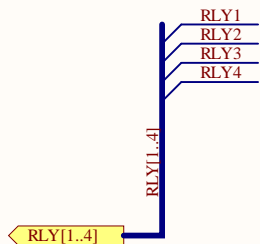
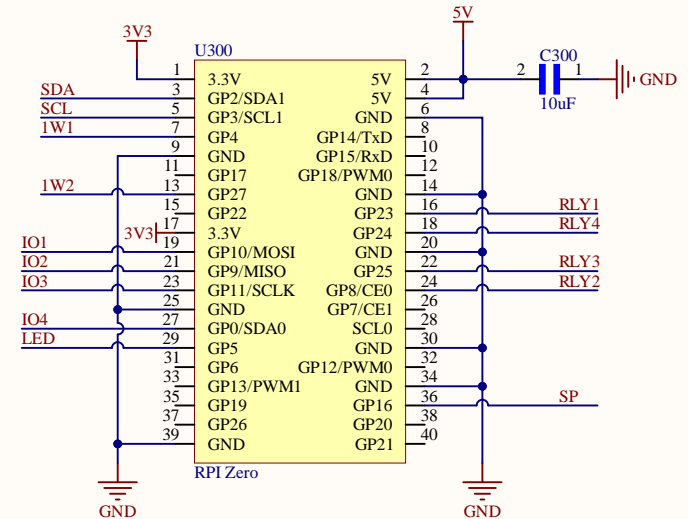
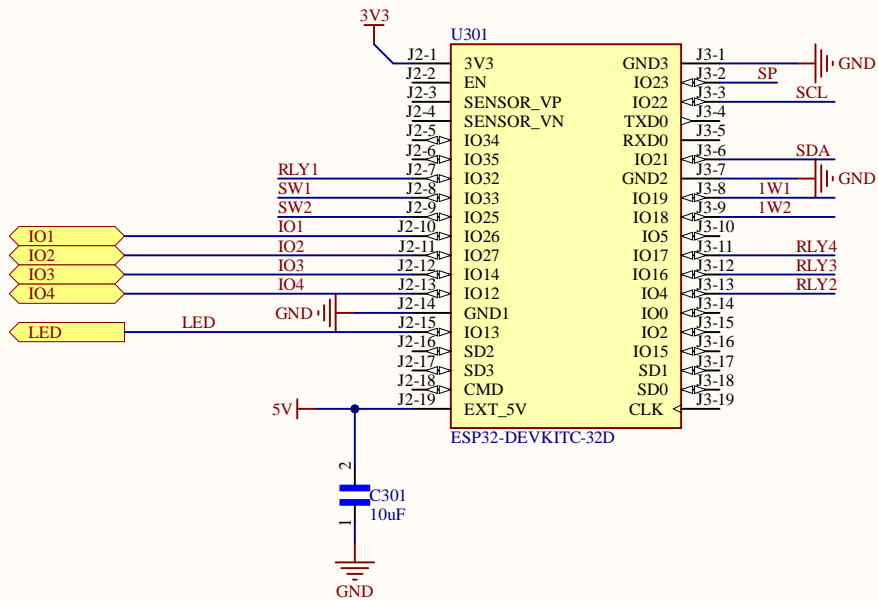


<https://lastminuteengineers.com/esp32-pinout-reference/>



Title **RV Essential: Logic Controller**

Size: **A4**

Number: **3**

Revision: **A**

Date: **9/23/2023**

Time: **10:12:52 PM** Sheet **3** of **5**

File: **rv_pwr_es_ctrl.SchDoc**

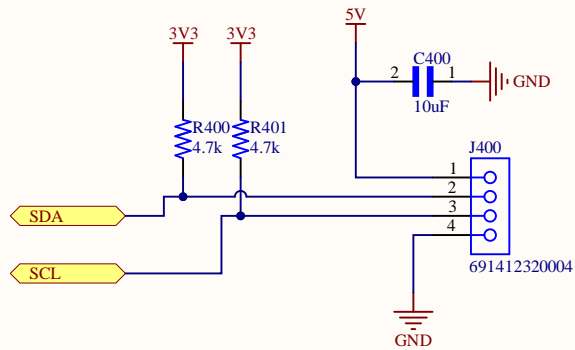
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blueacro.com

