GLEDOPTO®

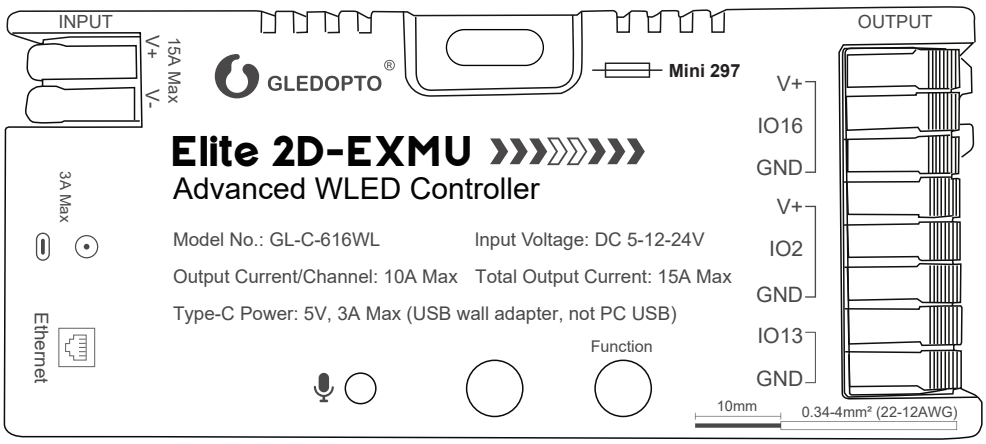
Elite 2D-EXMU
Advanced WLED Controller
—User Instruction—

GL–C–616WL

Product Parameter

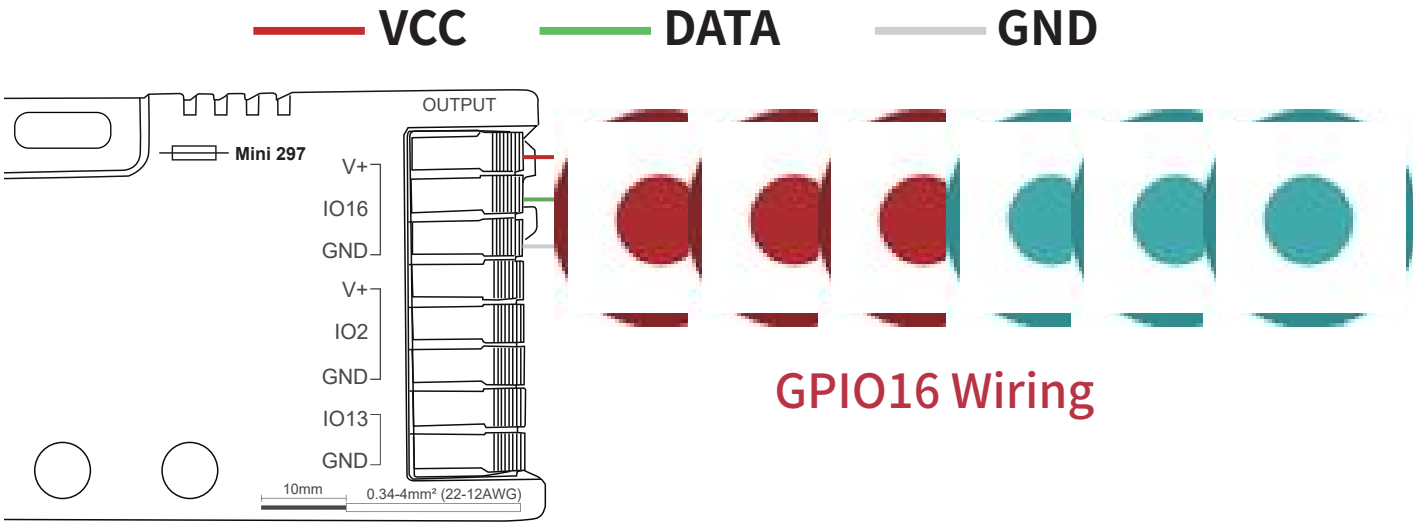
Model: GL-C-616WL
Total Output Current: 15A Max
Type-C Input Voltage: 5V
Temperature: -20~45°C

Input Voltage: DC 5-12-24V
Output Current/Channel: 10A Max
Type-C Input Current: 3A Max



Wiring Terminal Instructions

1. WLED controller supports connecting up to two digital LED strips. The output terminals labeled 'V+, GPIO16,GND; V+, GPIO2, GND' should be connected to the LED strip's 'VCC DATA GND'.
2. IO13 is an extended GPIO signal port for custom use.



