Wi-Fi & RF LED controller

5-in-1 constant-voltage controller | WT5 | Installation and user guide

One controller, five lighting types

Controls single-colour, tunable-white (CCT), RGB, RGBW and RGB+CCT LED strips. Select the correct lighting type before connecting the controller to Tuya or pairing a compatible 2.4GHz RF remote.

Use the Tuya app for switching, dimming, colour control, timers, schedules, scenes and music effects. Supports Amazon Echo and TmallGenie voice control, and can act as a Wi-Fi-to-RF converter for compatible RF controllers or dimming drivers.



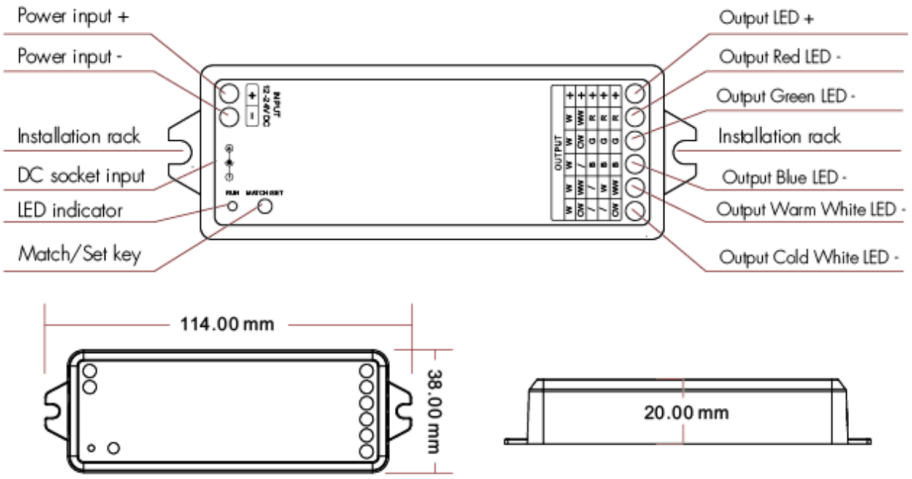
Technical specifications

Supply / output voltage	12-24V DC; constant-voltage output
Input current	15.5A
Output current	5 channels; maximum 3A per channel
Output power	36W per channel at 12V; 72W per channel at 24V
Control	Tuya app and 2.4GHz RF
RF range	Up to 30m in an open, unobstructed area
Dimming	0-100%; 4,096 levels; logarithmic curve
PWM frequency	500Hz (default)
Operating / case temperature	Ambient: -30°C to +55°C; case: +85°C
IP rating / protection	IP20; reverse-polarity and overheat protection
Warranty	5 years
EMC / safety standards	EN55015, EN61547 / EN61347, EN62493
Radio standards	EN300 440, EN50663, EN301 489
Certification stated in source	Safety + EMC + RF

Connections & system layout

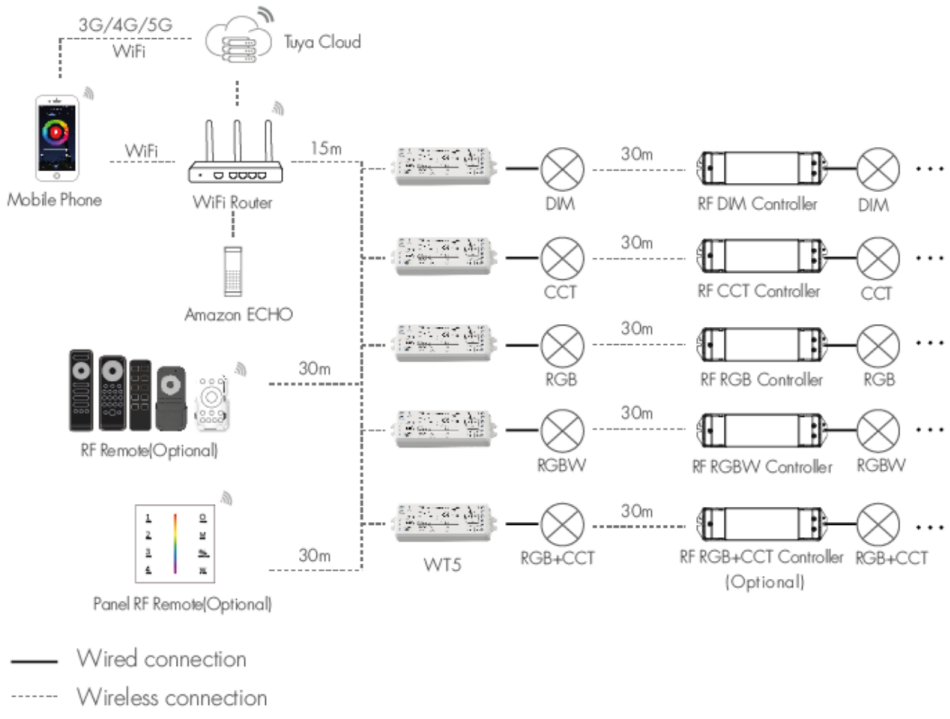
Identify the terminals and plan the wireless connections before installation.

