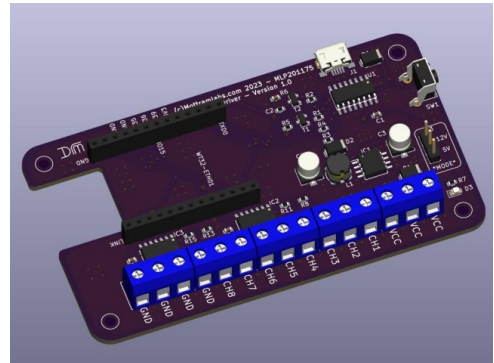


WT32-ETH01 LED Pixel (WS2812) Driver Board - MLP201175

Features and Benefits

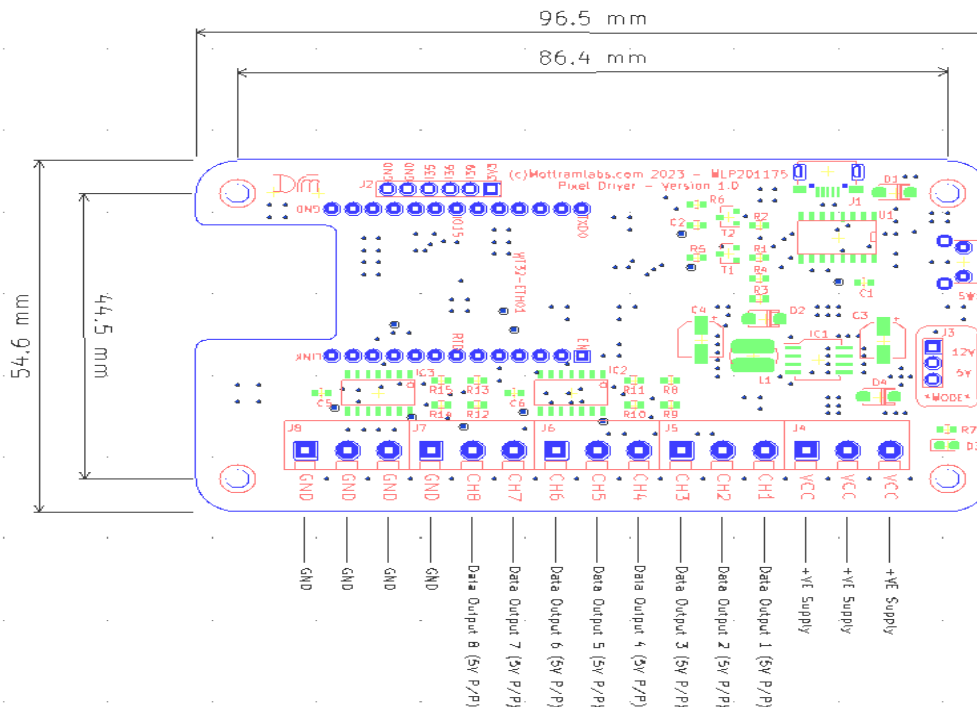
- 5V or 12V Operation
- Works With WT32-ETH01 ESP32 Boards
- On-board 5V Regulator powers the ESP32
- Reverse Polarity Protection (board only)
- 8 Channel 5V data outputs to LED pixels
- USB Serial interface for up-loading firmware
- Screw terminal connections



Product Details

The MLP201175 provides a simple solution for connecting WS2812 or similar LED pixel strips to the popular WT32-ETH01 ESP32 Wi-Fi and Ethernet module. An on-board 74HCT125 line driver provides a 5V P/P output from the normal 3.3V output supplied by the ESP32 chip.

