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› LGIDTECH E3-ZR Miboxer Zigbee 3 in 1 LED Strip Light Controller User Manual

LGIDTECH E3-ZR

LGIDTECH E3-ZR Miboxer Zigbee 3 in 1 LED Strip Light Controller User Manual

Model: E3-ZR

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the LGIDTECH E3-ZR Miboxer Zigbee 3 in 1 LED Strip Light Controller. Please read this manual thoroughly before use to ensure proper functionality and safety.

The E3-ZR controller is designed for versatile LED strip light applications, supporting RGB, RGBW, and RGB+CCT configurations. It features tool-free wiring for easy installation and operates on Zigbee 3.0 and 2.4G RF protocols, allowing for smart home integration via a compatible Zigbee gateway.

2. PRODUCT OVERVIEW

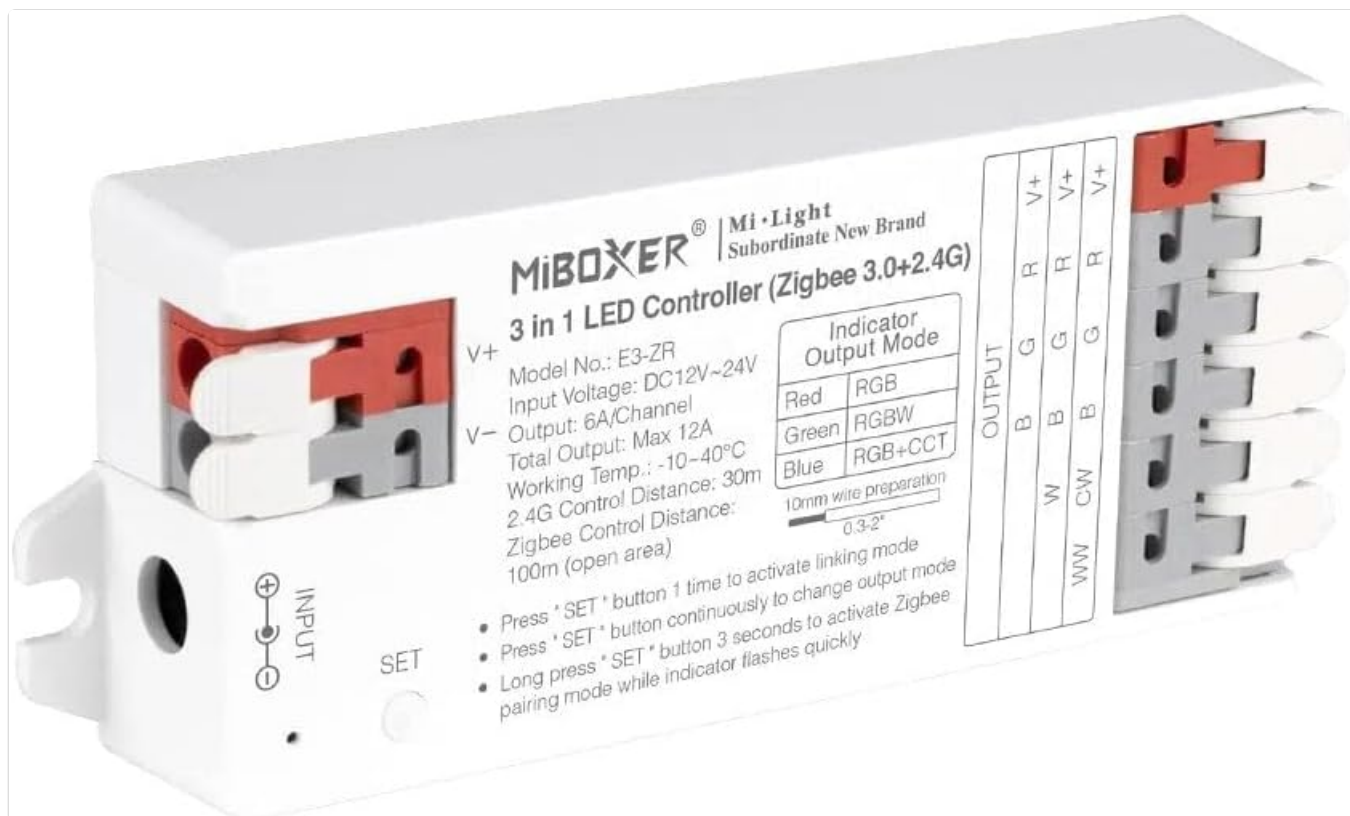


Figure 2.1: Front view of the LGIDTECH E3-ZR LED Strip Light Controller, showing its compact design and input/output terminals.

