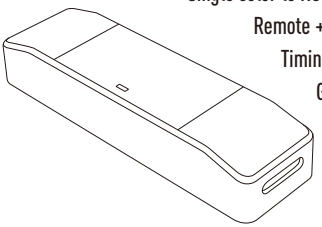
Rayrun

Umi Smart Wireless

LED Controller

Model: XV10 / XV20 / XV30 / XV40 / XV50 (-A/T)



Single color to RGB+CCT Model
Remote + Smartphone
Timing Play Option
Group / Scene

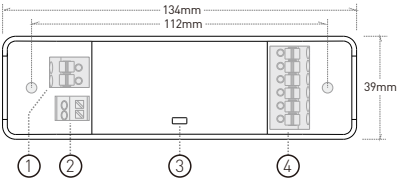
BLE Mesh | Remote + Phone | Full Protection

Push Terminal | Group / Scene | 8-50 Volt

Introduction

This series LED controllers are designed to drive constant voltage LED products in voltage range of DC 8-50V. They can be controlled by the Umi compatible remote controllers and Smartphone app (-A version). With advanced BLE mesh technology, controllers can work synchronously with a robust connection. The onboard press key and real time clock (-T version) is available for multiple application.

Function & Size



1. Power supply input

Connect to power supply. The controller can accept supply voltage from DC 8V to 50V, the maximum cable gauge is AWG12 or 2.5mm^2. The controller's output voltage is at same level as the power input voltage, please make sure the power supply voltage is correct and the power is capable for the load wattage. The power input '+' unit is directly connected to the output terminal '+' unit inside the controller.

2. Press key input

Connect to a normally open type press key switch if local wired operation is needed. Three operation method is available for the press key:

Single press: Turn on/off.
Double click: Change color or color temperature.
Hold press: Dimming.

3. Work status indicator

This indicator shows all working status of the controller. It displays different events as following:

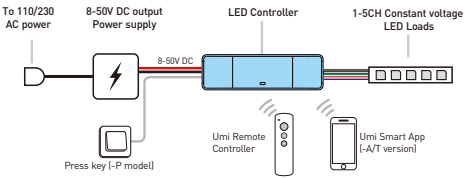
Steady green: Normal working.
Short green blink: Command received.
Green blink for 3 times: Confirmation or identification.
Single yellow flash : Edge of the content.
Red flash: Overload protection.
Yellow flash: Overheat protection.
Green blink: Timing play activated.

4. LED output

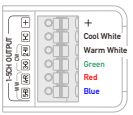
Connect to LED loads. The LED loads must be constant voltage driving type and compatible with PWM modulation. For multi-channel models, the LED connection need to be common anode. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is in range of the controller's rated current.

Wiring

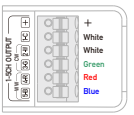
Please connect the controller output to LED loads and power supply to the controller power input. The power supply voltage must be same as the LED load's rated voltage. Check all cables to be well connected and insulated before power on.



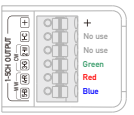
XV50 model supports 1-5 channel application from single color to RGB+CCT, please refer to following diagram for multiple application output wiring.



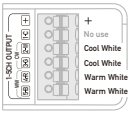
RGB+CCT



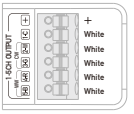
RGBW



RGB



CCT



Single Color

Operation

5. Pairing remote controllers

The controller can be paired with compatible Umi remote controller for remote operation. To pair or unpair the remote controller, user needs to connect and disconnect the power of controller and press specific combo keys on the remote controller. Each controller can be paired up to 5 remote controllers. Please refer to the remote controller's user's manual for detailed operation.

6. Control by smartphone

For -A and -T version controller, besides Umi wireless remote controllers, user can also control it by smartphone with 'Umi Smart' app. Please scan the QR code on the controller to find the app.

User can operate the controller from remote and/or Umi Smart app. The working status and group/scene setting will be synchronized.

Advanced features

7. Change model function (XV50 only)

XV50-A and XV50-T controller's function can be changed from 1 channel (single color) to 5 channels (RGB+CCT) by Umi Smart app.

To change the model function, please use the Umi Smart app and detect factory default devices in 'Discover nearby' function and then tap the item icon and select 'change function' menu to proceed.

8. Timing play function (-T version only)

A real time clock with backup power supply is equipped with the -T version model. With this feature, user can setup timing play function with multiple repeating features of weekday or date from the Umi Smart app.

The real time clock will set the time with smart phone once connected to the app. The built-in backup power will reserve the timing play setting up to 48 hours after power cut. The saved timing play function will be invalid after the backup power runs out and it will automatically recover once being connected to smart phone again. For more timing play features, please check the Umi Smart app.

9. Change PWM frequency to avoid noise and flicker

In some LED application, noise or flicker issue may occur at the default or low PWM frequency. The controller's PWM frequency can be changed via the Umi Smart app. The frequency must be tuned with LED type and installation. To maintain more stable working and less power loss, please do not set to high frequency if no noise or flicker issues occurred.

