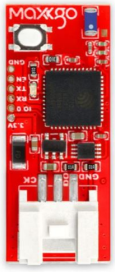


MAXKGO NELF ESK8 LED Light Strip Controller Instruction Manual

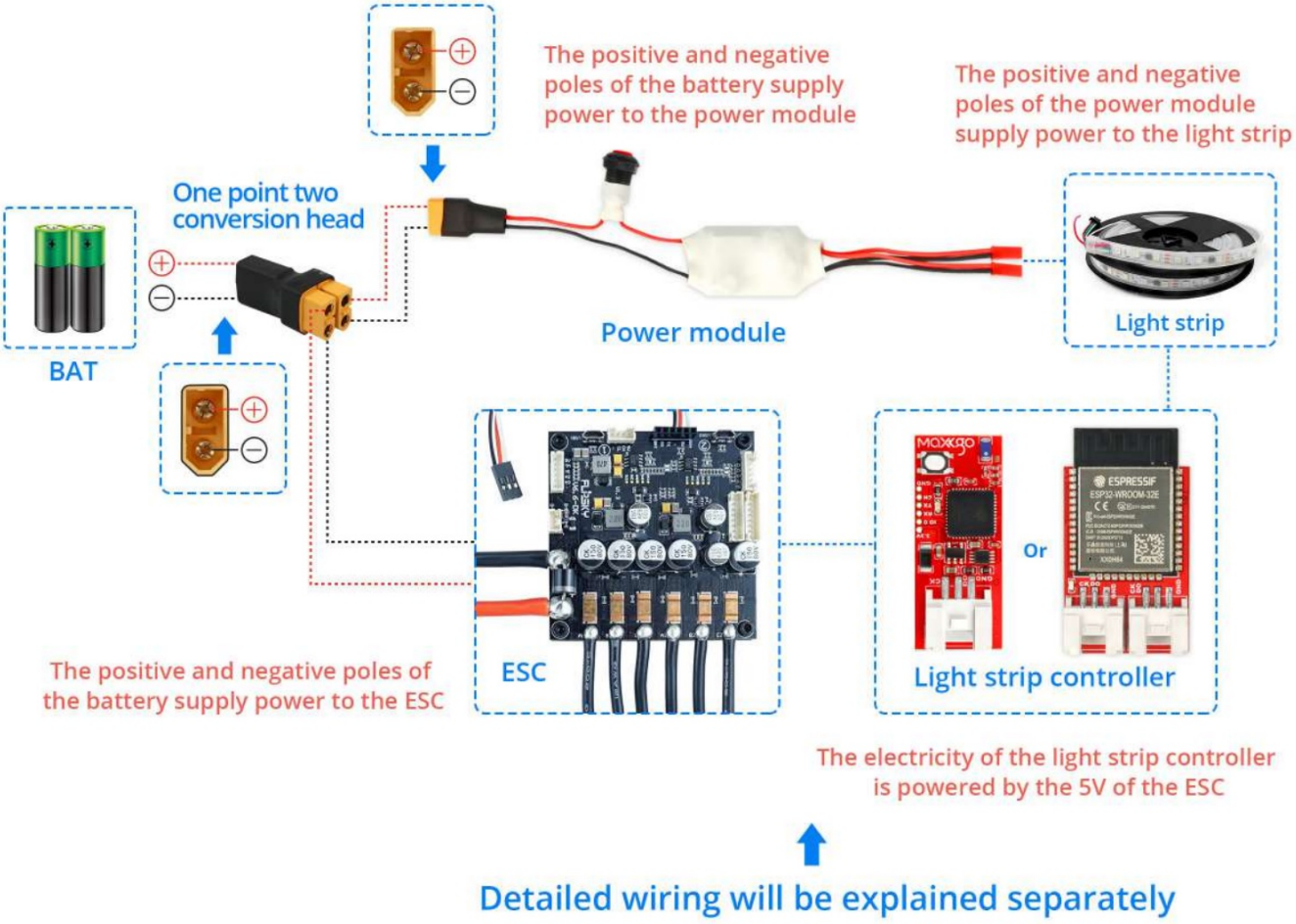
MAXKGO NELF ESK8 LED Light Strip Controller

Instruction Manual

Contents

Hardware Connection

Connecting the XT60 one-to-two adapter to the power supply. One interface is connected to the power module; the other interface is connected to the ESC. The power module supplies power to the light strip through the “JST-2P” cable, and the light strip is then connected to the “SM2.54-3P” (for 3P light strip) or “SM2.54-4P” (for 4P light strip) connect with the ESK8 LED light strip controller; the other end of the ESK8 LED light strip controller is through the “HY2.0-4P to 2.0-7P” cable (for V4 ESC) or the “HY2.0-4P to 2.0 8P” cable (Applicable to V6 ESC) connect with ESC.As shown in the picture below

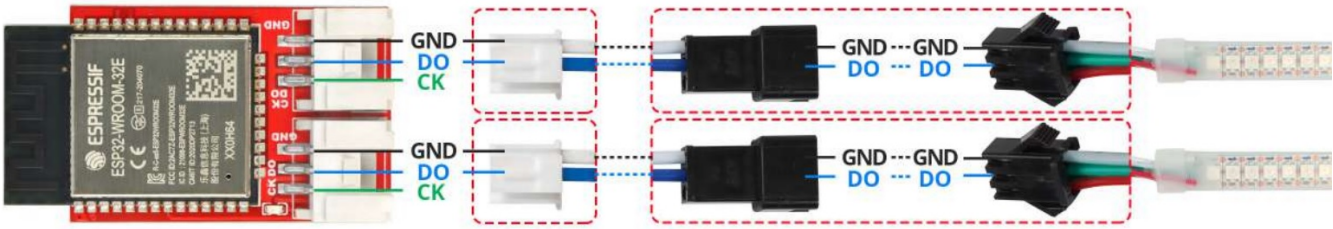


Schematic diagram of the connection between the controller and the LED light strip:

