68 Programming Manuals

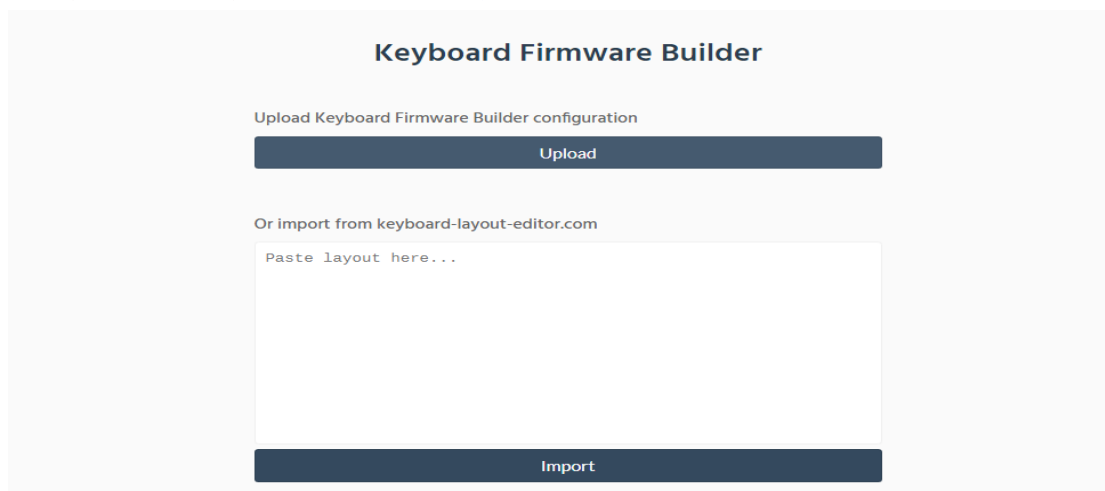## QUICK START HOW TO PROGRAM

1.Download QMK Toolbox https://github.com/qmk/qmk_toolbox/releases
Choose the toolbox according to your system,
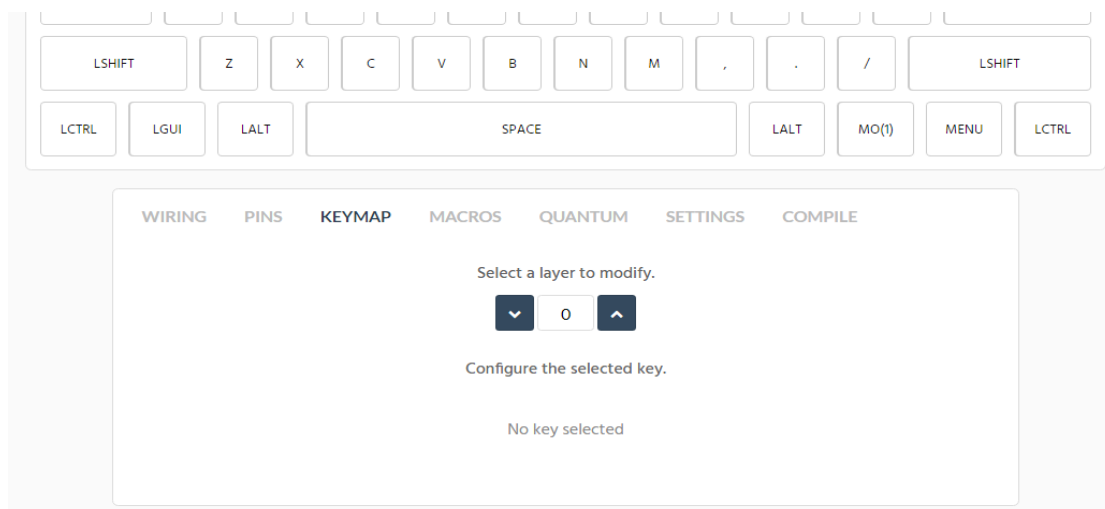**Mac system choose pkg or app file,Windows choose toolbox.exe file.**

2.Download Zadig or other driver updated software.