Controller connections and dimensions



Dimensions: 114 x 38 x 20mm. Use either the DC socket or the power-input terminals. The output connections depend on the selected lighting type; follow the relevant wiring diagram on page 3. The Match/Set button selects the lighting type and is also used for setup and pairing.

System layout



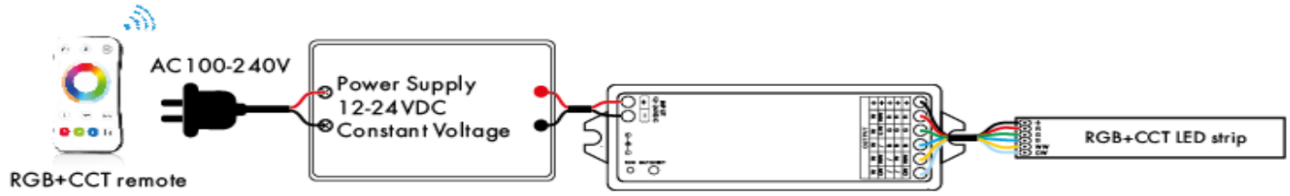
Use a visible 2.4GHz Wi-Fi network; 5GHz Wi-Fi is not supported. Keep the controller close to the router and check signal strength. The original layout indicates up to 15m between router and controller, and up to 30m for RF links. These are open-area figures; test the range at the installation site.

Wiring & lighting-type selection

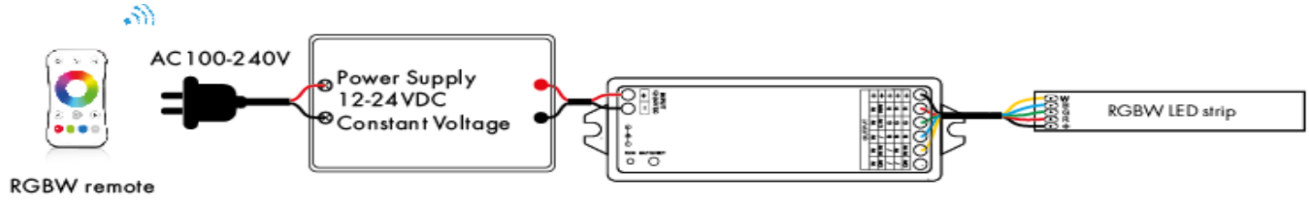
Use a 12-24V DC constant-voltage power supply matched to the LED strip voltage.

Disconnect the power before wiring. Observe polarity and keep each output channel within its 3A rating. Once wired, power the controller and hold Match/Set for the time below. Release when the RUN indicator shows the required colour, then set up Tuya or pair the matching remote.

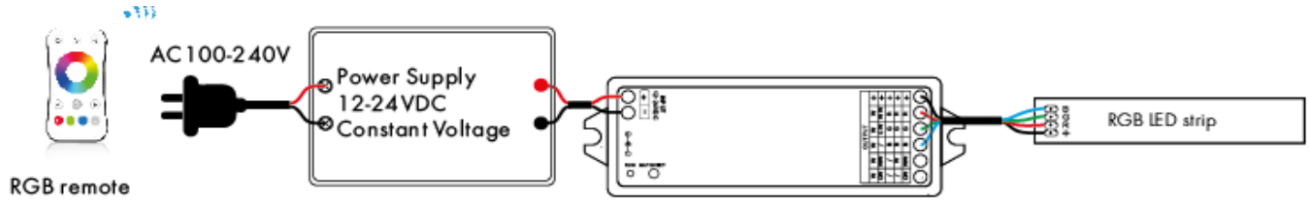
RGB+CCT - hold Match/Set for **16 seconds**; release at **blue**.



