

MX7X | SPI 5-IN-1 LED Intelligent Controller

MX7X Series Controllers+MESH Series Remote Control Specification



MX7-W /WIFI



MX7-B /BLUETOOTH



MX7-Z /ZIGBEE

The controller is compatible with 49 chips: TM1803, TM1804, TM1809, TM1812, UCS1903, UCS1909, UCS1912, SK6813, UCS2903, UCS2909, UCS2912, WS2811, WS2812, WS2813, WS2815, TM1829, TLS3001, TLS3002, GW6205, MBI6120, TM1814B(RGBW), SK6812(RGBW), WS2813(RGBW), WS2814(RGBW), UCS8904B(RGBW), LPD6803, LPD1101, D705, UCS6909, UCS6912, LPD8803, LPD8806, WS2801, WS2803, P9813, SK9822, TM1914A, GS8206, GS8208, UCS2904, SM16804, SM16825, SM16714(RGBW), UCS2603, UCS5603, SM16714D, SM16703P, UCS7604(RGBW), UCS7804(RGBW).

Colorful-X7 5 IN 1 can be adjusted THROUGH the Tuya/Smart Life APP, voice control, music rhythm, select various dynamic or custom shortcut color modes, and adjust the change speed and brightness. Set the control number of pixels, set the chip type and R/G/B/WWW/ CCT color order, etc.

Support MESH series remote control to achieve local physical key control (such as switching, group switching, basic dimming) through "MESH".

Compatible voice assistants

Support language command switching, brightness adjustment, and color.



Amazon Alexa



Yandex Alice



Google Assistant

Compatible remote control

A single device can support 10 remote controls at the same time



MR101/DIM



MR102/CCT



MR103/RGB



MR104/RGBW



MR105/RGBCCT



MR011/DIM



MR023/3 WAY



Characteristics

- DIM/CCT/RGB/RGBW/RGBWC magic light strip controller, SPI signal output, Tuya smart APP cloud control.
- Compatible with DIM, CCT, RGB or RGBW LED strips for 49 chips, the chip type and R/G/B/WWW/CCT color order can be set through the mobile app.
- 180 dynamic changing modes can be set through the mobile app, including running, chasing, flowing water, meteor shower and gradient drift.
- Voice control, support Xiaomi Xiaoi, Tmall Genie, Baidu Xiaodu, Amazon Alexa, Google Assistant and other voice assistants.
- The APP has built-in massive modes, with 180 dynamic modes, 22 light bars, and 30 light screens.
- Support OTA online upgrade (if there is an update iteration of a new IC, our products will also be updated and iterated) and it will be better to use it as it is used
- MESH remote control to control multiple dynamic modes, music mode. The brightness, color, and color temperature of the remote control can be adjusted to personal preference, and the brightness and speed of dynamic mode can be edited.
- Support matching multiple devices, can control multiple devices at the same time, and one remote control can manage and synchronize up to 500 controllers. Each controller can be supported by 10 remote controls. (Control distance 30 meters)

Device parameters

LED controller

Input voltage	5-24VDC
Enter the signal	WIFI/BLUETOOTH/ZIGBEE
	1024
Input current	8A
Scenario mode	180 types of dynamics...
	L100XW45XH22mm(LXHXW)

Bad situation

Maximum temperature of the shell	Tc:+65°C
Operating temperature	Ta:-20°C~+60°C
IP rating	IP20

Wrap

Package size	L105XW7XH28mm/0.06KG
Packing Size (100pcs)	L38XW30XH24cm/7KG

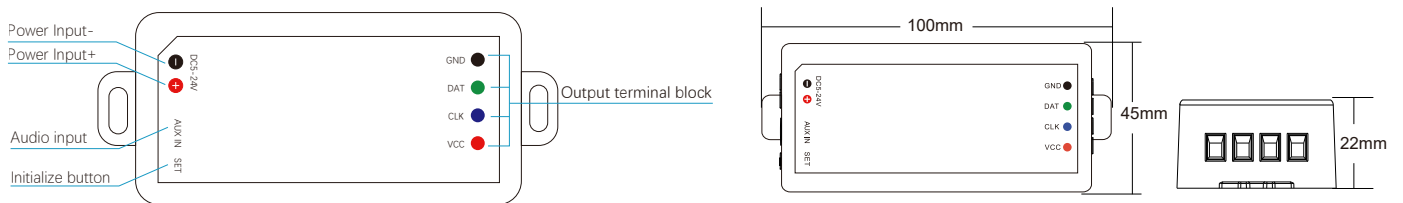
LED remote control (MR100 series)