3.Change layout on kbfirmware.com,this json file can be used to modify 64 Minila 60 layout,not only Minila,upload 68 json file

Keyboard Firmware Builder

Upload Keyboard Firmware Builder configuration

| Upload |

Or import from keyboard-layout-editor.com

```
Paste layout here...
```

| Import |

4.Then press keymap, You can select layer to change the keys,Layer 0 is the default layer you always use,layer 1 is the 2nd layer which is realized by Fn.

| LSHIFT | Z | X | C | V | B | N | M | , | . | / | LSHIFT |

| LCTRL | LGUI | LALT | SPACE | LALT | MO(1) | MENU | LCTRL |

WIRING   PINS   **KEYMAP**   MACROS   QUANTUM   SETTINGS   COMPILE

Select a layer to modify.

| ∨ | 0 | ∧ |

Configure the selected key.

No key selected

5.When you modify the keys ready,click Settings and
it will show No errors or warnings!And then click Compile to download hex file.
If something wrong,it will remind you of the fault.Just modify according to the
reminder and then download hex file.

WIRING	PINS	KEYMAP	MACROS	QUANTUM	SETTINGS	COMPILE

Configure your settings.

Layout Name   OK60-X RGB   ?

Bootloader Size   4096 KB   ?

WS2812 LEDs   −   10   +   ?

Backlight Levels   −   3   +   ?

Save your layout.

Save Configuration

Check errors and warnings.

No errors or warnings!

WIRING	PINS	KEYMAP	MACROS	QUANTUM	SETTINGS	COMPILE

Download the .hex file to flash to your keyboard.

Download .hex
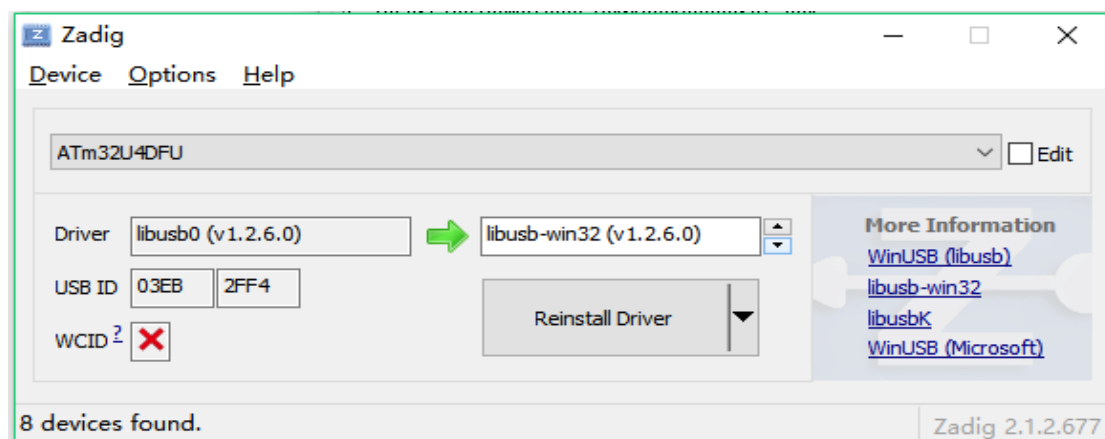
Or download the source files.

