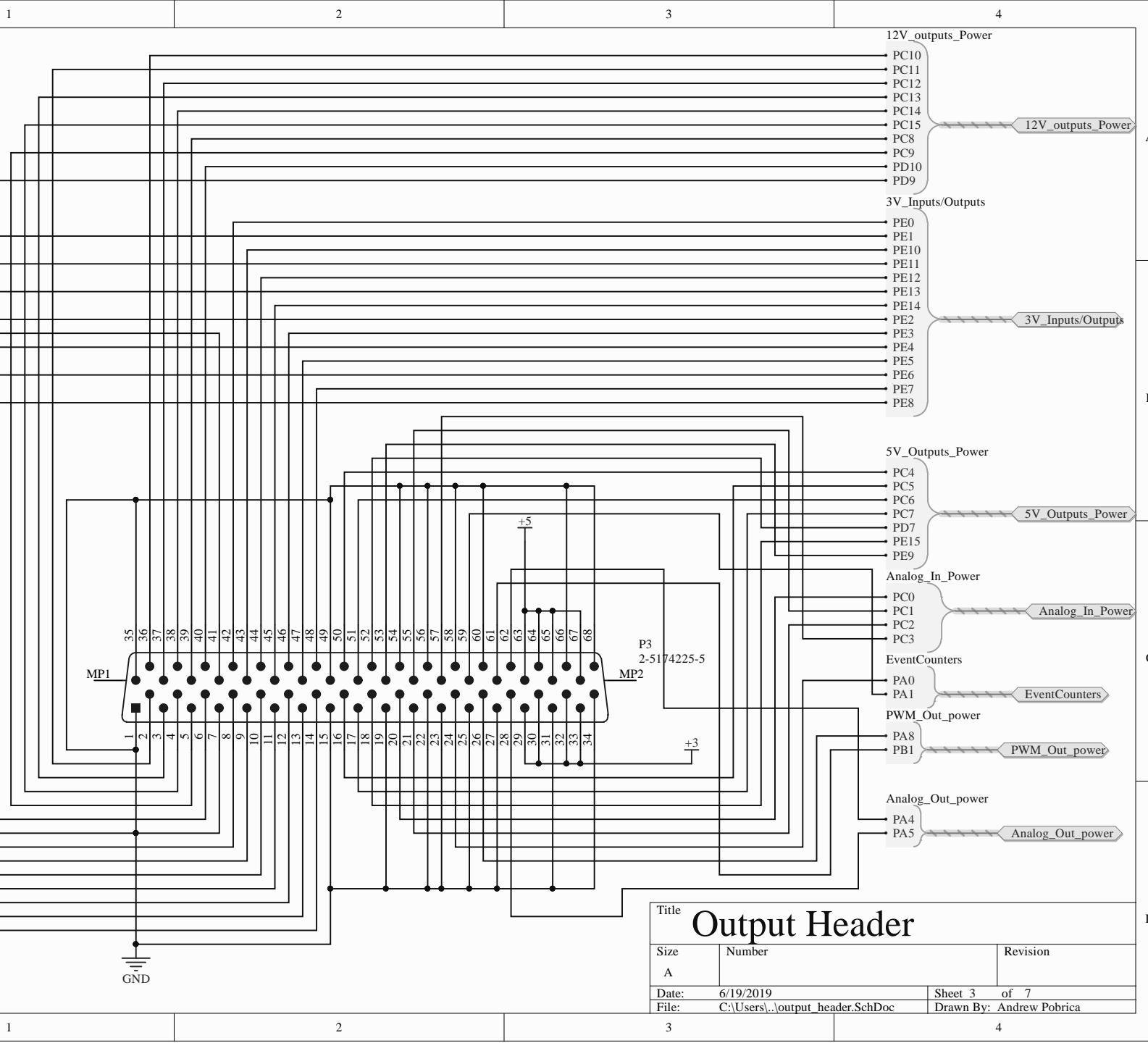
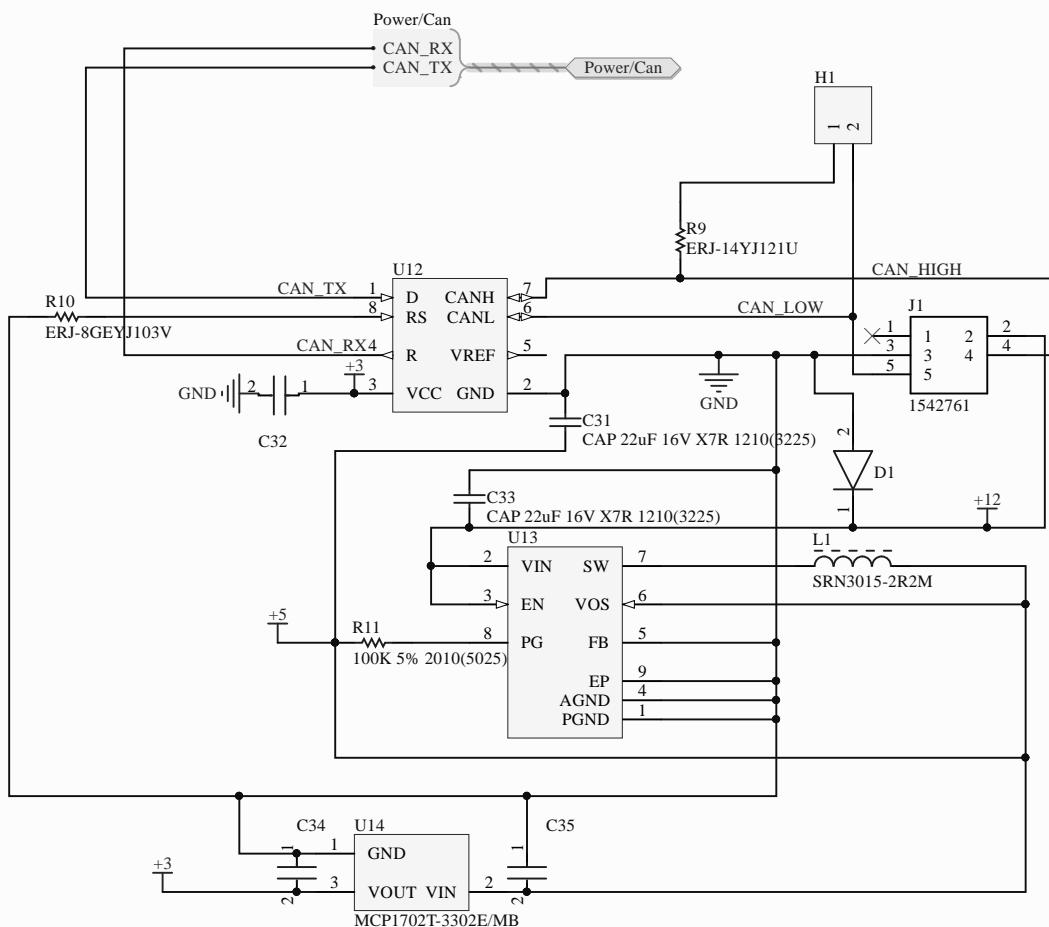


Title 12V Outputs

| Size | Number | Revision |
|-------|--------------------------------|--------------------------|
| A | | |
| Date: | 6/19/2019 | Sheet 2 of 7 |
| File: | C:\Users\...\12vOutputs.SchDoc | Drawn By: Andrew Pobrica |