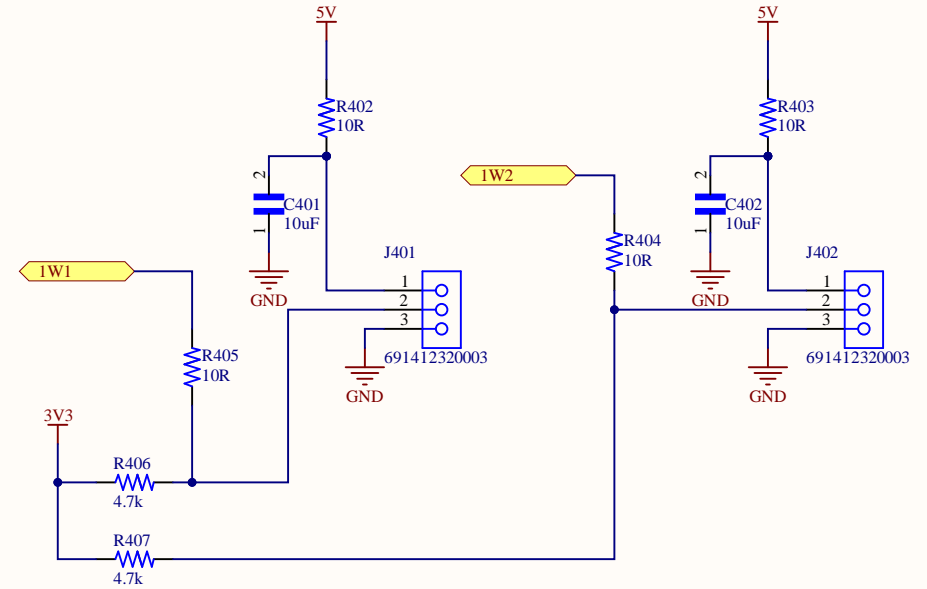
github.com/blueacro

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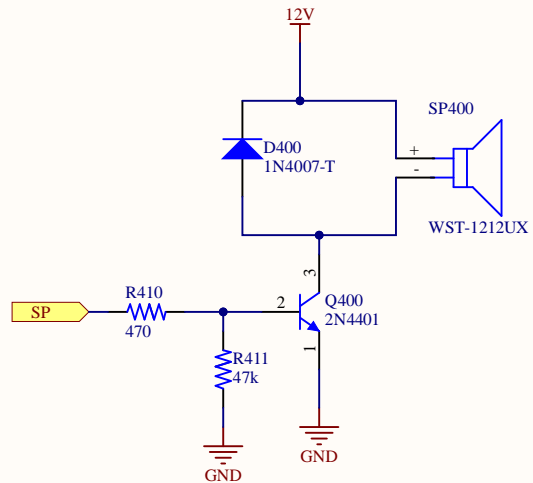
I2C Connector



