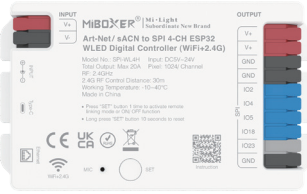
MiBOXER® | Mi·Light Subordinate New Brand

Art-Net/ sACN to SPI 4-CH ESP32 WLED Digital Controller (WiFi+2.4G)

Model No.: SPI-WL4H

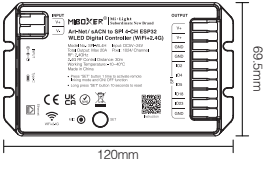
Product Feature

- Compatible with multi types SPI driver IC
- Compatible with WiFi + Ethernet
- 4 output channel with independent control
- Support Miboxer SPI wireless remote control
- Color, dim brightness, pixel points, speed, various dynamic & static mode adjustable
- Save scenes
- Built-in microphone and have music rhythm function
- Type-C terminal is used for updating or implementing hardware



Product Parameter

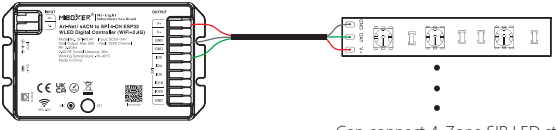
Product Name:	Art-Net/ sACN to SPI 4-CH ESP32 WLED Digital Controller (WiFi+2.4G)	IP Rate:	IP20
Model No.:	SPI-WL4H	Working Temp.:	-10~40℃
Input Voltage:	DC 5V-24V	Dimension:	120*69.5*22.6mm
Output Current:	Max 20A	EMC Standard (EMC):	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4
Pixel:	1024/ Channel		
Standby Power:	1W	Safety Standard (LVD):	EN 62368-1; 2020+A11;2020
Protocol:	WiFi+RF 2.4GHz	Radio Equipment (RED):	ETSI EN 300 440 V2.2.1
Control Distance:	RF: 30m	Certification:	CE, EMC, LVD, RED



Compatible chips

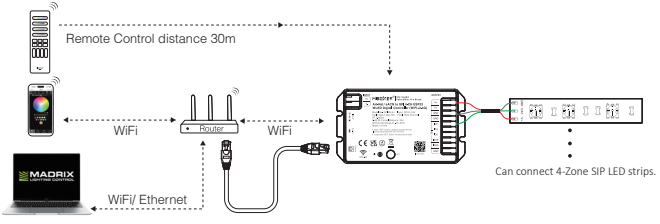
WS281X, SK6812/WS2814(RGBW), TM1814, 400kHz，TM1829, USC8903, APA106/P L9823, TM1914, FW1906(GRBCW), USC8904(RGBW), SW2805(RGBCW), SM16825(RGBCW), SW2811(White), WS281X(WWA), APA102, LPD8806, LPD6803, PP9813

Connection Diagram



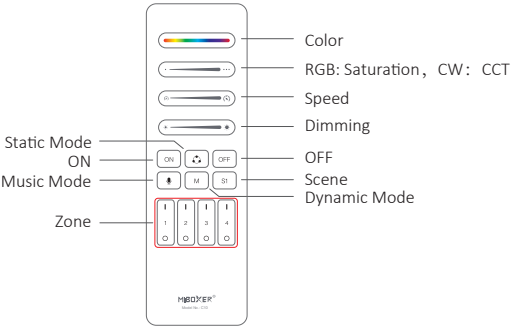
Can connect 4-Zone SIP LED strips.

Application Diagram



Function description

compatible with remote control



Button Explanation

Static Mode Button:

Switch pure static lighting,

Short press to R, G, B, C, W

Dynamic Mode Button:

Short press to switch dynamic mode

Music Mode Button:

Short press to switch music mode

Zone Button : 1 • • • 4

Short press " | " to open zones,

short press " O " to turn off zones

Scenes Button: S1

Long press S1 to save current scene

Short press S1 to select storage scenes

RGB slider:

Touching to dim RGB

Pixel points slider:

While current LED strip is RGB, touch slider to change saturation

While current LED strip is CCT, touch slider to change color temperature

While current LED strip is dynamic mode, touch slider to change parameter 2

Speed slider:

Touching to set speed

While current LED strip is dynamic mode, touch slider to change parameter 2

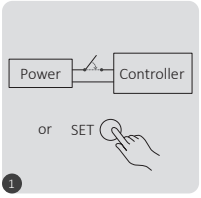
Brightness slider:

Touching to dim

Under music mode : it can adjust sensitivity of microphone chip

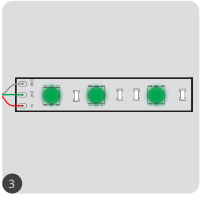
Link/Unlink

1). Link



Power off 10 seconds and power on again or short press"SET"

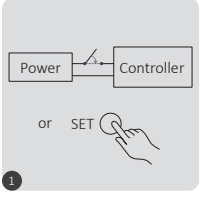
Short press " ON" button 3 times within 3 seconds.