3 in 1 LED Controller(Zigbee 3.0+2.4G)

Tool-free Instant wiring | Product follow Zigbee 3.0 standard protocol
 Support Tuya smart app control (Zigbee 3.0 gateway is needed)

Powered by **tuya** | **zigbee**

Press will be closed

Product Parameters

Name: 3 in 1 LED Controller (Zigbee 3.0 +2.4G)

Model Number: E3-ZR

Sold by Brand: LGIDTECH

Input Voltage: DC12~24V

Output: 6A/Channel

Total Output: Max 12A

Communication Protocol: Zigbee 3.0 + 2.4GHz

Control Distance:

Zigbee: 100meters=328ft (in open area)

2.4G RF: 30meters=98ft

Working Temperature: -10~40°C (14°F~104°F)

Wireless Technology: Zigbee 802.15.4

Wireless Frequency: 2.400-2.480GHz

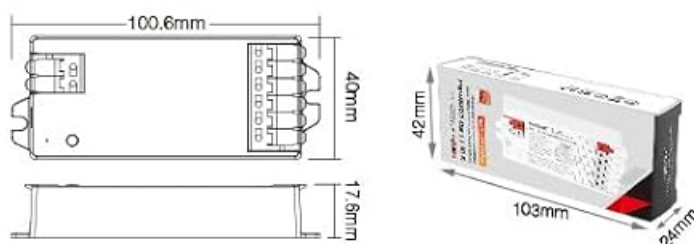


Figure 2.2: Detailed view of the product parameters, including model number, input voltage, output current, communication protocols, and control distances.

Key Features:

- **Tool-Free Instant Wiring:** Simplifies installation by eliminating the need for screwdrivers for wire connections.
- **3-in-1 Compatibility:** Supports RGB (4 wires), RGBW (5 wires), and RGB+CCT (6 wires) LED strip lights.
- **SET Button:** Allows easy switching between the three output modes.
- **High Load Capacity:** Maximum output of 12A, supporting up to 144 Watts (DC 12V) or 288 Watts (DC 24V) of LED strip light.
- **Smart Home Integration:** Compatible with Zigbee 3.0 gateways (e.g., ZB-Box3, Philips Hue, Amazon Echo Plus/4th Gen, Echo Studio, Echo Show 2nd Gen) for smartphone and voice control.
- **Dual Control Protocols:** Utilizes both Zigbee 3.0 and 2.4G RF for flexible control options.

3. SPECIFICATIONS

Parameter	Value
Product Name	3 in 1 LED Controller (Zigbee 3.0 + 2.4G)
Model Number	E3-ZR

Brand	LGIDTECH / Miboxer
Input Voltage	DC 12V~24V
Output Current	6A/Channel
Total Output	Max 12A
Max Wattage (12V)	144 Watts
Max Wattage (24V)	288 Watts
Communication Protocol	Zigbee 3.0 + 2.4G RF
Zigbee Control Distance	100 meters (328 ft) in open area
2.4G RF Control Distance	30 meters (98 ft)
Working Temperature	-10°C ~ 40°C (14°F ~ 104°F)
Dimensions (L x W x H)	3.96 x 1.57 x 0.69 inches (100.6 x 40 x 17.6 mm)
Item Weight	1.92 ounces

4. INSTALLATION AND SETUP

4.1 Safety Precautions

- Ensure power is disconnected before any installation or wiring.
- This device is designed for low voltage DC LED strip lights (12V-24V). Do not connect to AC power.
- Ensure correct polarity when connecting power and LED strips.
- Do not exceed the maximum total output of 12A.
- Install in a dry environment, away from moisture and extreme temperatures.

4.2 Wiring Instructions (Tool-Free)

The E3-ZR controller features tool-free wiring terminals for quick and secure connections.



2.4GHz RF
Remote Controllable

Remote sold separately!



