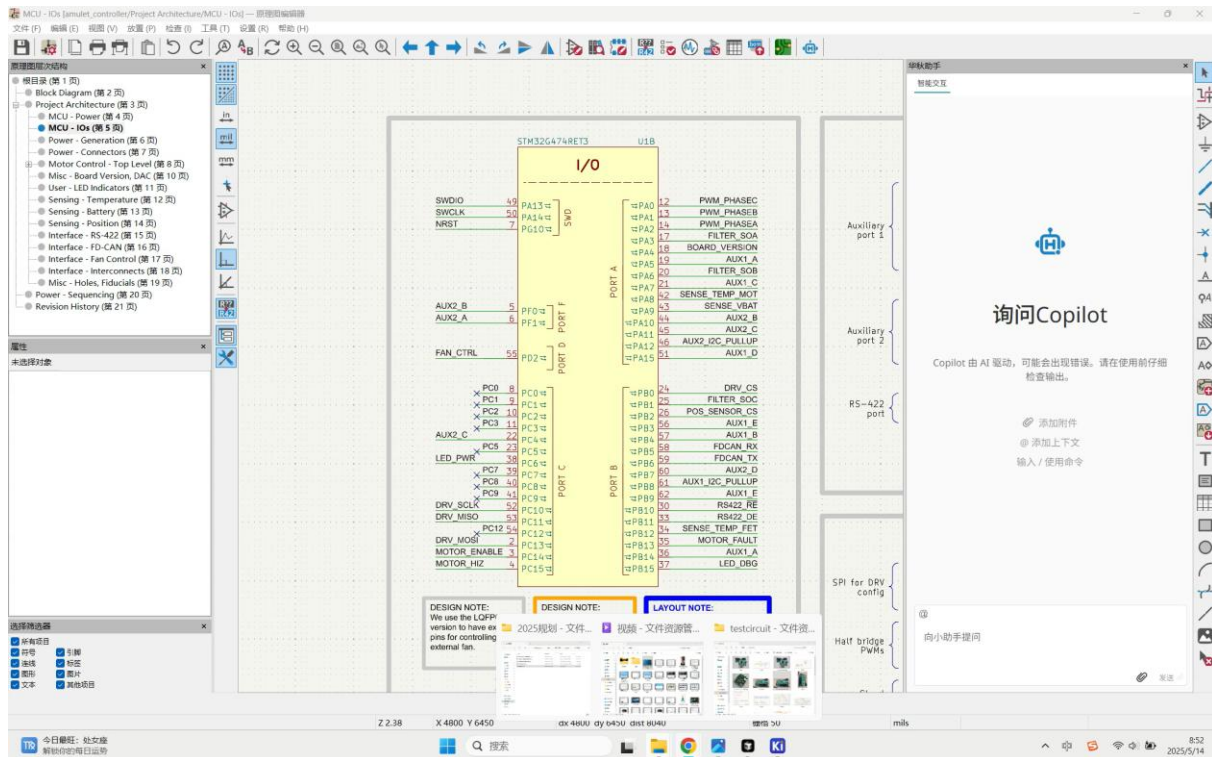


Chat with an Image(和图片对话)