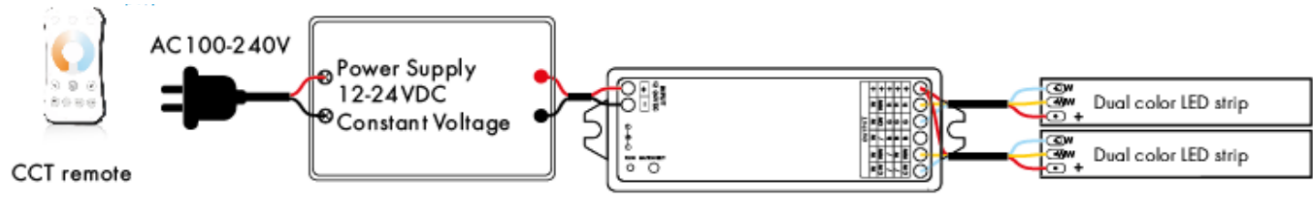
RGBW - hold Match/Set for **14 seconds**; release at **green**.



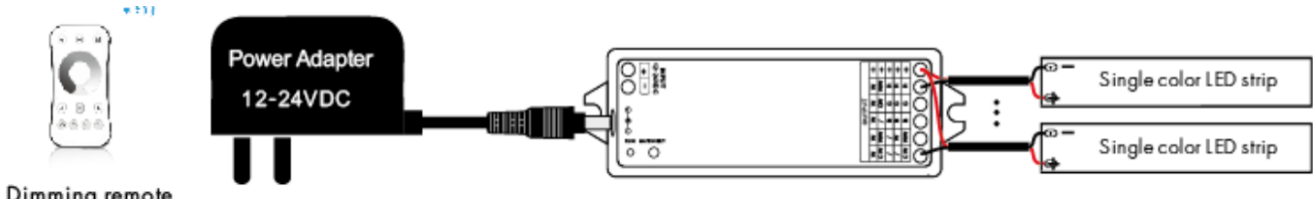
RGB - hold Match/Set for **12 seconds**; release at **red**.



Tunable white (CCT) - hold Match/Set for **10 seconds**; release at **yellow**.



Single colour (DIM) - hold Match/Set for **8 seconds**; release at **white**.



The wiring diagrams show alternative lighting types; choose the one that matches your strip. Use a suitable constant-voltage power supply or DC power adaptor.

Connect to the Tuya app

Set the lighting type first, then connect the controller to your 2.4GHz Wi-Fi network.

1. Start Smart configuration

Press and hold Match/Set for **2 seconds**, or press it twice quickly. This clears the previous network connection and starts Smart configuration. The indicator flashes **purple quickly**.

Selecting a lighting type by holding Match/Set for 8-16 seconds also clears the previous network connection and starts Smart configuration.

2. Use AP configuration if needed

If Smart configuration fails, press and hold Match/Set for **5 seconds**. This clears the previous network connection and starts AP configuration. The indicator flashes **purple slowly**. Use the matching AP setup option in the app.

3. Check the connection

When the network connection succeeds, the RUN indicator stops flashing purple and shows the colour for the selected lighting type. The device appears in Tuya as SKYDANCE-RGB+CCT, or the corresponding DIM, CCT, RGB or RGBW device.

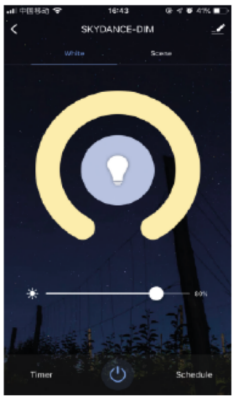
Lighting type	RUN indicator
Single colour (DIM)	White
Tunable white (CCT)	Yellow
RGB	Red
RGBW	Green
RGB+CCT	Blue

Before you start

Check that the router uses 2.4GHz Wi-Fi and that the network name is visible. Keep the controller and router close together during setup. Select the correct lighting type before pairing an RF remote.