16 Millions of
colors to choose



Saturation
control



Color temperature
adjustable



Stepless dimming
brightness



DMX512 Controllable



DMX512 LED CONTROLLER
(Only for RGB+CCT output mode,
Need DMX512 LED transmitter)

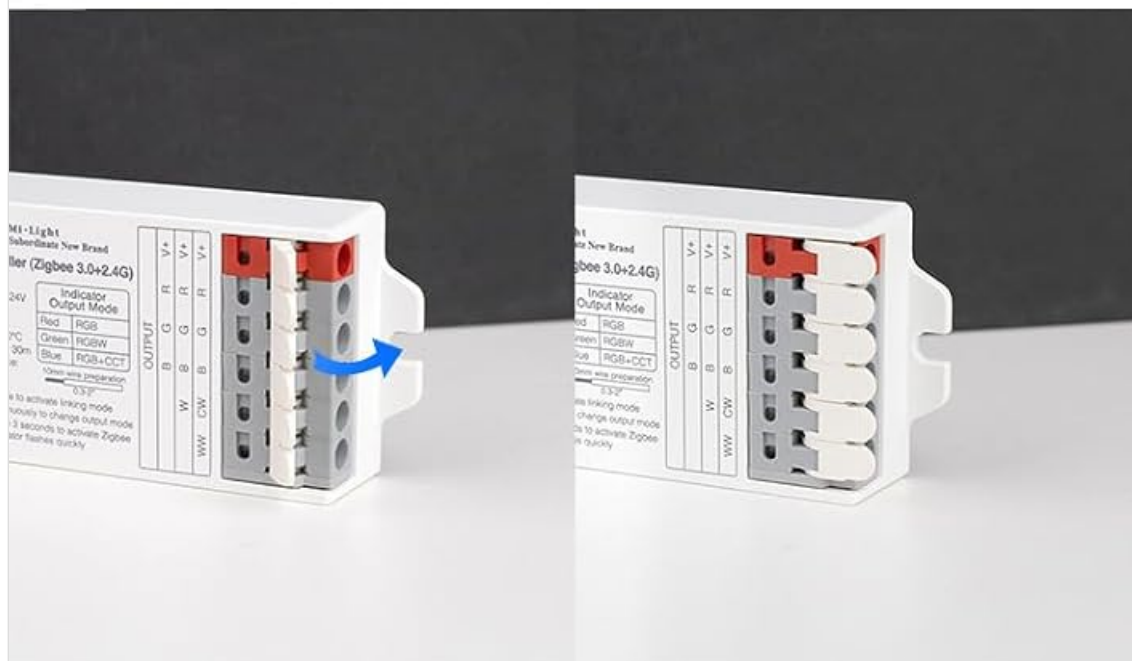
Sold separately!



Frequency switched
High(16KHz) / Low(250Hz)

