Sperll SP318E MESH Group SPI RGB LED Controller Instructions

Contents

SPERLL

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Brief:
SP318E MESH Group SPI RGB LED controller that utilizes advanced MESH networking technology for efficient and flexible multi-device connectivity. Compatible with the BanlanX App, it offers an intuitive lighting effect visualization UI and powerful customization features, making it the perfect solution for wireless smart lighting control.

Features

Decentralized mesh topology enhances deployment flexibility and reliability.

A single group can connect up to 200 devices, with intelligent data path switching within the group. Device failures do not affect overall communication.

Grouping is simple and intuitive, supporting the addition of multiple groups.
Single and group control can be switched freely.

The innovative Scene-based App UI design offers visualized lighting effect preview, providing a unique visual experience.

It features built-in creative dynamic effects, versatile DIY options and dynamic music effects.

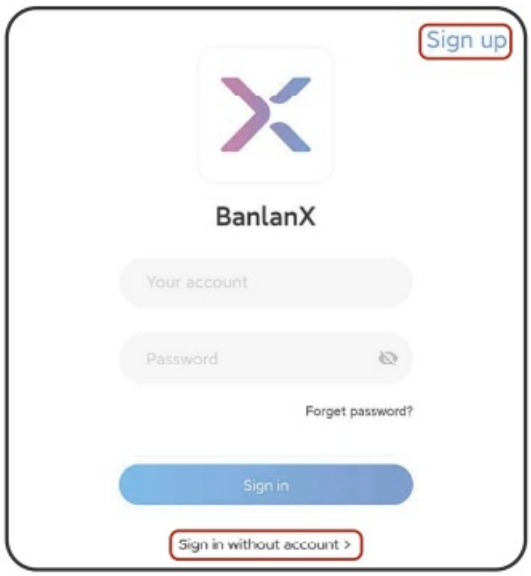
Supports scheduled ON/OFF and automatic device reconnection features.

Supports OTA updates, ensuring your device stays with the latest features and improvements.

BanlanX App

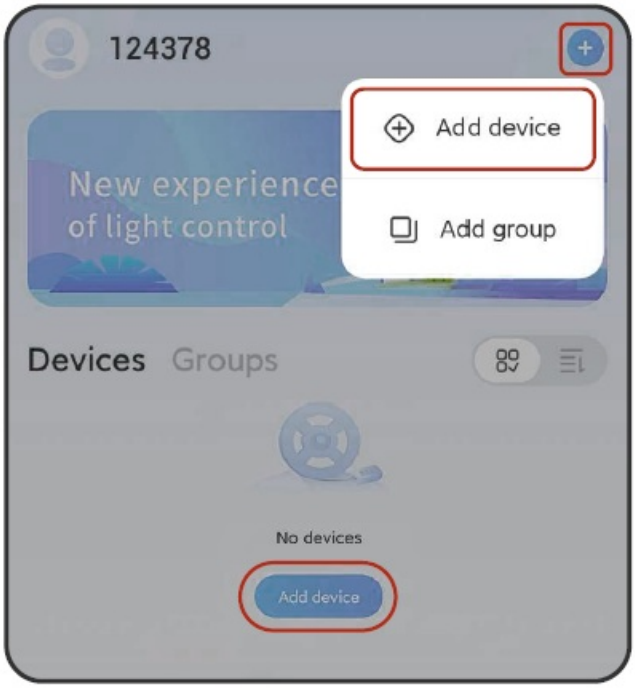
- SP318E supports App control for iOS and Android devices.
- Apple devices require iOS 10.0 or higher, and Android devices require Android 4.4 or higher.
- Yon can search “BanlanX” in App Store or Google Play to find the App, or scan the QR code to download and install.

Register and Login:
Click on the upper right corner of the page “Sign up” ➔ Fill in the required information ➔ Registration success ➔ Login.



Note:
Click “Sign in without account” ➔ Enter Guest Mode (Enter guest mode adds Mesh devices. After switching to the logged-in user, the device must be reset in order to be re-added)

Add Device:
After registering successfully, Add device in **Add device** or + ➔ Searching page ➔ Select the device ➔ Finish adding.