S1X Wiring

2P Connection line

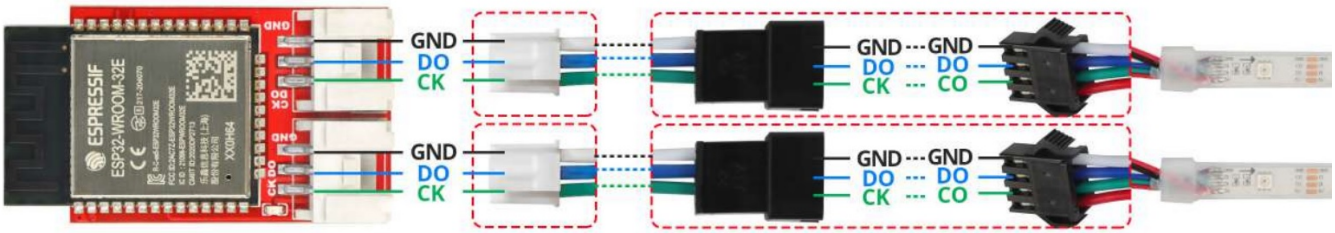
NOTE : According to the light strip interface corresponding to the board interface connection



2P Connection line

3P Connection line

NOTE : According to the light strip interface corresponding to the board interface connection



3P Connection line

S1 Wiring

2P Connection line

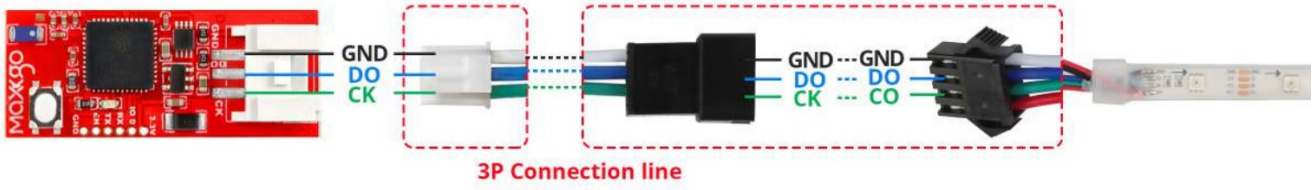
NOTE : According to the light strip interface corresponding to the board interface connection

2P Connection line

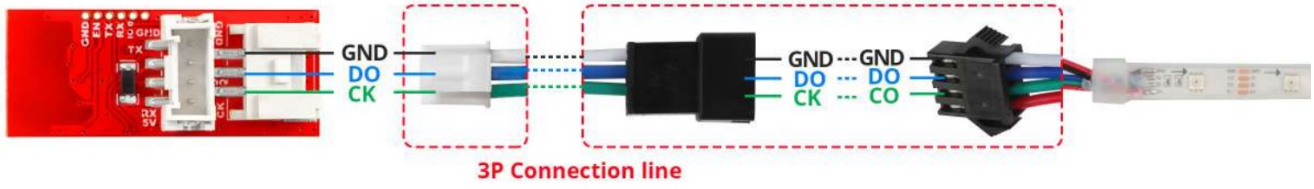
2P Connection line

3P Connection line

NOTE : According to the light strip interface corresponding to the board interface connection