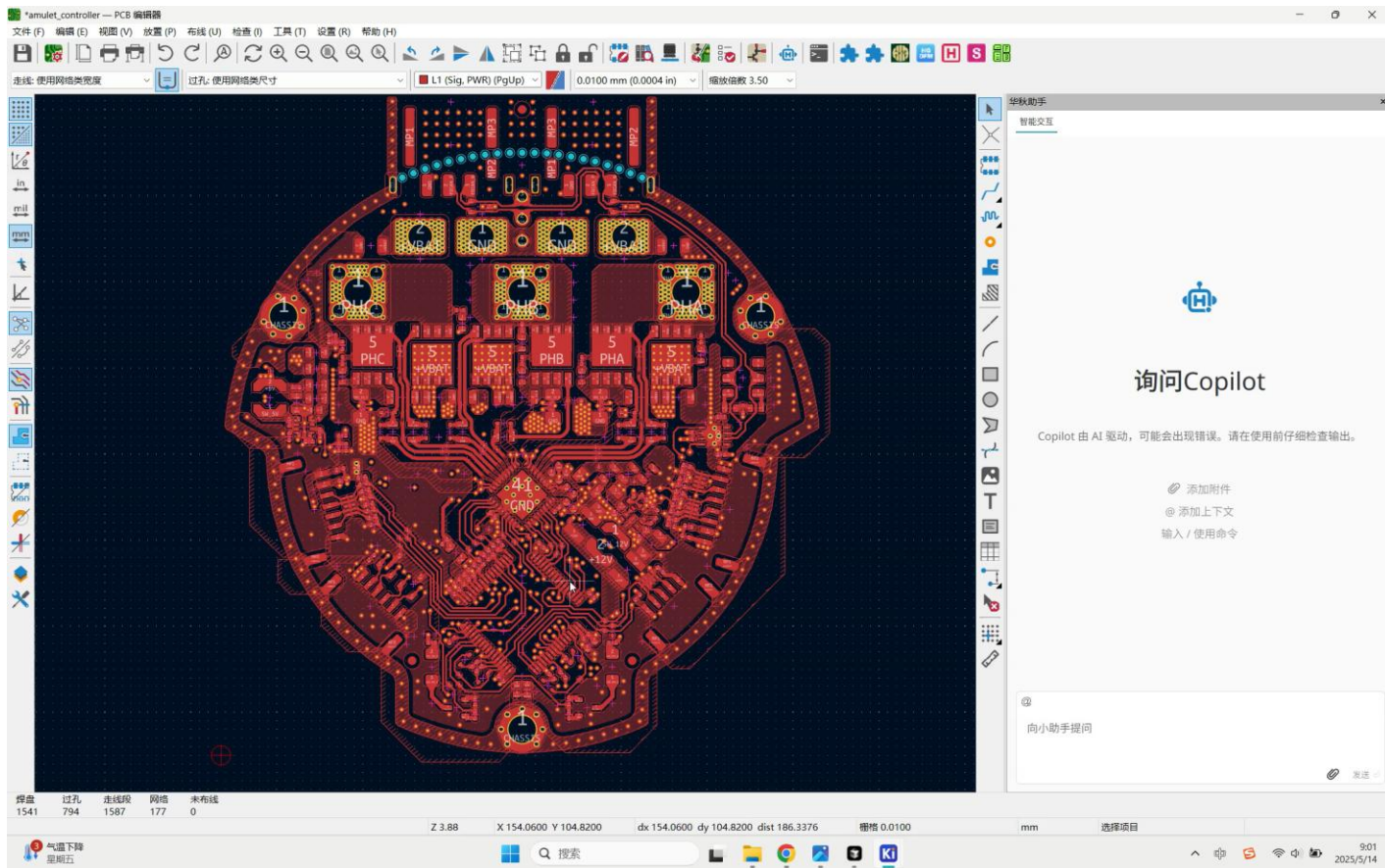
- Multi-modal support

- Paste and ask

- 支持多模态
- 粘贴即可问答



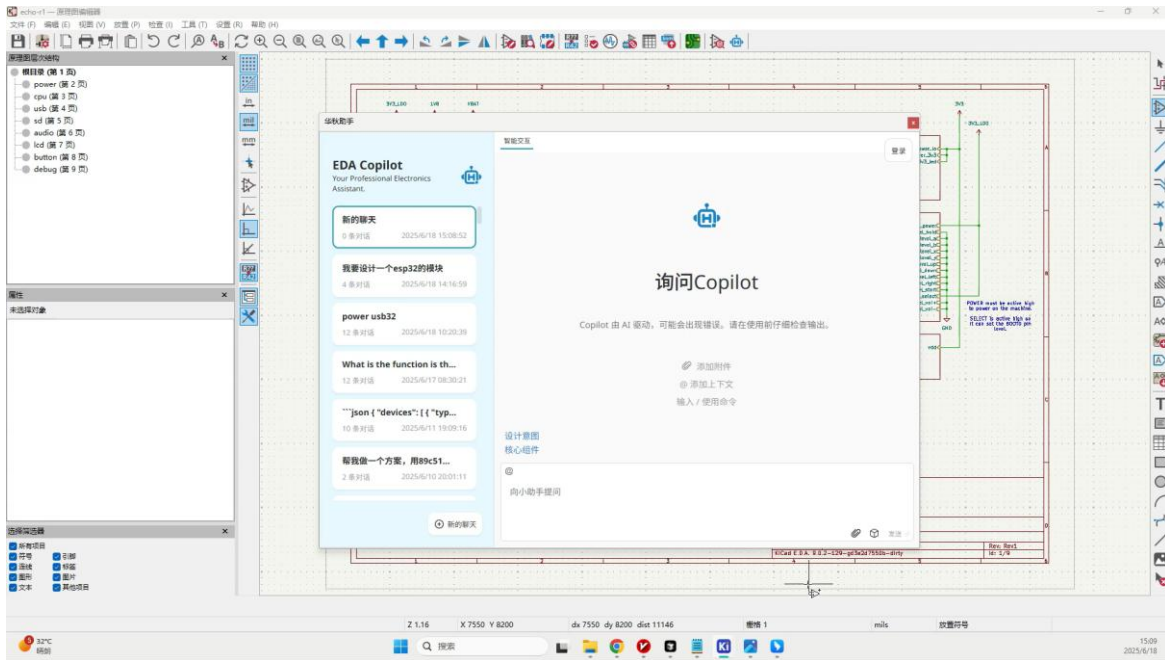
Chat with PCB(和 PCB 对话)



