

# MC20XZ | PWM 1-5CH ZIGBEE LED intelligent grouping controller

## MC20XZ Series controllers+MESH Series remote control Specification



MC201Z/DIM



MC202Z/CCT



MC203Z/RGB



MC204Z/RGBW



MC205Z/RGBWC

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



MR101/DIM



MR102S/CCT



MR102/CCT



MR103/RGB



MR104/RGBW



MR105/RGBCCT



MR011/DIM



MR023/3 WAY



### Compatible voice assistants

Support language command switch, brightness, color.



Amazon Alexa



Yandex Alice



Google Assistant



已接入米家  
works with  
mijia



小米小爱



小智管家



天猫精灵



百度小度

### Local Remote Control:

MESH remote control realizes local physical key control (such as switching, group switching, basic dimming) through MESH, which is suitable for the elderly, children or quick operation.

MSHE ZIGBEE Controller Through the ZIGBEE gateway Tuya Ecology supports remote APP control, which can finely adjust brightness, color and dynamic effects, and can share devices and create groups and other functions.

### peculiarity

- MESH wireless transmission technology, stable signal and strong penetration.
- Each node has a signal relay function, which makes long-distance transmission more sensitive and consumes less power.
- Support matching multiple devices, multiple devices can be controlled 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)
- The brightness of the remote control can be adjusted according to personal preference, and the brightness and speed of the dynamic mode can be edited.
- The controller can adjust the brightness, color, voice control, select various dynamic or custom scenario modes, timing, countdown and other functions through the Tuya/Smart Life APP.
- Device click to run and automate, automatic transfer and synchronization function.
- PWM (Pulse Width Modulation) technology is adopted to ensure smooth light transition and avoid eye fatigue.
- Voice control, support Asia Alexa, Google Assistant, Tmall Genie, Xiaomi Xiaoai voice assistant and other speakers.
- Support multi-controller cascade, easily cover large-area lighting scenes such as shopping malls, theaters, building facades, etc.

## Device parameters

### LED controllers

Input voltage	DC 12-48V
Input current	6/CH; 15A max
Access signal	MESH+ZIGBEE
Control the distance	30M
Size	L113XW39XH20mm
Authentication	CE,ROHS

### Environment

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

### Wrap

Package size	L11.6XW4.55XH2.45cm/0.06kg
Box size (100 pcs)	L42.5XW26.5XH17cm/6kg

### LED remote control

voltage	3V(AAA*2PCS)
Operating current	10mW
Transmission frequency	MESH (2.4GHz)
Transmit power	6dBm
Color temperature range	2700K-6500K
Dimming range	1-100% Infinitely dimming

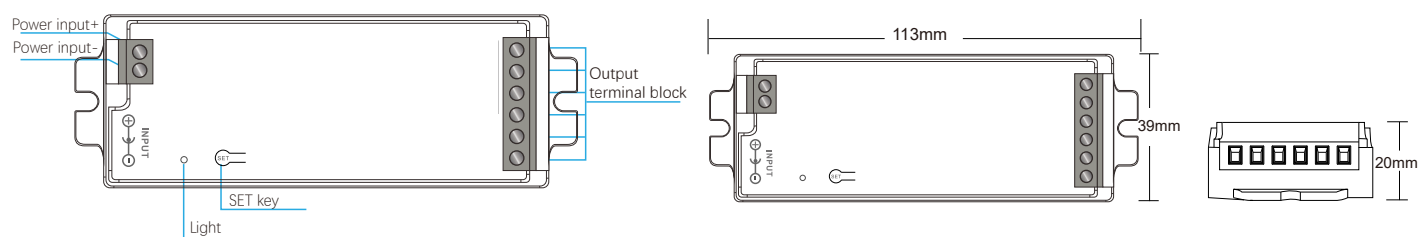
### Remote control distance

Remote control distance	30M
Size	L122XW53XH21mm
Operating temperature	Ta:-20°C~+60°C
Authentication	CE,ROHS

