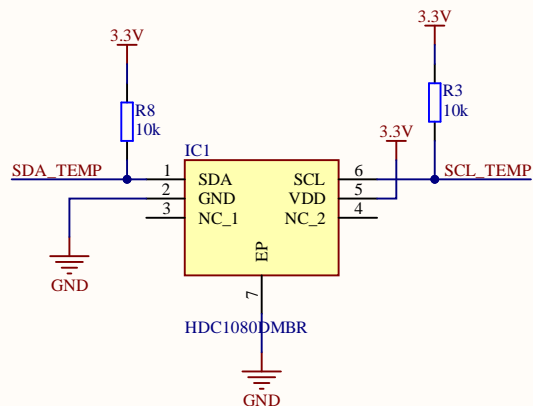
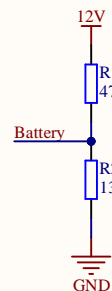


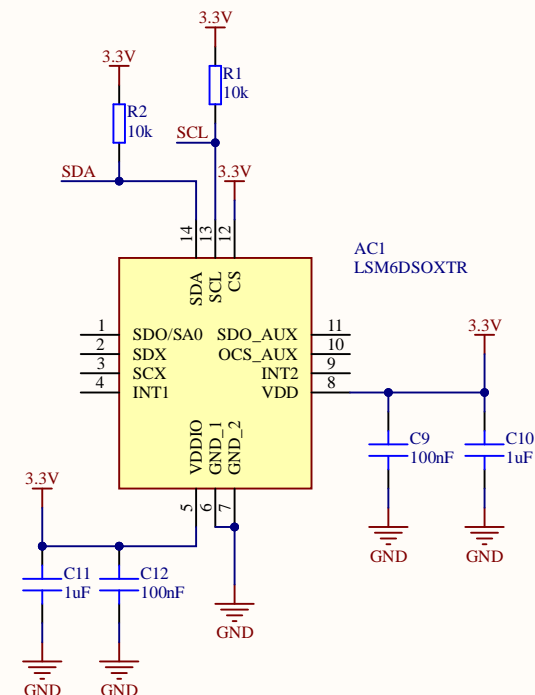
Temperature sensor



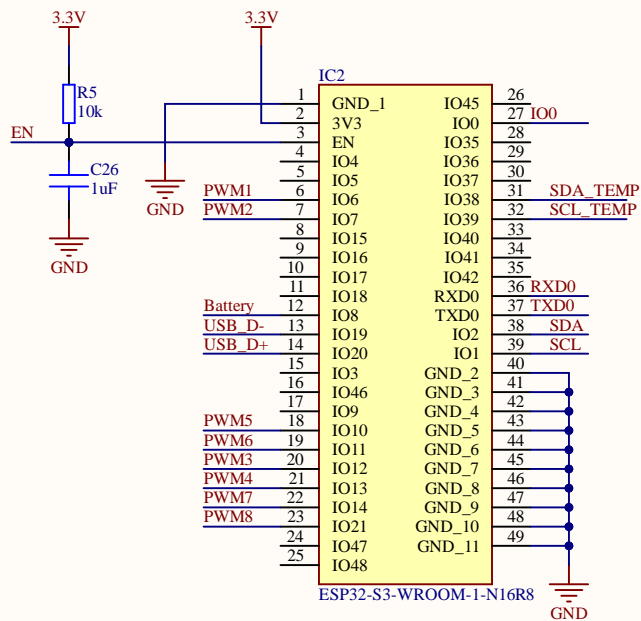
Voltage measure



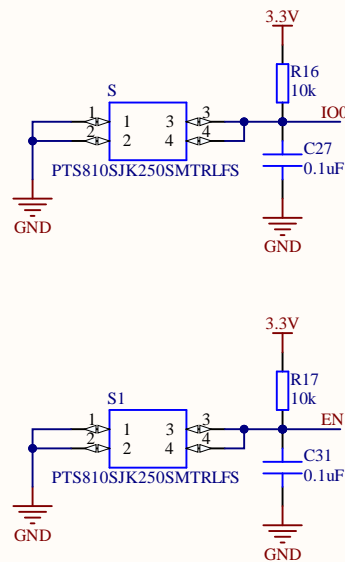
