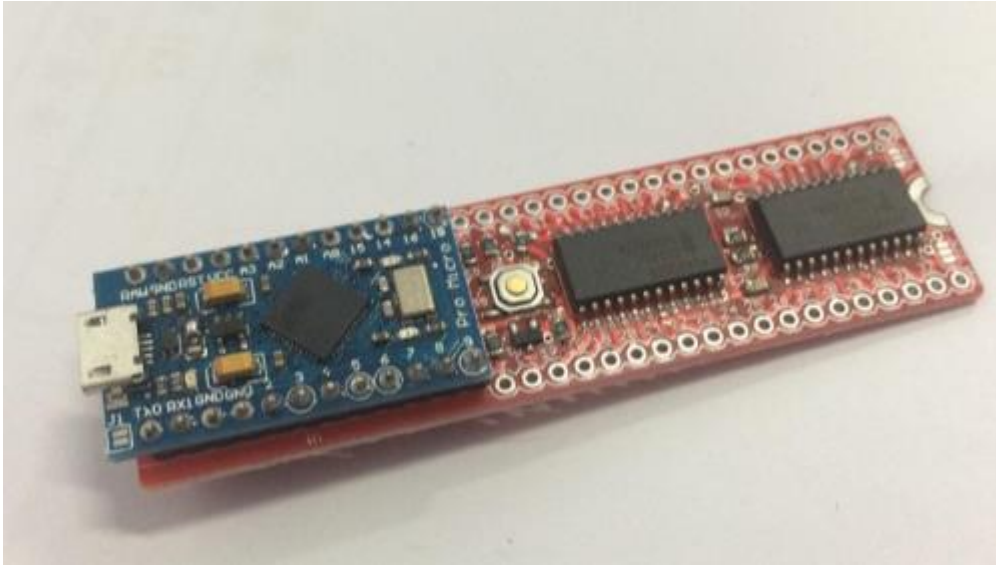


Kimera two-headed 飞线实例介绍

___無所謂

2015/2/26



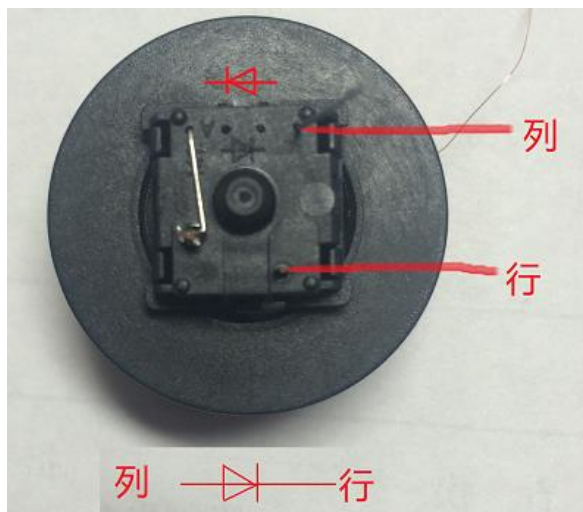
成品效果图:



上节课，大师兄@雷恩为我们科普了何为矩阵键盘及 Kirema 的基本工作原理，这节课为大家介绍一下 Kirema 主控的实际使用方法

一. 二极管的内置

由于我们是通过飞线的方法构建键盘矩阵，因此二极管就没有 pcb 可以依附，为了使得键盘没有“鬼键”的出现我就需要将二极管内置于轴内部(当然也可以用其他办法为矩阵加入二极管，这个方法相对简单)，二极管的摆放方向无所谓，最好所有的二极管都朝同一个方向。