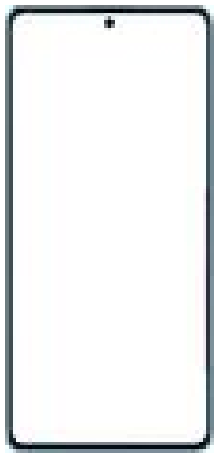
GPIO16 Wiring

APP Download Method



IOS

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



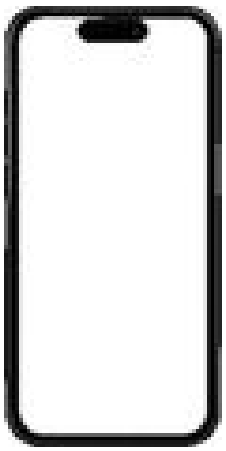
Android

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

APP Configuration Steps

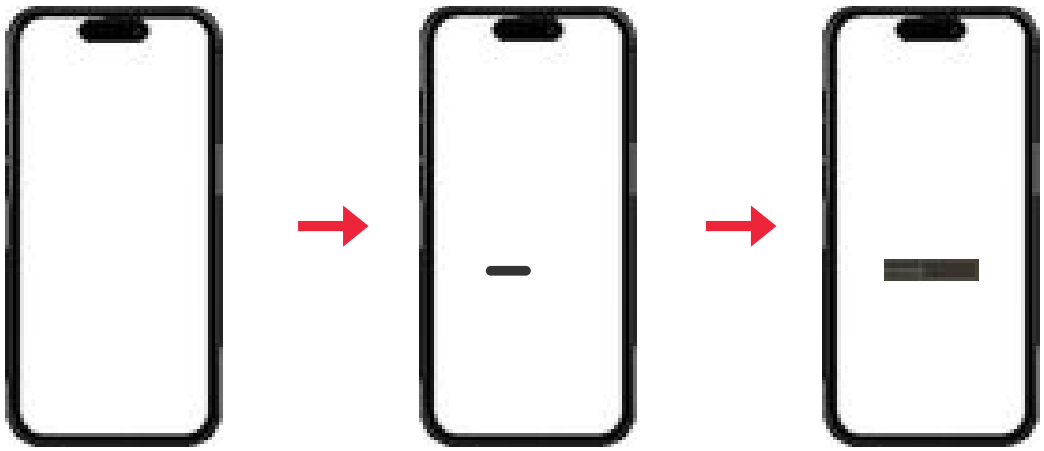


1. Power on the WLED controller.
2. Open the phone settings and enter WiFi settings, find"WLED-AP" and connect to it with the password "wled1234".



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 disconnects from the router, the chip will restart and return to the preset state (you can find the hotspot "WLED-AP" in your phone's WiFi settings).

2. If the WLED controller is not displayed or cannot be found in the APP, you can open a browser, enter the IP address of the WLED controller, and use the web interface for control (To find the controller's IP address: Connect to the Wi-Fi, locate the router's or controller's web address (usually found at the bottom of the router or on the controller itself), enter this address in the browser, and then you can view the controller's IP address in the router's backend interface).

Ethernet Interface Configuration

Enter into the WLED control page, click on 'Config' at the top right corner, select 'WiFi Setup', scroll down to the bottom of the screen, find 'Ethernet Type', choose 'Gledopto Series with Ethernet', then click Save & Connect to use the Ethernet interface.