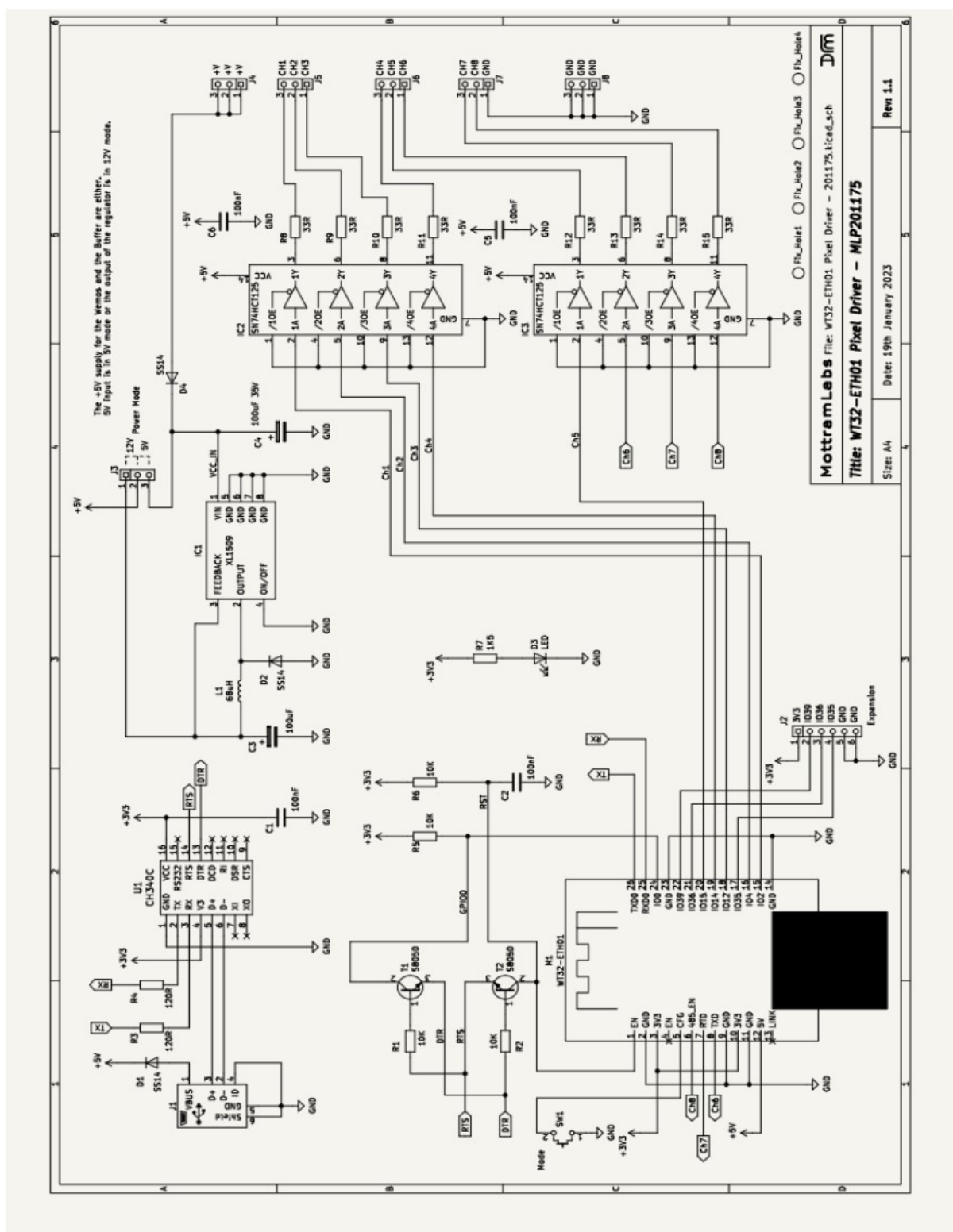
The board provides reverse polarity protection for the ESP32 and interface only. The board can be used with either 5V or 12V LED strips when using the appropriate power supply. There is an option link on the board (J1) to select between a 5V or 12V supply, it's important to select this link for the supply used or the ESP32 will be damaged. Please note the boards 5V regulator powers the WT32-ETH01 and 74HCT125 only, it does not power the LED output.



J3 Link

The voltage selection must match the input supply, so for 5V this link must be set to 5V and for 12V select 12V. Failure to do this will damage the PCB and any WT32-ETH01 plugged in.

MLP201175 - Schematic



Mottram Labs File: WS32-ETH01 Pixel Driver - 201175.licad.sch
 Title: WS32-ETH01 Pixel Driver - MLP201175
 Size: A4 Date: 19th January 2023
 Rev 1.1

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.

Flashing Tool

ESPHome-Flasher is a python utility for programming the ESP32. A USB to serial adaptor is also required.

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

WLED

WLED Github Page

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

WLED Releases

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

WT32-ETH01 Connections Map

Connection	ESP32 GPIO	Labeled
LED Channel – 1	GPIO-2	IO2
LED Channel – 2	GPIO-4	IO4
LED Channel – 3	GPIO-12	IO12
LED Channel – 4	GPIO-14	IO14
LED Channel – 5	GPIO-15	IO15
LED Channel – 6	GPIO-17	TXD
LED Channel – 7	GPIO-5	RXD
LED Channel – 8	GPIO-33	485_EN
Push Button	GPIO-32	CFG