To change the PWM frequency, please use the Umi Smart app and detect factory default devices in 'Discover nearby' function and then tap the item icon and select 'change setting' menu to proceed.

CAUTION: The controller's efficiency will drop versus increased frequency and the output current

needs to be derated maximum 50% with frequency higher than 4KHz. Otherwise the controller may run into overheat protection from excess heat.

10. Force turning on

The controller will restore to the last on/off status on each power on as default. To force turning on the controller at OFF status, user can connect and disconnect the power of the controller for 3 times in a short time. After this operation, the controller will be reset to ON status.

11. Protection feature

The controller has full protection function against wrong wiring, load short circuit, overload and overheat. The controller will stop working and the indicator will flash with red / yellow color to indicate the malfunction. The controller will try to recover from protection status in a short time when the working condition is good.

For protection issues, please check the situation with different indicator information:

Red flash: Check the output cables and load, make sure no short circuit and the load current is in rated range. Also the load must be constant voltage type.

Yellow flash: Check the installation environment, make sure in a rated temperature range and with good ventilation or heat dissipation condition.

Specification

Model	XV10	XV20	XV30	XV40	XV50
Function	Single color	CCT	RGB	RGB+W	5-in-1
Working voltage	DC 8-50V				
Rated output current (at 1KHz PWM freq.)	16A	2x8A	3x8A	4x8A (Total 24A max)	5x8A (Total 24A max)
Wireless connection	Umi protocol based on SIG BLE mesh				
Smartphone app support	Yes, -A & T version				
Timing play function	Yes, with backup battery. -T version				
Communication distance	>20 meters at open area				
Output mode	PWM constant voltage				
PWM frequency	498Hz - 15.7KHz adjustable				
Dynamic effects	9	NA	42	42	42
Overload protection	Yes				
Overheat protection	Yes				
Working temperature (Ta)	-20°C~+55°C				
Dimension	134x39x24mm				

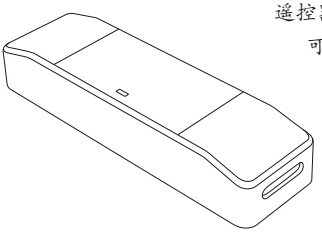
App download link: (for -A & T version only)

Rayrun

Umi智能无线

LED控制器

型号: XV10 / XV20 / XV30 / XV40 / XV50 (-A/T)



单色到五路多机型
遥控器+智能手机
可选时控功能
群组/场景

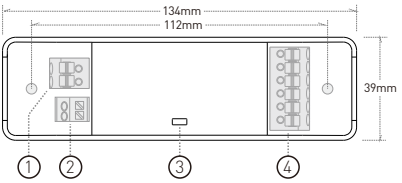
蓝牙自组网　遥控+手机　全功能保护

按压式端子　群组/场景　8–50V电压

简介

该系列LED控制器用于驱动电压范围为 DC 8-50V 的恒压 LED 产品。用户可以通过 Umi 兼容的遥控器或智能手机App(-A或-T版本) 进行控制。基于先进的蓝牙自组网技术，控制器之间可以形成稳定可靠的无线连接并实现多机同步功能。本机还可以通过有线按键进行操作，同时还具备完善的定时播放功能 (-T版本)。

功能和尺寸



1. 电源输入

连接到电源。控制器可接受直流8V至50V的供电电压，端子可安装的最大电缆规格为2.5mm^2。控制器的输出电平与电源输入电压相同，安装前请确保电源电压正确且功率储备满足控制器和负载的需求。请注意电源输入的“+”极与输出端子的“+”极在控制器内部直接相连。

2. 按键控制输入

连接到常开型按键开关，用于开关和调光操作。
按键开关有三种操作方式：
单按：切换开关状态
快速双按：调节颜色或色温
长按：调节亮度

3. 工作状态指示灯

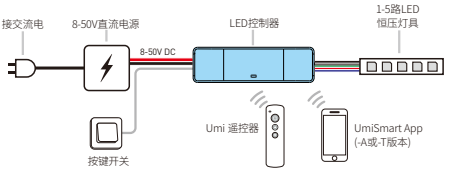
该指示灯显示控制器的工作状态，指示灯的闪烁方式与工作状态的对应关系如下：
绿色常亮：正常工作
绿色单闪：收到命令
绿灯慢闪3次：变更设置或设备识别
黄色单闪：已调至最高或最低
红色闪烁：过载保护
黄色闪烁：过热保护
绿色短时快闪：已开启定时播放功能 (-T版本)