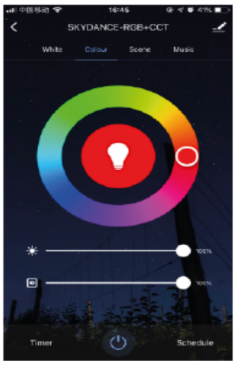
Using the Tuya app

Available controls depend on the lighting type selected on the controller.



White and colour temperature

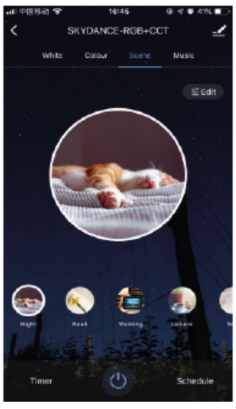
Single colour: use the brightness slider to dim the strip.
RGB: the white control produces mixed white from the RGB channels; use the slider to adjust brightness.
RGBW: the white control adjusts the dedicated white channel.
CCT: use the colour-temperature wheel to choose the white tone, then adjust brightness.
RGB+CCT: selecting a white tone switches off RGB automatically. Adjust the brightness of the white channels.



Colour control

For RGB and RGBW, use the colour wheel to choose a static colour, the brightness slider to adjust output, and the saturation slider to blend the chosen colour towards RGB-mixed white.

For RGB+CCT, selecting an RGB colour switches off the warm-white and cool-white channels automatically. Brightness and saturation work in the same way.



Scenes

Scenes 1-4 provide static colours for all lighting types; the scene colour can be edited. Scenes 5-8 provide dynamic effects for RGB, RGBW and RGB+CCT, including green fading, RGB colour changes and six-colour effects.

Music, timer and schedule

Music: use music playing on the smartphone or its microphone as the input for lighting effects.
Timer: set the lights to switch on or off within the next 24 hours.
Schedule: create multiple on/off timers for different times.

Pair an RF remote

Optional: use a compatible 2.4GHz RF remote for the selected lighting type.

Method A: use the WT5 Match/Set button

Pair: briefly press Match/Set on the WT5. Immediately press the on/off button on a single-zone remote, or the required zone button on a multi-zone remote. The controller indicator flashes several times to confirm pairing.

Clear all paired remotes: press and hold Match/Set on the WT5 for **20 seconds**. The indicator flashes several times to confirm that all paired remotes have been removed.

Method B: restart the power

Pair: switch the WT5 off, then on again. Immediately press the on/off button on a single-zone remote, or the required zone button on a multi-zone remote, **3 times**. The lights flash **3 times** to confirm pairing.

Clear all paired remotes: switch the WT5 off, then on again. Immediately press the same remote button **5 times**. The lights flash **5 times** to confirm that all paired remotes have been removed.

Choose the right remote

The remote must be compatible with the controller and support the same lighting type: DIM, CCT, RGB, RGBW or RGB+CCT. Set the WT5 lighting type before pairing. See page 3 for the selection times and indicator colours.

Wi-Fi-to-RF control & effects

Use the WT5 to control compatible RF LED controllers or RF dimming drivers through Tuya.

Pair an additional RF controller

Using its Match button: briefly press the Match button on the additional RF controller, then immediately tap the on/off control in Tuya. Its indicator flashes several times to confirm pairing.

Using a power restart: switch the additional RF controller off, then on again. Immediately tap the on/off control in Tuya **3 times**. The lights flash **3 times** to confirm pairing.

Clear pairing on the additional RF controller

Using its Match button: press and hold the additional controller's Match button for **5 seconds**. Its indicator flashes several times to confirm that all paired remotes have been removed.

Using a power restart: switch the additional controller off, then on again. Immediately tap the on/off control in Tuya **5 times**. The lights flash **5 times** to confirm that all paired remotes have been removed.

RGB dynamic modes

The mode lists are the same for RGB/RGBW and RGB+CCT, except for mode 5.

Mode	RGB / RGBW	RGB+CCT
1	RGB jump	RGB jump
2	RGB smooth	RGB smooth
3	6-colour jump	6-colour jump
4	6-colour smooth	6-colour smooth
5	Yellow / cyan / purple smooth	Smooth colour-temperature change
6	RGB fade in and out	RGB fade in and out
7	Red fade in and out	Red fade in and out
8	Green fade in and out	Green fade in and out
9	Blue fade in and out	Blue fade in and out
10	White fade in and out	White fade in and out