SKYLED WiFi Controller

The brain of the system. An open-firmware WiFi controller (WLED) with a built-in microphone. It joins your home WiFi once, then runs from the app. Two models: Pixel + PWM, or Pixel.



- 2.4 GHz WiFi: no hub, no bridge, no mandatory cloud.
- Open WLED firmware, updated over WiFi.
- Built-in microphone: light follows the music.
- Pixel + PWM model: also drives regular RGBCCT, RGBW, RGB, CCT and single-color strips.
- After a power outage, the light comes back exactly as it was.
- **Available as:** Pixel + PWM (2 pixel outputs, 5 PWM channels) · Pixel (pixel outputs only)

BOTH MODELS

Network	2.4 GHz WiFi
Processor	ESP32
Firmware	WLED (open source), updated over WiFi
Microphone	built-in (music mode)
Control	SKYLED app: phone, tablet, computer
Supported pixel ICs	WS2805, WS2811, WS2812B, WS2814, WS2815, SK6812
WiFi setup	once: "WLED-AP" access point or USB-C cable, then your home WiFi

PIXEL + PWM MODEL

Input voltage	5 to 24V DC
Pixel outputs	2 outputs, up to 2048 pixels
PWM outputs	5 channels, 6 A max. per channel
Total current	12 A max.
Barrel jack	4 A max. (above that: terminals)
Supported PWM strips	single color, CCT, RGB, RGBW, RGBCCT
Operating temperature	-10 to 40 °C
USB-C port	wired firmware update (UART)

Addressable pixels	up to 2048 pixels
Power input	screw terminals, or 5.5 × 2.1 mm barrel jack (4 A max.)
Data pinout	DATA1 = IO16, DATA2 = IO2
PWM pinout	R = IO25, G = IO26, B = IO27, W = IO12, C = IO14 (NMOS)
Microphone	analog, IO36
Button	IO0: short press = on/off; 1 s = color; 10 s = reset (WLED-AP access point)
Spare input	IO33 + GND, for a push button or wall switch
Radio remote	RF-to-IR receiver on IO32 (optional 2.4 GHz remote)
Indicator	green, steady when powered
Use	indoor

PIXEL MODEL

Input voltage	5, 12 or 24V DC, constant voltage
Data outputs	2 (GPIO16 and GPIO2)
Current per output	10 A max.
Total current	15 A max. (fused)
Strip power relay	built-in (cuts the strip when off)
Microphone	built-in
Buttons	Restart and Function
Spare input	IO33 + GND
Expansion header	5V, 3.3V, GND, IO25, IO18, IO19
USB-C port	wired firmware update (UART)
Wiring	lever terminals: V+, V-, GPIO16, GPIO2, GND
Rating	IP20
Operating temperature	-20 to 45 °C
Housing length	approx. 128 mm

GOOD TO KNOW

- Full dimensions: after bench testing (end of November).