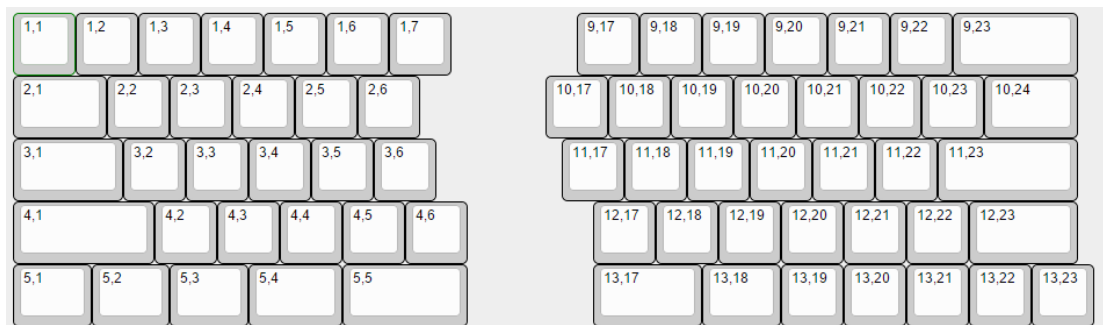


需要注意的是：Kirema 的飞线顺序是列→行的顺序

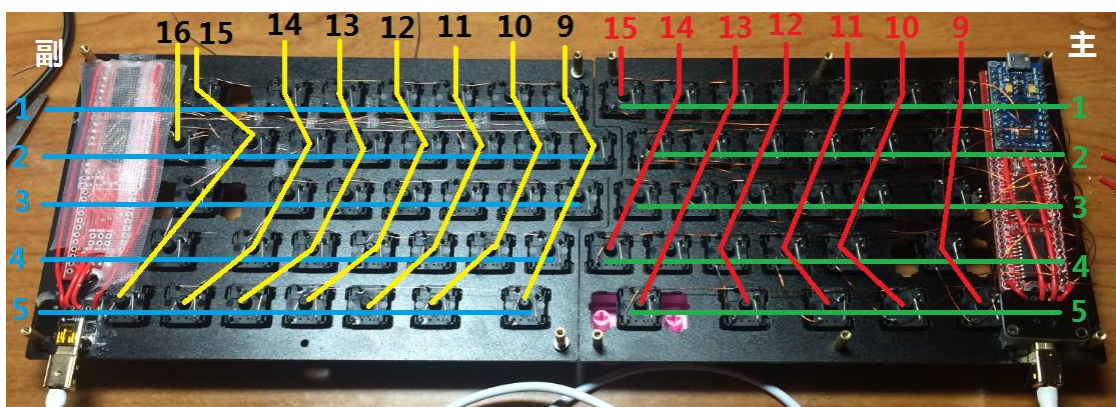
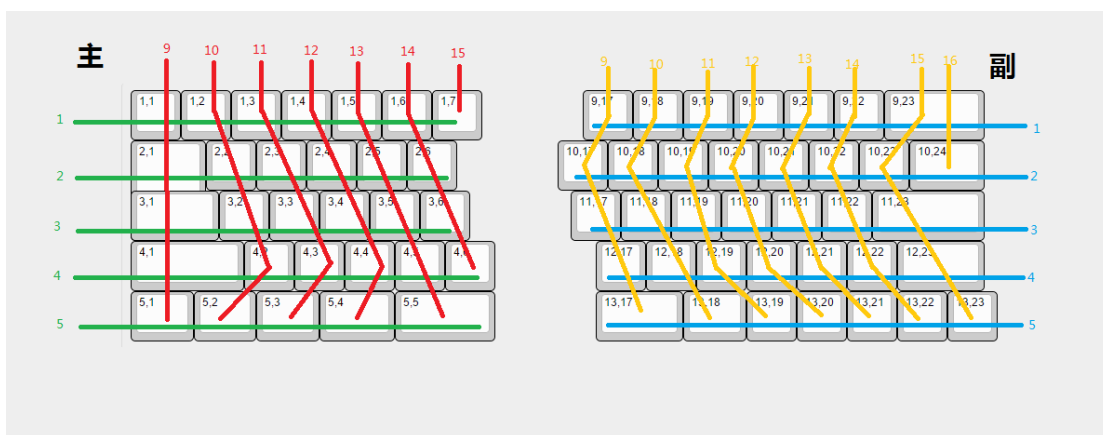
关于 led: Kirema 预留了 L1、L2、L3、L4 四个接口，可供背光、CapsLock、NumLock、SlrLock 使用，飞线时随意飞即可，在 tkg 中可以对应设置

二. 飞线实例

Step1. 在 <http://www.keyboard-layout-editor.com/> 中画出需要的布局图，并为每一个案件标记[行, 列]，如下图所示：