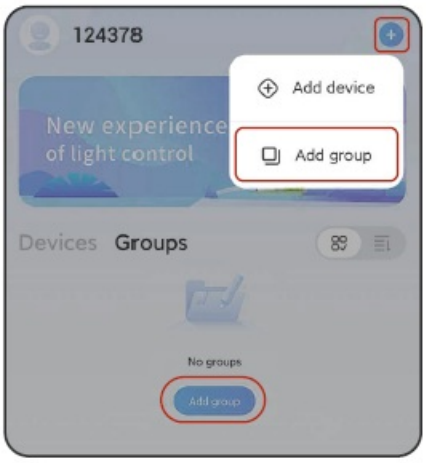


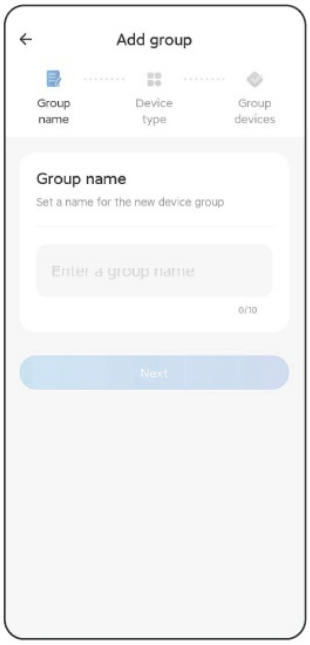
Color Correction:

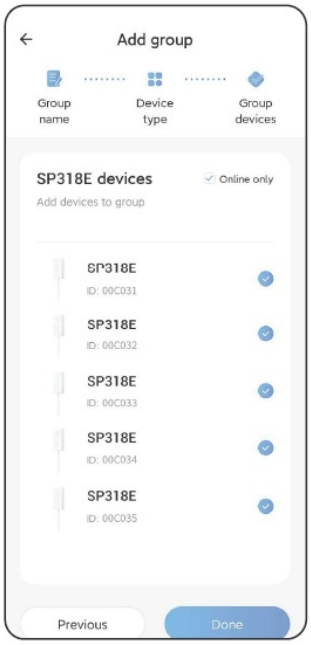
Click the icon in the upper right corner of the control interface➔ Color Correction ➔ Select the corresponding color button based on the actual color shown by the LED ➔ Correction completed.

Note:
Due to differences in the LED, if the UI color does not match the actual light. calibration is required.

Add Group:
After registering successfully, Add group in **Add group** or + ➔ Create and name a group➔ Select device type (SP318E) ➔ Select device➔ Finish adding.







Note:

1. Devices need to be added to the device list one by one before they can be grouped. A controller can be assigned to a maximum of 10 groups simultaneously.
2. Lighting effects:
   When adding or deleting a group. On success (White light breath 1 time). On failure (White light breaths 2 times).

Single control / Group control switch:

- **Single control:**
  In the Devices list (Figure 1), click on the controller tab to enter single control mode. Each controller can be controlled independently, even if it has been grouped with other controllers.
- **Group control:**
  In the Groups list (Figure 2), click on the group tab to enter group control mode.
  All controllers within a group can be controlled simultaneously.

(Figure 1)

(Figure 2)

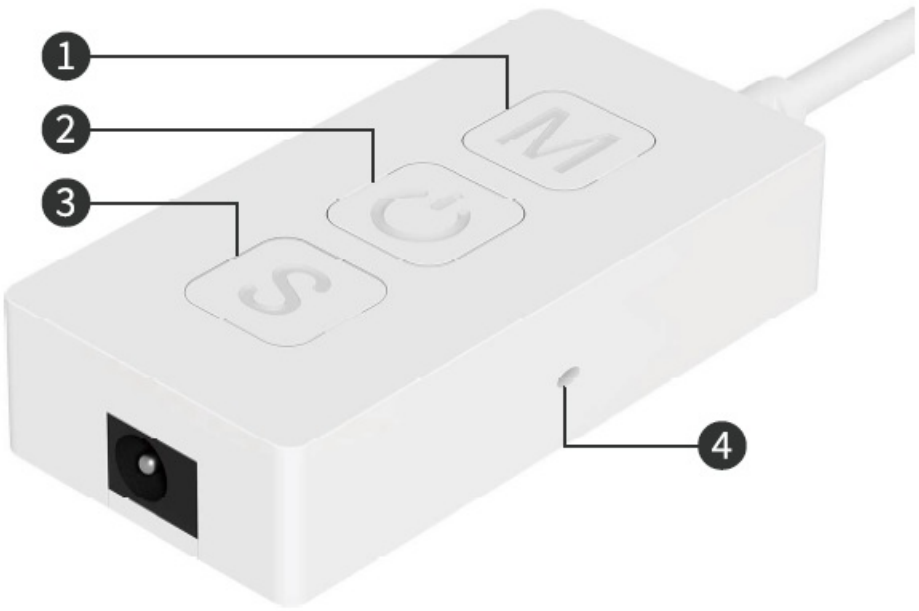
Delete l Edit and Reset:

- Delete group:
  Long press the group tab (Figure 2) ➔ Select delete➔ Dissolve the entire group.
  Note:
  Deleting a group only removes the connection between the controllers within the group, without affecting their association with other groups.
- Edit devices within the group:
  Long press the group tab (Figure 2) ➔ Select edit➔ Check/ Uncheck devices ➔ Done.
- Device deletion and reset:
  Software reset (Method l): Long press the device label in the device list (Figure 1)
  ➔ Remove➔ Reset complete. (When performing a software reset, ensure that the device is online.)