Voltage	3V(AAA*2PCS)
Operating current	10mW
Transmission frequency	MESH (2.4GHz)
Standby power consumption	15μA
Transmit power	6dBm
Color range	16 million colors
Remote control distance	30M
Size	L122XW53XH21mm(LXHXW)
Operating temperature	Ta:-20°C~+60°C
Authentication	CE,ROHS

Wrap

Package size	L13XW5.8XH2.7cm/0.105kg
Packing Size (100pcs)	L27XW30XH15cm/11kg

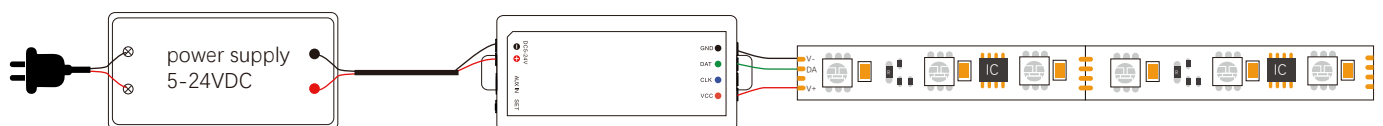
Equipment mechanism and installation



Equipment wiring diagram

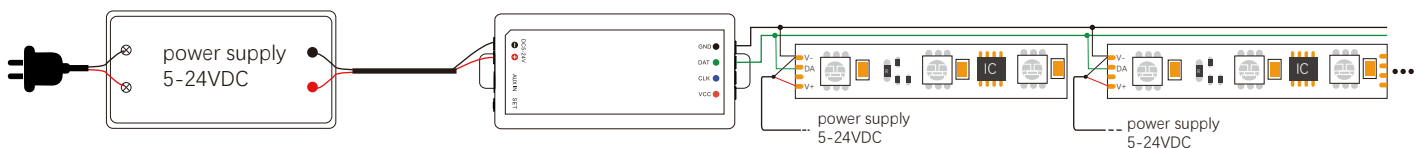
Connect the light strip

AC100-240V



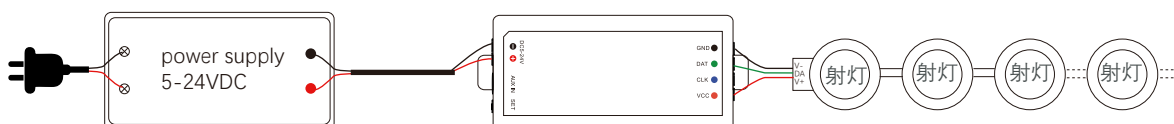
Connect multiple strips (the light load exceeds 8A and needs to be connected to a separate power supply)

AC100-240V



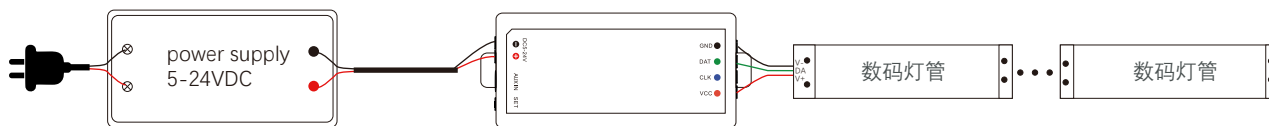
Connecting Spotlight (TM1803)

AC100-240V



Connecting Lamp (TM1803)