Green flashing state, then the code is successful.

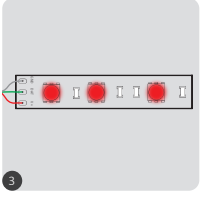
Link is failed if light doesn't flash, please repeat above steps (Attention: can not link again if remote already finished linking)

Unlink:



Power off 10 seconds and power on again or short press"SET"

Short press "ON" button 5 times within 3 seconds.



Red flashing state, Then clear the code successfully.

Unlink is faild if light doesn't flash, please repeat above steps (Attention: no need to unlink if the light never be linked)

Choose any control method

PC Control

WLED Native APP

C9/ C10 SPI Remote
(Purchased separately)

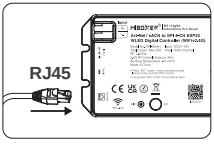
APP add Instructions

Download App

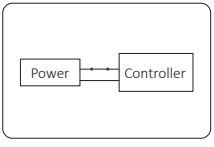
Download and install “ WLED Native ” APP

ISO：Search for and download “WLED Native” in the App Store.
Android: Search for and download “WLED Native” in the Google Play Store.

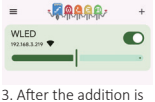
APP add by Ethernet



1. Connecting to Ethernet via network cable.

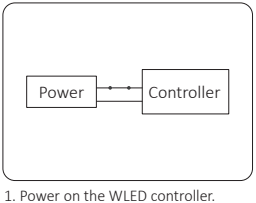


2. Power on the WLED controller.



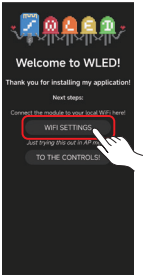
3. After the addition is completed, you can view the added devices and their IP addresses in the APP.

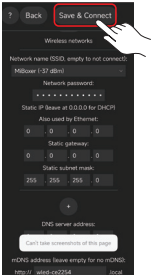
APP add by WiFi

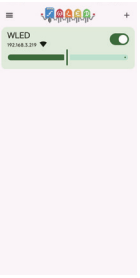


1. Power on the WLED controller.

2. Open the phone settings and enter WiFi settings, find "MiBoxer-WLED-AP" and connect to it with the password "wled1234"







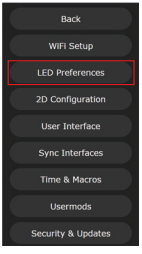
3. After successful connection, it will automatically jump to the WLED page (or enter the website 4.3.2.1 in the browser to enter the WLED page).

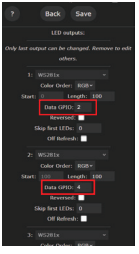
4. Click "WIFI SETTINGS", set the WiFi account and password, and the click "Save & Connect"

5. After the addition is completed, you can view the added devices and their IP addresses in the APP.

LED Strip Configuration

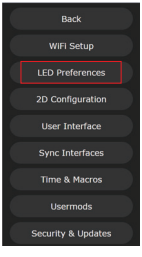
Reboot configuration based on the type of led strip
Data GPIO: 2, 4, 5, 18

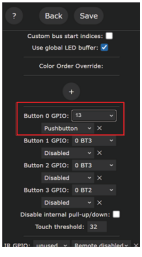




IO port configuration

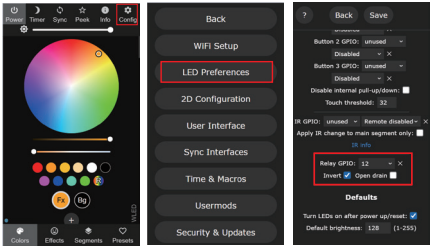
Factory default IO port, modify the port via following route





