cod.m WLED Controller V0.10 Quick Start Guide

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- 2.4 GHz WiFi module for controlling addressable LEDs
- Designed for driving 5V, 12V and 24V LEDs: WS281x, SK6812, APA102, WS2801, LPD8806, etc.
- Designed for use with WLED
  https://github.com/Aircoookie/WLED
- Suitable for 5V, 12V **and** 24V installations without additional voltage converter or configuration
- Based on ESP32 microcontroller (4MB) with integrated 74AHCT125D level shifter
- Over 100 effects thanks to WLED
  see: https://kno.wled.ge/features/effects/
- Freely programmable pushbutton (`IO15`)
  see https://kno.wled.ge/features/macros/
- Up to four lines á 1000 LED's possible
  see https://kno.wled.ge/features/multi-strip/
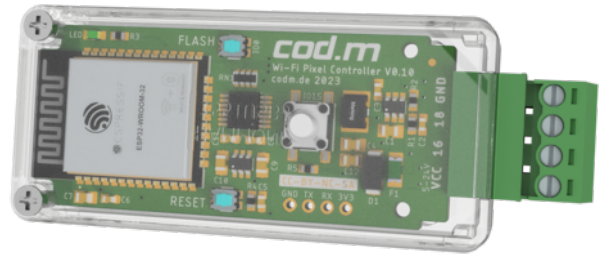
Initial Setup

1. When switched off, connect the pixel strips to the connector according to the connection diagram and screw tight.

   Depending on the number of pixels, an additional supply voltage must be fed in (see connection diagram). For this we recommend: *cod.m WLED Fused Power Capacitor Board V0.4*, part no. 90062 (1000µF, max. 35V/10A)

2. Connect the plug of the pixel strip with the socket of the pixel controller.

3. Switch on power supply, configure and use.

The connections `IO16/IO18` (5V, max. 8mA) on the connector can be used as required. Either a DATA line each from two strips (WS281x, SK6812, etc.) can be connected to the pins **or** DATA and CLOCK from one strip (WS2801). It is also possible to use it as a relay output, please note the current consumption.

WLED Configuration

1. During the first startup, a temporary access point with the WLAN network name (SSID) `WLED-AP` and the password `wled1234` is opened for the initial setup. You must connect to this WLAN network with a WiFi-capable device (smartphone, PC, or similar).
   The QR code on the right can be scanned for easy connection.

2. After connecting to the access point, the configuration page typically opens automatically. Alternatively, this can be reached under the address `4.3.2.1` in the Internet browser.

3. Under `WiFi settings`, you can now connect to the local WLAN network.

   If you want to assign a static IP address to the device, this configuration can be done in the same menu. If you want to use DHCP, `Static IP` must be set to `0.0.0.0.` This is the default selection.

4. The settings are saved and applied via `Save & Connect`. The device then restarts and connects to the local WLAN network.

   If a connection is not possible, for example because incorrect entries were made, the temporary setup access point is opened again and you have the option to correct the configuration.

5. After a connection to the local WLAN network has been established, the device can be reached via its IP address (assigned by the DHCP server). The device can also be reached via `"hostname".local` using Avahi/mDNS.

6. Finally, configure the type and length of the pixel strip in the configuration menu under `LED Preferences` - Set pins 16 or 18 according to the connection.

7. The button on the device is connected via `IO15.` Store this accordingly in the configuration as "Button 0". The flash button on the board is connected via `IO0` and can optionally be used for switching tasks.

   The device can then be controlled via the web interface, the WLED app or the various interfaces.

See also: https://kno.wled.ge/basics/getting-started/

WLED interfaces

WLED has an `HTTP request API` and a `JSON API`. Both can be accessed via the HTTP protocol. Additionally, you can enable a UDP socket that uses the `HTTP Request API`. A detailed structure of the respective interfaces can be found under the following links:

https://kno.wled.ge/interfaces/http-api/, https://kno.wled.ge/interfaces/json-api/

Factory Reset

A factory reset can be performed by pressing the button on the housing (`Button 0, IO15`) for ten seconds. Afterwards, the configuration must be carried out again.

GPIO	Function
IO15	Button
IO5	Status LED
IO16/IO18	Outputs

Firmware Update

In the web interface (`Config`, gear icon), a firmware update can be performed under `Security & Updates`. With `Manual OTA Update` a firmware file can be uploaded and applied with `Update!` Select WLED update file according to version/revision of the controller.

Intended Use

This module is designed to control addressable LED strips. These must be connected according to the connection diagram. Only the specified intended use is permitted. Any other use will void the warranty and exclude liability.

Safety Instructions

Hereby, cod.m GmbH declares that the radio equipment type WLED Controller V0.10 is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address: https://lnk.codm.de/wled-90060-ce.
Keep the module away from heat and direct sunlight. Avoid contact with dust and liquids. Only use the module indoors. Protect the module from electrostatic discharge.

Technical Data

Short description:	cod.m Pixel Controller, 90060 V0.8	Dimension:	72 x 30 x 16mm
Supply voltage:	5V, 12V or 24V, <1W	Weight:	20g incl. case
Surrounding:	IP20, +5 to +45°C	TX Power:	Max. 19.68dBm, IEEE 802.11 (Wi-Fi)

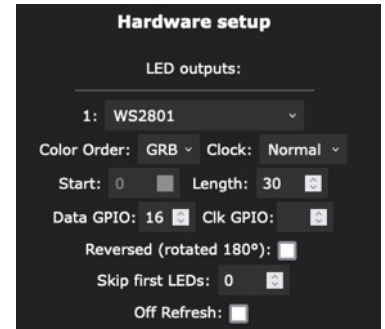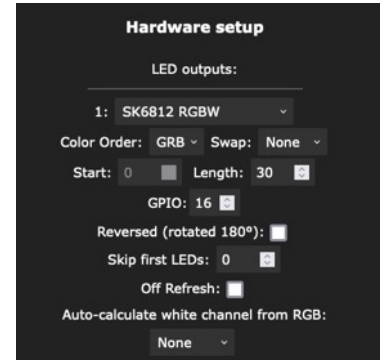Open Source Project: Support via support@codm.de, no support via phone!