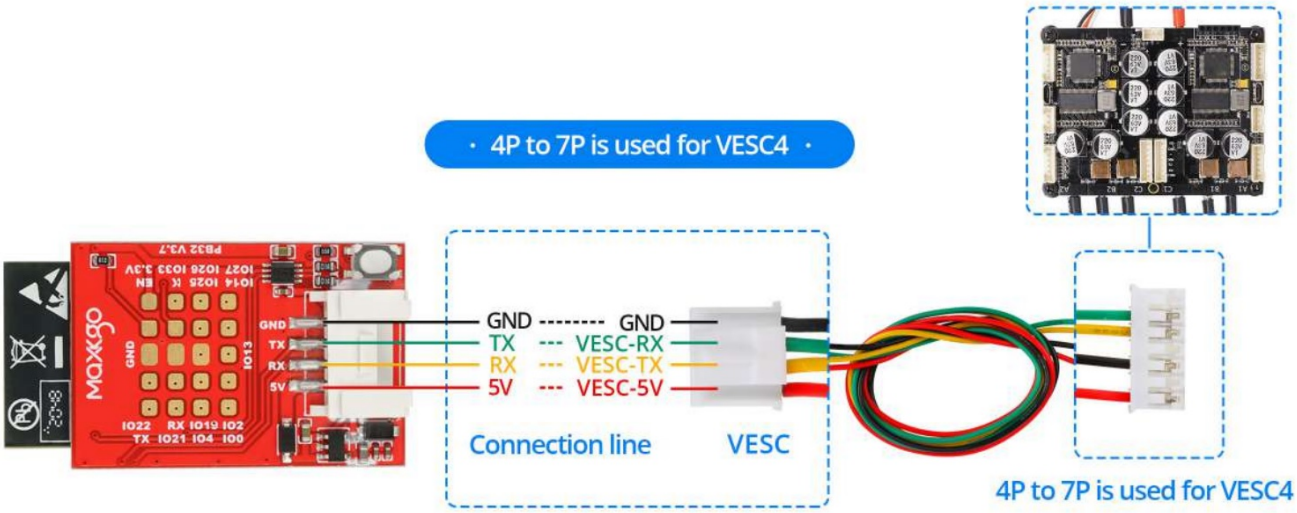
3P Connection line

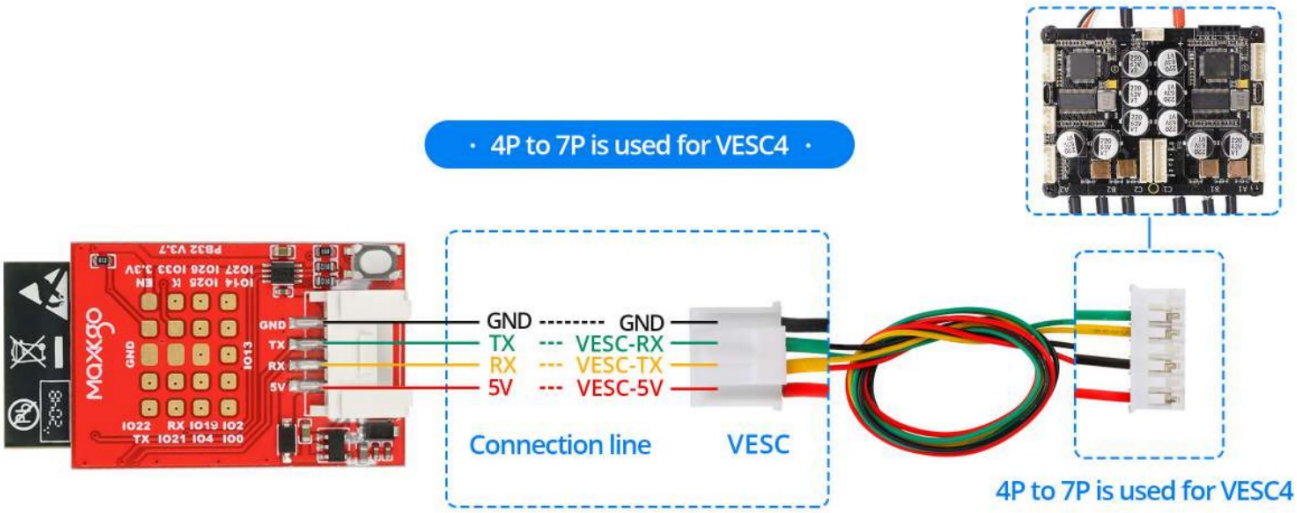


3P Connection line