Relay Configuration

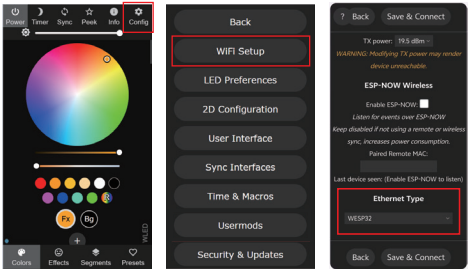
Factory default configuration



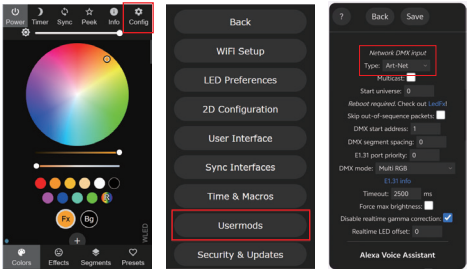
Mic Configuration (If this feature is available)

Factory default to use interior microphone, reboot the configuration via following instruction

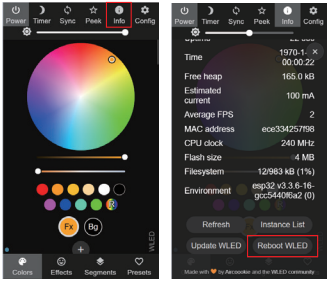
Ethernet Type



Art-Net/ sACN Mode



Reboot your device once configuration is done



Set Button Instruction

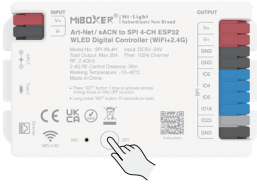
Press "SET" button 1 time to activate remote linking mode and ON/ OFF function

Long press for 10 seconds: Reset the WLED controller and activate the MiBoxer-WLED-AP hotspot.

Reset to Factory Settings

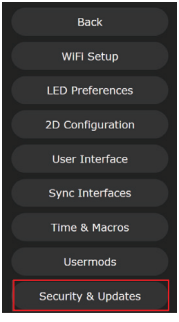
1.Button Reset

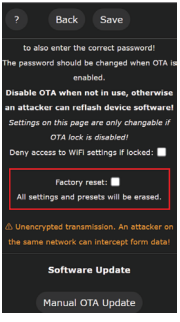
Long press “SET” for 10 seconds.



2.APP Reset

Go to the WLED control page and click on the top right corner "Config".
Click on "Security & Updates" at the bottom, and then scroll down to find "Factory reset" and check the box. Click "Save" to reset the controller.





UART downloading firmware

WLED official firmware downloading： https://install.wled.me/

1.Install serial port driver CH340K

2.Download through website page or esp32 tool software, review more details on WLED website

Troubleshooting and Solution

Number	Symptoms	Solution
1	Indicator light is not on	Check whether the input power connection is correct
2	APP shows "offline"	1. Check if the phone is on the same network as the controller. 2. Check if the controller is out of the range of the WIFI connection, causing unstable connection. 3. Turn off and on the controller to retry.
3	APP is connected, but the light strip is not controllable	1. Check if the power supply is working properly. 2. Check if the power supply voltage matches the light strip. 3. Check if the input power connection is correct. 4. Check if the light strip connection is correct. 5. Check if the GPIO settings in the APP are correct. 6. Check if the light strip IC model in the APP is set correctly.
4	The brightness of the light strip is low, and the front and back colors are significantly different	1. Check if the power supply is working properly. 2. Check if the power supply matches the light strip. 3. Check if all connections are good, and use conductive and short wires as much as possible for connection. 4. Add power supply at an appropriate position. 5. Check if the APP has set a limit on rgr.
5	Remote fault	1.Check interior battery 2.Check the baud rate of WLED serial port 0, it should be 115200 3.Check the relay IO, it should be IO12

PC Control

Typing into IP address of your device on broswer to enter into PC control interface while APP configuration is completed
(the device should be in the same LAN network)

PC configuration is same as APP

PC Control

Attention

1. Please turn off power supply before installation.
2. Please ensure input voltage to be same as requirements from device.
3. Don't disassemble device if you are not expert, otherwise it will damage it.
4. Please do not use the light in the place with widely range metal area or strong electromagnetic wave nearby, otherwise, the remote distance will be seriously affected.

Disclaimers

1. Our company will update the content of this manual based on the improvement of product functionality. The updates will be displayed in the latest version of this manual, without further notice.
2. Due to our continuous adoption of new technologies, product specifications mayu change without further notice.
3. This manual is provided for reference and guidance only and does not guarantee complete consistency with the actual product. The actual application should be a aa pc.
4. The components and accessories described in this manual do not represent the standard configuration of the product. The specific configuration is subject to the packaging.
5. All text, tables, and images in this manual are protected by relevant national laws and may not be used without our permission.
6. This product may be compatible with third-party products, but our company does not take responsibility for compatibility issues or partial loss of functionality caused by changes in third-party products.

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