Accelerometer with gyroscope



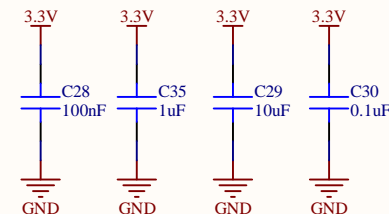
MCU ESP-32-S3



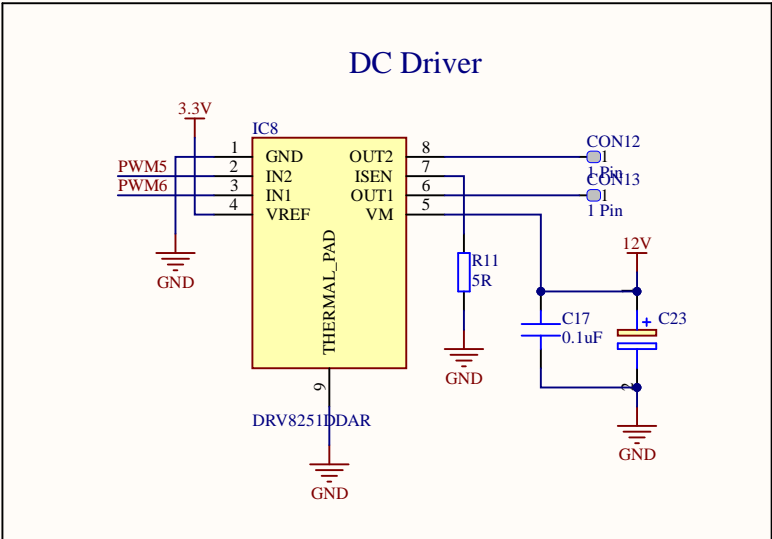
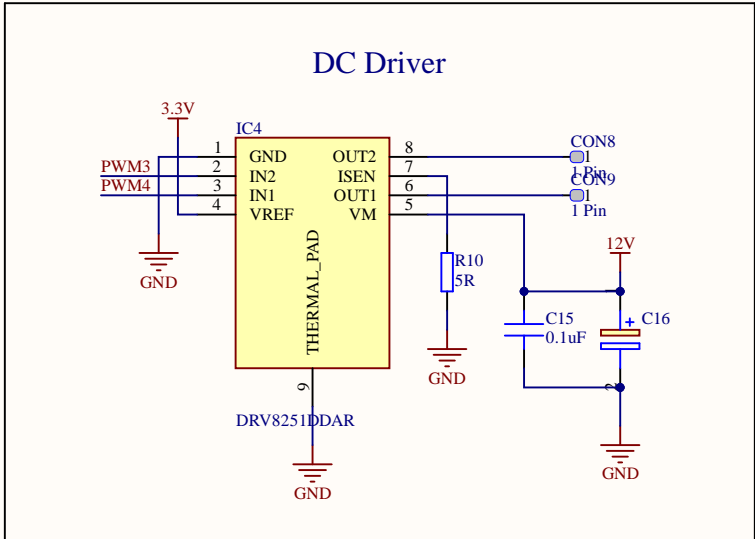
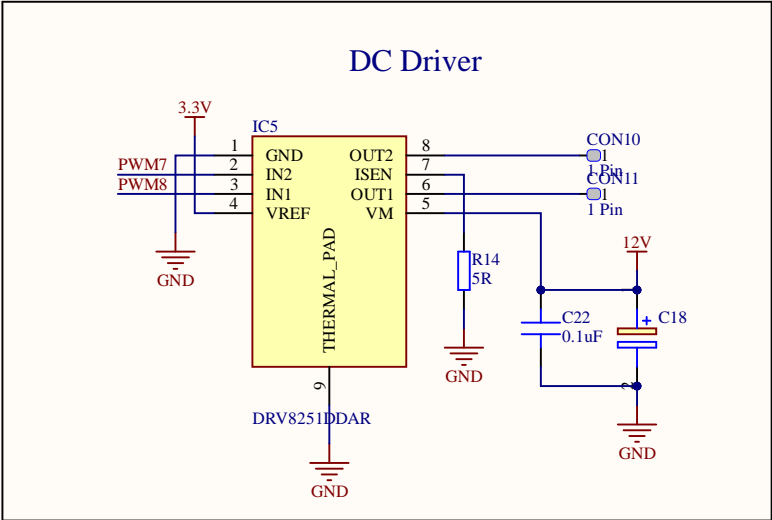
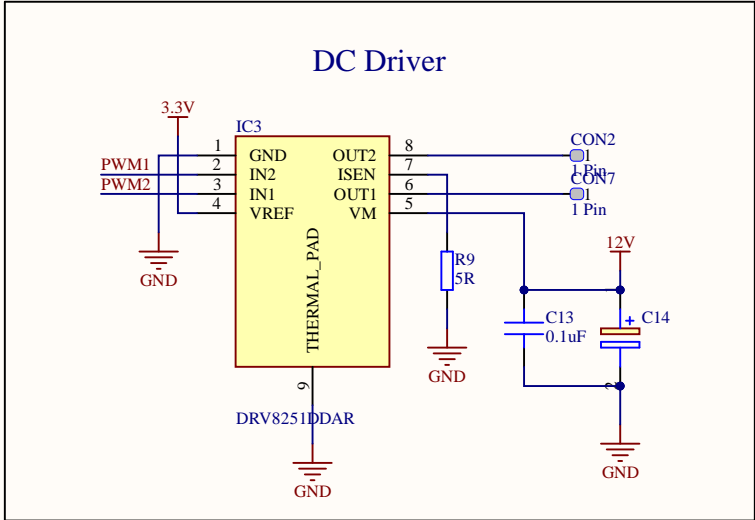
Buttons