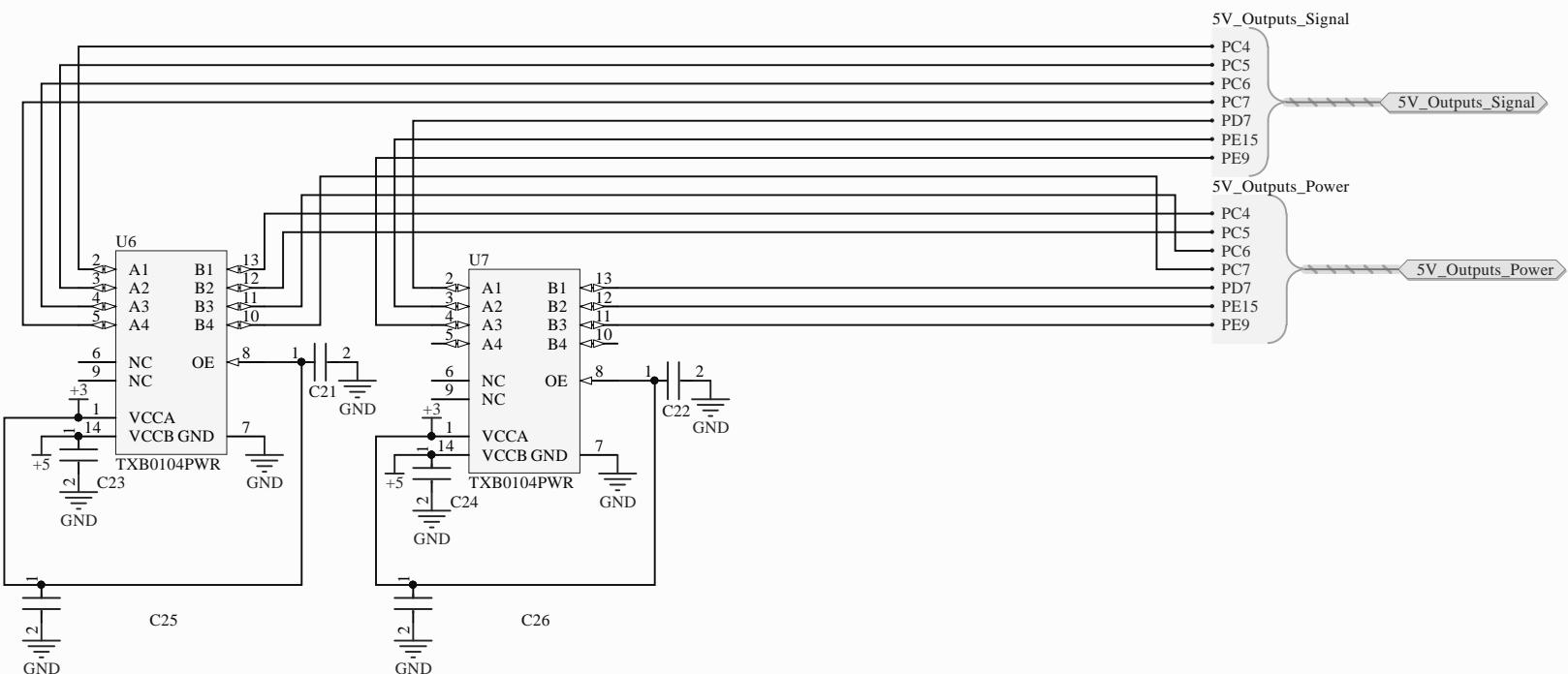
A



Title

Power and CAN

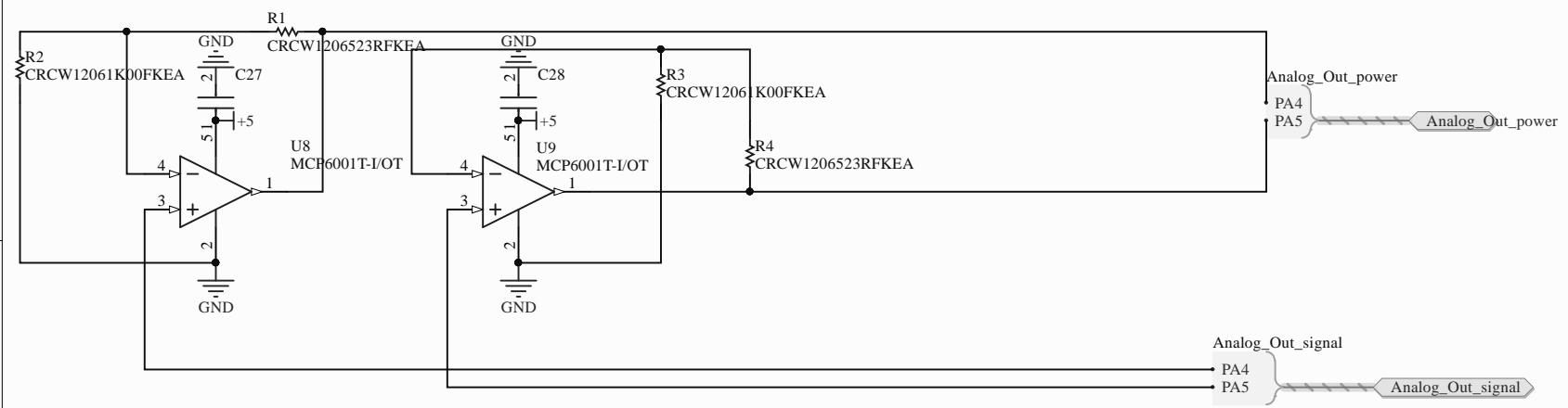
| Size | Number | Revision |
|-------|------------------------------|--------------------------|
| A | | |
| Date: | 6/19/2019 | Sheet 4 of 7 |
| File: | C:\Users\..\Power_CAN.SchDoc | Drawn By: Andrew Pobrica |



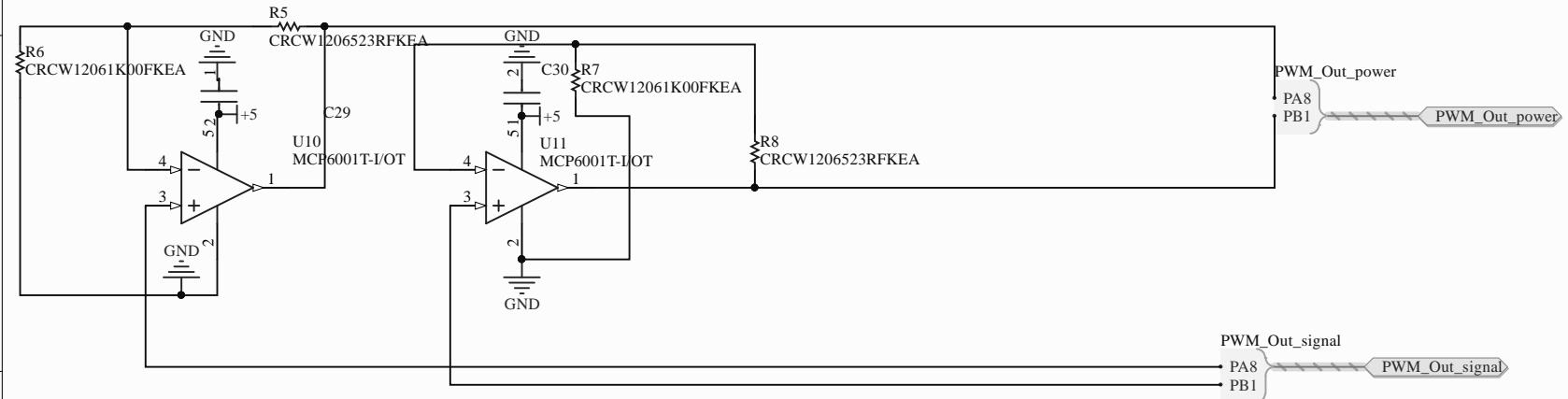
Title 5V Outputs

| Size | Number | Revision |
|-------|------------------------------|--------------------------|
| A | | |
| Date: | 6/19/2019 | Sheet 5 of 7 |
| File: | C:\Users\..\5vOutputs.SchDoc | Drawn By: Andrew Pobrica |