### Wrap

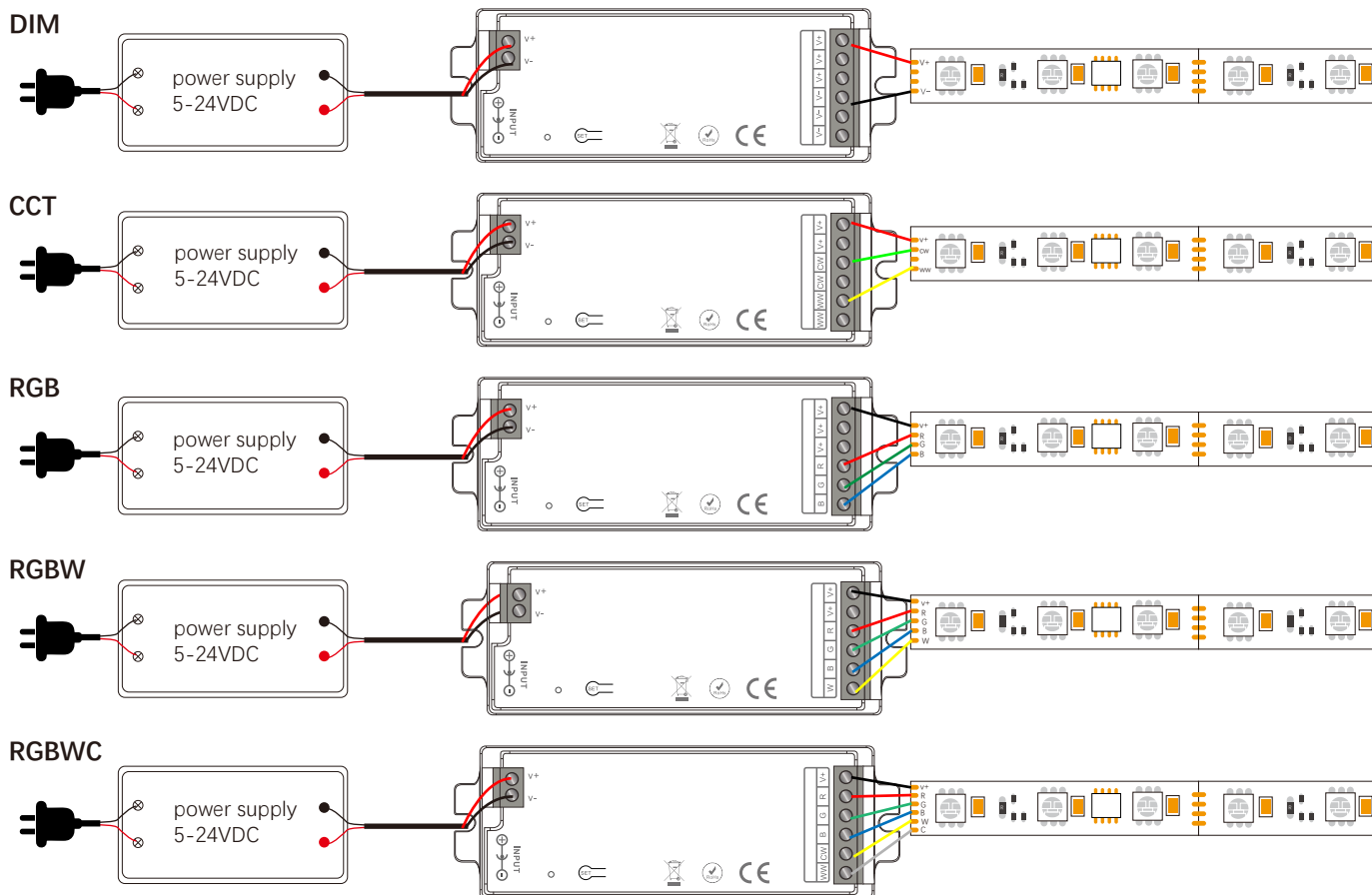
Package size	L13XW5.8XH2.7cm/0.105kg
Box size (100 pcs)	L27XW30XH15cm/11kg

## Equipment mechanism and installation



## Wiring diagram of the device

### Connect the strip light AC100-240V





Control Method 1: 'SET'Button	Control Method 2: Power Off	Indicator light status	Next steps	Functional Result
Short press (release within 1 second)	Not supported	No special flicker	No additional action required	Switch device power on/off status
Press and hold for 3 seconds, then release	3 times	Rapid flicker	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	Slow blinking	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	Rapid flicker	No additional action required	Device reset, clear WiFi network information and remote control pairing

**Trigger-type distribution network:** When the controller is in an un-distribution network state, the network can be directly distributed within 30 seconds of power-up.