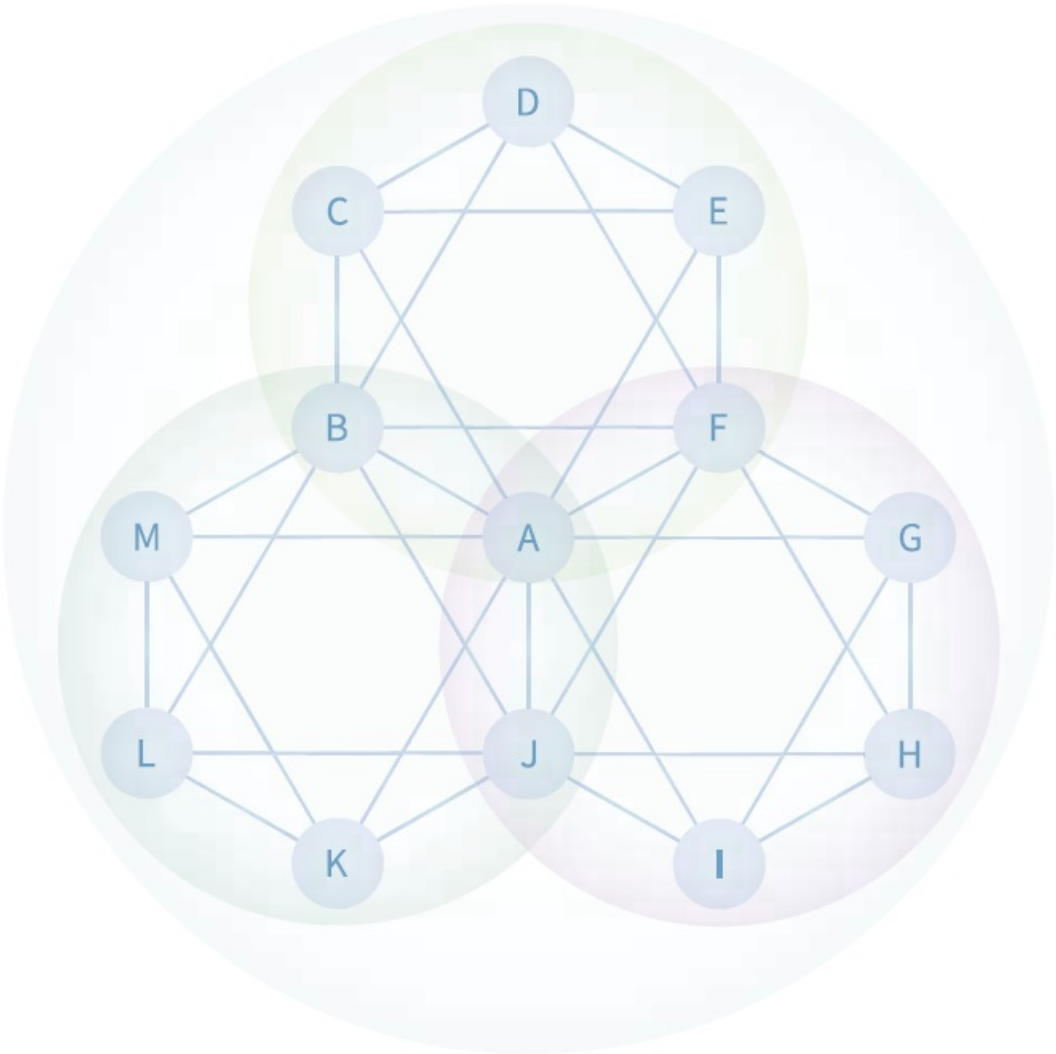
Button reset (Method 2): Within 20 seconds of powering on the device, long press
the switch button for 5 seconds ➔ Indicator light flashing ➔ Release, and the device indicator light will remain on ➔ Reset complete. (Long press for more than l 0 seconds to cancel this reset➔ The indicator light returns to solid on.)