A



B

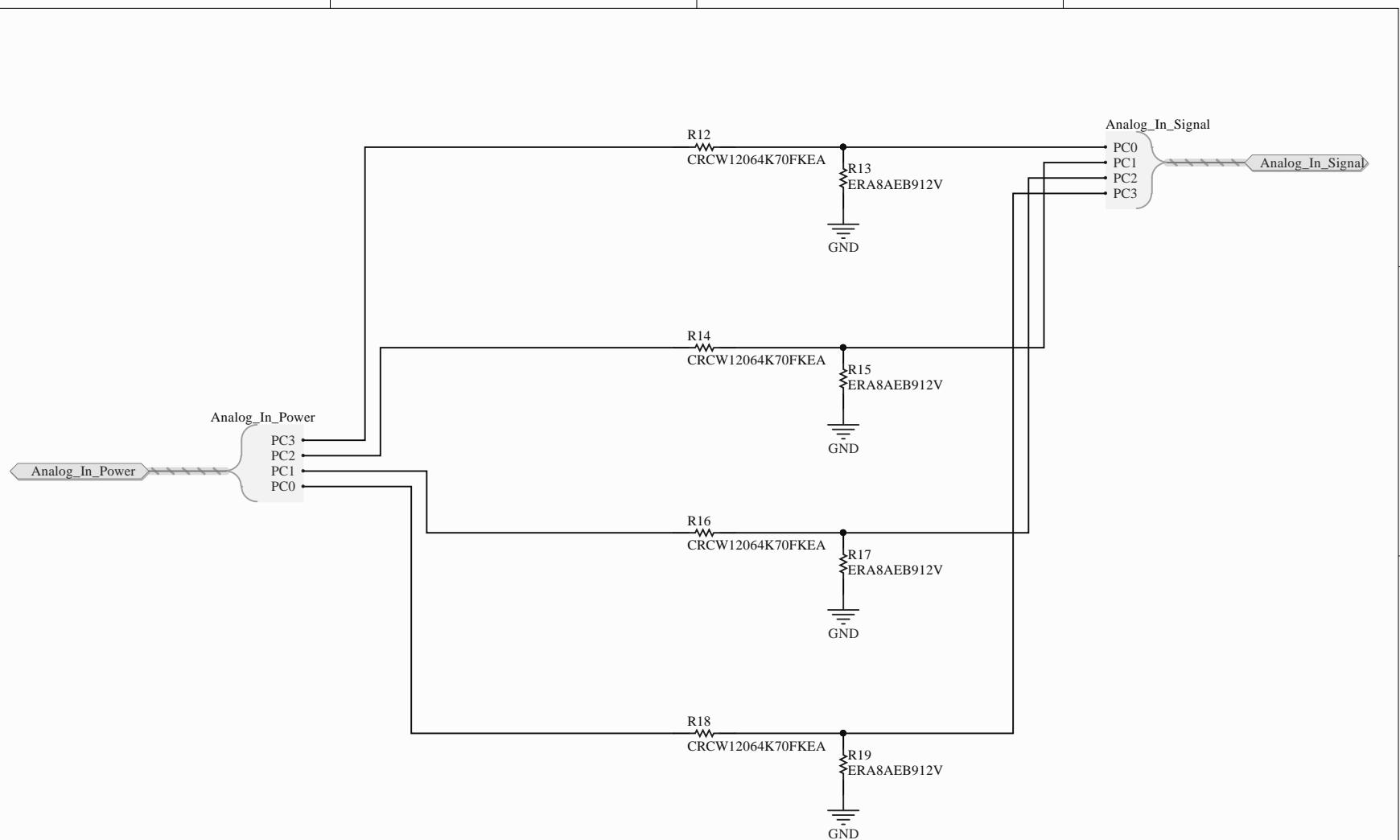


D

Title

DAC/PWM Outputs

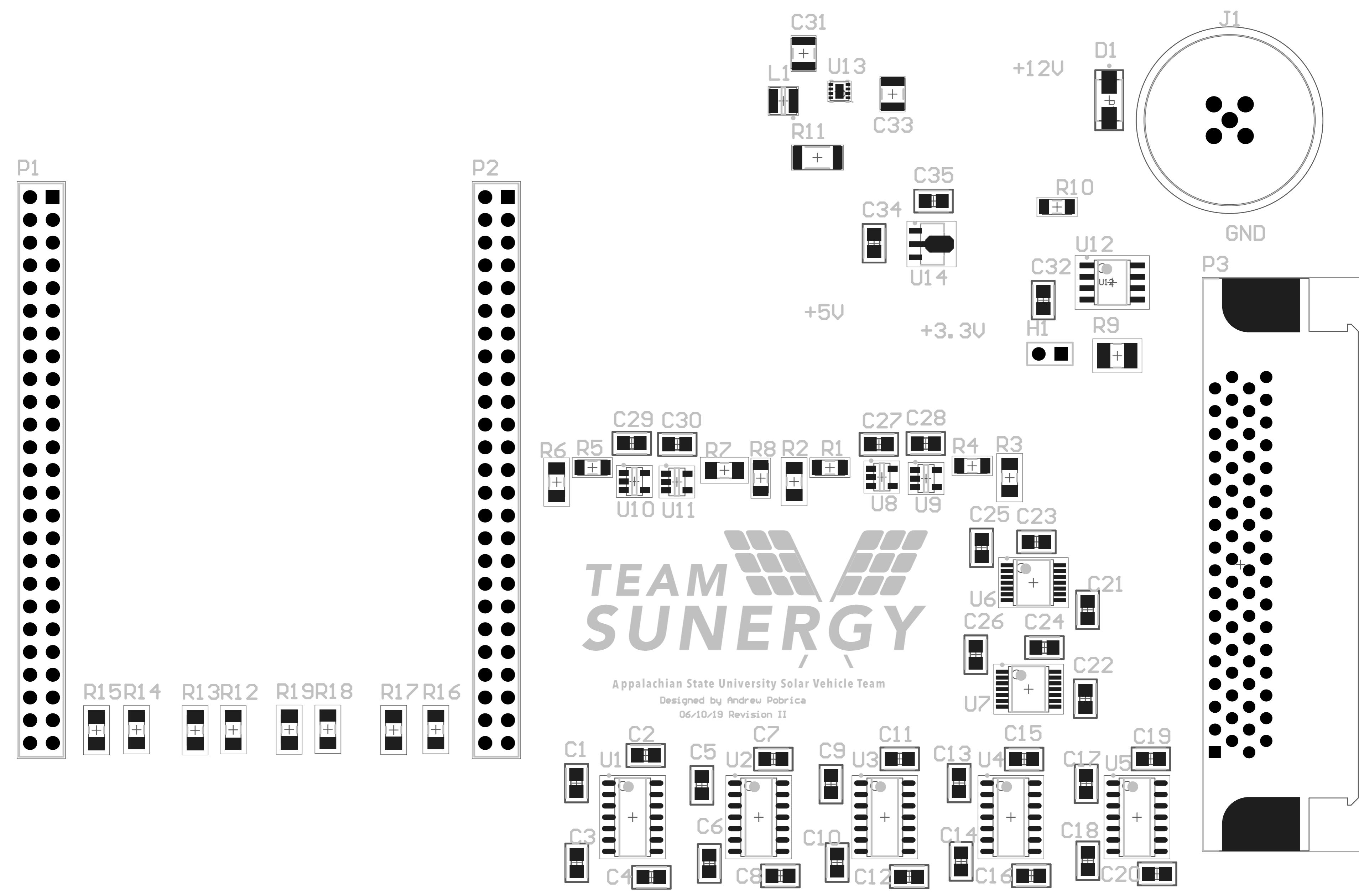
| Size | Number | Revision |
|-------|-------------------------------------|--------------------------|
| A | | |
| Date: | 6/19/2019 | Sheet 6 of 7 |
| File: | C:\Users\...\DAC_PWW_Outputs.SchDoc | Drawn By: Andrew Pobrica |