### 2.2-1.Adjust the controller frequency

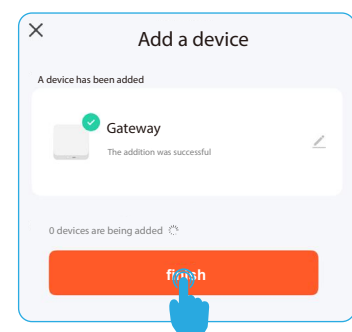
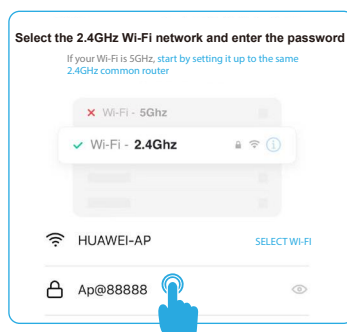
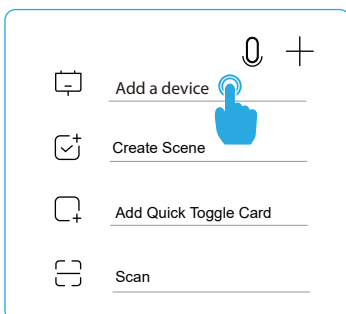


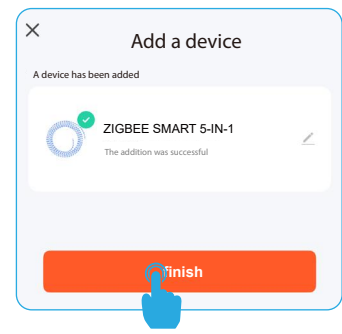
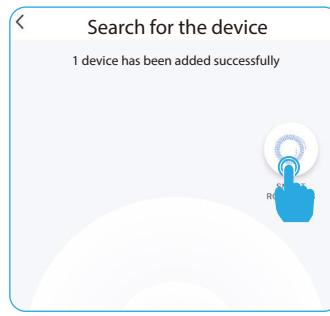
- Press and hold the “SET” button of the controller, let go after the indicator light flashes quickly, and wait for the indicator light to stop flashing. This stage is the preparation stage for frequency switching
- The indicator light stops flashing, and immediately press and hold the “SET” button again (enter the frequency selection stage):
  - When the indicator light turns to flicker slowly, let go immediately and the controller frequency is switched to 1kHz;
  - If the indicator light flashes quickly, let go immediately, and the controller frequency is 16kHz.

### 3. Connect to your smartphone

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.

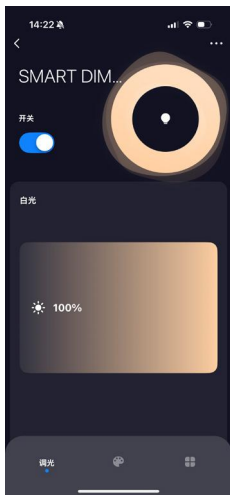
Follow these steps to complete the connection:





## Tuya APP interface

Main interface: white light mode; color temperature mode; IPL mode; Color light mode+ White light mode;  
Color light mode+ color temperature mode;



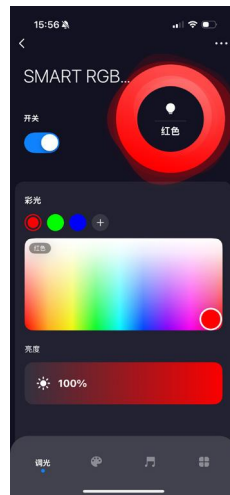
white light mode

DIM



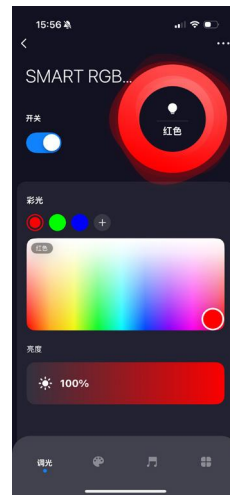
color temperature mode

CCT



IPL mode

RGB



Color light mode+  
White light mode

RGBW



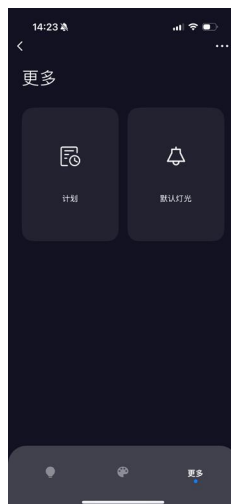
Color light mode+  
color temperature mode;

RGCCT

## MC201Z and MC2102Z Tuya app interface



Scenario mode



More pages



Settings page

**Scenario mode:** Four scenario modes to choose from.

**More page:** Schedule: Customize the countdown time to perform the on/off light action, and the light will automatically turn off when the countdown ends.