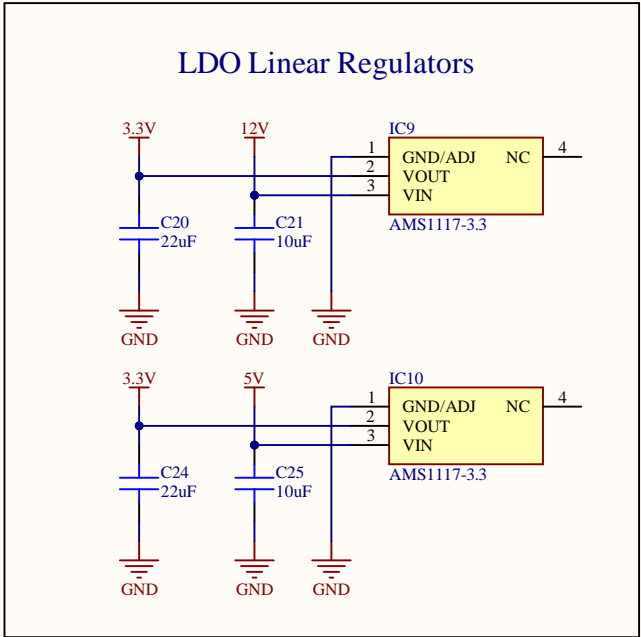
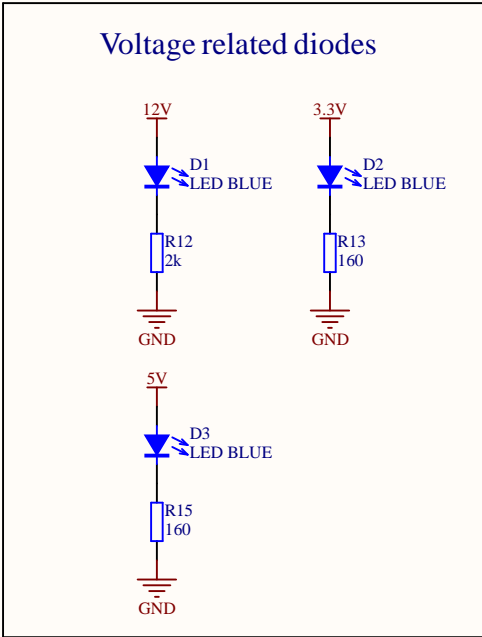
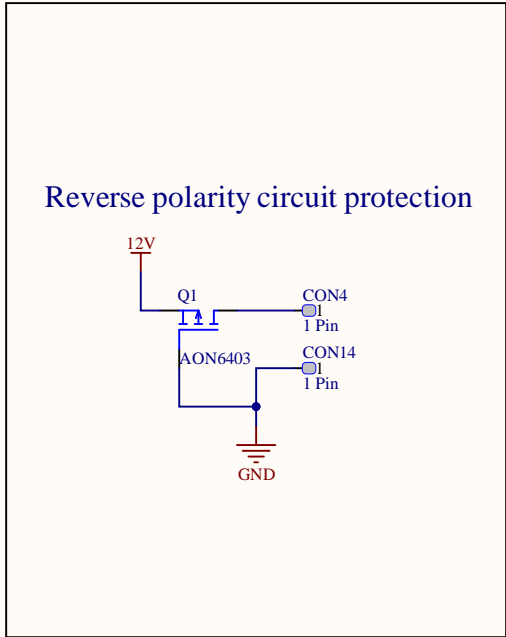
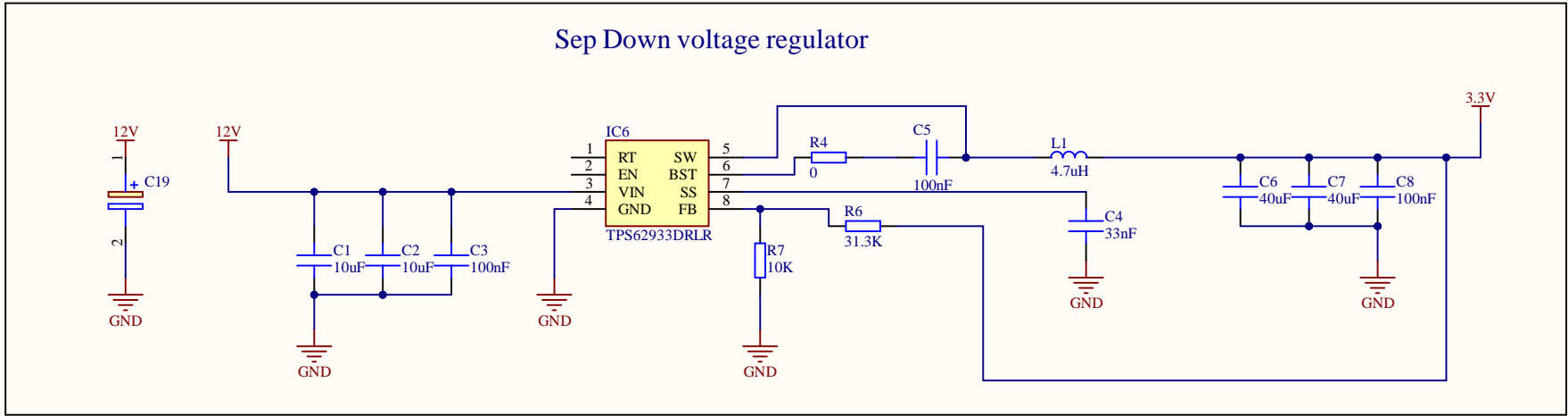
MCU filtration