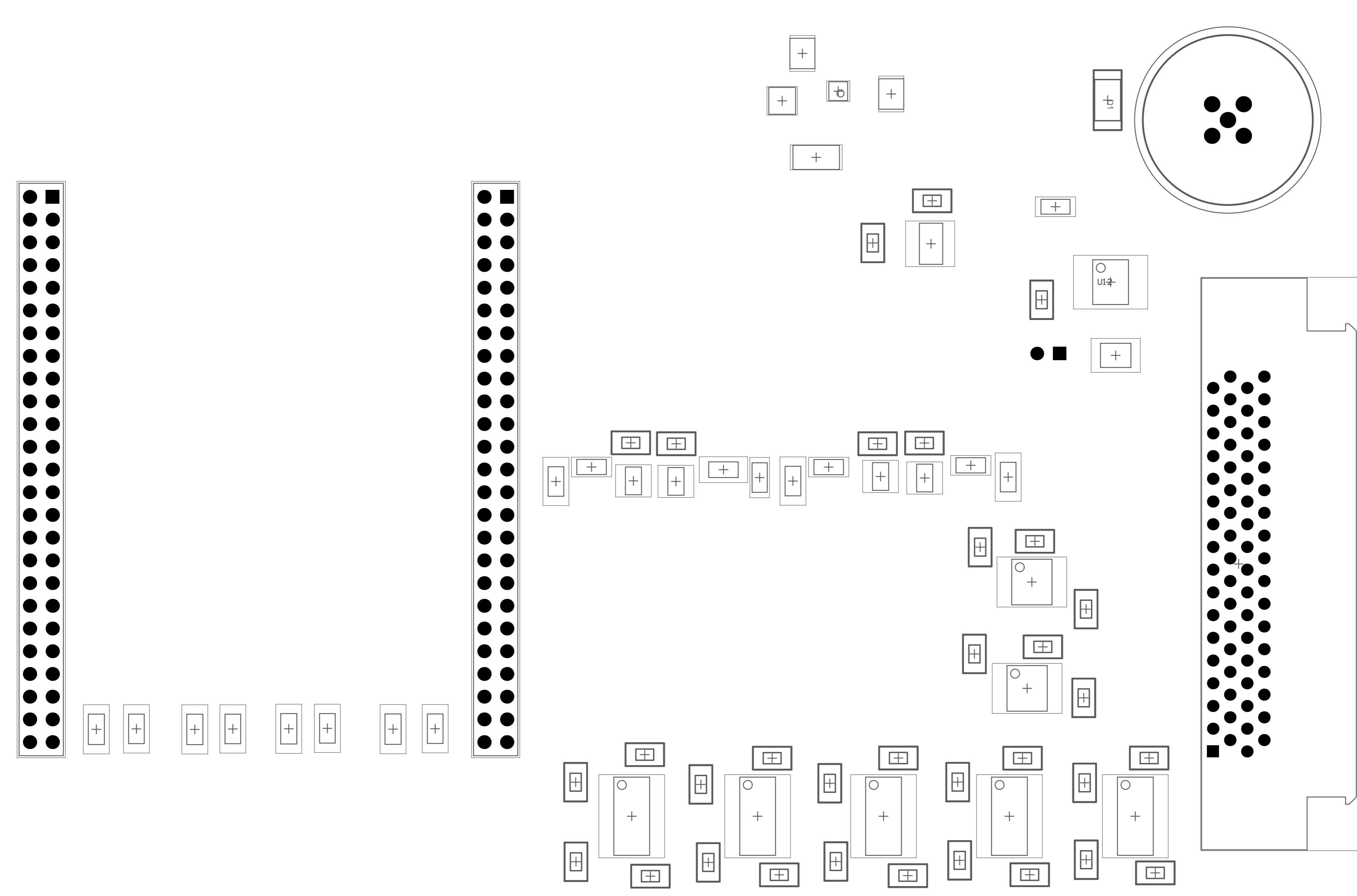


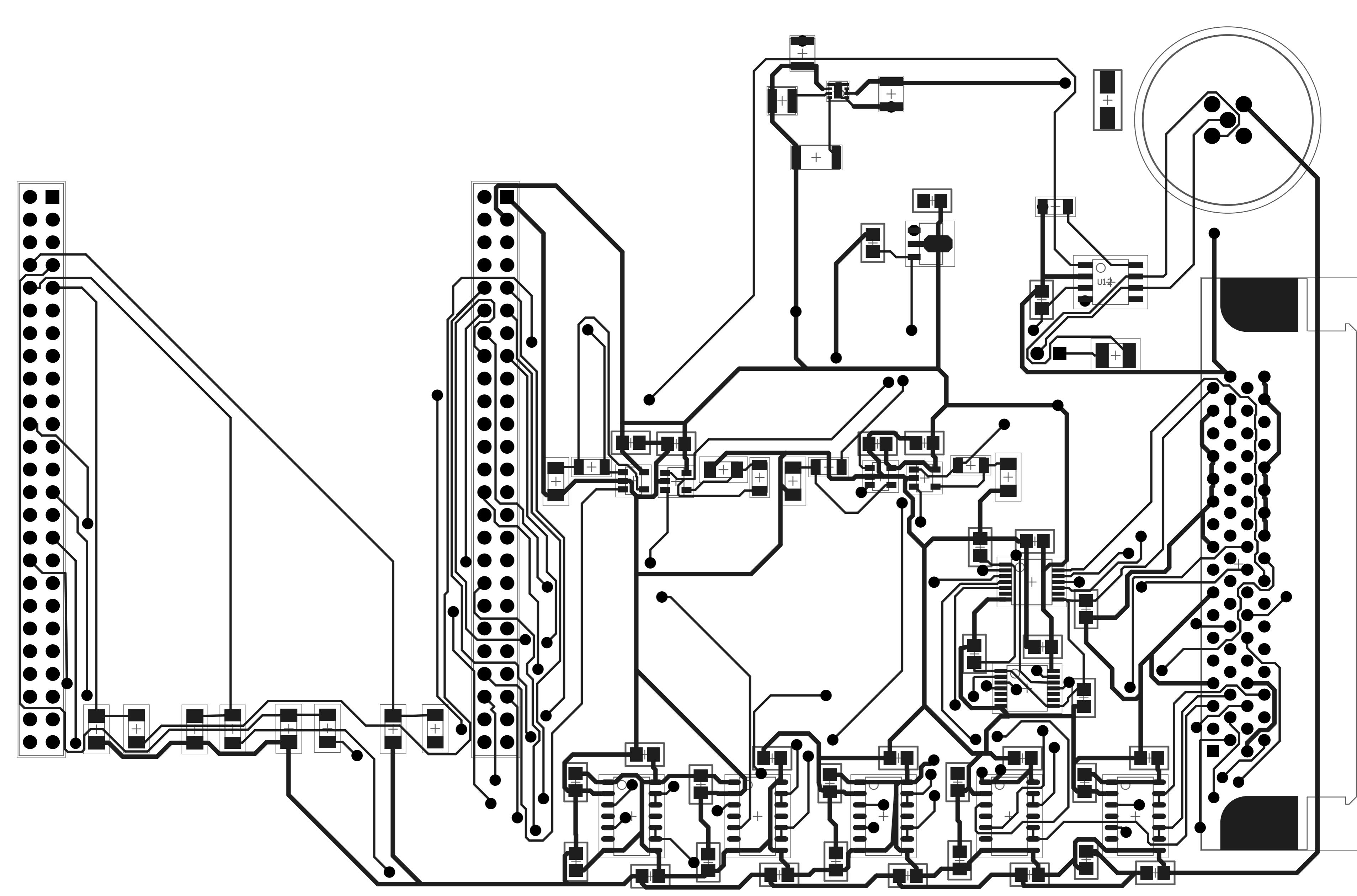
Title

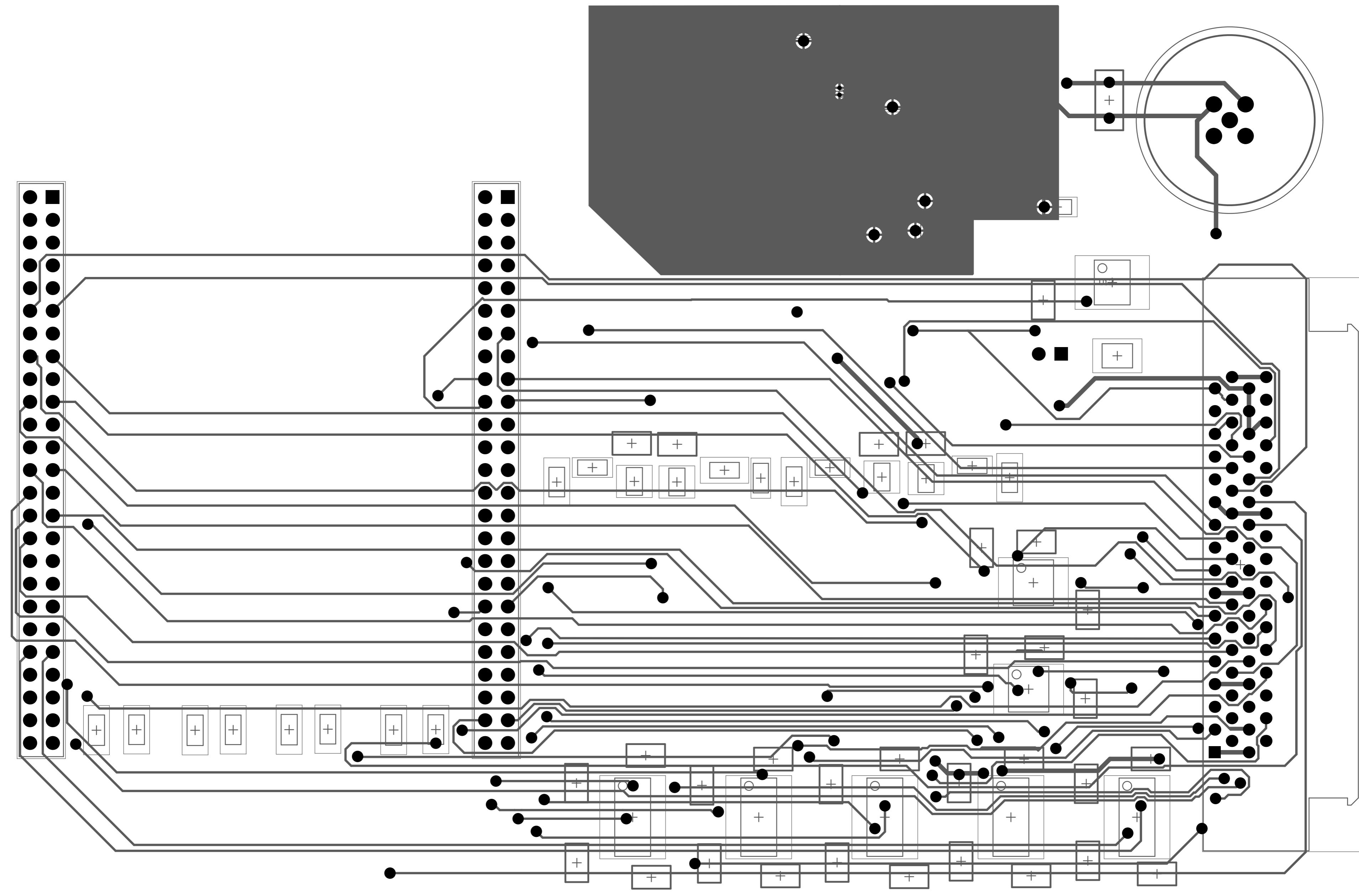
Analog Inputs

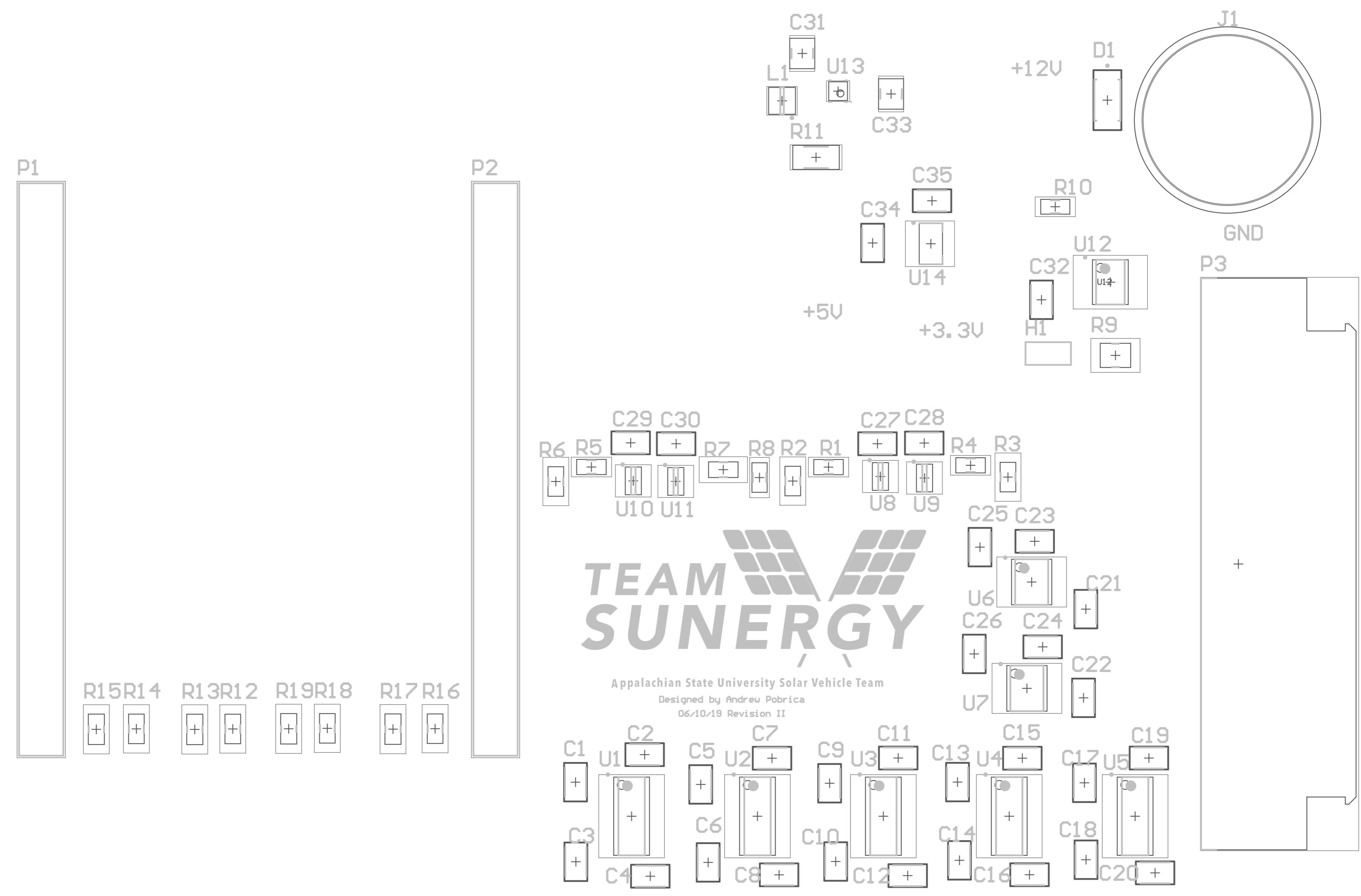
| Size | Number | Revision |
|-------|----------------------------------|--------------------------|
| A | | |
| Date: | 6/19/2019 | Sheet 7 of 7 |
| File: | C:\Users...\Analog_inputs.SchDoc | Drawn By: Andrew Pobrica |