Instant wiring! Tool-free

Effortless connection, saving you time and effort



Switching 3 output mode via one button

RGB \ RGBW \ RGB+CCT

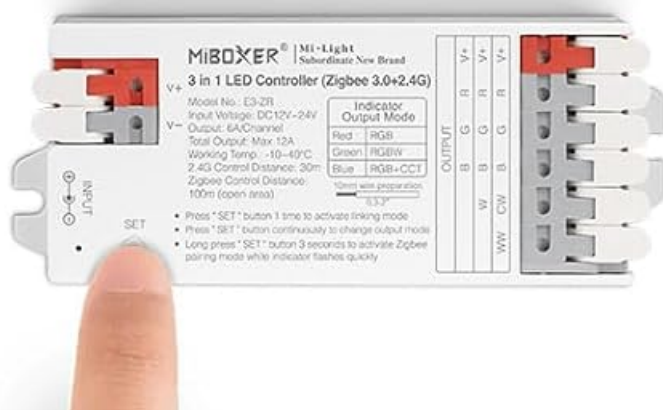
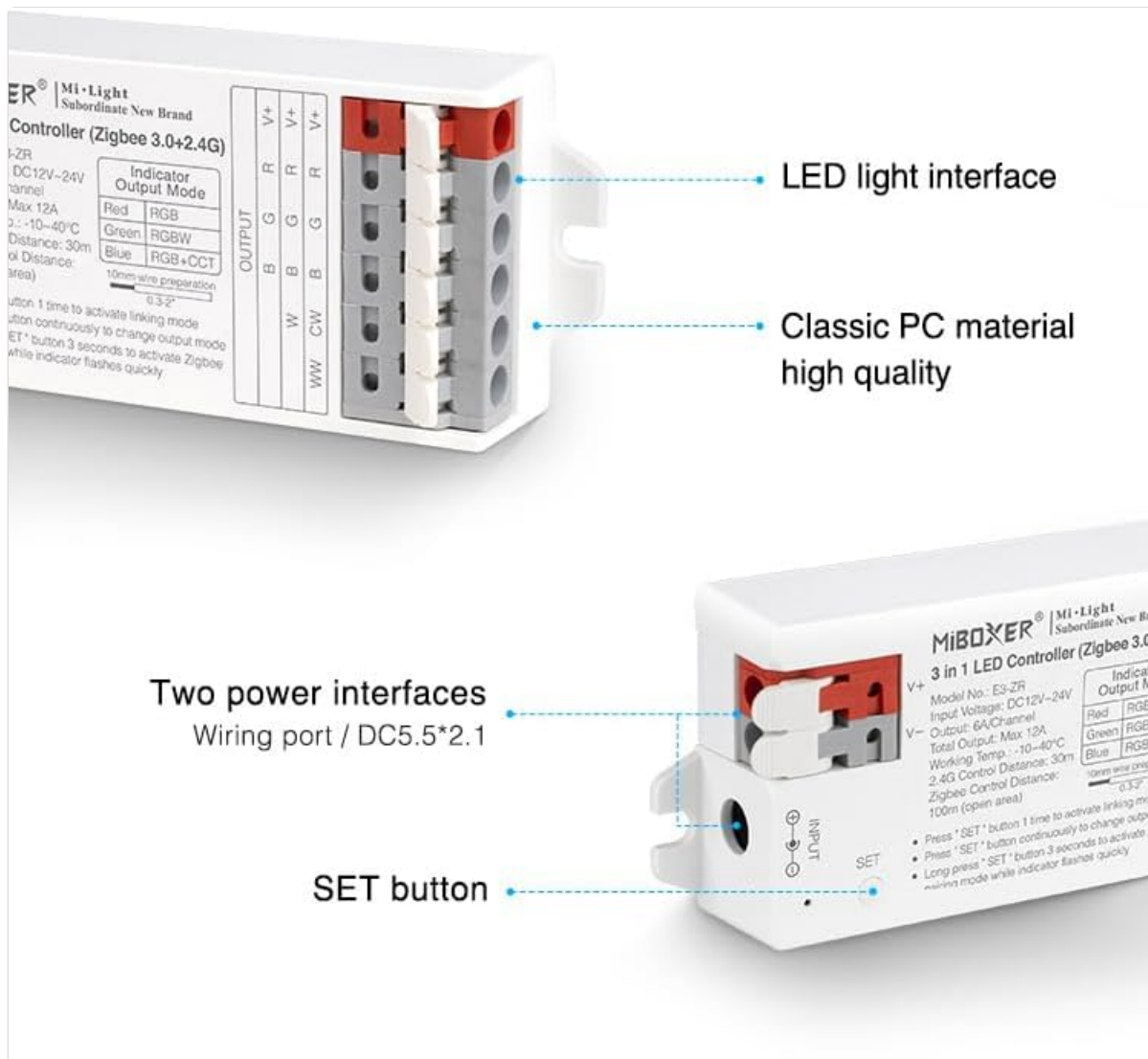


Figure 4.1: Illustration of the tool-free wiring mechanism. Simply press the tab to insert the wire and release to secure.



Ambience Showing



Figure 4.2: Close-up of the controller showing the input (DC 12-24V) and output (V+, R, G, B, W, CW, WW) terminals, and the SET button.

- Power Input:** Connect your DC 12V or 24V power supply to the "INPUT" terminals (V+ and V-). Ensure correct polarity.
- LED Strip Output:** Connect your LED strip light to the corresponding output terminals.
 - RGB Strip:** Connect to V+, R, G, B.
 - RGBW Strip:** Connect to V+, R, G, B, W.
 - RGB+CCT Strip:** Connect to V+, R, G, B, CW, WW.
- To insert a wire, press down on the orange tab, insert the stripped wire end, and release the tab to secure the connection.

