

6. RGB colorful light bar special effects display

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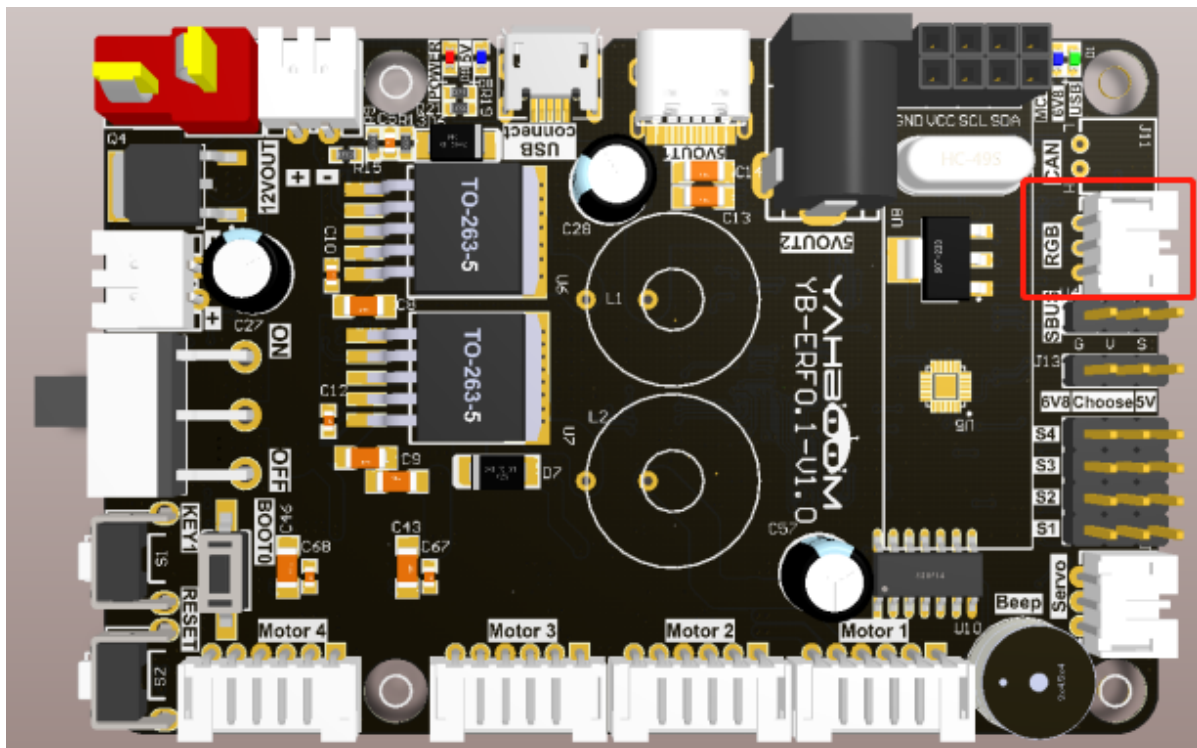
6.1. Experimental objectives

Control the RGB colorful light bar to display different special effects, manually control the color of the RGB light bar, and set the color of a single RGB light.

6.2. Experiment preparation

The position of the red box in the picture below is the interface of the RGB colorful light bar. The interface has anti-reverse connection function, and there is no need to worry about reverse connection during the connection process.

RGB dazzling lights support the color of a single light, as well as control the color of all lights.



The Rosmaster_Lib library functions required to control the RGB colorful light bar effects are as follows:

```
set_colorful_effect ( effect , speed = 255 , parm = 255 )
```

Parameter explanation: RGB programmable light strip special effects display.

effect=[0, 6], 0: stop light effect, 1: running water light, 2: marquee light, 3: breathing light, 4: gradient light, 5: starlight, 6: battery display

speed=[1, 10], the smaller the value, the faster the speed changes.

parm, optional, as an additional parameter. Usage 1: Enter [0, 6] for the breathing light effect to modify the color of the breathing light.

Return value: None.

```
set_colorful_lamps ( led_id , red , green , blue )
```

Parameter explanation: RGB programmable light strip control, which can be controlled individually or as a whole. Before the control, you need to stop the RGB light effects.

led_id=[0, 16], control the corresponding number of RGB lights; led_id=0xFF, control all lights.

red,green,blue=[0, 255], indicating the color RGB value.

Return value: None.

6.3. Experimental effect

Refer to 4.3.1 and 4.3.2 Checking ROS expansion board and entering Docker container, then run the program. double-click on the jupyter lab interface to enter /root/yahboomcar_ros2_ws/Rosmaster/Sample.

Double-click and select 6.rgb_effect.ipynb, and click the button in 4.3.3 to operate the program step by step.

6.4. Program source code

Go to docker, Reference code path:

/root/yahboomcar_ros2_ws/Rosmaster/Sample/6.rgb_effect.ipynb