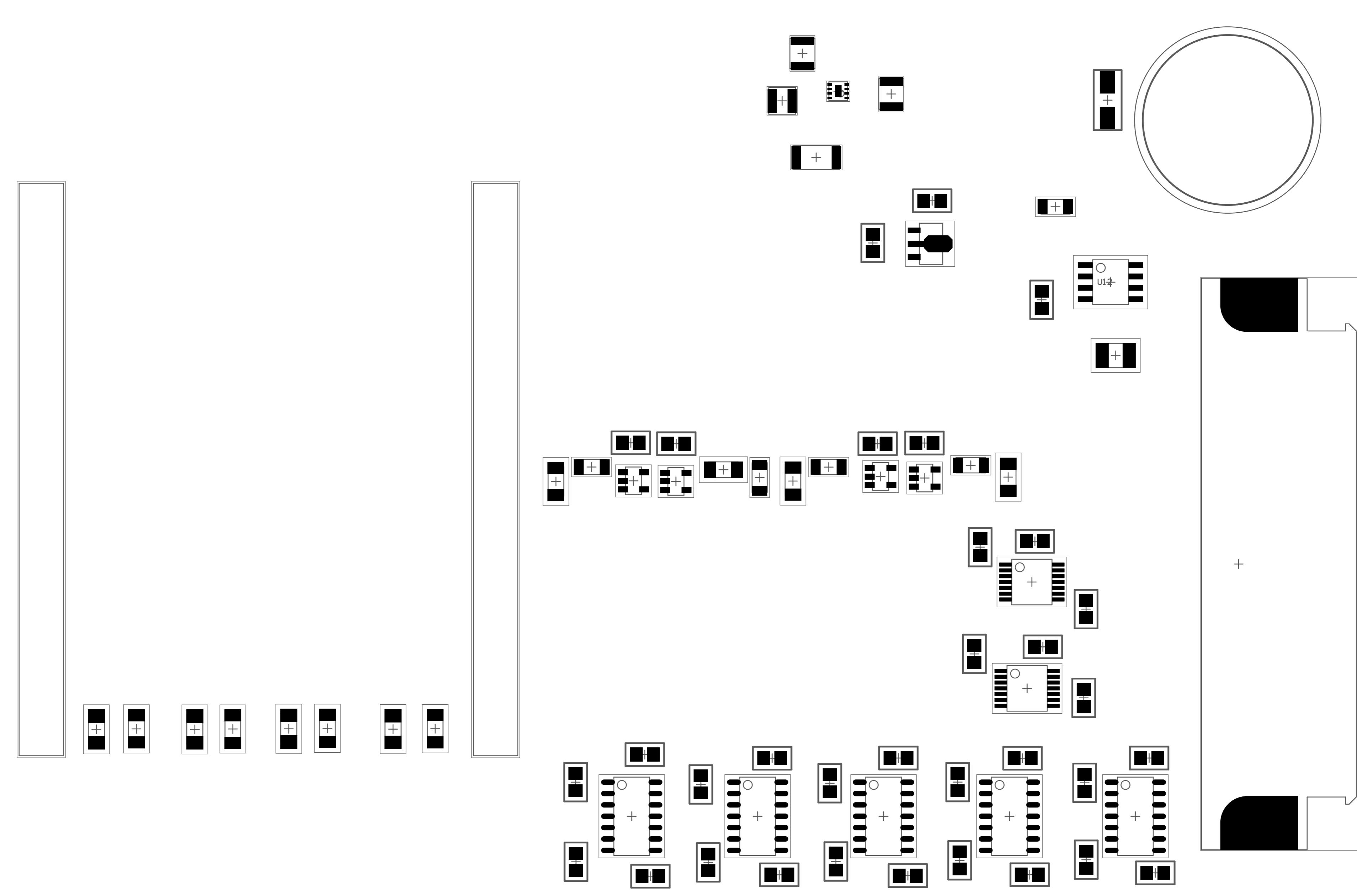


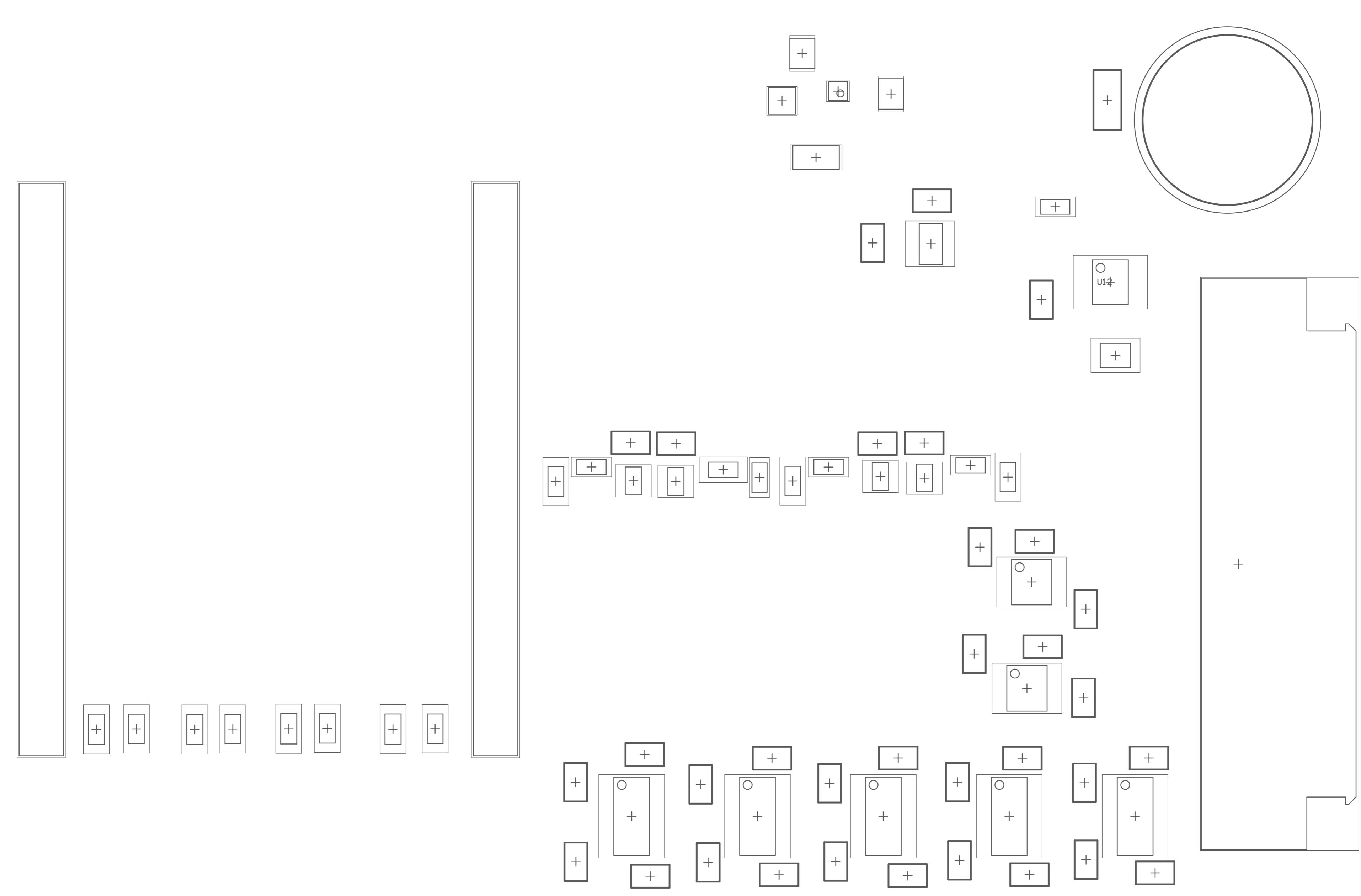




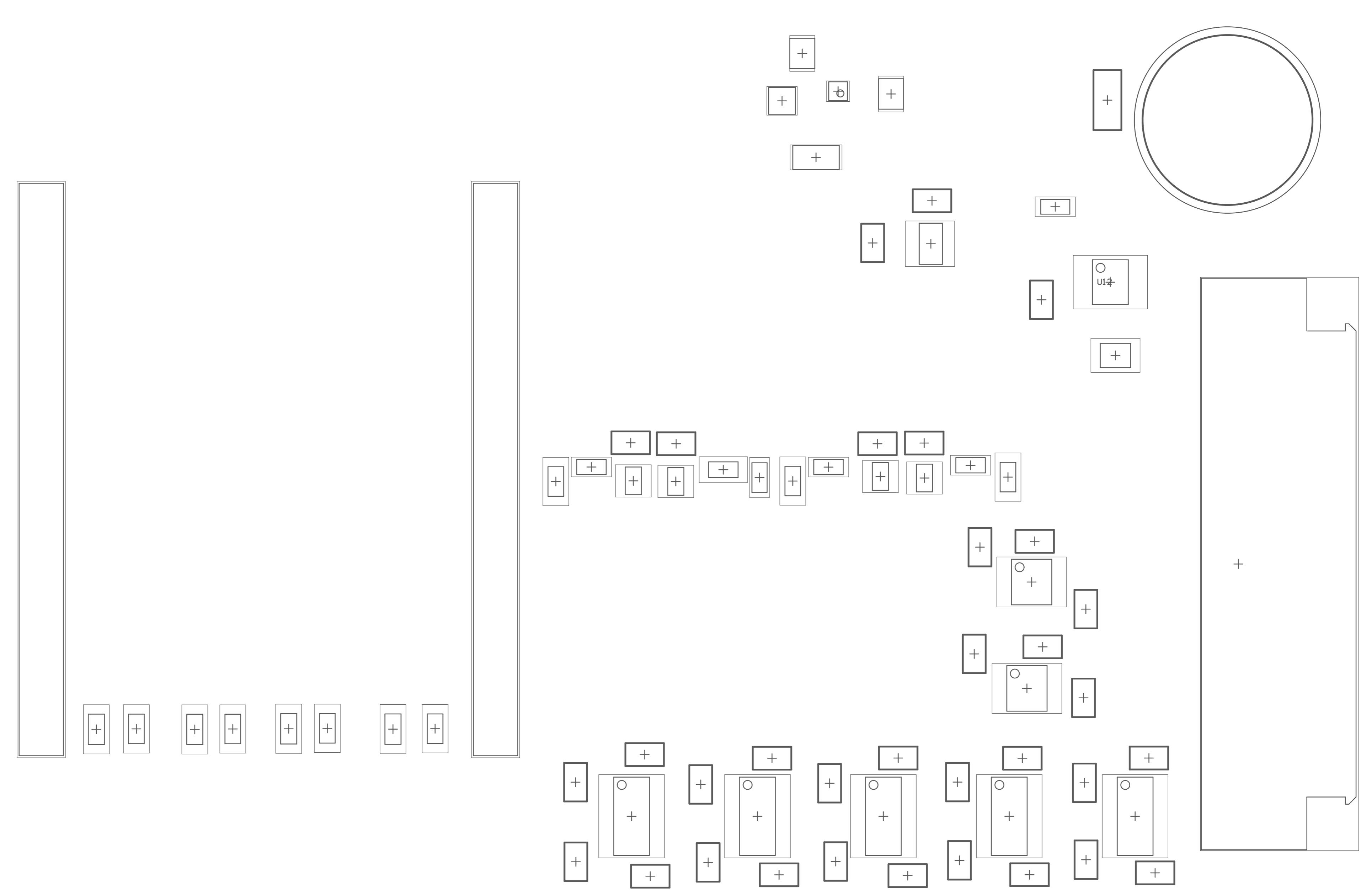




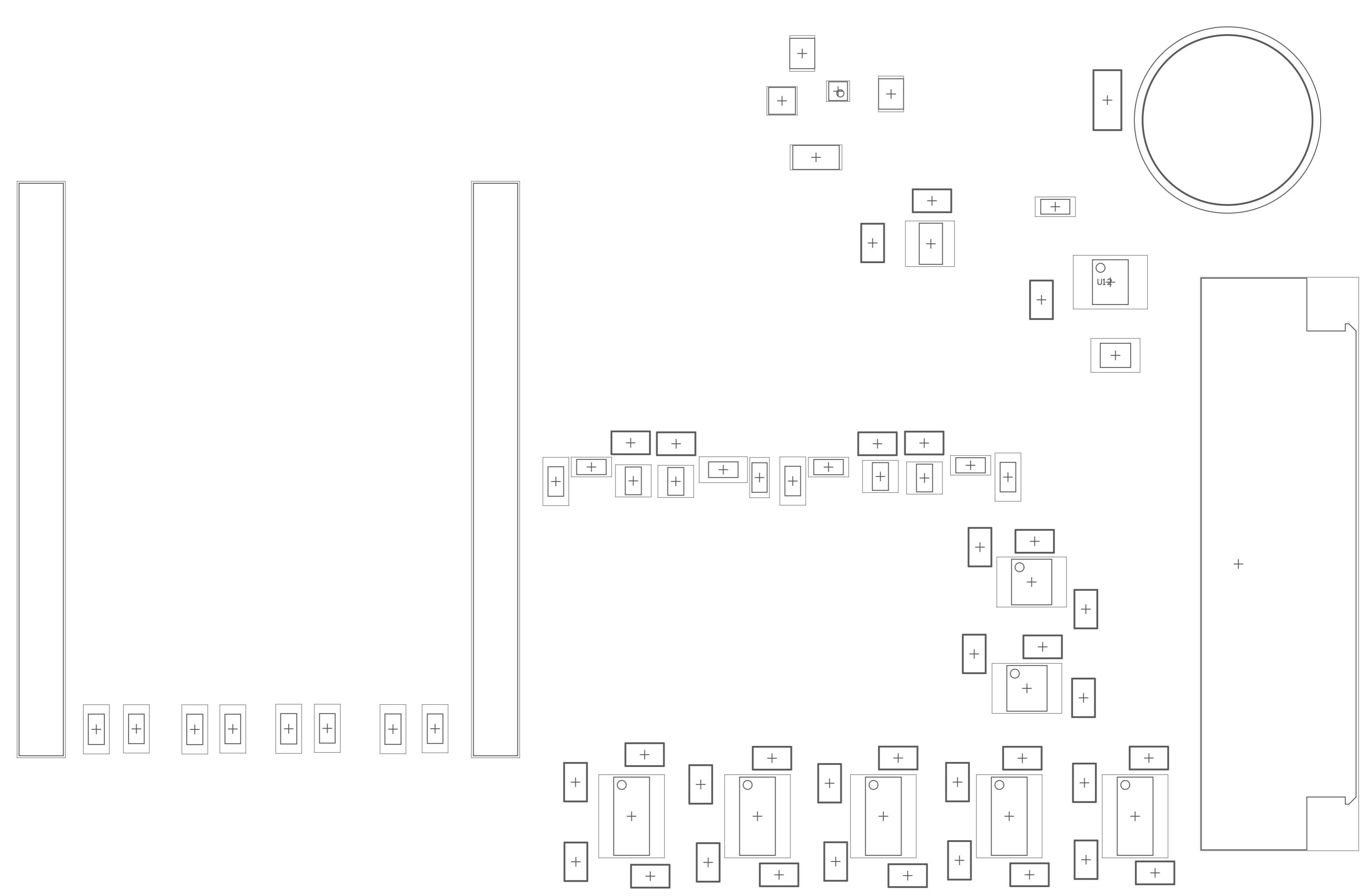




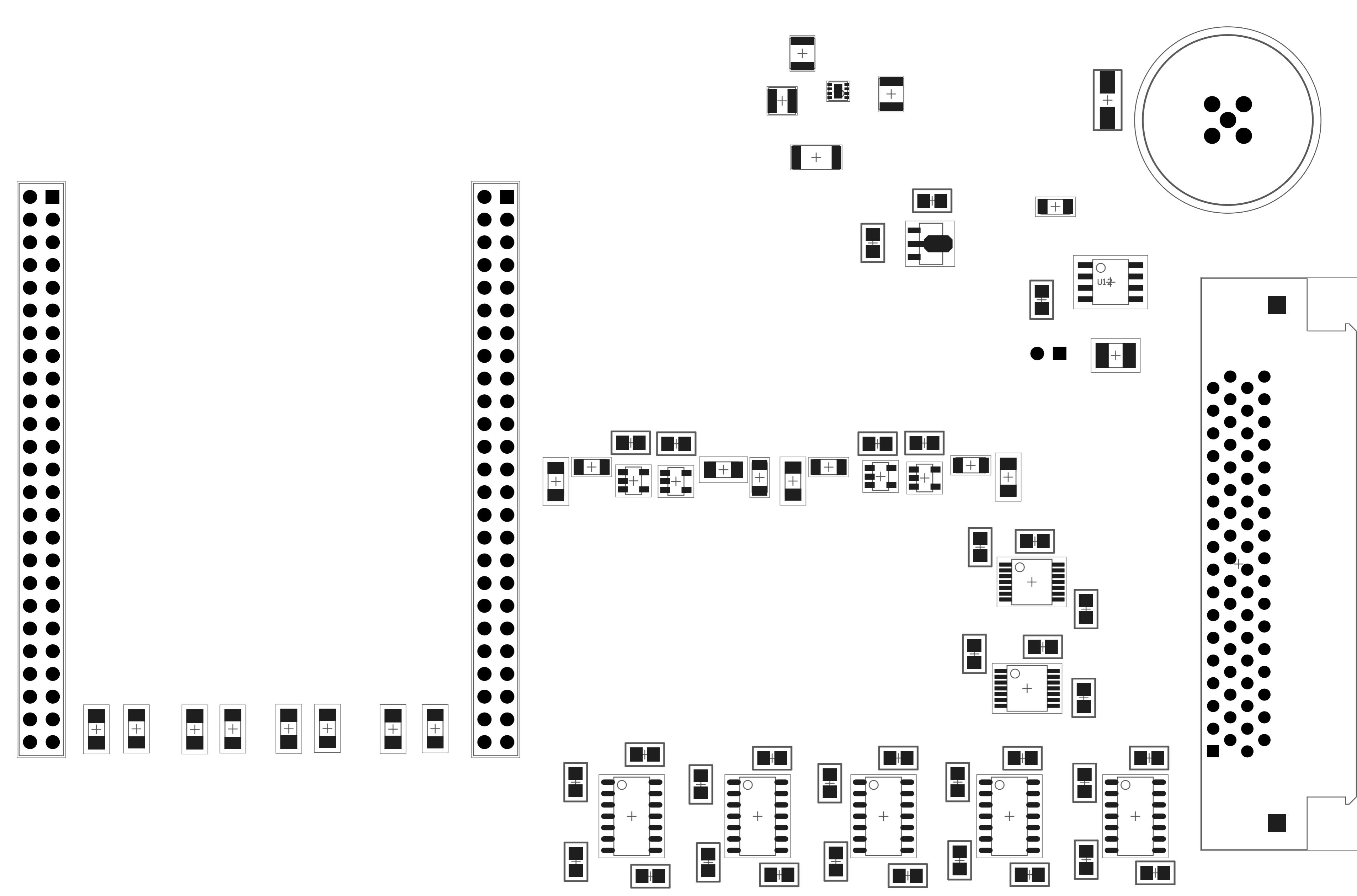
+

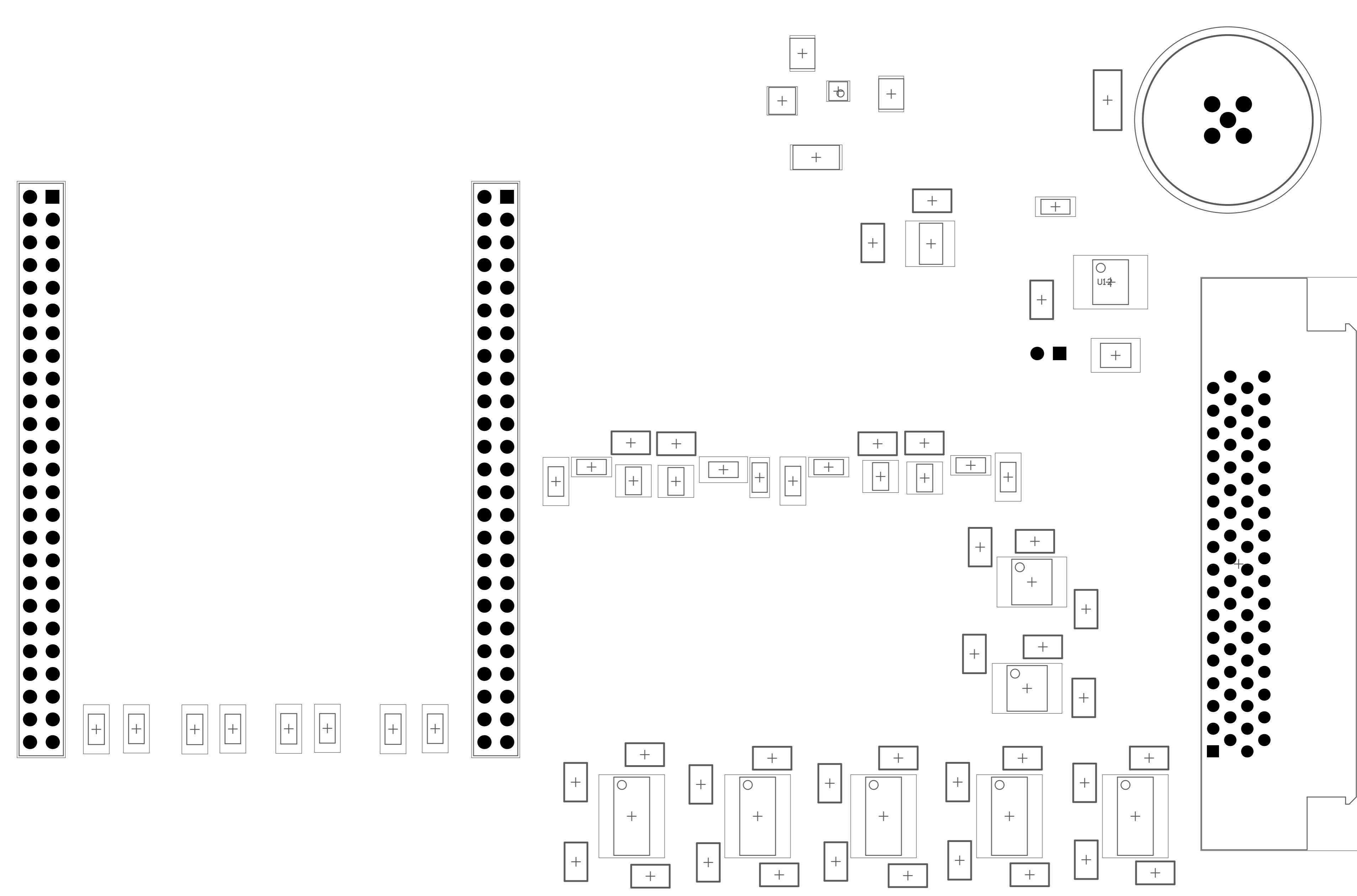


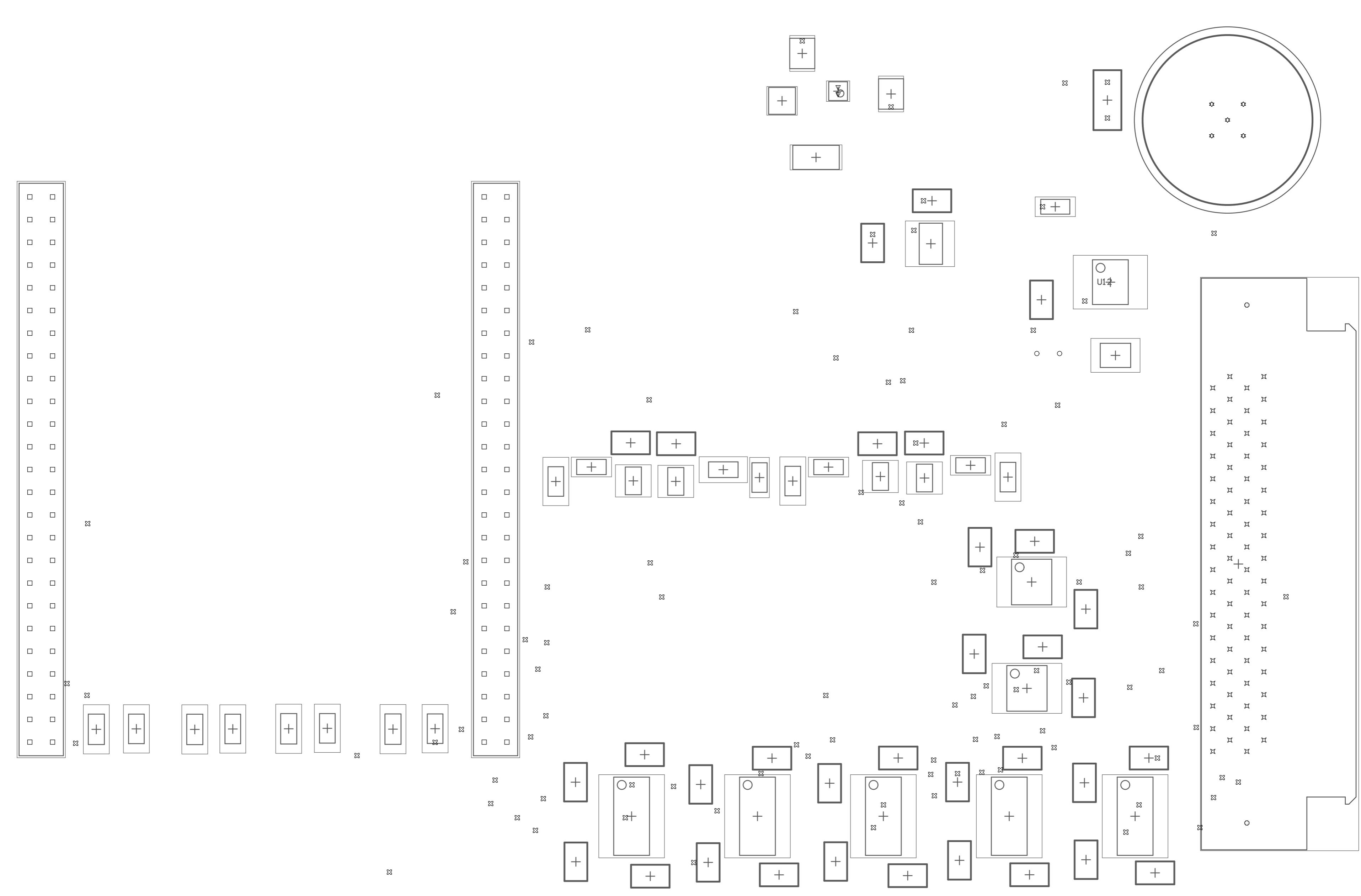
+

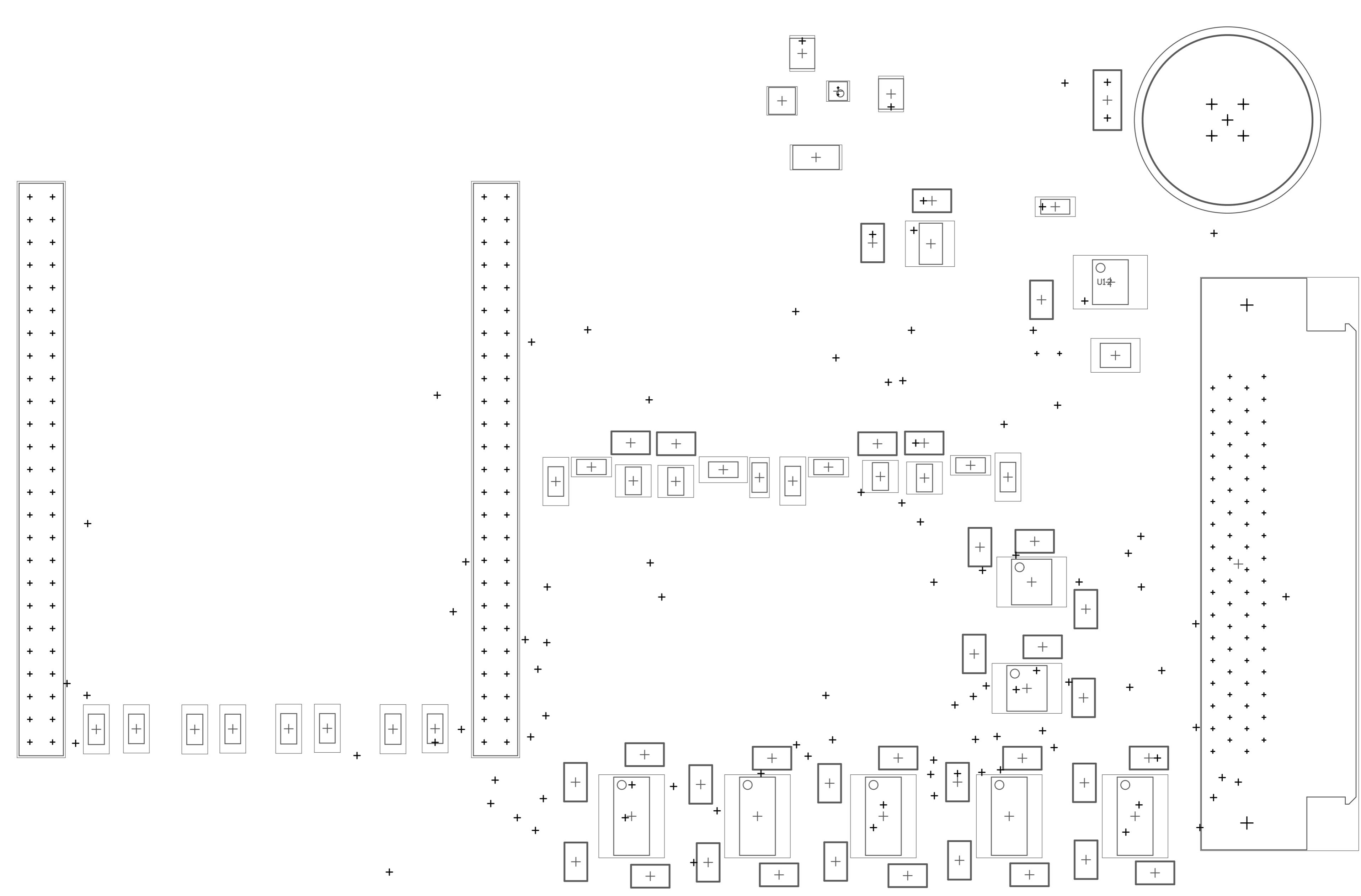


+









| 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 |
|---|---------------------------------------|-------------------|--------------------|---------------------|------------------|----------------------------|--------------------------|-----------------------|------------------------|-----------------------|---------------------|
| C0603C104K5RACTU | | | C1, C2, C3, C4, C5 | 31 | KEMET | C0603C104K5RACTU | Volume Production | Digi-Key | 399-5089-6-ND | 0.14 | 4.34 |
| CAP 22uF 16V CAP 22uF 16V ±10% 1210 (3225 Me) | C31, C33 | | | 2 | KEMET | C1210C226K4PAC | Volume Production | Arrow | C1210C226K4PAC | 0.1388 | 0.2776 |