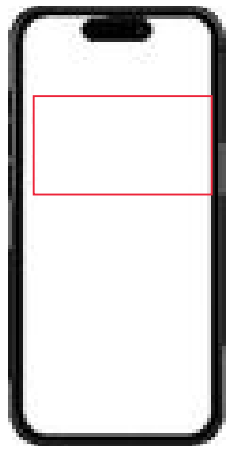


Note:

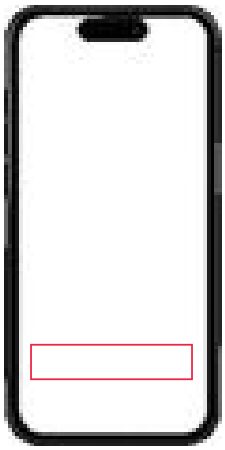
1. The Ethernet function is configured by default.
2. After connecting the controller to the router with an Ethernet cable, you can use the app to control it without configuring WiFi.

LED Strip Configuration

Enter into the WLED control page and click on the "Config" button in the upper right corner. Then, select "LED Preferences" and navigate to "Hardware setup" to configure the LED strip information.



Relay Configuration



Enter into the WLED control page, click on the top right corner "Config", select "LED Preferences", then find "Relay GPIO". Configure Relay GPIO as 18, check Invert, and click Save to apply the settings.

note:

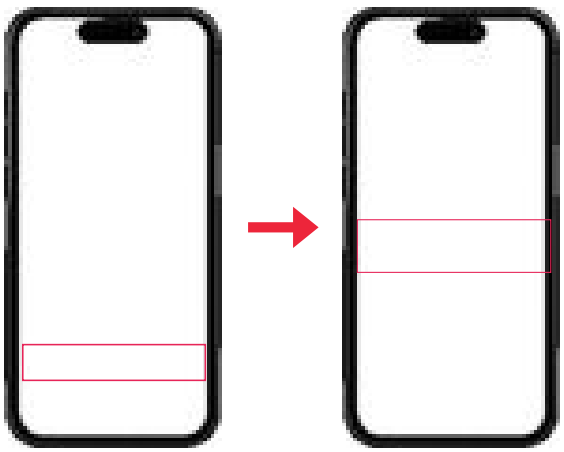
1. The relay function is configured by default.
2. When turning off the light via the APP, remote control, or PUSH switch, the power supply to the output terminal will be cut off to save energy.It should be noted that this function cannot deactivate the supplementary power supply.

Mic Configuration

Enter the WLED control page, click "config" in the upper right corner, select "Usermods", find "AudioReactive", check (Enabled), and then configure according to the configuration information under "Digitalmic". After the configuration is completed, click "save". After the successful save, turn off the controller.

Configuration Information:

1. Type: Generic 12S PDM 2. Pin 12S SD: 32 3. Pin 12S WS: 15



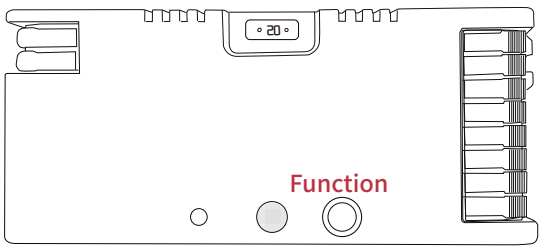
Note:

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

Description of Button Functions

Funciton(GPIO17):

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



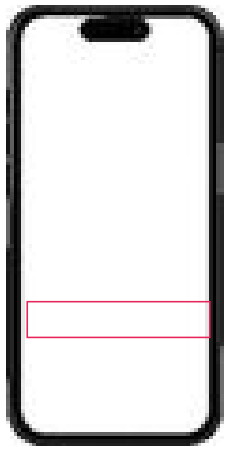
Reset to Factory Settings

1. Button Reset

Long press the "Function" button for 10 seconds.

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

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

② WLED APP
(https://github.com/GLEDOPTO/WLED/releases)