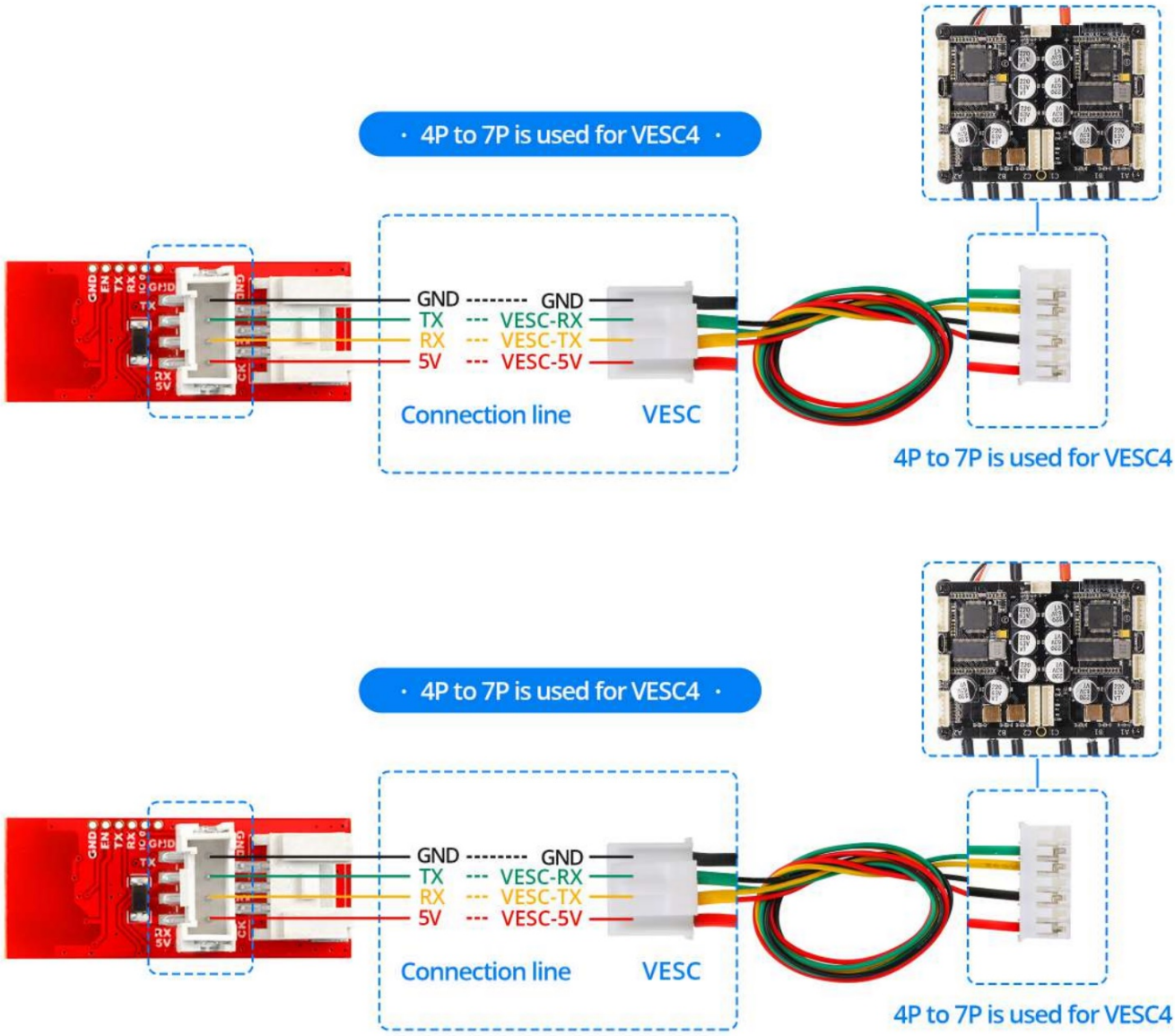
Schematic diagram of the connection between the controller and the ESC:

S1X Wiring


· 4P to 7P is used for VESC4 ·
GND -------- GND
TX --- VESC-RX
RX --- VESC-TX
5V --- VESC-5V
Connection line
VESC
4P to 7P is used for VESC4


· 4P to 7P is used for VESC4 ·
GND -------- GND
TX --- VESC-RX
RX --- VESC-TX
5V --- VESC-5V
Connection line
VESC
4P to 7P is used for VESC4

S1 Wiring



NOTE : The ESK8 LED strip controller is powered by an ESC and does not share power with the light strip

Operating Instructions

1) Setup Steps for First Use

1. Connect your mobile phone to the Wifi established by ESK8: MaxkGo_esk_xxx xxx is ESK8's unique identifier, any number between 0-fffffffffff), password: 2021maxkgo
2. If the phone prompts "This WLAN network has no Internet access. Connect anyway?", select "CONNECT".
3. Open the browser, enter and open the URL: 192.168.4.1, then enter the page as shown in Figure 1:

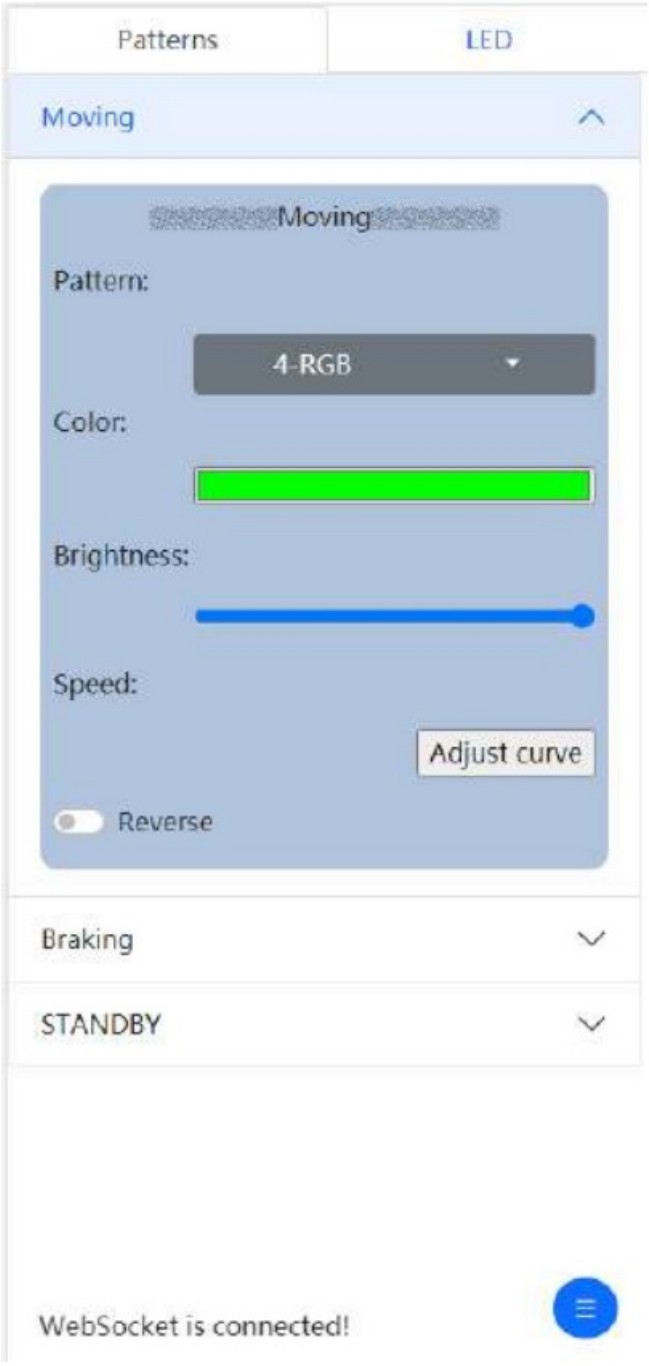


Figure 1

4. Click the “LED” in the upper right corner of the page to expand the LED parameter list, as shown in Figure 2.

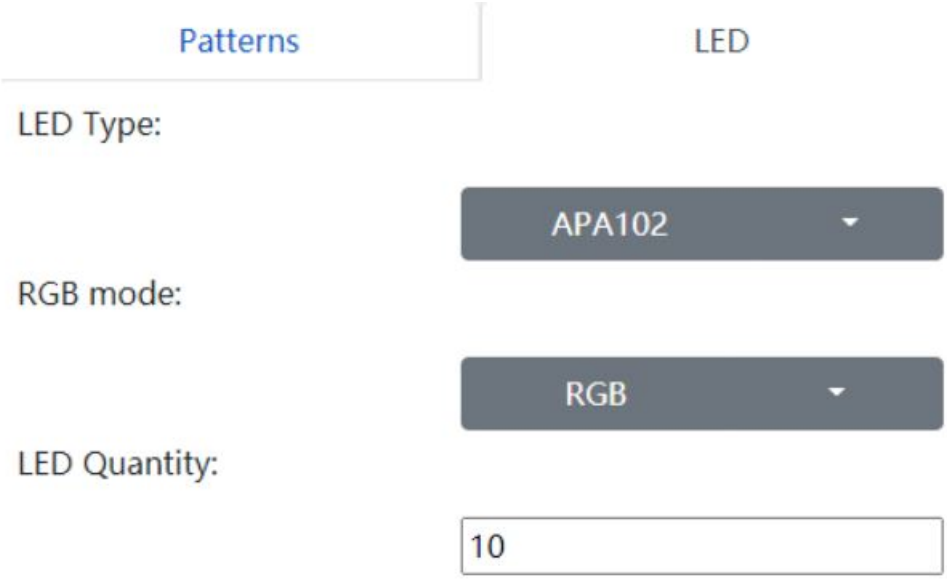


Figure 2

5. Select the light strip type, RGB mode and the number of light beads correctly on the current page.
6. Click the blue menu button at the bottom right corner of the page to display the page selection list, as shown in Figure 3.