| C0805C105K4RACTU | C34, C35 | | | 2 | KEMET | C0805C105K4RACTU | Volume Production | Digi-Key | 399-1284-1-ND | 0.17 | 0.34 |
| S1J-13-F | D1 | | | 1 | | | | | | | |
| Header 0 | Header, 2-Pin | | H1 | | 1 Samtec | SSW-125-01-F-D | Volume Production | Newark | 40P2157 | 4.9 | 4.9 |
| 1542761 | Connector | J1 | | 1 Phoenix Contact | 1542761 | Volume Production | Arrow | | 1542761 | 15.17 | 15.17 |
| SRN3015-2R | Semi-shielded Power Inductor, 2.2 u | L1 | | 1 Bourns | SRN3015-2R2M | Volume Production | Digi-Key | SRN3015-2R2MCT-ND | | 0.46 | 0.46 |
| SSW-125-01 | SQ Post Socket, Through-hole, Verti | P1, P2 | | 2 Samtec | SSW-125-01-F-D | Volume Production | Newark | 40P2157 | | 4.9 | 9.8 |
| 2-5174225-5 | Male D-Sub Connector, Pitch 1.27 m | P3 | | 1 TE Connectivity | 2-5174225-5 | Volume Production | Arrow | 2-5174225-5 | | 19.91 | 19.91 |
| CRCW1206523RFKEA | R1, R4, R5, R8 | | | 4 Vishay | CRCW1206523RFKEA | Volume Production | Future Electronic | CRCW1206523RFKEA-CUTT | | 0.0359 | 0.1436 |
