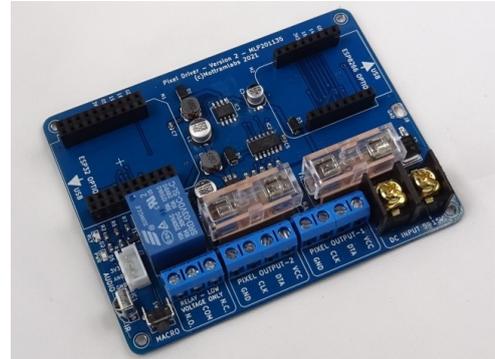


ESP32/ESP8266 LED Pixel (WS2812) Driver Board - **MLP201135****Features and Benefits**

- Supports Wemos ESP32 & ESP8266 boards
- 5V or 12V Operation
- On-board regulator powers the Wemos board
- Reverse polarity protection
- Dual outputs Data & Clock
- 5V data output to LED pixels
- 200mA on-board fuse (5A max each)
- Screw terminal connections
- Analogue audio input option
- Relay output
- IR Receiver

**Product Details**

The MLP201135 provides a solution for connecting WS2812 or similar LED pixel strips to the popular Wemos D1 Mini ESP32 or ESP8266 Wi-Fi modules. An on-board 74HCT125 line driver provides a 5V P/P output from the normal 3.3V outputs supplied by the ESP32 & ESP8266 chips.

The board provides both reverse polarity protection and two 20mm fuses for both of the two LED outputs. The board can be used with either 5V or 12V LED strips when using the appropriate power supply.

A Sound reactive option is possible via a 3 pin header for use with an external analogue microphone board, the microphone is then connected to the Wemos D1 Mini's analogue input.

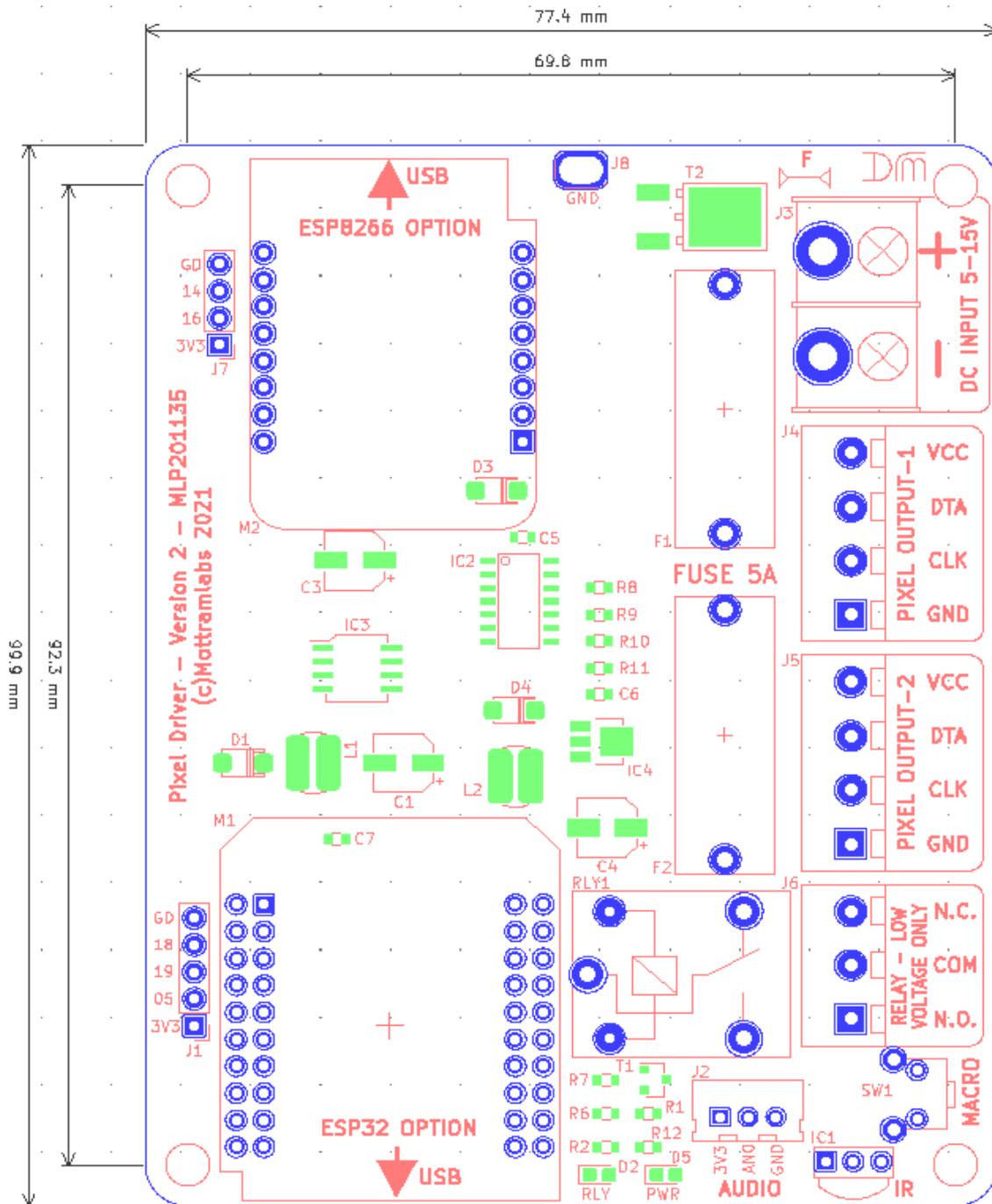
A relay is also provided for control by the Wemos board, for low voltage use only. The relay must **not be** used for **mains** voltage.