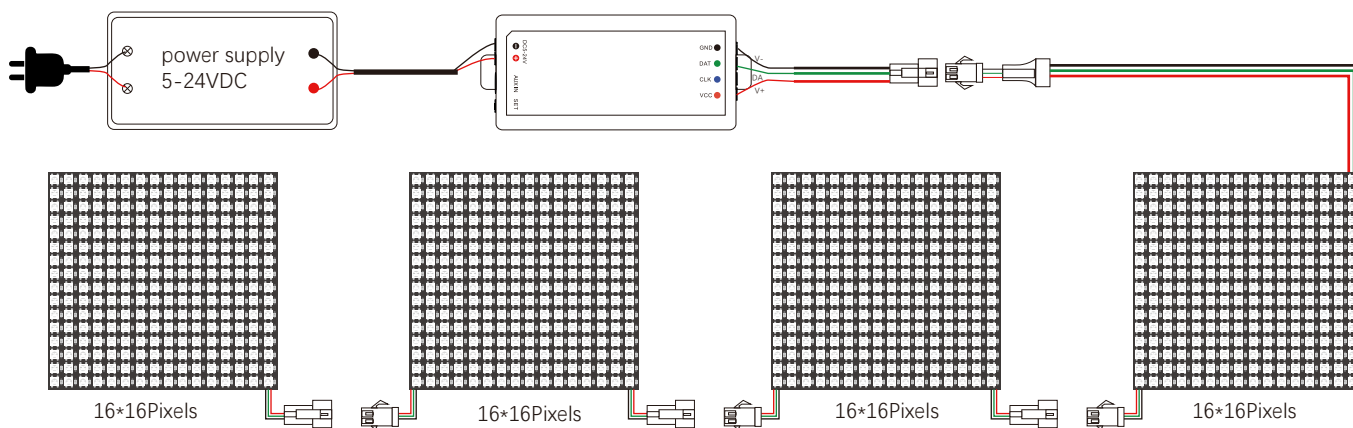
AC100-240V



Connect the light screen

AC100-240V

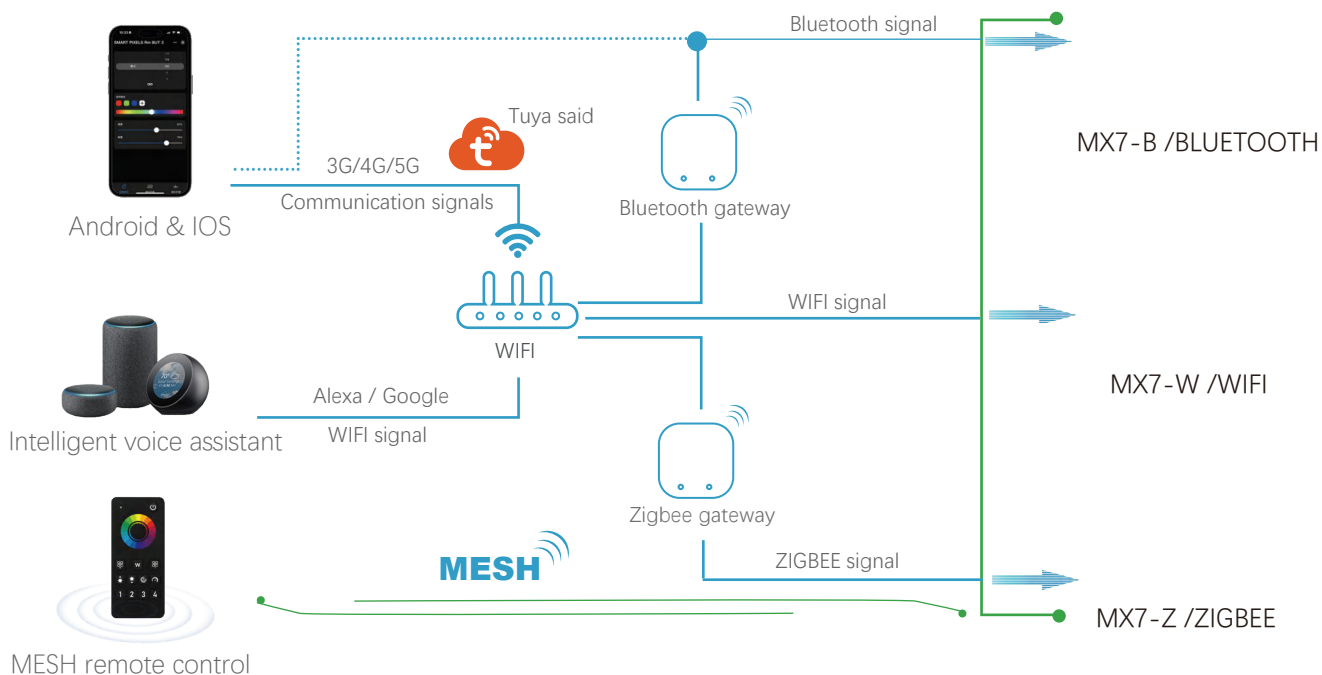
16*16=256*4=1024 Pixels



note

1. If the LED strip is a single-wire control mode, the DATA and CLK signal line output of the controller are different, and one controller can connect 6 LED strips to DAT (4 wires need to be connected to CLK).
2. When the load of the light strip exceeds 8A, the light strip needs to be powered by other power sources (the light strip and the power supply need to be in the same place), and only the DATA/CLK and GND wires are connected between the controller and the light strip.
3. The output power of the constant voltage power supply is at least 1.2 times that of the output load (light strip), otherwise the full power output of the load is easy to cause the light to flicker or shake automatically