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USBC connector

The diagram illustrates the internal circuitry of a USB-C connector. Key components include:

- IC7 (BAT760-7):** A Schottky diode used for protection.
- IC12 (BAT760-7):** Another Schottky diode for protection.
- J2 (USB4500-03-0-A):** The USB-C connector IC, which manages the connection between the USB-C port and the internal system.
- Resistors:** R18 (10k) and R21 (10k) are used for current limiting and signal conditioning.
- Capacitors:** C32 (10uF) and C34 (10uF) are used for decoupling and filtering.
- Diodes:** D6 and D7 are Schottky diodes for protection.
- Connectors:** J1 (USB-C connector) and J2 (USB4500-03-0-A) are the main connection points.

The circuit is powered by a 5V source, which is connected to the VBUS pin of the USB-C connector (J1) and the VBUS pin of the USB4500-03-0-A IC (J2). The ground (GND) is connected to the GND pin of the USB-C connector (J1) and the GND pin of the USB4500-03-0-A IC (J2).

Uart programmer

3.3V

J1

EN 1

TXD0 3

RXD0 5

1 2

3 4

5 6

IO0

09185066324

GND

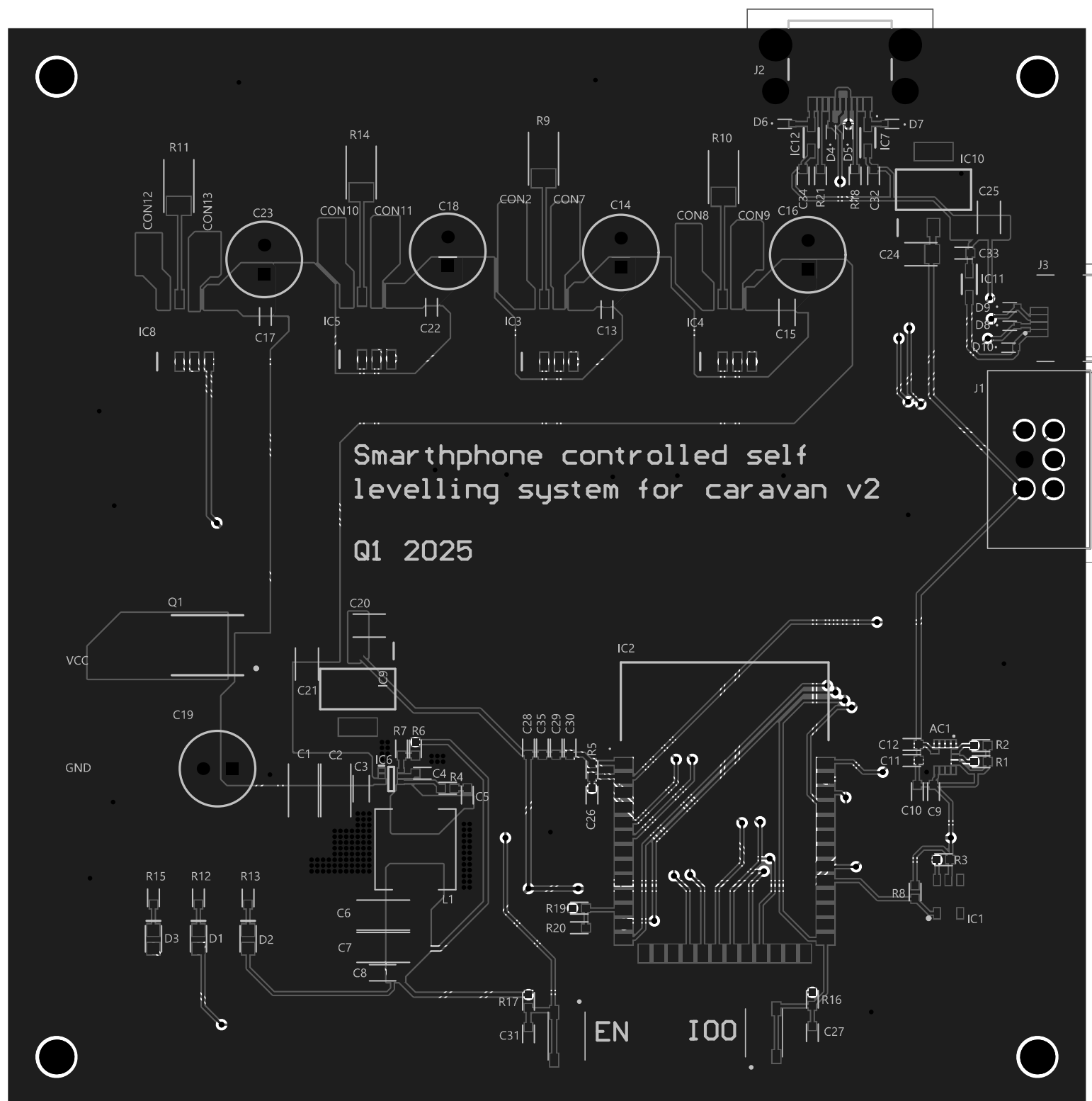
Micro USB connector

The diagram illustrates the internal circuitry of a Micro USB connector. It features a 5V power input connected to a 10uF capacitor (C33) and a BAT760-7 diode (IC11) for reverse polarity protection. The USB D- and D+ lines pass through diodes D8, D9, and D10, which are connected to ground. The USB D- line is also connected to the GND pin of the Micro USB connector (J3). The Micro USB connector (J3) is a 0473461001 component with pins for VBUS, D-, D+, ID, GND, and MP1 through MP6. The GND pin is connected to ground, and the MP1 pin is connected to the D- line. The VBUS, D-, D+, ID, and MP2 through MP6 pins are connected to the corresponding pins of the Micro USB connector.

