

CAN BUS Power Rail

Never powered Down so that emergency signal keep blinking

Conn_01x04 CAN IN J1

Conn_01x04 CAN OUT J2

5A MAX

+12V

+3.3V

GND

10K R12

NMOS Q6

small sig 20 V 5A mosfet

0.001 R R14 size R for 20 mA or better of resolution

keep power below 0.1 W --> max 20 mV max 0.004 mR

5A MAX

+12V

10K R11

NMOS Q5

small sig 20 V 5A mosfet

0.001 R R15

5A MAX

+12V

10K R10

NMOS Q4

small sig 20 V 5A mosfet

0.001 R R16

5A MAX

+12V

10K R9

NMOS Q3

small sig 20 V 5A mosfet

0.001 R R17

5A MAX

+12V

10K R8

NMOS Q2

small sig 20 V 5A mosfet

0.001 R R19

5A MAX

+12V

10K R2

NMOS Q1

small sig 20 V 5A mosfet

0.001 R R20

5A MAX

+12V

10K R1

NMOS Q8

small sig 20 V 5A mosfet

0.001 R R21

5A MAX

+12V

10K R13

NMOS Q7

small sig 20 V 5A mosfet

0.001 R R22

switch to ESP32 C3 super micro

The diagram shows an ESP32-C3 Supermini module (U4) with the following connections:

- Power:**
 - V5V pin connected to +5V.
 - V3V3 pin connected to +3.3V.
 - GND pin connected to ground.
- LED Control:**
 - GPIO7 connected to CAN_S.
 - GPIO8 connected to RGBLED_DIN.
 - GPIO9 connected to ground.
- GPIO Pins:**
 - GPIO0, GPIO1, GPIO2, GPIO3, GPIO4, GPIO5, GPIO6 are connected to ground.
- External Components:**
 - Two 4k7 resistors (R7, R6) are connected in series between the +3.3V supply and the SDA/SCL pins of the CAN module.
 - The CAN module's CAN_TX pin is connected to GPIO2.
 - The CAN module's CAN_RX pin is connected to GPIO3.



RGB strip

+5V

D4 diode -> little hack to drive the WS2812 using 3v3 logic

U51M

D5 WS2812B

1 2 3 J3 Conn_01x03

4 DIN DOUT

VSS VDD GND

Rca

<https://hackaday.com/2017/01/20/cheating-at-5v-ws2812-control-to-use-a-3-3v-data-line/>

The image displays three circuit diagrams for a PCB project:

- RGB strip:** A circuit diagram showing an RGB LED strip connected to a WS2812B IC (U1). The IC is powered by +5V and GND. A diode (D4) is used as a "little hack to drive US1M the WS2812 using 3v3 logic". The IC has pins for DIN, VDD, DOUT, and GND. A connector J3 (Conn_01x03) is shown.
- CAN Transceiver:** A circuit diagram showing a CAN transceiver IC (U1, TJA1051T-3) connected to a CAN bus. The IC is powered by +3.3V and GND. It has pins for CAN_TX, CAN_RX, TXD, RXD, CANH, CANL, VIO, and S. A 120Ω resistor (R18) is connected between CANH and CANL. A 100nF capacitor (C2) is connected between CANH and GND. A 100nF capacitor (C1) is connected between CAN_S and GND.
- daylight sensor:** A circuit diagram showing a daylight sensor IC (U1) connected to a 3.3V supply and GND. The IC has pins for SDA, SCL, GND, and 3V3. A connector J12 (Conn_01x04) is shown.

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Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. 9.0.6		Id: 1/1