控制连接示意图



Tuya smart download & APP network connection (C-206A/2.4G You can't connect to the app)

1. Download and install the [Smart Life] or [Tuya Smart] APP

Search for [Tuya Smart] on Apple or Google Play or scan the QR code below to download and install the app.

Please click on the "Sign Up" button to create an account and use it for the first time, if you already have an account, log in directly.

Please download the corresponding Tuya/Smart Life APP according to your region.



Scan the QR code to download the APP



Smart Life APP



Tuya Smart APP

2. Product function description & reset the device



①



②

Control Method 1: 'SET' Button	Control Method 2: Power Off	Next steps	Functional Result
Short press (release within 1 second)	Not supported	No additional action required	Switch device power on/off status
Press and hold for 3 seconds, then release	3 times	Press any group button on the remote control	Complete the pairing of the remote control with the corresponding group
Press and hold for 5 seconds, then release.	5 times	Operate network settings on the mobile app	Complete the device network configuration and connect to the mobile app
Press and hold for 10 seconds, then release.	10 times	No additional action required	Device reset, clear WiFi network information and remote control pairing

Note: APP connection When the light strip is 2811, the light strip will enter the breathing state.

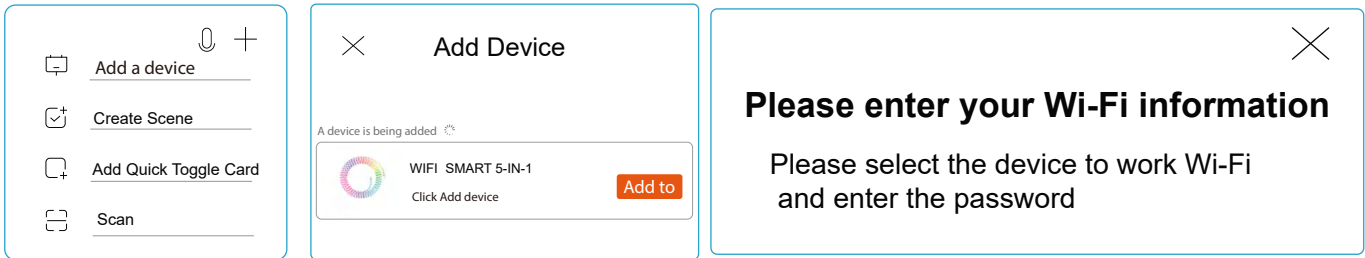
Non-2811 light strips, there will be no breathing state, and you can directly search for the distribution network on the APP after long pressing

3. Connect to your smartphone

NX7W Connection process

1. Make sure your smartphone is working under a WLAN network.
2. Open the login APP, press and hold "SET" to add a device, if it is not found, please click " + " in the upper right corner, and then manually select "Add Device", when adding, you need to enter the WiFi password of your smartphone connection, and wait for 5-10 seconds to complete the connection after successfully entering
3. Once the connection is successful, the new device will be displayed on the home page, then tap on the device and enter the control interface to do more

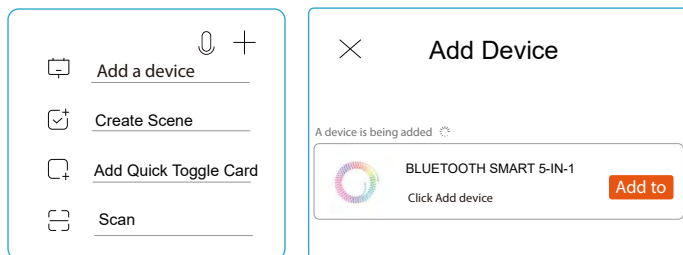
Follow these steps to complete the connection:



MX7B Connection process

1. Make sure your smartphone is working under a WLAN network.
2. Open the login APP, press and hold "SET" to add a device, if you don't find it, please click " + " in the upper right corner, then manually select "Add Device", wait for 5-10 seconds to complete the connection.
3. Once the connection is successful, the new device will be displayed on the home page, then tap on the device and enter the control interface to do more