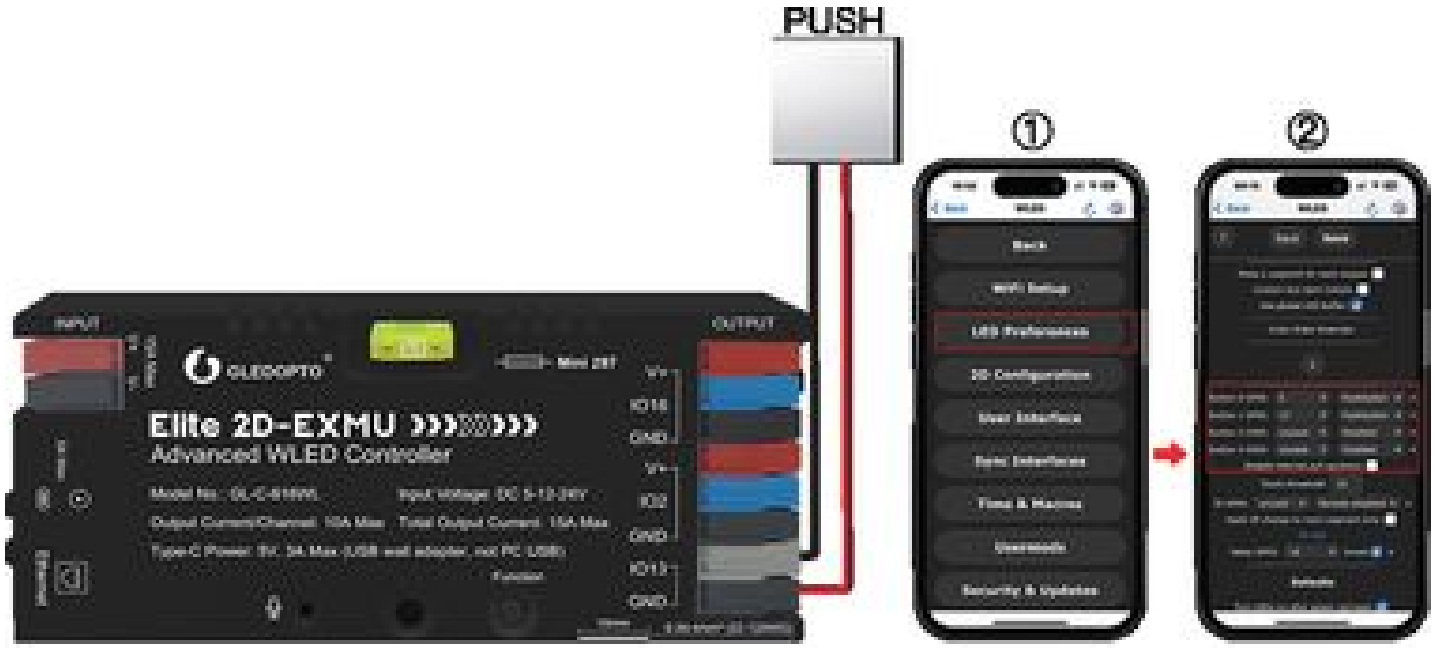


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IO13 interface is for DIY use



- GPIO 13
  - Button 0
    - Pushbutton
      - Short press: On/Off
      - Long press 1S: Adjust color
      - Long press 10S: Enter WiFi-AP mode, pop-up hotspot "WLED-AP"
    - Switch → On/Off
  - Button 1
    - Pushbutton
      - Short press: Adjust mode
      - Double-tap: Adjust color in mode
      - Long press: Adjust brightness
    - Switch → On/Off

*Function button is GPIO17

Supported Chips

WS2805, WS2811, WS2811F, WS2812B, WS2814A, WS2815, SK6812, SM16703, SM16703SP3, FL19038, FW1935, UCS2903B, etc.

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.



1. Before turning on the power, please ensure that all connections are correct and secure, and do not operate while the power is on.
2. The product should be used under the rated voltage. Using it under excessive or insufficient voltage may cause damage.
3. Do not disassemble the product, as it may cause fire and electric shock.
4. Do not use the product in environments exposed to direct sunlight, moisture, high temperatures, etc.
5. Do not use the product in metal shielded areas or around strong magnetic fields, as this may severely affect the wireless signal transmission of the product.
6. The controller is factory-equipped with a 20A fuse, and a spare 5A fuse is also included for your selection based on actual needs. The fuse's current-carrying capacity test is conducted at 25°C, and its lifespan decreases as the ambient temperature rises. When the operating current approaches or exceeds the rated value, the temperature will also increase accordingly. It is advisable to choose a fuse with a nominal current rating that is 1.3 to 1.5 times the operating current. For example, if the operating current is 10A, a 15A fuse should be selected.

Disclaimer

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 may 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 based on the actual product.
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.