Symbol Generation by Image(图片生成原理图符号)



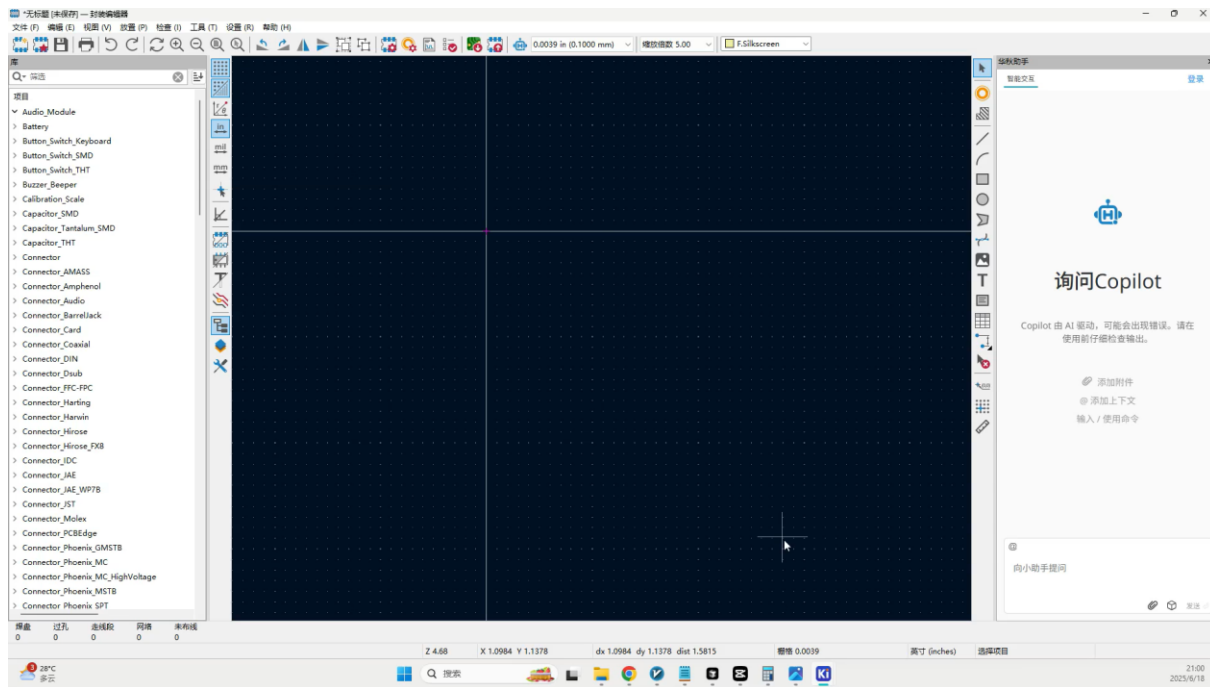
- Support table
- Support Pin Graph
- Directly place in KiCad
- 支持表格
- 支持引脚图
- 生成后直接摆放到 KiCad