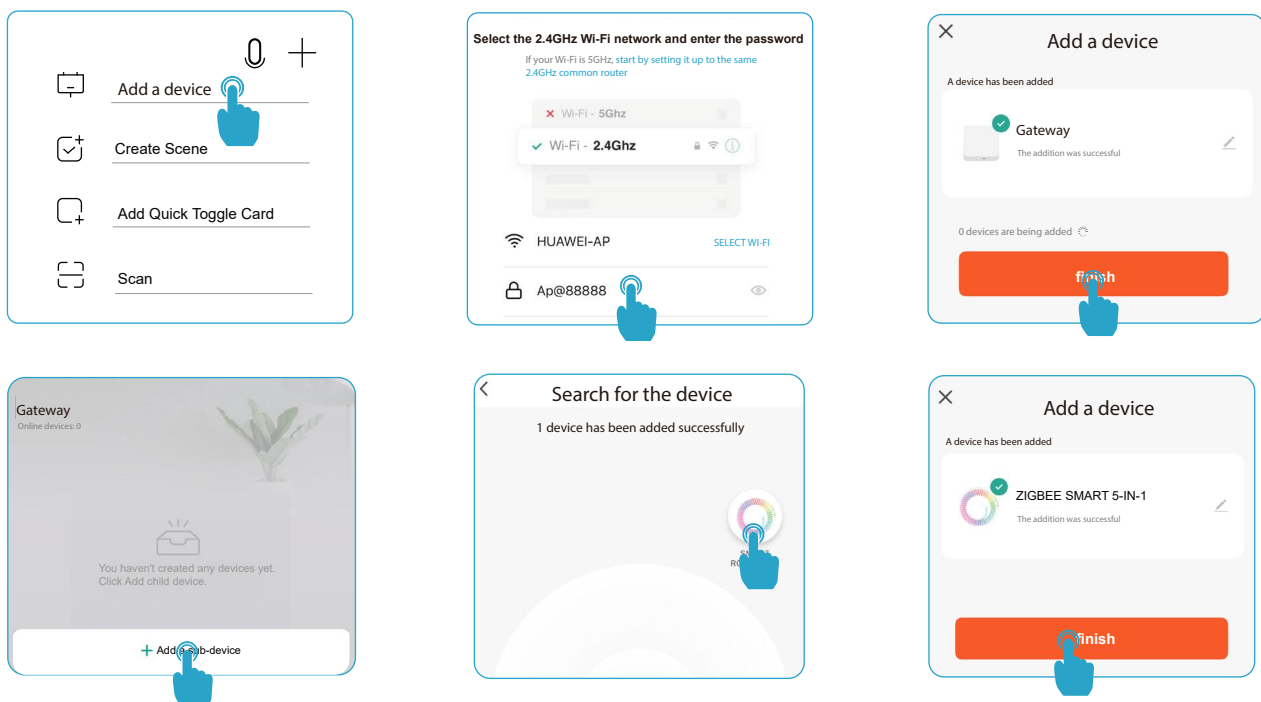
Follow these steps to complete the connection:



MX7Z connection to TUYA APP process

1. Make sure your smartphone is working under a WLAN network.
2. Open the Tuya APP, select Manually Add Gateway Central Control, select Zigbee Gateway, and enter the WIFI password to connect (Incorrect WIFI password will cause the connection to fail, non-2.4G network WIFI also.) will cause the connection to fail)
3. Reset the Zigbee gateway device, the red and blue lights of the Zigbee gateway are always on, turn on the power supply, please confirm that the red light is flashing, the blue light is always on, and the red light is always on after the connection is successful.
4. Click Done to enter the gateway control interface, add sub-devices, and confirm that the sub-devices belong to the network configuration mode (please place the gateway, controller, and smartphone close to each other for quick speed.) Pairing identification) long press the controller "SET" for 5 seconds, after the connection is successful, the sub-device will be displayed on the home page, then tap the device and enter the control interface to do more.
5. After the controller is installed in the APP, we can easily control the LED lighting with the APP.