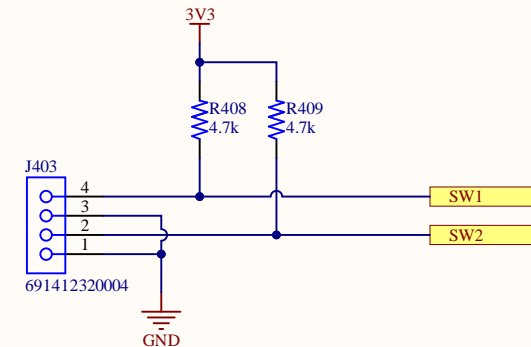
1Wire Ports



Sensor

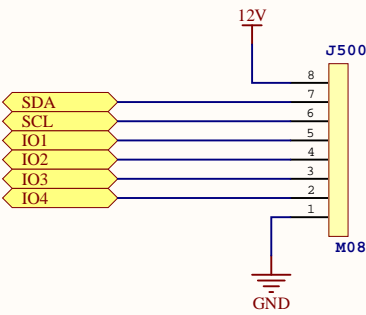


Switch Input

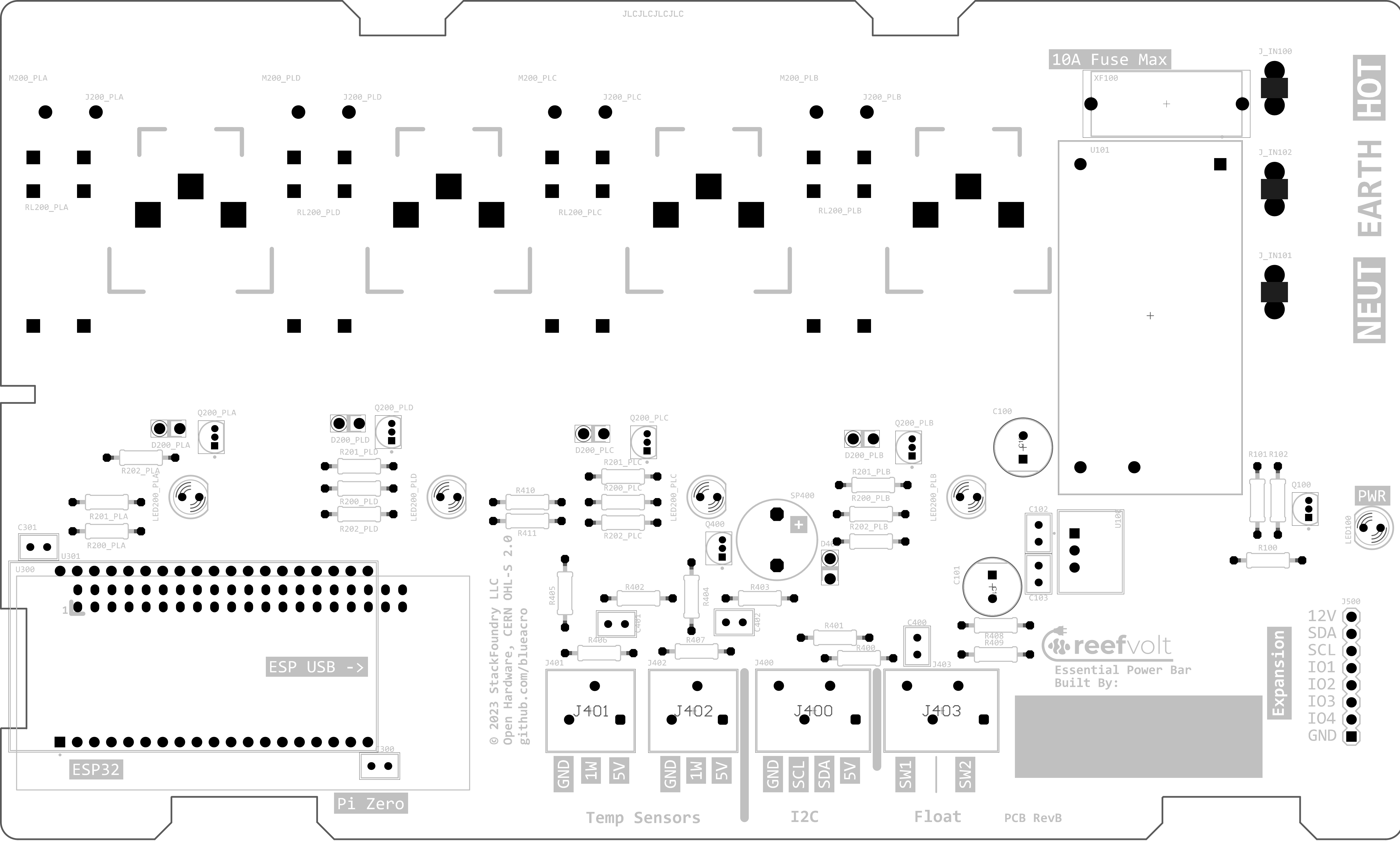
Title ***RV Essential: Sensors and IO***Size: **A4**Number: **4**Revision: **A**Date: **9/23/2023**Time: **10:12:52 PM** Sheet **4** of **5**File: **rv_pwr_es_sensor.SchDoc**