4. LED输出

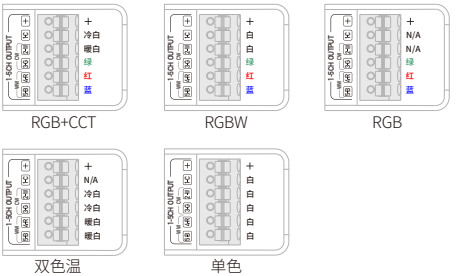
连接到LED灯具。LED灯具必须为恒压型且适用于PWM驱动。对于多通道应用，各通道需为共阳极连接方式。请确保 LED 的额定电压与电源相同，并且每个通道的最大负载电流在控制器的额定电流范围内。

接线方法

请将控制器输出连接到合适的恒压LED灯具，并将电源连接到控制器电源输入端子。电源电压必须与LED负载的额定电压相同。在通电前请检查所有电缆是否连接良好并已可靠绝缘。



XV50机型支持从单色到RGB+CCT的应用，在不同应用下输出端子的功能定义如下：



操作方法

5. 遥控器配对

控制器可与兼容的Umi遥控器配对进行操作。要对遥控器进行配对或取消配对，用户需要连接和断开控制器的电源或者在app上激活配对模式，然后按遥控器上的特定组合键。具体方法请参考遥控器使用说明书。每个控制器最多可配对5个遥控器。

6. 通过智能手机操控

对于-A版与-T版控制器，除了使用无线遥控器外，还可以同时通过Umi Smart App进行控制。

用户可以仅使用遥控器、仅使用app或者同时使用遥控器和app进行操作。控制器的工作状态、分组状态和场景模式在遥控器和app上可以实现同步。请扫描机身上的二维码或者在各大应用市场搜索“Umi Smart”来安装App。

高级功能

7. 变更机型功能（仅适用XV50）

对于XV50-A和XV50-T机型，用户可以通过Umi Smart app更改控制器功能，以实现从单色到RGB加冷暖白的各种应用模式。

如需更改机型功能，请使用Umi Smart app并在“发现附近”功能中搜索未配置的设备，然后点击产品图标并选择“更改功能”，然后选择需变更到的机型。

8. 可断电保持的定时播放功能（仅限-T版本）

后缀为-T的机型配备了带后备电源的实时钟功能。用户可以通过Umi Smart应用设置可编辑日期、时间和灯具状态的定时播放功能。

本机的时钟在连接到手机后会自动校准，控制器的后备电源可以确保在断电48小时内仍准确保留定时播放设置。在断电且后备电源用尽的情况下定时播放功能会暂时失效，在控制器再次连接手机后即可自动恢复。

9. 更改PWM频率以避免噪音和频闪

在某些应用中，灯具可能会因PWM驱动方式出现噪音或频闪问题，本机可以通过调整PWM频率来优化这类问题。提高PWM频率后控制器的工作效率会有所下降，某些灯具可能无法正常工作。因此为保证系统工作更加稳定，请尽量设置到较低的PWM频率。

要更改PWM频率，请使用Umi Smart App在“发现附近”功能中点击未配置的设备，然后选择“更改设置”菜单进行配置。

注意：在PWM频率升高时，控制器的发热量会相应增加，在频率高于4KHz时，根据应用条件控制器的输出电流最多需降额约50%，以避免发生过热。

10. 强制开启

控制器将在每次通电时会恢复到上次的开/关状态。要把通电后在‘关’的状态的控制器强制开启，用户需要在短时间内连接和断开控制器电源3次，即可将控制器强制开启。

11. 保护功能

本产品具有完善的保护功能，可以最大程度的防止因接线错误、负载短路、过载或过热而引起的产品损坏。当发生以上异常状态时控制器将停止工作，同时指示灯会闪烁红色或黄色。当工作状态良好时，控制器会尝试恢复正常工作。

当控制器停止工作时，请检查指示灯的状态，在不同的闪烁状态下应检查相应的故障：

红色闪烁：请检查输出电缆是否短路、负载电流是否过高，并且请确保所驱动灯具为恒压驱动类型。

黄色闪烁：请检查控制器的安装环境以及负载功率，并确保控制器散热条件良好且负载功率在额定范围之内。

规格

型号	XV10	XV20	XV30	XV40	XV50
功能	单色	冷暖白	RGB	RGBW	5合1
工作电压	DC 8-50V				
额定输出电流 (在1KHz PWM下)	16A	2x8A	3x8A	4x8A (最大总和24A)	5x8A (最大总和24A)
无线协议	Umi协议，基于SIG蓝牙mesh				
智能手机控制	支持，仅限-A & T版				
按键输入功能	支持				
时控功能	支持，带备用电池（-T版本）。				
无线工作距离	开阔地带>20米				
输出模式	PWM恒压模式				
PWM频率	498Hz - 20.9KHz可调				
动态效果种类	9	NA	42	42	42
过载保护	支持				
过热保护	支持				
工作环境温度(Ta)	-20°C~+55°C				
尺寸	134x39x24mm				

扫码下载APP: (仅限-A 和 -T 版本)