4.3 Output Mode Selection

The E3-ZR controller supports three output modes: RGB, RGBW, and RGB+CCT. You can switch between these modes using the "SET" button.



2.4GHz RF
Remote Controllable



16 Millions of
colors to choose



Saturation
control



Color temperature
adjustable



Stepless dimming
brightness

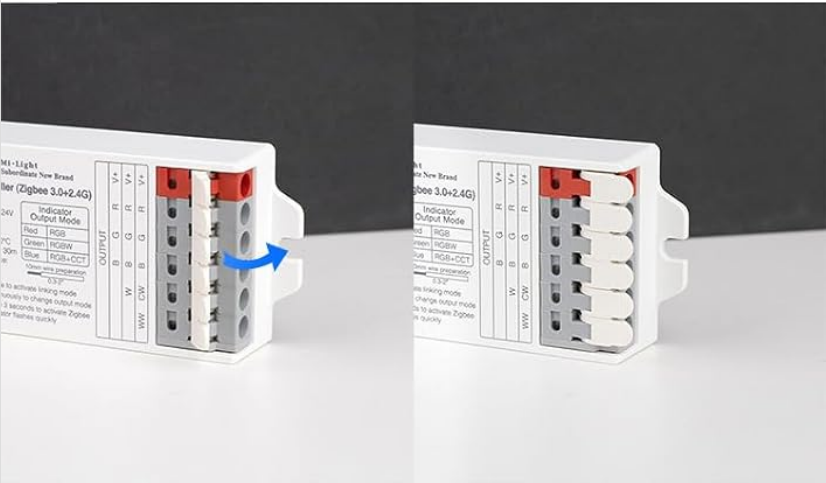


DMX512 Controllable
(Only for RGB+CCT output mode,
Need DMX512 LED transmitter)
Sold separately!



Frequency switched
High(16KHz) / Low(250Hz)

Instant wiring! Tool-free
Effortless connection, saving you time and effort



Switching 3 output mode via one button
RGB \ RGBW \ RGB+CCT



Figure 4.3: The SET button located on the side of the controller, used for switching output modes.

- Press the "SET" button once to activate linking mode (for remote control pairing).
- Press the "SET" button continuously to change the output mode. The indicator will show the current mode:

- Red: RGB Mode
 - Green: RGBW Mode
 - Blue: RGB+CCT Mode
- Long press the "SET" button for 3 seconds to activate Zigbee pairing mode (indicator flashes quickly).

5. OPERATING INSTRUCTIONS

5.1 Remote Control (2.4G RF)

The E3-ZR controller can be controlled by compatible 2.4G RF remotes (sold separately, e.g., FUT092, FUT089, B4, B8). Refer to the remote's manual for pairing instructions. Typically, you will activate linking mode on the controller by pressing the SET button once, then initiate pairing on the remote.

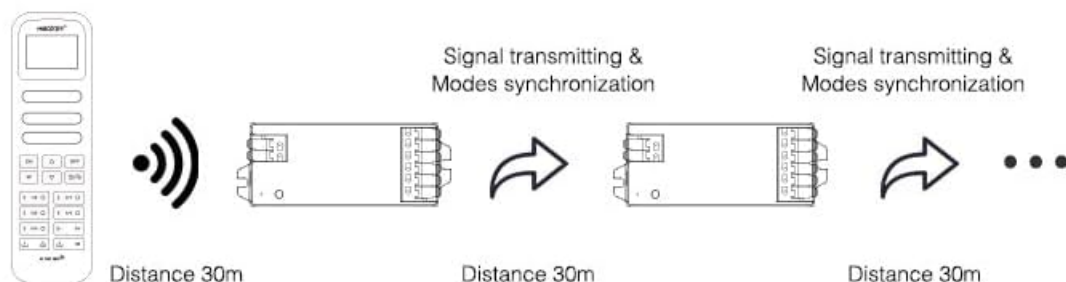


Signal transmitting

One LED controller can transmit the signals from the remote control to another LED controller within 30m, as long as there is a LED controller within 30m, the remote control distance can be limitless.

Modes synchronization

Different LED controllers can work synchronously when they are started at different times, controlled by the same remote, under same dynamic mode and within 30m distance.