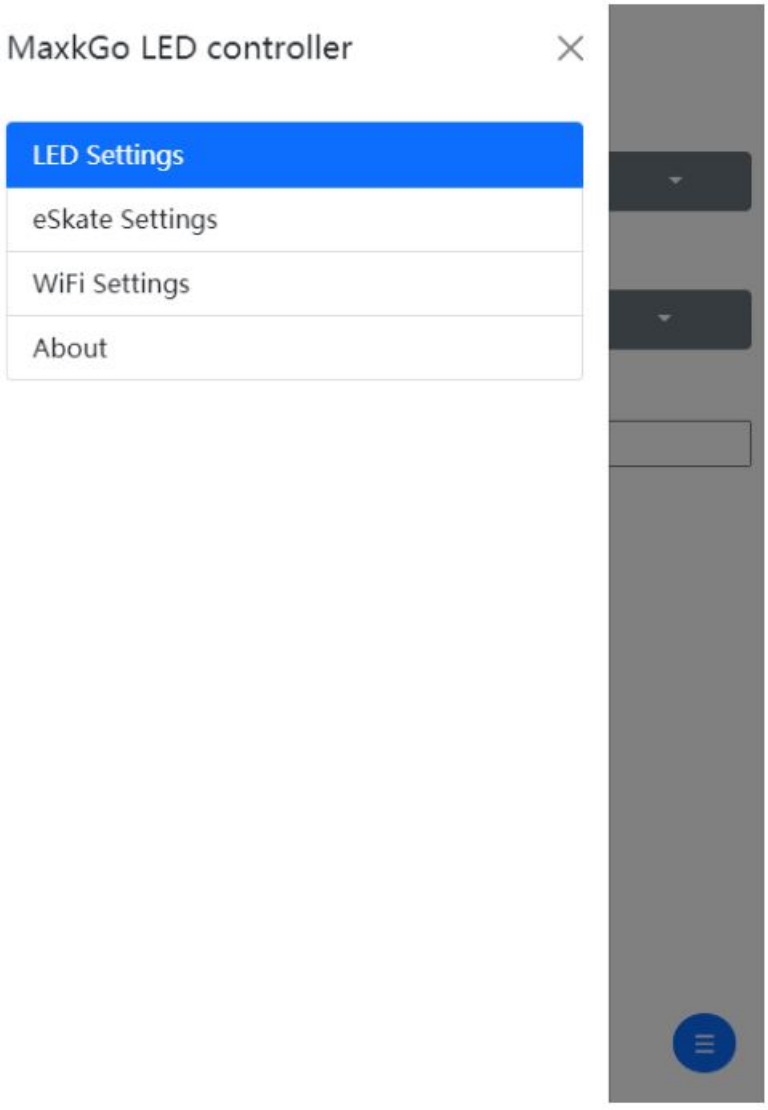


Figure 3

7. Click “eSkate Settings” to enter the electric skateboard parameter setting page, as shown in Figure 4.

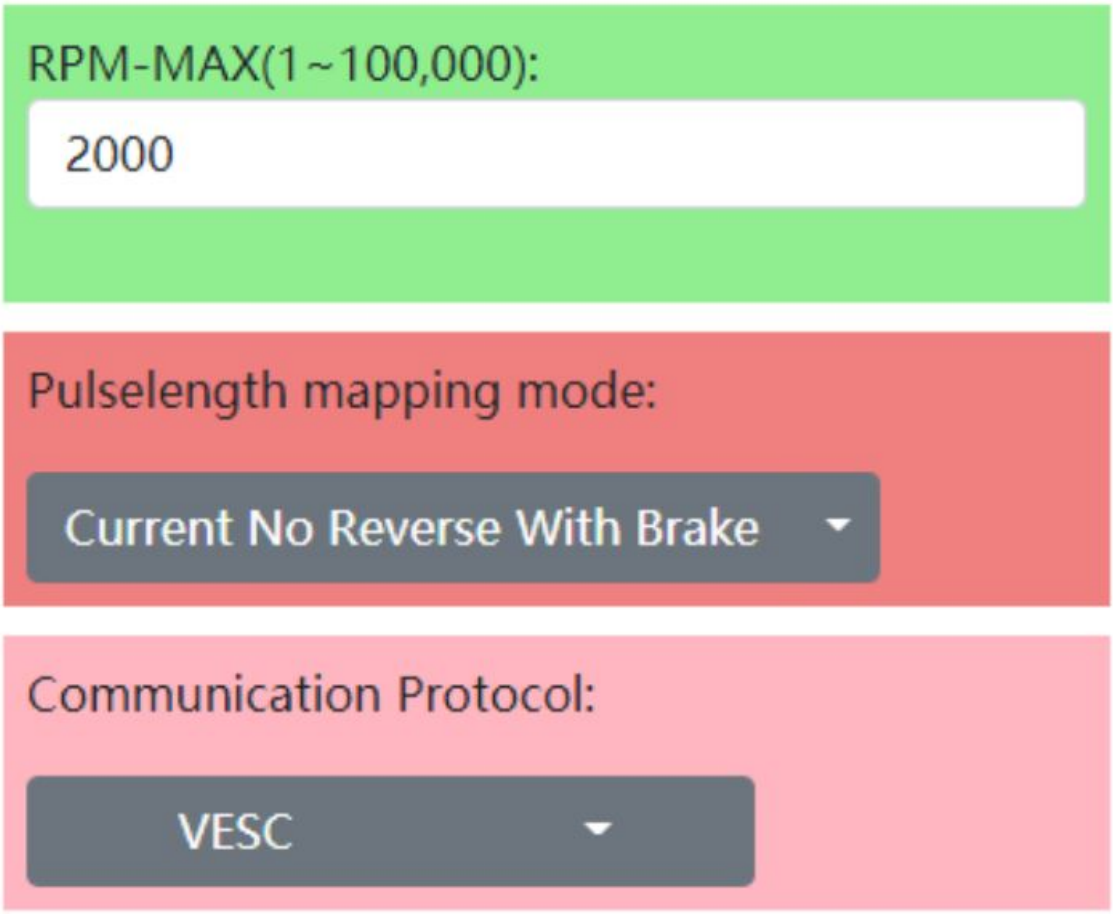


Figure 4

8. “eSkate Settings” parameter description page RPM-MAX The motor will reach maximum speed during moving that could be estimated accurately or approximately. If the speed of the light strip is too changing too fast or too slowly when moving, it could be modified.
   Pulselength mapping mode:Motor PPM, make sure to be consistent with the actual mode of the motor.
   Communication Protocol now only the VESC serial port protocol is supported, and no modification is required.
9. .If all the operation is correct, your light strip should have been lit at this moment.Then,the Pattern/Brightness /Speed/Color of the light strip can be controlled in real time on your mobile phone.

   Please note: Color customization is not supported in some modes.

2) Set the light strip mode and other parameters

1. Enter the main page (as shown in Figure 1), you can expand any of the “Moving” or “Braking” or “STANBY” tabs to set the light strip mode, brightness, movement speed, reverse and other parameters, respectively acting on the moving state, braking state and standby state of the skateboard.
2. The speed adjustment of the light strip during the moving state
3. The speed adjustment of the light strip in the moving state is a little complicated, so a further analysis is provided here.
4. First, click the “Adjust curve” button in the “Moving” tab in the main page to expand the curve adjustment page, as shown in Figure 5.