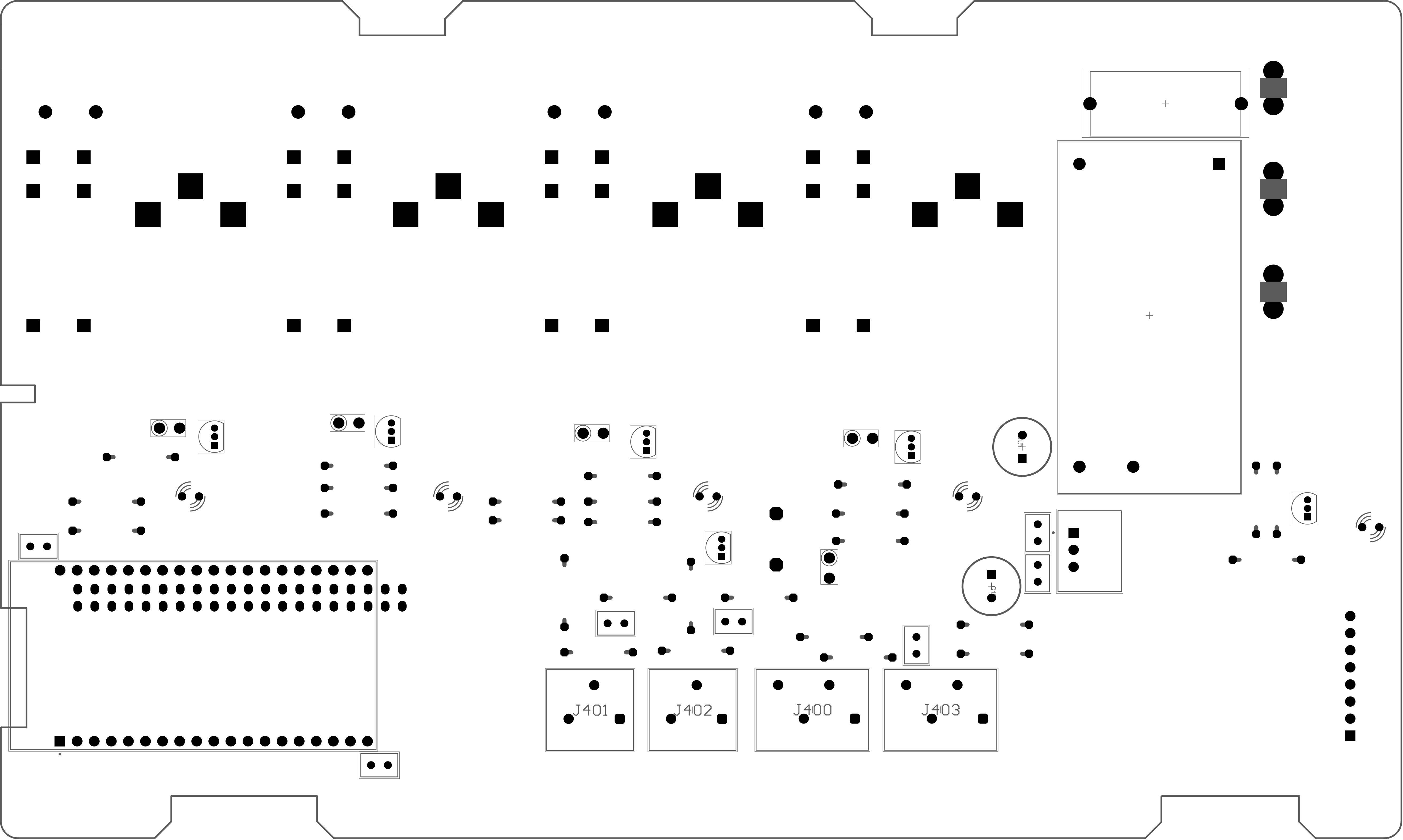
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| | | | | |
|--|--------------------------|----------------------------|------------------|--|
| Title <i>RV Essential: Expansion</i> | | | * * * * | Made available under the CERN OHL v2.0 blueacro.com github.com/blueacro |
| Size: A4 | Number: 1 | Revision: A | | |
| Date: 9/23/2023 | Time: 10:12:52 PM | Sheet 5 of 5 | | |
| File: rv_pwr_addon.SchDoc | | | | |
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| Line # | Name | Description | Designator | Quantity | Manufacturer 1 | Manufacturer Part Number 1 | Manufacturer Lifecycle 1 | Supplier 1 | Supplier Part Number 1 | Supplier Unit Price 1 | Supplier Subtotal 1 |
|--------|---|--|--|----------|------------------------------|----------------------------|--------------------------|------------|--------------------------|-----------------------|---------------------|
| 1 | CAP 100uf 25V Aluminum 8mm Through Hole | Cap Aluminum 100uf 25V 20% (R X 11.5mm) Radial 3.5mm 500mA 2000 hr 125°C Bulk | C100, C101 | 2 | Panasonic | EEUTA1E101 | Volume Production | Digi-Key | P19501-ND | 0.86 | 1.72 |
| 2 | CAP 10uf 25V TH X7R | FG Series 10 uF 25 V ±10% Tolerance X7R Radial Multilayer Ceramic Capacitor | C102, C103, C300, C301, C400, C401, C402 | 7 | TDK | FG16X7R1E106KRT06 | Volume Production | Digi-Key | 445-173156-1-ND | 0.65 | 4.55 |
| 3 | 1N4007-T | VR-1000V IF-1A 8pF | D200_PLA, D200_PLB, D200_PLC, D200_PLD, D400 | 5 | Diodes | 1N4007-T | Volume Production | Digi-Key | 1N4007DICT-ND | 0.2 | 1 |
| 4 | 3-213598-2 | | D200_PLA, J200_PLB, J200_PLC, J200_PLD | 4 | TE Connectivity | 3-213598-2 | Volume Production | Digi-Key | 3-213598-2-ND | 2.7 | 10.8 |