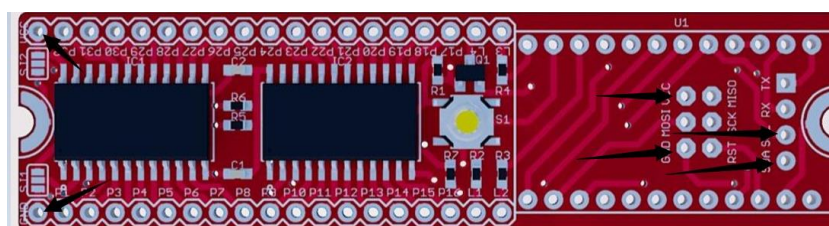


Step2. 按照矩阵进行飞线



Step3. 主副主控的连接

与 ergodox 类似，Kirema two-headed 两片主控之间也需要一根四芯线进行连接。接口对应关系为：scl-scl\sda-sda\vcc-vcc\gnd-gnd。接口如下图所示：

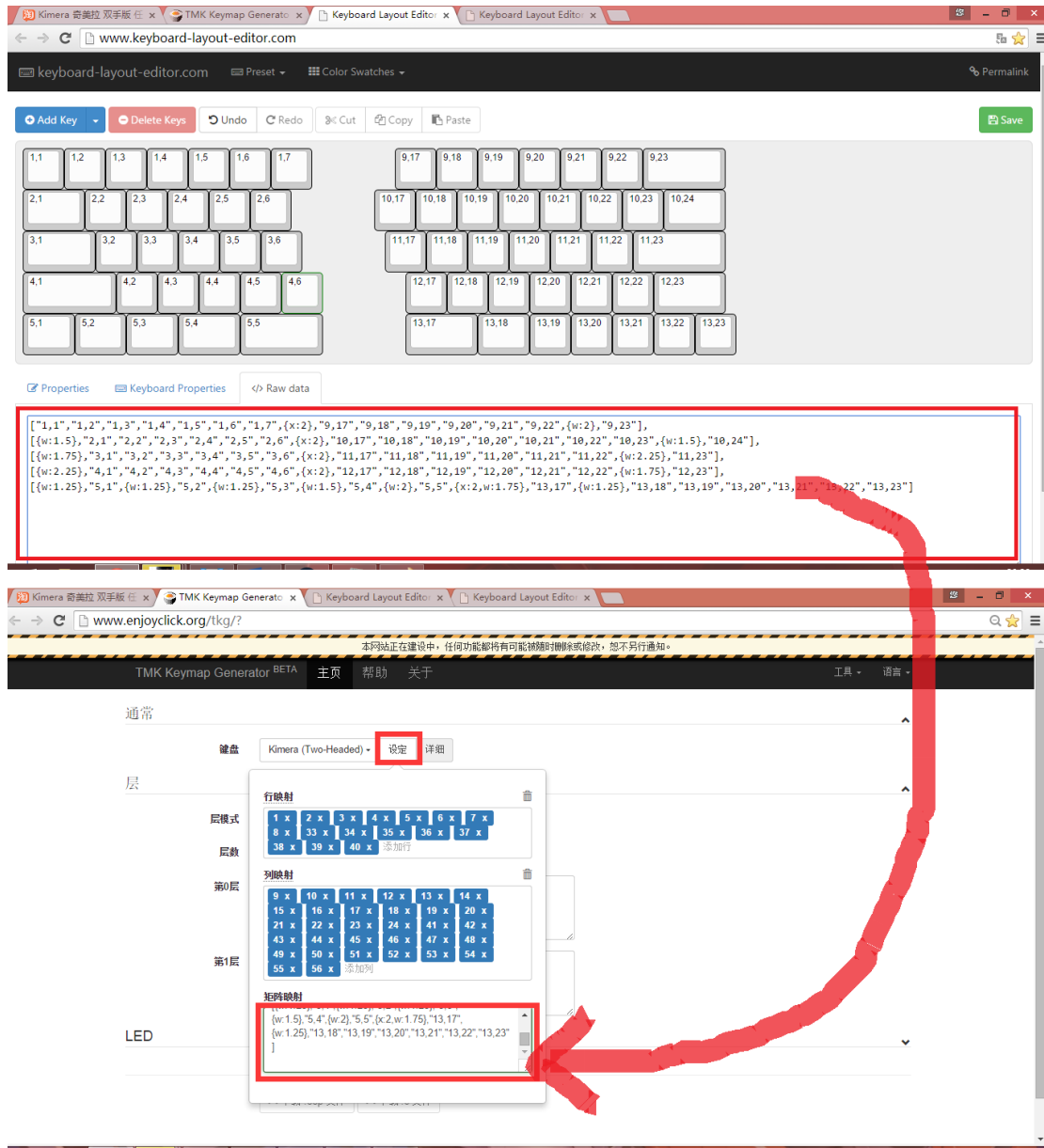


连接方法多种多样，可以是和 ergodox 一样 利用四芯音频线，也可以利用现有数据线，或者自制四芯线，实例中用的是自制了一条 mini-usb 双头线

三. 固件的制作

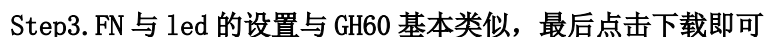
还是那两个熟悉的网站

Step1. 把布局图对应的代码粘到 Kirema two-headed 设定中的【矩阵映射】框中, 行列映射基本不用动



The screenshot shows the 'Keyboard Layout Editor' website. At the top, there's a navigation bar with 'Preset' and 'Color Swatches' dropdowns, and a 'Permalink' button. Below this is a toolbar with buttons for 'Add Key', 'Delete Keys', 'Undo', 'Redo', 'Cut', 'Copy', 'Paste', and 'Save'. The main area displays two keyboard layouts: a standard QWERTY layout on the left and a custom layout on the right. The custom layout has several keys replaced with function keys like 'fn1', 'fn2', 'fn3', 'fn4', 'fn5', 'fn6', 'fn7', 'fn8', 'fn9', 'fn10', 'fn11', 'fn12', 'fn13', 'fn14', 'fn15', 'fn16', 'fn17', 'fn18', 'fn19', 'fn20', 'fn21', 'fn22', 'fn23', 'fn24', 'fn25', 'fn26', 'fn27', 'fn28', 'fn29', 'fn30', 'fn31', 'fn32', 'fn33', 'fn34', 'fn35', 'fn36', 'fn37', 'fn38', 'fn39', 'fn40', 'fn41', 'fn42', 'fn43', 'fn44', 'fn45', 'fn46', 'fn47', 'fn48', 'fn49', 'fn50', 'fn51', 'fn52', 'fn53', 'fn54', 'fn55', 'fn56', 'fn57', 'fn58', 'fn59', 'fn60', 'fn61', 'fn62', 'fn63', 'fn64', 'fn65', 'fn66', 'fn67', 'fn68', 'fn69', 'fn70', 'fn71', 'fn72', 'fn73', 'fn74', 'fn75', 'fn76', 'fn77', 'fn78', 'fn79', 'fn80', 'fn81', 'fn82', 'fn83', 'fn84', 'fn85', 'fn86', 'fn87', 'fn88', 'fn89', 'fn90', 'fn91', 'fn92', 'fn93', 'fn94', 'fn95', 'fn96', 'fn97', 'fn98', 'fn99', 'fn100'. Below the layouts, there are three tabs: 'Properties', 'Keyboard Properties', and 'Raw data'. The 'Raw data' tab is selected, showing a large block of raw data code. A red box highlights the raw data code, and a red arrow points to the 'fn1' key in the custom layout.