| CRCW12061 | Chip Resistor, 1 KOhm, +/- 1%, 0.25 | R2, R3, R6, R7 | | 4 Vishay | CRCW12061K00FKEA | Volume Production | Digi-Key | 541-1.00KFCT-ND | | 0.1 | 0.4 |
| ERJ-14YJ121U | | R9 | | 1 Panasonic | ERJ14YJ121U | Volume Production | Future Electronic | ERJ-14YJ121U-CUTT | | 0.0866 | 0.0866 |
| ERJ-8GEYJ103V | | R10 | | 1 Panasonic | ERJ8GEYJ103V | Volume Production | Future Electronic | ERJ-8GEYJ103V-CUTT | | 0.0101 | 0.0101 |
| 100K 5% 2010 | 100K 0.75W 5% 2010 (5025 Metric) | R11 | | 1 Panasonic | ERJ-12ZYJ104U | Volume Production | Mouser | 667-ERJ-12ZYJ104U | | 0.26 | 0.26 |
| CRCW12064 | Chip Resistor, 4.7 KOhm, +/- 1%, 0.2 | R12, R14, R16, R1 | | 4 Vishay | CRCW12064K70FKEA | Volume Production | Future Electronic | CRCW12064K70FKEA-CUTT | | 0.015 | 0.06 |
| ERA8AEB912V | | R13, R15, R17, R1 | | 4 Panasonic | ERA8AEB912V | Volume Production | Digi-Key | P9.1KBCC7-ND | | 0.66 | 2.64 |