Footprint Generation with Image(图片生成封装)



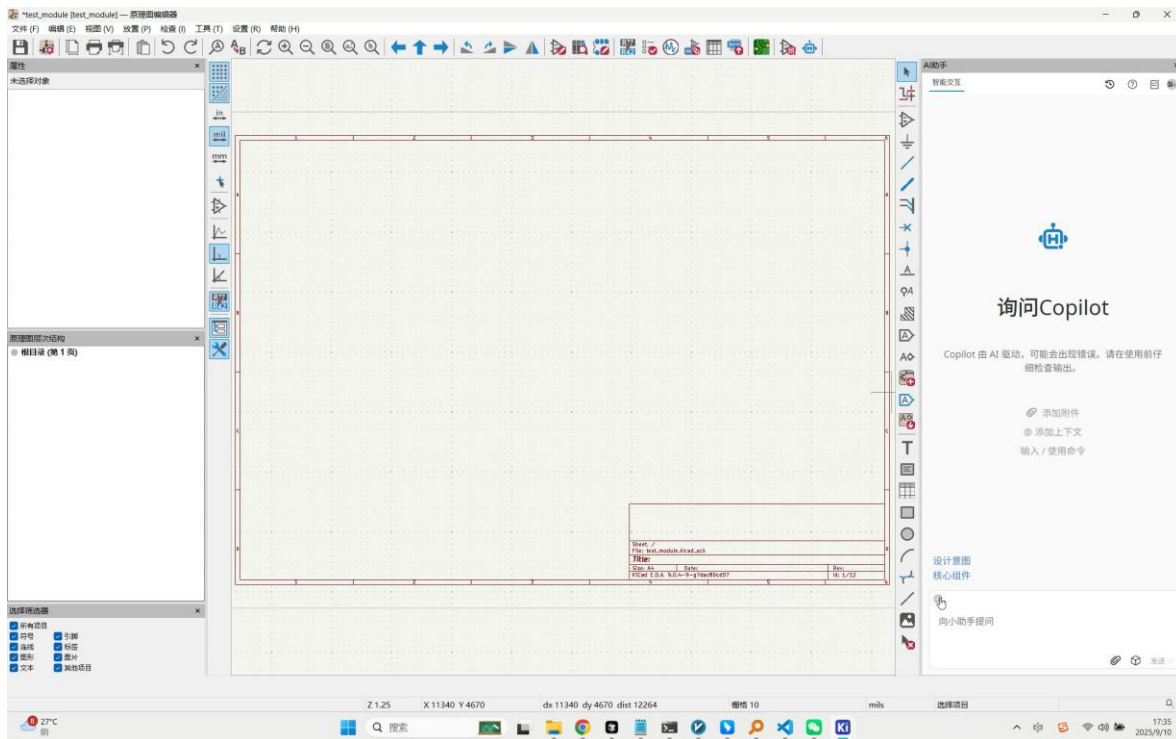
- IPC compliant footprint
- Geometry extraction
- Review and edit
- 支持 IPC 标准封装
- 自动提取几何参数
- 支持审核和修改



Schematic Generation(自然语言生成原理图)

- Module based
- Auto connection
- Yet to be verified

- 基于模块
- 自动连接
- 结果需验证



Source Code & Download



- Source code for Huaqiu's Distribution:
 - ✓ <https://gitlab.com/kicad-hq/kicad>
- Source code for Plugins:
 - ✓ <https://github.com/orgs/Huaqiu-Electronics/repositories>
- Download Huaqiu's Distribution
 - ✓ <https://kicad.eda.cn/download>

- Repo for KiCad Project
- Open source
- KiCad Viewer enabled
- Easy to build(Future)

- KiCad 项目仓库
- 图纸开源
- 动态图纸查看器
- 链接制造 (未来)



<https://p.elecfans.com/>



Live Demo