| 5 | 691412320004 | 1b, Wire To Brd, 4Way, 16Awg Rohs Compliant: Yes Wurth Elektronik 691412320004 | J400, J403 | 2 | Wurth Electronics | 691412320004 | Unknown | Digi-Key | 732-11129-ND | 1.3 | 2.6 |
| 6 | 691412320003 | 1b, Wire To Brd, 3Way, 16Awg Rohs Compliant: Yes Wurth Elektronik 691412320003 | J401, J402 | 2 | Wurth Electronics | 691412320003 | Unknown | Digi-Key | 732-11128-ND | 1.39 | 2.78 |
| 7 | M08 | | J500 | 1 | | | | | | | |
| 8 | TAB_QUICKCON | Molex 0197054203 | J_IN100, J_IN101, J_IN102 | 3 | Molex | 19705-4203 | Volume Production | Digi-Key | WM3984CT-ND | 0.14 | 0.42 |
| 9 | | | LED100, LED200_PLA, LED200_PLB, LED200_PLC, LED200_PLD | 5 | Cree | C5038-RCN-CW020AA2 | Volume Production | Digi-Key | C5038-RCN-CW020AA2CT-ND | 0.18 | 0.9 |
| 10 | GMOV | | M200_PLA, M200_PLB, M200_PLC, M200_PLD | 4 | Bourns | GMOV-14D301K | Unknown | Digi-Key | GMOV-14D301K-ND | 1.84 | 7.36 |
| 11 | 2N4401 | Transistor NPN Silicon 40V IC=600ma TO-92 Case General Purpose Amplifier And Switch | Q100, Q200_PLA, Q200_PLB, Q200_PLC, Q200_PLD, Q400 | 6 | ON Semiconductor / Fairchild | 2N4401TA | Volume Production | Digi-Key | 2N4401TAFSCT-ND | 0.35 | 2.1 |
| 12 | 1k TH 0207 5% 0.25W | Res Carbon Film 1K Ohm 5% 1/4W -500ppm/°C to 350ppm/°C Conformal AXL Thru-Hole Paper T/R | R100, R200_PLA, R200_PLB, R200_PLC, R200_PLD | 5 | Yageo | CFR-25JR-52-1K | Volume Production | Digi-Key | 13-CFR-25JR-52-1KCT-ND | 0.1 | 0.5 |
| 13 | 470 TH 0207 5% 0.25W | Res Carbon Film 470 Ohm 5% 1/4W - 500ppm/°C to 350ppm/°C Conformal AXL Thru-Hole Paper T/R | R101, R201_PLA, R201_PLB, R201_PLC, R201_PLD, R410 | 6 | Yageo | CFR-25JR-52-470R | Volume Production | Digi-Key | 13-CFR-25JR-52-470RCT-ND | 0.1 | 0.6 |