Download .zip

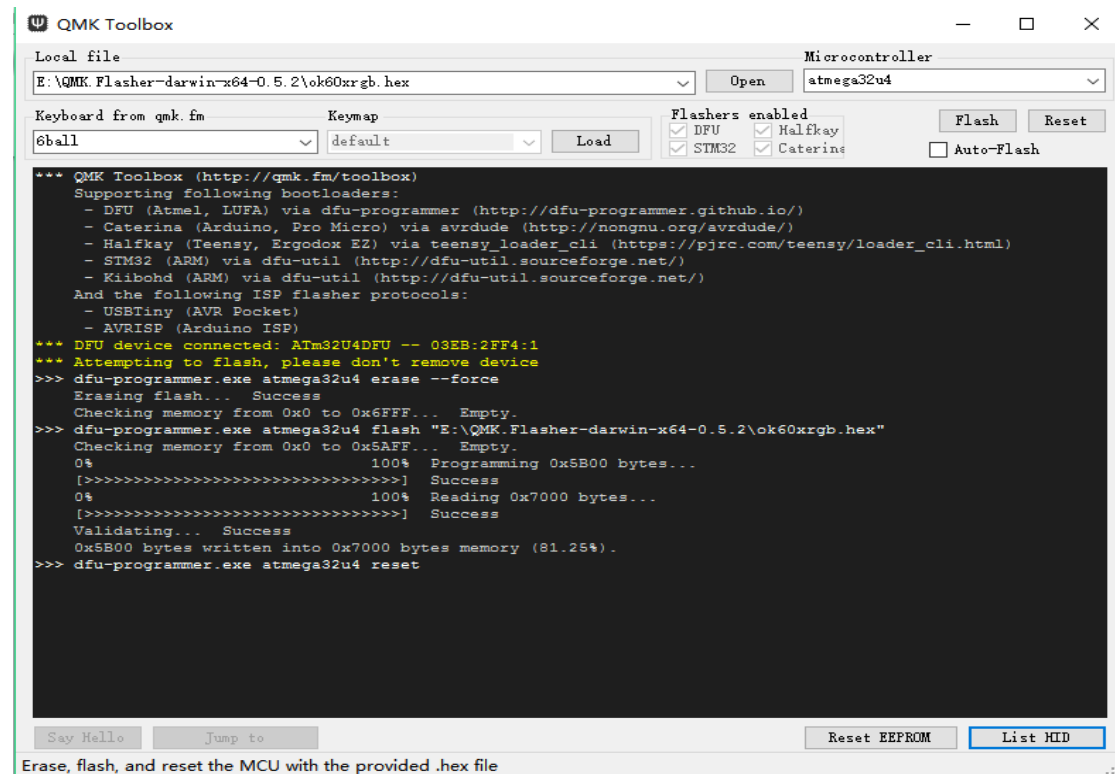**6.Reset the keyboard**
Method 1,press FN+ESC.
Method 2,pull out USB from PC,press spc+B together till inserting USB to PC.
Method 3,if you change your keys without reset or SPC B button,you can still open
the back cover to press the reset button.Method 3 won't use as usual.

7.Open Zadig,click list all,choose atmega32u4,
install the driver libusb-win32 (v1.2.6.0).

Zadig

Device   Options   Help

ATm32U4DFU   ☐ Edit

Driver   libusb0 (v1.2.6.0) → libusb-win32 (v1.2.6.0)

More Information
WinUSB (libusb)
libusb-win32
libusbK
WinUSB (Microsoft)

USB ID   03EB   2FF4

WCID ? ✗   Reinstall Driver

8 devices found.   Zadig 2.1.2.677

8.Open Toolbox,click open button to choose the hex file
you just download,click flash.Make sure the chipset is atmega32u4.
When it shows as below image,that means it succeeds.

9.More details about keycode on kbfirmware,refer to Keycode.

10.How to record Mac
Choose a key as KC_M(n),go to Marcos page,then click Record Marco,press a list of actions on keyboard,then stop recording.Edit every action and download hex at last.

11.How to Exchange between 6KRO and NKRO
Pull out USB from PC,press SPC+N until inserting USB to PC.

12.How to control RGB Underglow
Use Fn+QERTYUI as default.You can define it on kbfirmware yourself as well.
Fn+Q=on\off RGB
Fn+E=Switch RGB Mode
Others are used to adjust brightness Saturation Hue.