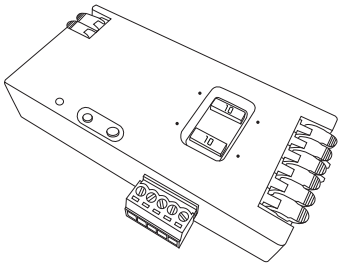
GLEDOPTO®

AeX 2gis *Dual-channel Relay & Fuse*

WLED Digital Controller



User Manual

GL-C-116WL、GL-C-116WL-RF

Item Number 7029

Product Parameter

Input Voltage:DC5-12-24V
Input Current:20A Max
Output Current/Channel:10A Max
Total Output Current:20A Max
Material:Flame-retardant PC
Operating Temperature:-20~45℃
Recommended ICquantity: 800x2 Max
DIYTerminal 5VInterface Output Current:300mA Max

Type-CInput Voltage:DC5V
Type-CInput Current:3A Max
DCJack Voltage:DC5-12-24V
DCJack Current:5A Max
DCJack:Φ5.5xΦ2.1mm
Size:113x47.5x19mm
IP Rating:IP20

Frequenzy band: 2402-2480MHZ
Transmit Power: max. 16dBm

GL-C-116WL

GL-C-116WL-RF

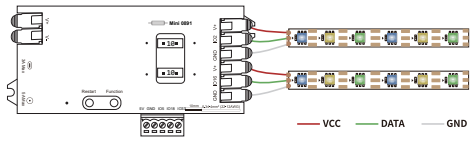
Model	GL-C-116WL	GL-C-116WL-RF
Control Protocol	WiFi	WiFi+2.4GRF

Wiring Terminal Instructions

1.WLED controller supportsconnecting up to two digital LED strips.

2.The output terminals labeled 'V+,IO2,GND;V+,IO16,GND' should be connected to the LED strip's 'VCC DATA GND'.

3."5VGND IO5 IO18 IO33" are extended GPIO signal ports for custom use.



DIY Extensions Instructions

The black terminals "5VGND IO5 IO18 IO33" on the side of the controller are extended GPIO signal ports,which can be configured as Pushbutton,Switch,PIRsensor,External relay,etc.

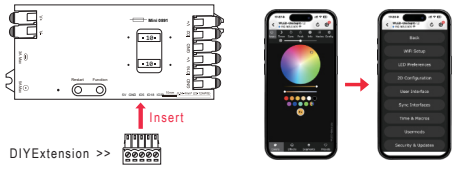
Pushbutton, Switch, PIR sensor configuration:

Config →LED Preferences→Hardware setup →Button * GPIO

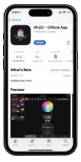
External relay configuration:

Config →Usermods→MultiRelay →Relay 2

Note: The GPIOson the extension port (IO5,IO18,IO33)are directly connected to themain controller chip and arenot 5Vtolerant.Applying voltages higher than 3.3V(e.g.,5V)will directly damage the controller.



APP Download Method



IOS

Search for and download WLED/ WLED Native in the App Store.

Android

Search for and download WLED/ WLED Native in the Google Play Store.

APP Configuration Steps

1.Power on the WLED controller.
2.Open the phone settingsand enter WiFi settings,find"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" at the top of the screen to save.

5. Keep both your phone and the WLED controller connected to the same Wi-Fi network.Then,open the WLED-Native APP,and the WLED controller will be displayed in the list.

Note:

1.After the WLED controller disconnectsfrom the router,the chip will restart and return to thepreset state(you can find thehotspot "WLED-AP" in your phone'sWiFi settings).

2.Ifthe WLED controller isnot displayed or cannot be found in the APP,you can open a browser,enter the IP addressofthe WLED controller,and use the web interface for control (To find the controller'sIP address:Connect to the Wi-Fi,locate the router'sor controller'sweb address(usually found at the bottom oftherouter or on thecontroller itself),enter thisaddressin the browser,and then you can view the controller'sIP addressin the router's backend interface).

LED Strip Configuration

Click on "Config" Select "LED Preferences" Find "Hardwaresetup" to configureinformation

Relay Configuration

Click on "Config" Select "Usermods" Find "MultiRelay" Configure Relay0 Pin as21 Configure Relay1 Pin as19

Note:

When turning off thelight via theAPP, remotecontrol,or push switch,the powersupplyto theoutput terminalwillbecut off to saveenergy.It should benoted that thisfunction cannot deactivatethesupplementary powersupply.

Mic Configuration

Click on "Config" Select "Usermods" Find "AudioReactive" Check "Enabled" Configureinformation

Configuration Information:

1. Type: Generic PDM 2. Pin I2S SD: 323. Pin I2S WS: 15

Note:

1.The Mic function isconfigured by default.
2.After microphone function configured,it will be only activated after rebooting thecontroller again.