Follow these steps to complete the connection:

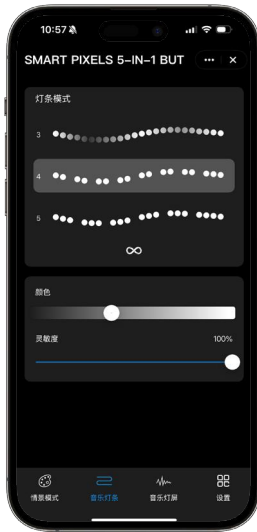


DIM interface



Dynamic mode

180 dynamic changes and customizations
Adjust the speed and brightness of the change



Light bar mode

22 light bar modes
Adjust the brightness and sensitivity of the variation



Light screen mode

30 light screen modes
Adjust the drop point color, column color, and sensitivity



Settings interface

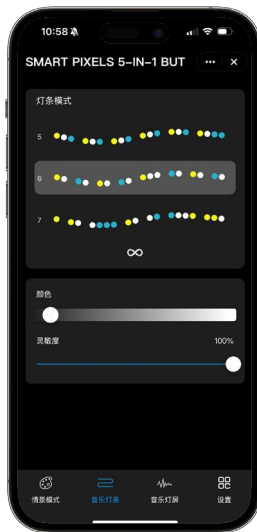
Set the chip type and R/G/B/WWW/CCT sequence through this interface.

CCT interface



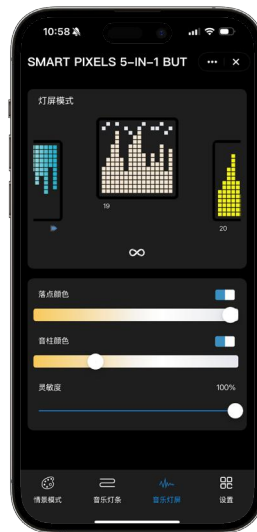
Dynamic mode

180 dynamic changes and customizations
Adjust the speed and brightness of the change



Light bar mode

22 light bar modes
Adjust the brightness and sensitivity of the variation



Light screen mode

30 light screen modes
Adjust the drop point color, column color, and sensitivity



Settings interface

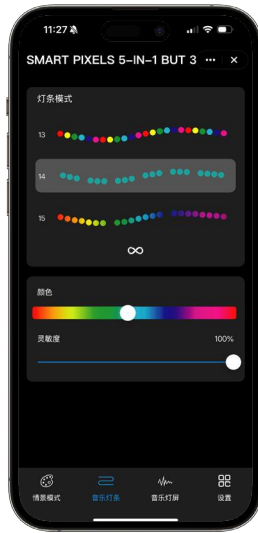
Set the chip type and R/G/B/WWW/CCT sequence through this interface.

R/G/B + interface (When the light strip is TM1814)



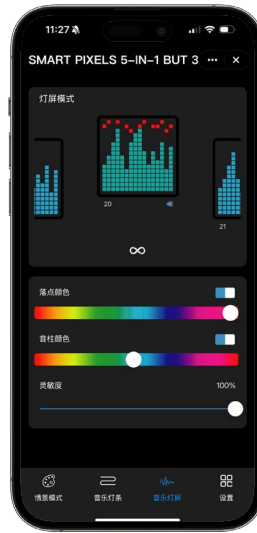
Dynamic mode

180 dynamic changes and customizations
Adjust the speed and brightness of the change



Light bar mode

22 light bar modes
Adjust the brightness and sensitivity of the variation



Light screen mode

30 light screen modes
Adjust the drop point color, column color, and sensitivity



Settings interface

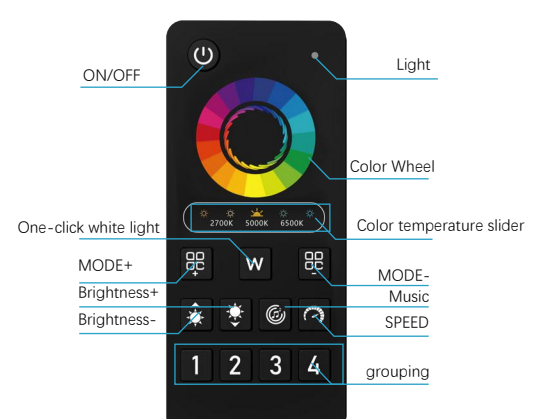
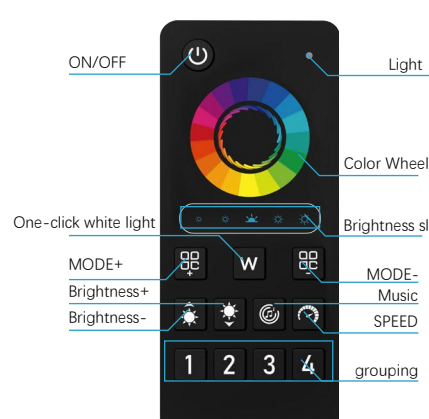
Set the chip type and R/G/B/WWW/CCT sequence through this interface.