Also a push button for use with WLED firmware. An IR receiver for use with WLED.

**Peripheral Connections and I/O Mapping**

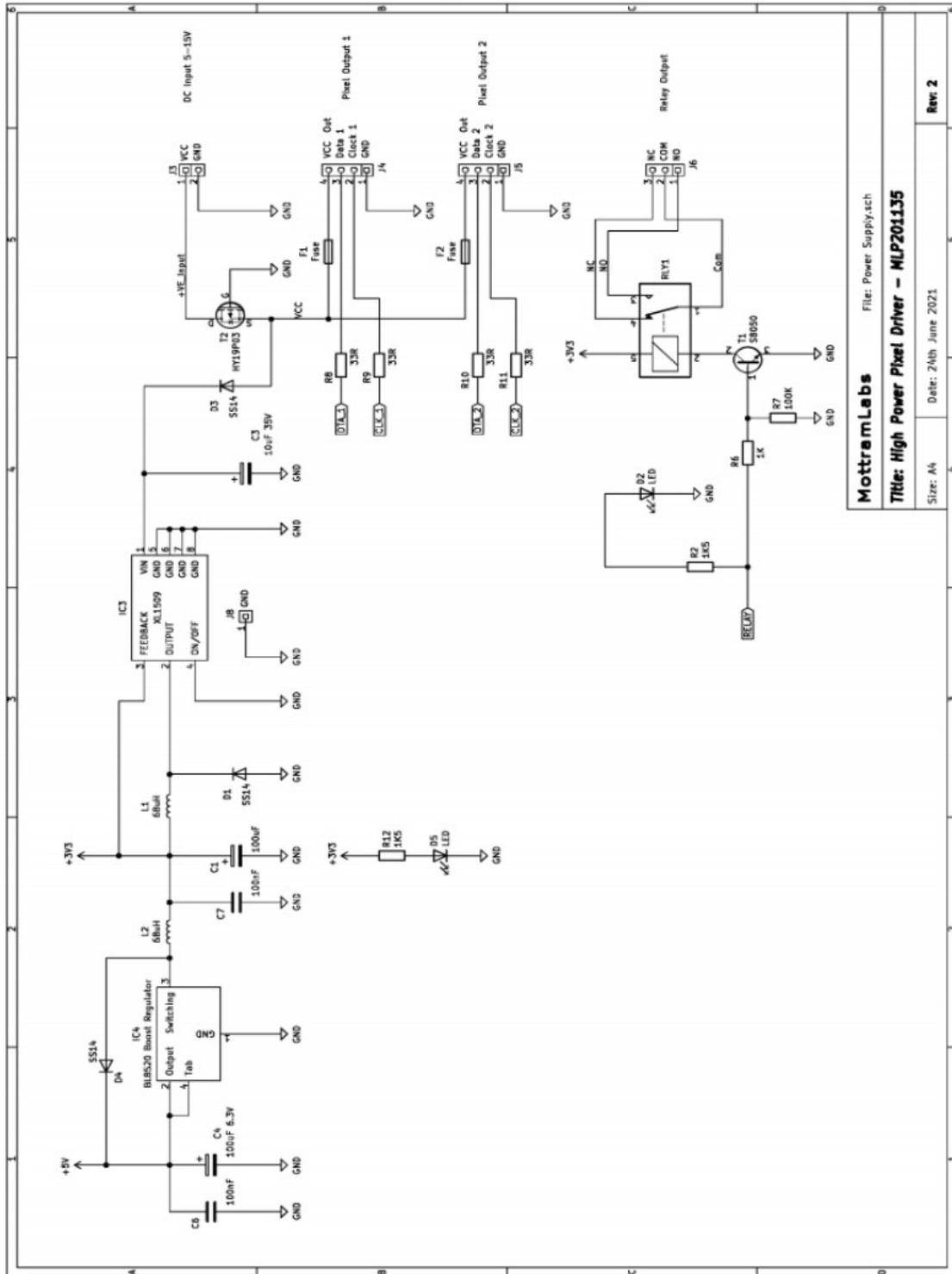
Function	ESP32	ESP8266
Data 1	IO2	IO2
Clock 1	IO4	IO4
Data 2	IO16	IO12
Clock 2	IO17	IO13
Push Button Switch	IO0	IO0
IR Receiver	IO21	IO5
Relay Control	IO22	IO15
Audio	SVP	A0

## MLP201123 - Connections





## MLP201123 – Schematic Page 2



**MottramLabs** File: Power Supply.sch  
**Title: High Power Pixel Driver – MLP201135**  
 Size: A4 Date: 24th June 2021  
 Rev: 2

## Software – WLED

Although the board can work with a range of software one of the most popular and feature rich is WLED. Below are some links to the WLED project page and a fork “WLED Sound Reactive”. This version adds as the name suggests sound reactive modes, this version requires an external audio input. The simplest way is to add a microphone board to the Wemos D1 Mini’s analogue input.

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## Flashing Tool

**ESPHome-Flasher** is a python utility for programming the Wemos D1 Mini

<https://github.com/esphome/ESPHome-Flasher>

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## WLED

**WLED Github Page**

<https://github.com/Aircoookie/WLED>

**WLED Releases**

<https://github.com/Aircoookie/WLED/releases>

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## Sound Reactive WLED

**Sound Reactive WLED Releases**

<https://github.com/atuline/WLED/releases>

**Sound Reactive Wiki**

<https://github.com/atuline/WLED/wiki>

**Audio connection Options**

<https://github.com/atuline/WLED/wiki/Analog-Audio-Input-Options>

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## 3D Printable Case

**A Mounting Frame**

<https://www.thingiverse.com/thing:4966399>