WLED Remote Configuration

Compatible:

Model	GL-RC-001WL	GL-RC-002WL
Compatibility	√	√

Click on "Config" Select "WiFi Setup" Find "ESP-NOW Wireless" Check "Enable ESP-NOW" Click "Save & Connect"

Long pressany key of WLEDremote control for 1 second Select "WiFi Setup" Find "ESP-NOW Wireless" Copy the "Last device seen" field to "Paired Remote MAC"

2.4G RF Remote Configuration(if available)

Compatible:

Model	GL-RC-009S	GL-RC-208
Compatibility	√	√

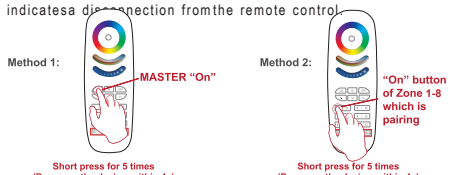
Pairing:

Short press once
(Power on the device, within 4s)

1.Power on the controller (Execute the next step within four secondsafter the relay indicator light or light strip hasturned on).
2.Pressthe "On" button of any group on the RFremote control (check the user manual of each remote control for details).
3.When the light stripsconnected to the controller flash 3 times,it indicatesa successful connection with the remote control.

Unpairing:

1.Power on the controller (Execute the next step within four seconds after the relay indicator light or light strip hasturned on).
2.Pressthe Master "On" button on the RFremote control or the Group "On" button of the room where the controller islocated for 5 times.
3.When the light stripsconnected to the controller flash 3 times,it indicatesa disconnection fromthe remote control.



Notes:

1.Thecontroller can bepaired with up to 4remotecontrols.When the5th remote control ispaired, the1st paired remotewill beautomaticallyunpaired.
2.Thecontroller can pair with anyofthegroups1–4oftheremotecontrol.Once paired with oneofthesegroups,it cannot bepaired with theremaining groupsof that remotecontrol.

RF Remote Control Function(if available)

GL-RC-009S

①“W” key
Switch to the previousmode
②“M” key
Short press:Switch to the next mode
Long press:Return to the static mode (Solid)
③S1/S2/S3/S4:Short pressto invoke preset
(The presetsneed to be set in the APP)

GL-RC-208

①S1/S2/S3/S4:Short pressto invoke preset
(The presetsneed to be set in the APP)
②“M” key
Short press:Switch to the next mode
Long press:Return to the static mode (Solid)
③“F” key (Quick switch function)

The“F” key enablesquick navigation within the currently active control area.The specific functionsare asfollows:

1) After touching thecolor wheel
Short pressthe“ F” key:Switch colors[Red -- Green -- Blue]
2) After touching thecolor temperaturebar
Short pressthe“ F” key:Switch color temperature[Warm white -- Neutral white(warm and cold mixed white)--Cold white]
3) After touching the brightnessbar
Short pressthe“ F” key:Switch brightness[25% -- 50% -- 100%]
4) After a short pressof the“ M” key
Short pressthe“ F” key:Switch the dynamic effect[Blink -- Flow-- Meteor -- Twinkle -- Wipe -- Breathe -- Chase -- Rainbow]

Preset Settings Steps

Enter the WLED control page,adjust the controller to your desired state,click on the "Presets" at the bottom,select "Preset",and then click "Save".

Note:

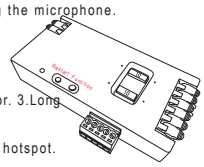
The saved Preset representsthe current state ofthe controller.Save to ID 1 isS1,Save to ID 2 isS2,Save to ID 3 isS3,and Save to ID 4 isS4.

Description of Button Functions

Restart (EN):

Pressing the button will switch off the controller module, releasing it will switch it back on.Useful when the controller needsto be restarted after configuring the microphone.

Function (GPIO17):



1.Short press:Power on/off.
2.Long pressfor 1 second:Adjust the color. 3.Long press for 10 seconds:Reset the WLED controller and activate the WLED-AP hotspot.

Reset to Factory Settings

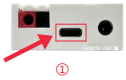
1. Button Reset
Long pressthe "Function" button for 10 secondsto reset the WLED controller,and the WLED-AP will pop up.

2. APP Reset
Enter into 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.

Firmware update method

①Type-C UART
(https://gledopto.com/wled_flash.html)

②Gledopto offi cial firmware
(https://github.com/GLEDOPTO/WLED/releases)



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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 brightness or current.

Attention

1. Before turning on the power,make sure all electrical connectionsare correct and tight.Never connect,disconnect,or repair the device while it ispowered on. Pleasekeep theproduct working within therated voltageand current range.
2. Using it outsidethisrangemay damagetheproduct,lower itsperformance,or cause safety accidents.
Do not takeapart or modify theproduct yourself.Unprofessionalhandling may
3. cause internal short circuitsor electric leaks,leading to fire or electric shock risks.
Thisproduct relieson wirelesssignals.Please do not use it inside metal boxes,
4. closed metal cabinets,or areaswith strong magnetic fields.Otherwise,the wirelesssignal may becomeweak,drop,or stop working properly.

Warning

Thisisa precision electron ic device.Please avoid using it in the following environments:
1) Damp placeswith humidity over 80%;
2) Temperaturesoutside the working range (-20℃ to 45℃);
3) Areaswith strong electric fieldsor near high-voltage power lines;
4) Pleasewithheavy dust or corrosive gases.

Note:Using the product incorrectly may break it or reduce its lifespan.