| 14 | 47k TH 0207 5% 1/4W | Res Carbon Film 47K Ohm 5% 1/4W - 500ppm/°C to 350ppm/°C Conformal AXL Thru-Hole Paper T/R | R102, R202_PLA, R202_PLB, R202_PLC, R202_PLD, R411 | 6 | Yageo | CFR-25JR-52-47K | Volume Production | Digi-Key | 13-CFR-25JR-52-47KCT-ND | 0.1 | 0.6 |
| 15 | 4.7k TH 0207 5% 1/4W | Res Carbon Film 4.7K Ohm 5% 1/4W - 500ppm/°C to 350ppm/°C Conformal AXL Thru-Hole Paper T/R | R400, R401, R406, R407, R408, R409 | 6 | Yageo | CFR-25JR-52-4K7 | Volume Production | Digi-Key | 13-CFR-25JR-52-4K7CT-ND | 0.1 | 0.6 |
| 16 | 10R TH 0207 5% 1/4W | Res Carbon Film 10 Ohm 5% 1/4W -500ppm/°C to 350ppm/°C Conformal AXL Thru-Hole Paper T/R | R402, R403, R404, R405 | 4 | Yageo | CFR-25JR-52-10R | Volume Production | Digi-Key | 13-CFR-25JR-52-10RCT-ND | 0.1 | 0.4 |
| | RelaySPST_DT | | RL200_PLA, RL200_PLB, RL200_PLC, RL200_PLD | 4 | Omron | GSRL-1A-E-HR-DC12 | Volume Production | LCSC | C231374 | 1.58 | 6.34 |
| 18 | WST-1212UX | Audio Magnetic Xdr 9-15V Th | SP400 | 1 | Sobertron | WST-1212UX | Volume Production | Digi-Key | 433-1049-ND | 1.42 | 1.42 |
| 19 | P7805-2000-S | Module DC-DC 24VIN 1-OUT 5V 2A 10W 3-Pin SIP Module Tube | U100 | 1 | CUI | P78E05-1000 | Unknown | Digi-Key | 102-5018-ND | 3.09 | 3.09 |
| 20 | IRM-20-12 | Single Output Encapsulated Type, 12 V, 1.8 A, 21.6 W, -40 to 85 degC, 4-Pin THD, RoHS | U101 | 1 | Mean Well | IRM-20-12 | Volume Production | Digi-Key | 1866-3038-ND | 11.05 | 11.05 |
| 21 | RPI Zero | | U300 | 1 | | | | | | | |
| | ESP32-DEVKITC-32D | WiFi Development Tools (802.11) ESP32 General Development Kit, ESP32-WROOM- 32D on the board | U301 | 1 | Espressif Systems | ESP32-DEVKITC-32E | Unknown | Mouser | 356-ESP32-DEVKITC32E | 9.8 | 9.8 |
| 22 | 696103201002 | WR-FSH Fuse Holder Blocks Fuse Holder Blocks Clip Cover for PCB - THR Version | XF100 | 1 | Wurth Electronics | 696103201002 | Unknown | Mouser | 710-696103201002 | 1.26 | 1.26 |