Remote is sold separately!

Figure 5.1: Diagram illustrating signal transmitting and modes synchronization between multiple controllers using a single remote.

[Tuya Smart] app control

Need to match Zigbee 3.0 gateway to experience more functions
(Zigbee 3.0 gateway needs to be purchased separately)

 Timing setting

 Music rhythm

 Tap-to-Run & automation

 Do not disturb mode

 Scene customization

 Device sharing



Zigbee 3.0 Gateway



Gateway sold separately

Support third party voice control

Needs ZB-Box1,ZB-Bo2 or ZB-Box3 Gateway,
but they're all sold separately!









It can enter into Philips Hue, IKEA TRADFRI, AMAZON Echo Plus (2nd Gen),
Echo (4th Gen), Echo Studio, Echo show (2.Gen) standard zigbee 3.0 gateway



Figure 5.2: Overview of remote control capabilities including 16 million colors, saturation control, color temperature adjustment, stepless dimming, and frequency switching.

Multiple E3-ZR controllers can be synchronized to operate together from a single remote within a 30-meter range, provided they are started at different times and controlled by the same remote in the same dynamic mode.

5.2 Smartphone Control (Zigbee 3.0 Gateway Required)

For smartphone app control, a Zigbee 3.0 gateway (e.g., LGIDTECH ZB-Box3, Philips Hue Bridge, Amazon Echo Plus/4th Gen, Echo Studio, Echo Show 2nd Gen) is required. The E3-ZR controller cannot be controlled directly by a smartphone app without a gateway.

[Tuya Smart] app control

Need to match Zigbee 3.0 gateway to experience more functions
(Zigbee 3.0 gateway needs to be purchased separately)



Timing setting



Music rhythm



Tap-to-Run & automation



Do not disturb mode



Scene customization



Device sharing



Zigbee 3.0 Gateway



Gateway sold separately

Support third party voice control

Needs ZB-Box1,ZB-Bo2 or ZB-Box3 Gateway,
but they're all sold separately!



WORKS WITH
amazon alexa



works with the
Google Assistant



Работает
с Алисой



It can enter into Philips Hue, IKEA TRADFRI, AMAZON Echo Plus (2nd Gen), Echo (4th Gen), Echo Studio, Echo show (2.Gen) standard zigbee 3.0 gateway



Figure 5.3: Diagram showing the connection between the E3-ZR controller, a Zigbee 3.0 Gateway, and a smartphone for app control.

1. Ensure your Zigbee 3.0 gateway is set up and connected to your home network.
2. Put the E3-ZR controller into Zigbee pairing mode by long pressing the "SET" button for 3 seconds until the indicator flashes quickly.

3. Follow the instructions in your Zigbee gateway's app (e.g., Tuya Smart app) to discover and add the new device.
4. Once paired, you can control the LED strip light via the app, including timing settings, music rhythm, scene customization, and device sharing.

5.3 Voice Control

Voice control functionality depends on your Zigbee gateway and voice assistant device.

[Tuya Smart] app control

Need to match Zigbee 3.0 gateway to experience more functions
(Zigbee 3.0 gateway needs to be purchased separately)



Timing setting



Music rhythm



Tap-to-Run & automation



Do not disturb mode



Scene customization



Device sharing



Zigbee 3.0 Gateway



Gateway sold separately

Support third party voice control

Needs ZB-Box1,ZB-Bo2 or ZB-Box3 Gateway,
but they're all sold separately!



WORKS WITH
amazon alexa



works with the
Google Assistant



Работает
с Алисой



It can enter into Philips Hue, IKEA TRADFRI, AMAZON Echo Plus (2nd Gen), Echo (4th Gen), Echo Studio, Echo show (2.Gen) standard zigbee 3.0 gateway



Figure 5.4: Examples of voice control devices compatible with the E3-ZR controller via a Zigbee gateway, such as Amazon Alexa and Google Home.

- If your voice control device (e.g., Google Home) does not have built-in Zigbee 3.0 functionality, you must use a compatible Zigbee 3.0 gateway (e.g., ZB-Box3) to enable voice control.