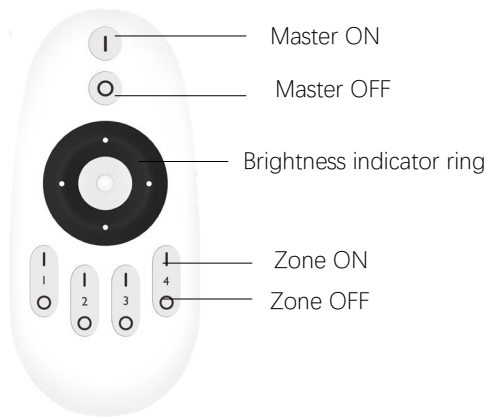
Use the Tuya/Smart Life APP, select various dynamic change modes, adjust the change speed and brightness, set the number of control pixels, set the chip type and R/G/B/WWW/CCT color order, voice control, music rhythm, and select various dynamic or custom shortcut color modes

Remote control function description

Multi-function grouping remote control

The key is always open **1 2 3 4** Group keys short press; Select the key function long press; Perform key functions

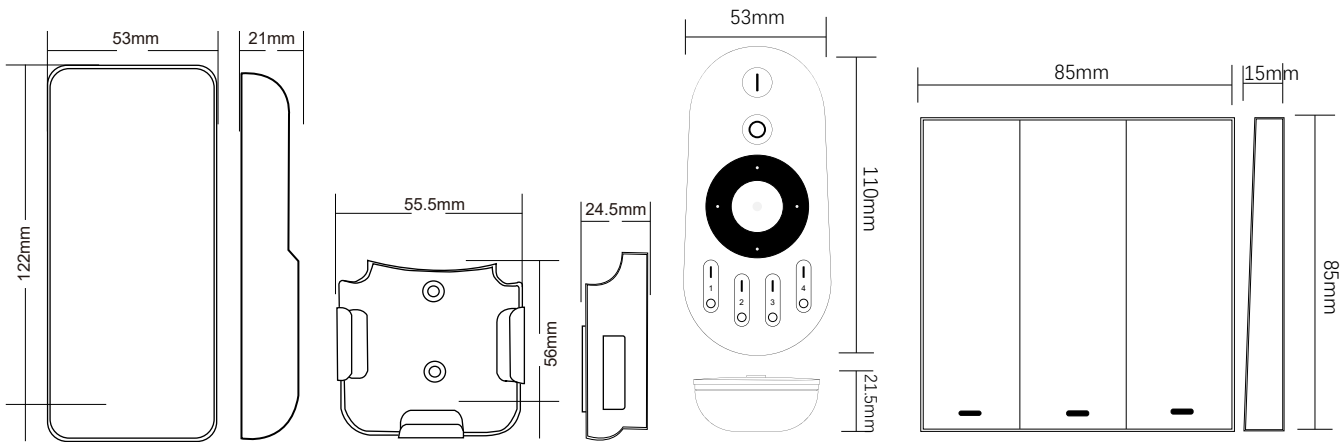




Grouped simple Remote control



Feel free to stick switches



Safety Precautions

1. The remote control is a precision electronic product, please do not use it in a humid or high temperature environment for a long time. If not in use for a long time, remove the battery and store it in a cool, dry place.
2. Do not use this device in a large area of metal or in an environment with strong electromagnetic waves nearby, otherwise it will seriously affect the control distance
3. Please check whether the input voltage of the constant voltage power supply meets the requirements of the controller, and check whether the connection of the cathode and anode is correct.
4. The working voltage is DC 5~24V, if the voltage is higher than 24V, the controller will be damaged.
5. Non-professional users cannot directly disassemble the controller, otherwise it may cause fire and electric shock.
6. The working temperature (Ta) is -20~60°C; Do not use the device in direct sunlight, humidity, or other high-temperature areas.
7. When the equipment load reaches 15A, the wire diameter must be more than 1.5 square millimeters
8. When the device load exceeds 10A, the connection cable from the DC port to the LED strip must be shorter than 40cm.
9. Please install the device in a good heat dissipation area.