Default Light: Select the default light state to be turned on from the power supply each time; DIY lighting available.

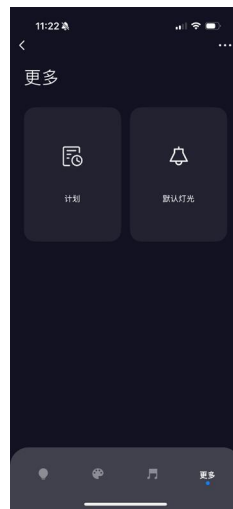
**Settings page:** This interface can be bound with third-party language control, one-click execution and automation, group creation, device sharing and other functions.



Scenario mode



Music mode



More pages



Settings page

**Scenario mode:** Eight scenario modes to choose from

**Music mode:** Local music: The device microphone collects music, and the lights move with it. There are five preset rhythms with adjustable sensitivity. Three custom modes to edit the rhythm, and two types of movements can be edited. Effects, jumps and classics, edit color and sensitivity.

APP music: The mobile phone collects the microphone, and the lights rhythm with it. There are five preset grooves. Three custom modes to edit grooves, you can edit two animations, jumping and breathing, Edit color, sensitivity, decibel and pitch rhythm modes, adjustable min/max decibel-0-100db

**More page:** Schedule: Customize the countdown time to perform the on/off light action, and the light will automatically turn off when the countdown ends.

Default Light: Select the default light state to be turned on from the power supply each time; DIY lighting available.

**Settings page:** This interface can be bound with third-party language control, one-click execution and automation, group creation, device sharing and other functions.

## Description of the function of the remote control

Multi-function grouped Remote control

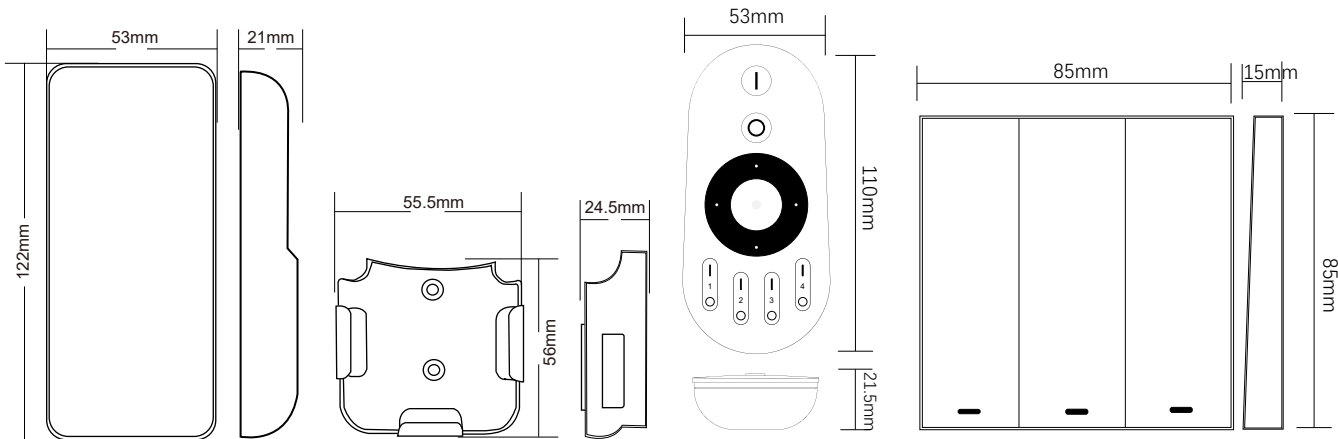
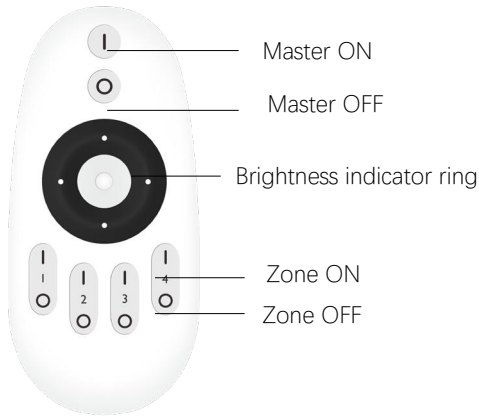
Main ON/OFF button    **1 2 3 4** Grouping key    Short press; Select the key function. Long press; Perform key functions.





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.