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下载最新的 tkg-toolkit，刷写步骤与 GH60 基本类似，就不截图了，注意 setup 的时候选 Kirema two-headed 就可以了

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五. 参考 raw date 及小测试

参考 1:

```
["1,1","1,2","1,3","1,4","1,5","1,6","1,7",{x:2},"9,17","9,18","9,19","9,20",
"9,21","9,22",{w:2},"9,23"],
[{w:1.5},"2,1","2,2","2,3","2,4","2,5","2,6",{x:2},"10,17","10,18","10,19",
"10,20","10,21","10,22","10,23",{w:1.5},"10,24"],
[{w:1.75},"3,1","3,2","3,3","3,4","3,5","3,6",{x:2},"11,17","11,18","11,19",
"11,20","11,21","11,22",{w:2.25},"11,23"],
[{w:2.25},"4,1","4,2","4,3","4,4","4,5","4,6",{x:2},"12,17","12,18","12,19",
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[{w:1.25},"5,1",{w:1.25},"5,2",{w:1.25},"5,3",{w:1.5},"5,4",{w:2},"5,5",
,{x:2,w:1.75},"13,17",{w:1.25},"13,18","13,19","13,20","13,21","13,22","13,23"]
```

```
["fn1","!\n1\n\n\nnf1","@\n2\n\n\nnf2","#\n3\n\n\nnf3","$\n4\n\n\nnf4","%\n5\n\n\nnf5",
"^ \n6\n\n\nnf6",{x:2},"&\n7\n\n\nnf7","*\n8\n\n\nnf8","(\n9\n\n\nnf9",")\n0\n\n\nnf10","_ \n-
\n\n\nnf11","+ \n= \n\n\nnf12","del","Backspace\n\n\n\nndel"],
[{w:1.5},"tab","q","w\n\n\n\nnup","e","r","t",{x:2},"y","u","i","o","p",
,"{\n[","}\n]",{w:1.5},"|\n\\",
[{w:1.75},"caps","a\n\n\n\n\nleft","s\n\n\n\n\nndown","d\n\n\n\n\nnright","f",
"g",{x:2},"h","j","k","l",":\n;","'\n'",{w:2.25},"enter"],
[{w:2.25},"lshift","z","x","c","v","b",{x:2},"n","m","<\n",">\n.","? \n/",
"up",{w:1.75},"rshift\n\n\n\n\nnf2"],
[{w:1.25},"lctrl",{w:1.25},"lgui",{w:1.25},"lalt",{w:1.5},"fn0",{w:2},
"space",{x:2,w:1.75},"space",{w:1.25},"fn0","ralt","left","down","right","rctrl"]
```