- For Amazon Echo Plus (2nd Gen), Echo (4th Gen), Echo Studio, and Echo Show (2nd Gen), which have built-in Zigbee hubs, you can voice control the E3-ZR directly after pairing it with the Echo device.

5.4 DMX512 Controllable (Optional)

The E3-ZR controller can be integrated into a DMX512 system for advanced lighting control, but this requires a DMX512 LED transmitter (e.g., FUTD01, sold separately) and is only applicable for RGB+CCT output mode.

Support DMX512 Controllable

Need DMX512 LED transmitter, Only for RGB+CCT output mode



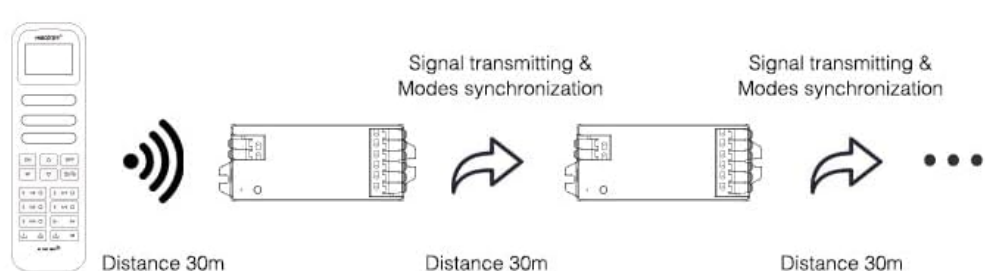
This FUTD01 transmitter is sold separately!

Signal transmitting

One LED controller can transmit the signals from the remote control to another LED controller within 30m, as long as there is a LED controller within 30m, the remote control distance can be limitless.

Modes synchronization

Different LED controllers can work synchronously when they are started at different times, controlled by the same remote, under same dynamic mode and within 30m distance.



Distance 30m Distance 30m Distance 30m

Remote is sold separately!

Figure 5.5: Diagram showing the connection of the E3-ZR controller to a DMX512 LED transmitter for DMX control. Consult the DMX512 LED transmitter's manual for specific setup and operation instructions.

6. MAINTENANCE

- Keep the controller clean and free from dust. Use a soft, dry cloth for cleaning.
- Do not use harsh chemicals or abrasive cleaners.
- Ensure proper ventilation around the controller to prevent overheating.
- Regularly check wire connections to ensure they remain secure.

- Avoid exposing the device to direct sunlight or extreme temperatures.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
LED strip not lighting up.	No power to controller; incorrect wiring; faulty LED strip.	Check power supply connection and voltage. Verify all wire connections (input and output) are secure and correct polarity. Test LED strip with another power source if possible.
Incorrect colors or flickering.	Incorrect output mode selected; loose wire connections; incompatible LED strip.	Press the "SET" button repeatedly to cycle through RGB, RGBW, and RGB+CCT modes until the correct colors appear. Re-check all output wire connections. Ensure your LED strip type matches the selected mode.
Remote control not working.	Remote not paired; remote battery low; out of range.	Ensure the remote is paired with the controller (refer to remote manual). Replace remote battery. Reduce distance between remote and controller (max 30m).
Smartphone app control not working.	No Zigbee gateway; controller not paired with gateway; network issues.	Ensure a compatible Zigbee 3.0 gateway is connected and functioning. Put controller into Zigbee pairing mode (long press SET button for 3s) and re-pair with gateway. Check your home network and gateway's internet connection.
Voice control not responding.	Gateway not linked to voice assistant; incorrect voice commands; incompatible voice assistant.	Ensure your Zigbee gateway is properly linked to your voice assistant (e.g., Alexa, Google Home) account. Use correct voice commands. Confirm your voice assistant device supports Zigbee 3.0 or is connected via a compatible gateway.

8. WARRANTY AND SUPPORT

8.1 Warranty Information

LGIDTECH products are manufactured to high quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or contact LGIDTECH customer support. The warranty typically covers defects in materials and workmanship under normal use.

8.2 Customer Support

If you encounter any issues or have questions regarding your LGIDTECH E3-ZR controller, please contact our customer support team. For the most up-to-date contact information, please visit the official LGIDTECH website or refer to your product packaging.

You may also find helpful resources and FAQs on the LGIDTECH store page on Amazon:[LGIDTECH Amazon Store](#)