Indicator Light and Button Description

1. M:
   Switch the effects in the favorites list. When the favorites list is empty, switch all dynamic effects.
2. ON/ OFF:
   Turn ON / OFF. Device reset.
3. S:
   Speed adjustment.
4. Indicator Light:
   Red light flashing:
   1. Device is about to be reset.
   2. During network configuration. Red light solid:
      Device is in working status.



Device Networking



Network topology example Image

Device networking (As shown in the example image):

- Group Device A. B, C, D, E, F

- Group 2: Device A. F, G, H, I, J
- Group 3: Device A, J, K, L, M, B
- Group 4: Device A, B, C, D, E, F, G, H, I, J, K, L, M

Explanation: Devices A, B, C, E, F, G, H, I, J, K, L, and M are all SP318E online devices.

1. Create multiple groups: Devices can be flexibly divided into different groups according to actual needs.
2. Cross-group devices: For example, Device A can be assigned to different groups.

Technical Parameters

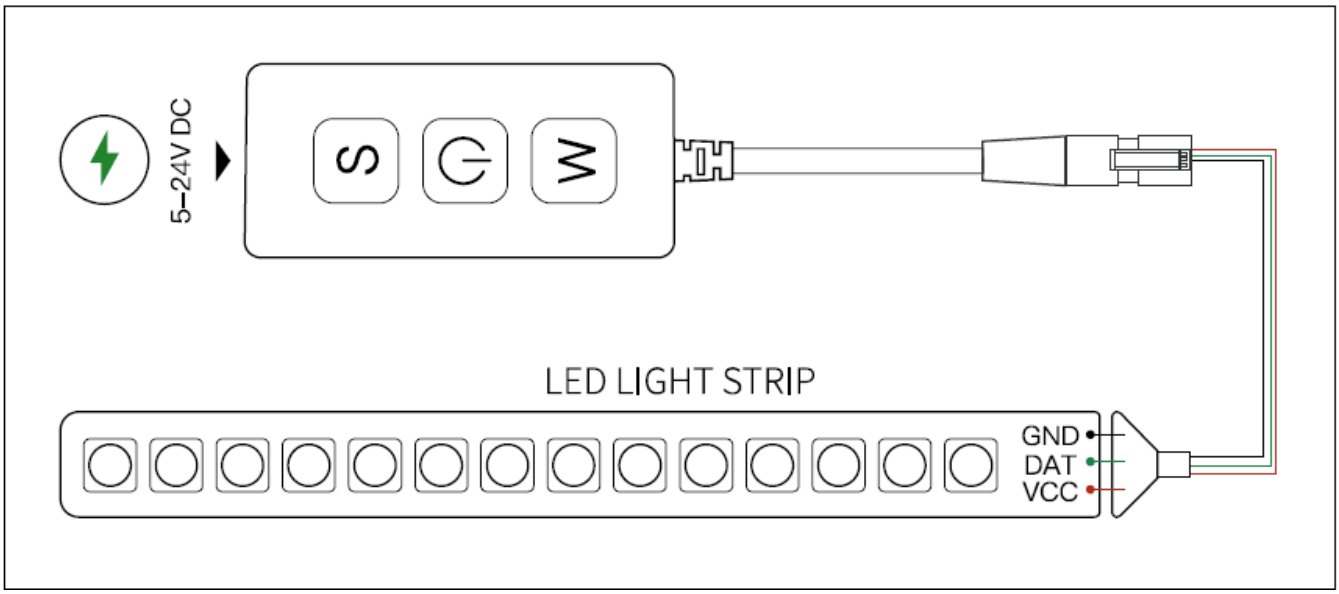
Working Voltage 5V ~ 24V DC	Working Current 10mA ~ 35mA
Working Temp -10°C ~ 40°C	Data Type SPI
IC Type Single-wire RZ RGB LED driver IC	MAX Pixels 900

Wireless distance (Open space)
Any two devices in the Mesh network have a straight-line distance of up to 30 meters.

Network characteristics
BLE Mesh network supports up to 200 devices per group, with devices able to span across l O groups.

Dimension
60mm x 30mm x 14mm (Not including the wires)

Wiring



FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: {l) This device may not cause harmful interference, and {2) this device must accept any interference received, including interference that may cause undesired operation.

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Documents / Resources

	Sperll SP318E MESH Group SPI RGB LED Controller [pdf] Instructions SP318E, SP318E MESH Group SPI RGB LED Controller, MESH Group SPI RGB LED Controller, SPI RGB LED Controller, RGB LED Controller, LED Controller

References

- User Manual