参考 2(来源自@kai1103):

[http://www.keyboard-layout-](http://www.keyboard-layout-editor.com/#/layouts/9a7c43d33d807e3d27440c8d9cef5e7b)

[editor.com/#/layouts/9a7c43d33d807e3d27440c8d9cef5e7b](http://www.keyboard-layout-editor.com/#/layouts/9a7c43d33d807e3d27440c8d9cef5e7b)

[http://www.keyboard-layout-](http://www.keyboard-layout-editor.com/#/layouts/6ed57d1fd2e0e32628eb6a97642580af)

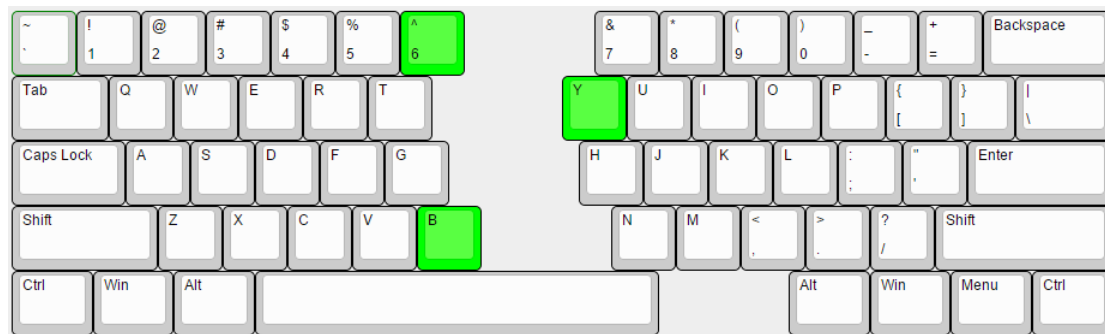
[editor.com/#/layouts/6ed57d1fd2e0e32628eb6a97642580af](http://www.keyboard-layout-editor.com/#/layouts/6ed57d1fd2e0e32628eb6a97642580af)

关于 B、Y、6 等键左右手分配的小测试：

B：不知道不想要不明了...

Y：有一个姑娘他有一些...

6：打打自己身份证号 qq 号神马的好了...



如果测试之后发现自己是左右乱用，也可以设置两组 6、Y、B 等

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李曰曰带你飞 <http://gotohell.taobao.com/?spm=2013.1.1000126.d21.1fKKLe>

附录:

GH60 原帖 : <http://geekhack.org/index.php?topic=41464.0>

原作者博客 : <http://blog.komar.be/projects/gh60-programmable-keyboard/>

硬件开源 : <https://github.com/komar007/ghkb>

TMK 主控程序 : https://github.com/tmk/tmk_keyboard

KLE 布局编辑器 : <http://www.keyboard-layout-editor.com/>

TKG 布局生成器 : <http://www.enjoyclick.org/tkg/>

tkg-toolkit 工具集 : <https://github.com/kairyu/tkg-toolkit>

关于 Kirema 硬件介绍请看 “Kimera v5.0 主控 DIY 说明 Ver1.2.pdf”

关于矩阵键盘介绍请看“矩阵键盘原理.pdf”

更多教程请在群共享中仔细寻找

群号 : 70792735 特别感谢团长创建此群

感谢 kai1103、雷恩等对于开源项目的贡献