| BTS4160DG | Smart High-Side Power Switch, 2 Ch | U1, U2, U3, U4, U | 5 | | | | | | | | |
| TXB0104PW | 4-Bit Bidirectional Voltage-Level Tra | U6, U7 | | 2 Texas Instruments | TXB0104PWR | Volume Production | Newark | 99K4466 | | 0.704 | 1.41 |
| MCP6001T-I | 1 MHz, Low-Power Operational Amp | U8, U11 | | 2 Microchip | MCP6001T-I/OT | Volume Production | Arrow | MCP6001T-I/OT | | 0.2635 | 0.527 |
| MCP6001T-I | 1 MHz, Low-Power Operational Amp | U9, U10 | | 2 Microchip | MCP6001T-I/OT | Volume Production | Arrow | MCP6001T-I/OT | | 0.2635 | 0.527 |
| SN65HVD23 | CAN Bus Transceiver, 3.3 V, -40 to 8 | U12 | | 1 Texas Instruments | SN65HVD230D | Volume Production | Arrow | SN65HVD230D | | 2.97 | 2.97 |
| TPS62173DS | Buck Step Down Regulator with 3 to | U13 | | 1 Texas Instruments | TPS62173DSGR | Volume Production | Newark | 24AC0569 | | 0.602 | 0.602 |
| MCP1702T-3 | 250 mA Low Quiescent Current LDO | U14 | | 1 Microchip | MCP1702T-330E/MB | Volume Production | Newark | 11N7989 | | 0.462 | 0.462 |