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Smartphone controlled self
levelling system for caravan v2

Q1 2025



| Comment | Description | Designator | Footprint | LibRef | Quantity |
|------------------------|---|---|------------------------|------------------------|----------|
| LSM6DSOXTR | Accelerometer | AC1 | LGA-14_1 | LSM6DSOXTR | 1 |
| 10uF | MLCC Capacitor | C1, C2 | C 1206 | Capacitor | 2 |
| 100nF | MLCC Capacitor | C3, C8 | C 0603 | Capacitor | 2 |
| 33nF | MLCC Capacitor | C4 | C 0402 | Capacitor | 1 |
| 100nF | MLCC Capacitor | C5, C9, C12, C28 | C 0402 | Capacitor | 4 |
| 40uF | MLCC Capacitor | C6, C7 | C 1206 | Capacitor | 2 |
| 1uF | MLCC Capacitor | C10, C11, C26, C35 | C 0402 | Capacitor | 4 |
| 0.1uF | MLCC Capacitor | C13, C17, C22, C27, C30, C31 | C 0402 | Capacitor | 6 |
| UVY1V101MED1TD | Capacitor Polarised | C14, C16, C18, C19, C23 | CAPPRD250W50D655 H1250 | UVY1V101MED1TD | 5 |
| 0.1uF | MLCC Capacitor | C15 | C 0603 | Capacitor | 1 |
| 22uF | MLCC Capacitor | C20, C24 | C 0805 | Capacitor | 2 |
| 10uF | MLCC Capacitor | C21, C25 | C 0805 | Capacitor | 2 |
| 10uF | MLCC Capacitor | C29, C32, C33, C34 | C 0402 | Capacitor | 4 |
| 1 Pin | | CON2, CON4, CON7, CON8, CON9, CON10, CON11, CON12, CON13, CON14 | SMD PAD | 1 Pin | 10 |
| LED BLUE | | D1, D2, D3 | LED 0603 BLUE | LED BLUE | 3 |
| LES5D5.0CT1G | TVS Diode (Bi-directional) | D4, D5, D6, D7, D8, D9, D10 | LES5D50CT1G | LES5D5.0CT1G | 7 |
| HDC1080DMBR | Integrated Circuit | IC1 | SON100P300X300X80-7N-D | HDC1080DMBR | 1 |
| ESP32-S3-WROOM-1-N16R8 | Integrated Circuit | IC2 | ESP32S3WROOM1N16R8 | ESP32-S3-WROOM-1-N16R8 | 1 |
| DRV8251DDAR | Integrated Circuit | IC3, IC4, IC5, IC8 | SOIC127P600X170-9N | DRV8251DDAR | 4 |
| TPS62933DRLR | Integrated Circuit | IC6 | SOTFL50P160X60-8N | TPS62933DRLR | 1 |
| BAT760-7 | Integrated Circuit | IC7, IC11, IC12 | SOD2513X120N | BAT760-7 | 3 |
| AMS1117-3.3 | Integrated Circuit | IC9, IC10 | SOT229P700X180-4N | AMS1117-3.3 | 2 |
| 09185066324 | Connector | J1 | 09185066324 | 09185066324 | 1 |
| USB4500-03-0-A | Connector | J2 | USB4500030A | USB4500-03-0-A | 1 |
| 0473461001 | Connector | J3 | 0473461001 | 0473461001 | 1 |
| 4.7uH | General pourpouse inductor | L1 | HPI0630 | Inductor | 1 |
| AON6403 | P-Mosfet 30V 67A Rds(on) 3.1mR | Q1 | DFN 5x6 | AON6403 | 1 |
| 10k | General pourpouse resistor | R1, R2, R3, R5, R7, R8, R16, R17, R18, R21 | R 0402 | Resistor | 10 |
| 0 | General pourpouse resistor | R4 | R 0402 | Resistor | 1 |
| 31.3K | General pourpouse resistor | R6 | R 0402 | Resistor | 1 |
| 5R | General pourpouse resistor | R9, R10, R11, R14 | R 1206 | Resistor | 4 |
| 2k | General pourpouse resistor | R12 | R 0402 | Resistor | 1 |
| 160 | General pourpouse resistor | R13, R15 | R 0402 | Resistor | 2 |
| 47k | General pourpouse resistor | R19 | R 0402 | Resistor | 1 |
| 13k | General pourpouse resistor | R20 | R 0402 | Resistor | 1 |
| PTS810SJK250SMTRLFS | Tactile Switch SPST-NO Top Actuated Surface Mount | S, S1 | PTS810SJK250SMTRLFS | PTS810SJK250SMTRLFS | 2 |