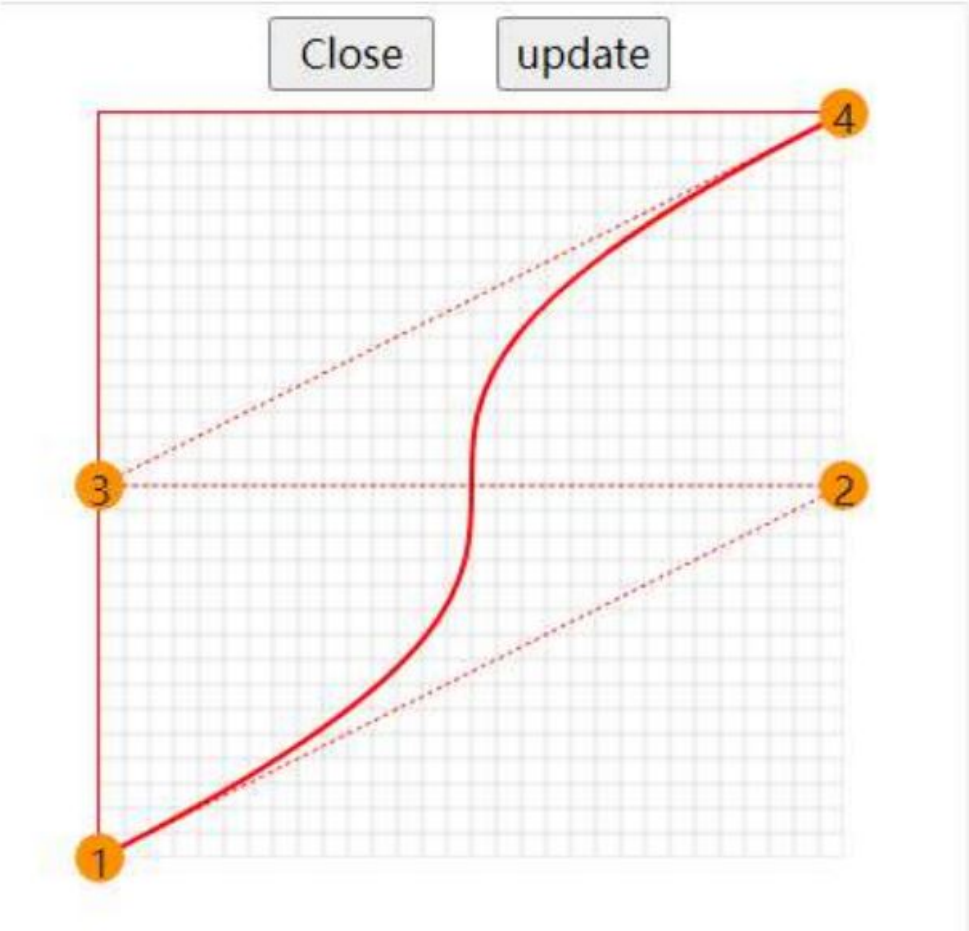
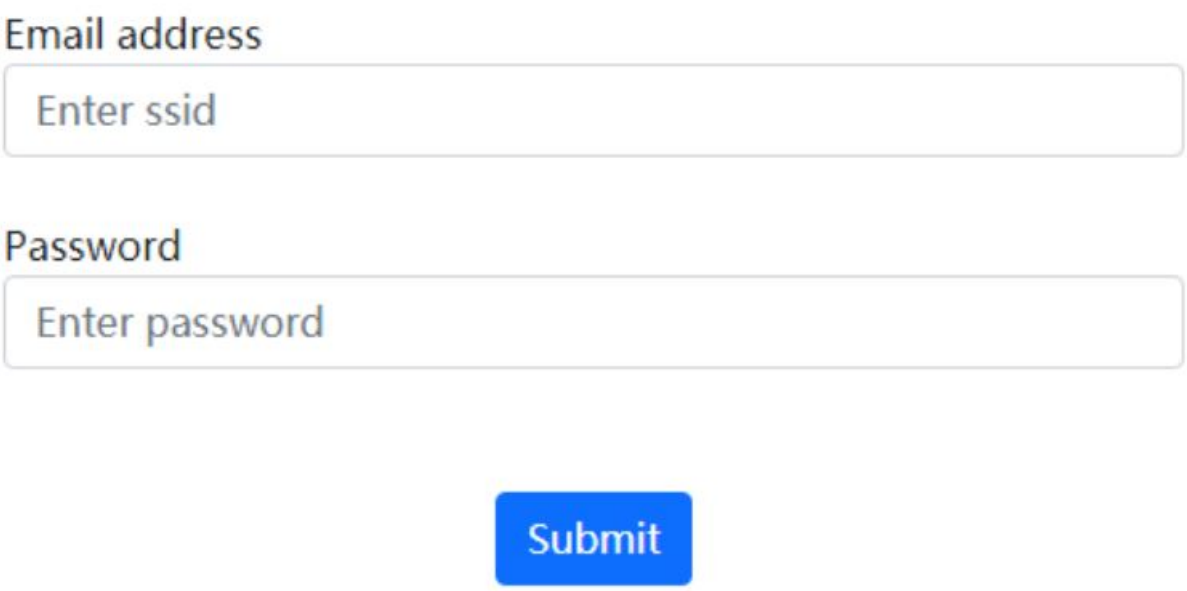


Figure 5

5. In the figure, the X axis corresponds to the motor speed (RPM), and the vertical axis corresponds to the movement speed of the light strip. The curve is a Bézier curve with a total of 4 control points, in which the position of control point 1 is fixed, and control point 4 can be moved up and down, and 2/3 of the control points can be moved freely in the XY plane. Through the movement of 3 control points, we can create a variety of speed response curves.
6. The value range of X is 0~RPM-MAX, so if RPM-MAX is set too small, the speed of the light strip will be at the maximum while the skate speed is very small; on the contrary, if RPM-MAX is set too large, the speed of the light strip will never reach the maximum.
7. Button operation instructions: “update” submit modification; “Close”-close the current page.

3) Modify WiFi SSID and Password

Switch to the wifi settings page (WiFi Settings) through the blue menu button at the bottom right corner of the page, as shown in Figure 6.



Enter the relevant information as prompted, and then click the button “Submit” to submit the modification.

4) Upgrade Firmware

Enter the About page through the blue menu button at the bottom right corner of the page, as shown in Figure 7.

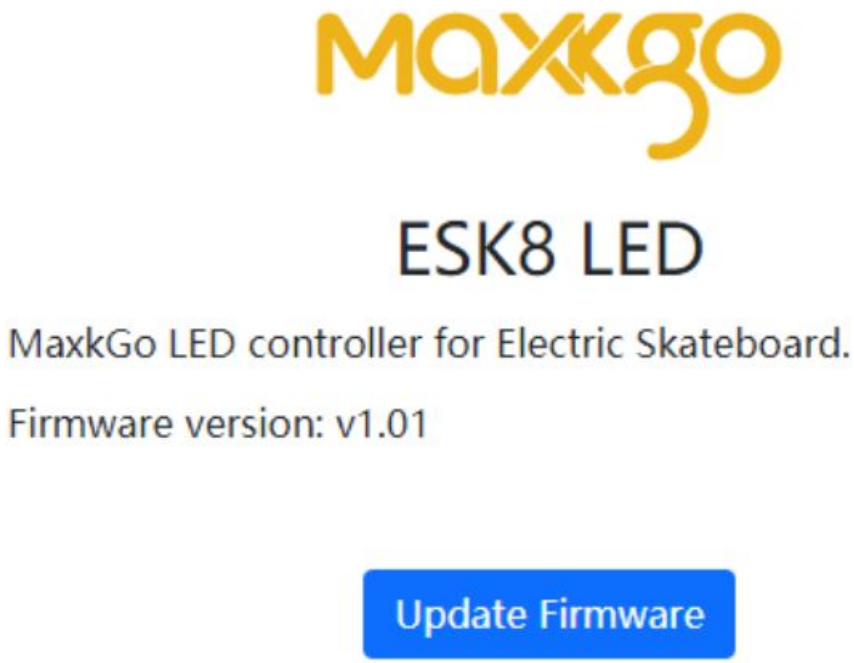


Figure 7

Click the “Update Firmware” button to enter the firmware upgrade window, as shown in Figure8.

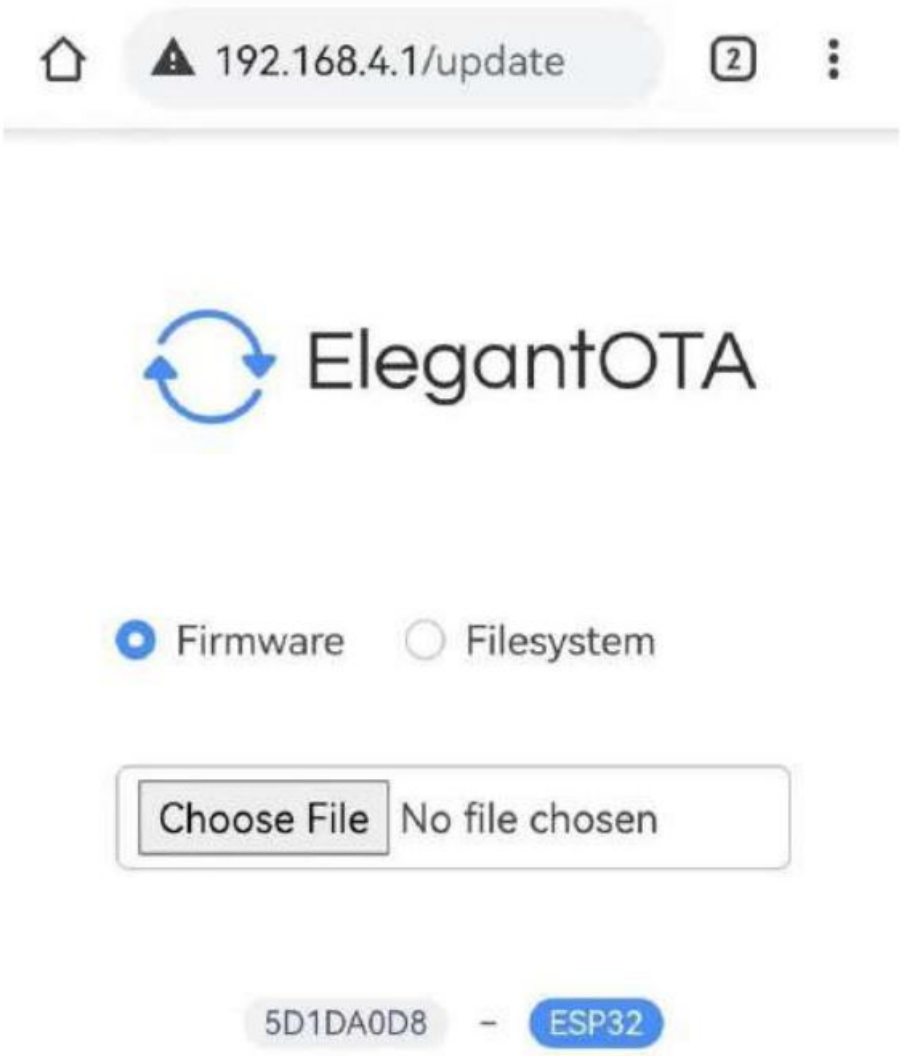

192.168.4.1/update
ElegantOTA
Firmware
Filesystem
Choose File
No file chosen
5D1DA0D8
-
ESP32

Figure 8

Figure 9

Click the button “Choose File” to open the file browser, select the firmware update package provided by MaxkGo, and then comes the update progress bar, as shown in Figure 9.

Note: Do not cut off the power during the upgrade; the device will restart automatically after successful upgrade, please reconnect moblie phone to wifi hotspot.

Buttons and Indicators

ESK8 is equipped with a button and a status indicator.

1. **Indicator Status**
   1) Slow flashing for 3 seconds: it means that ESK8 is starting;
   2) Flashing once: it means that a mode switch has just been performed;
   3) Fast flashing: ESK8 has been reset to the factory state;
   4) Steady light: ESK8 is running.
2. **Button Function**
   1) Switch Mode Short press this button to switch the light strip lighting mode under the current skateboard state (Moving/Braking/Standby)
   2) Restore Factory Settings : Long press the button for 5 seconds, the indicator light will enter a fast flashing state, indicating that the ESK8 has been reset to the factory state. After releasing the button, the indicator light

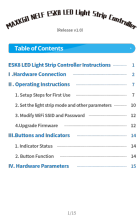
will continue to flash quickly for 3 seconds.

Hardware Parameters

ESK8 S1X/S1				
	Minimum	Typical	Maximum	Unit
Supply Voltage	4.5	5	5.5	V
Supply Current	0.5	—	—	A
Operating Temperature	-40	—	85	°C
Humidity	—	85	—	%RH

Power Step-down Module				
	Minimum	Typical	Maximum	Unit
Supply Voltage	9	—	90	V
Supply Current	—	—	3	A
Output Voltage	—	5/12	—	V
Power	—	—	30	W

Documents / Resources


MAXKGO NELF ESK8 LED Light Strip Controller

Release v1.01

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