

POWER SUPPLY PORT

LED

MCU

SWD

5 V SUPPLY

Crystals

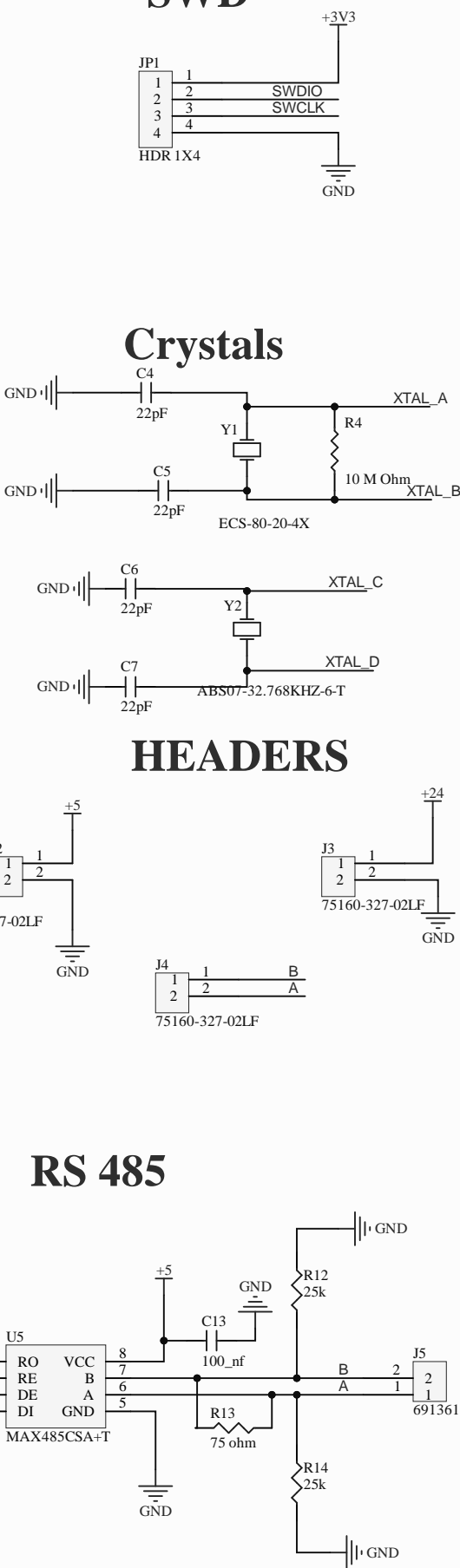
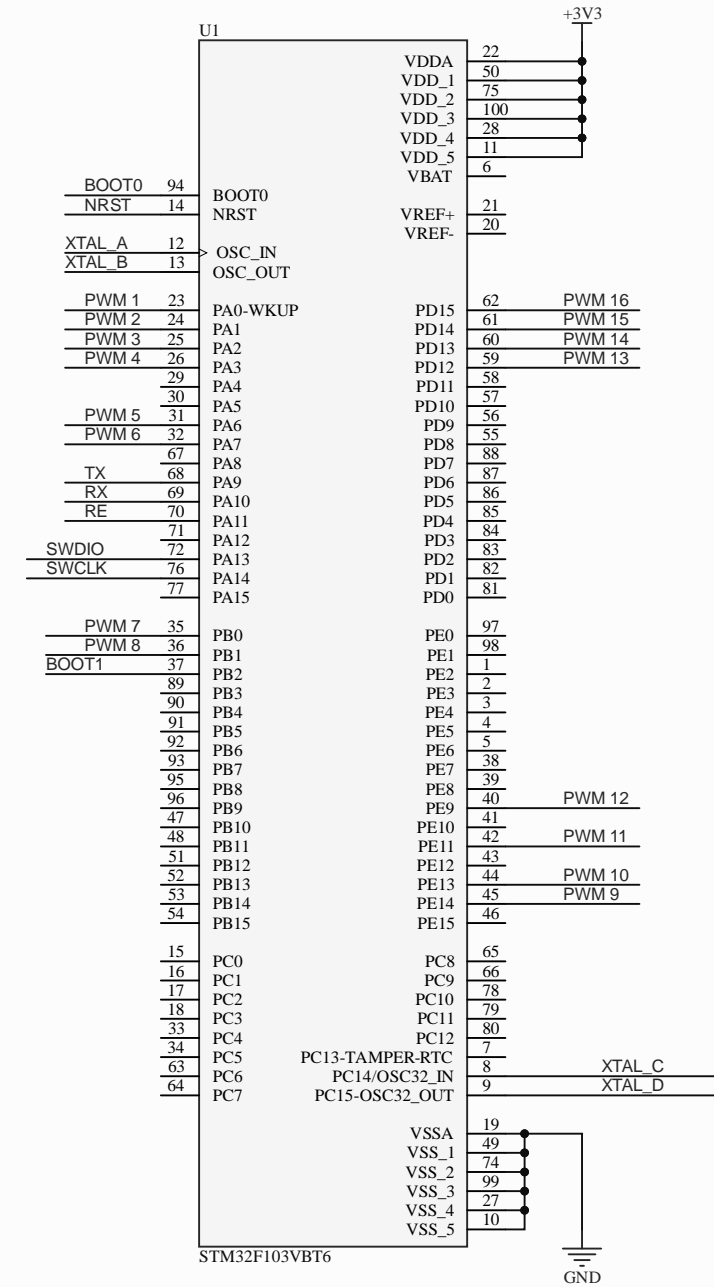
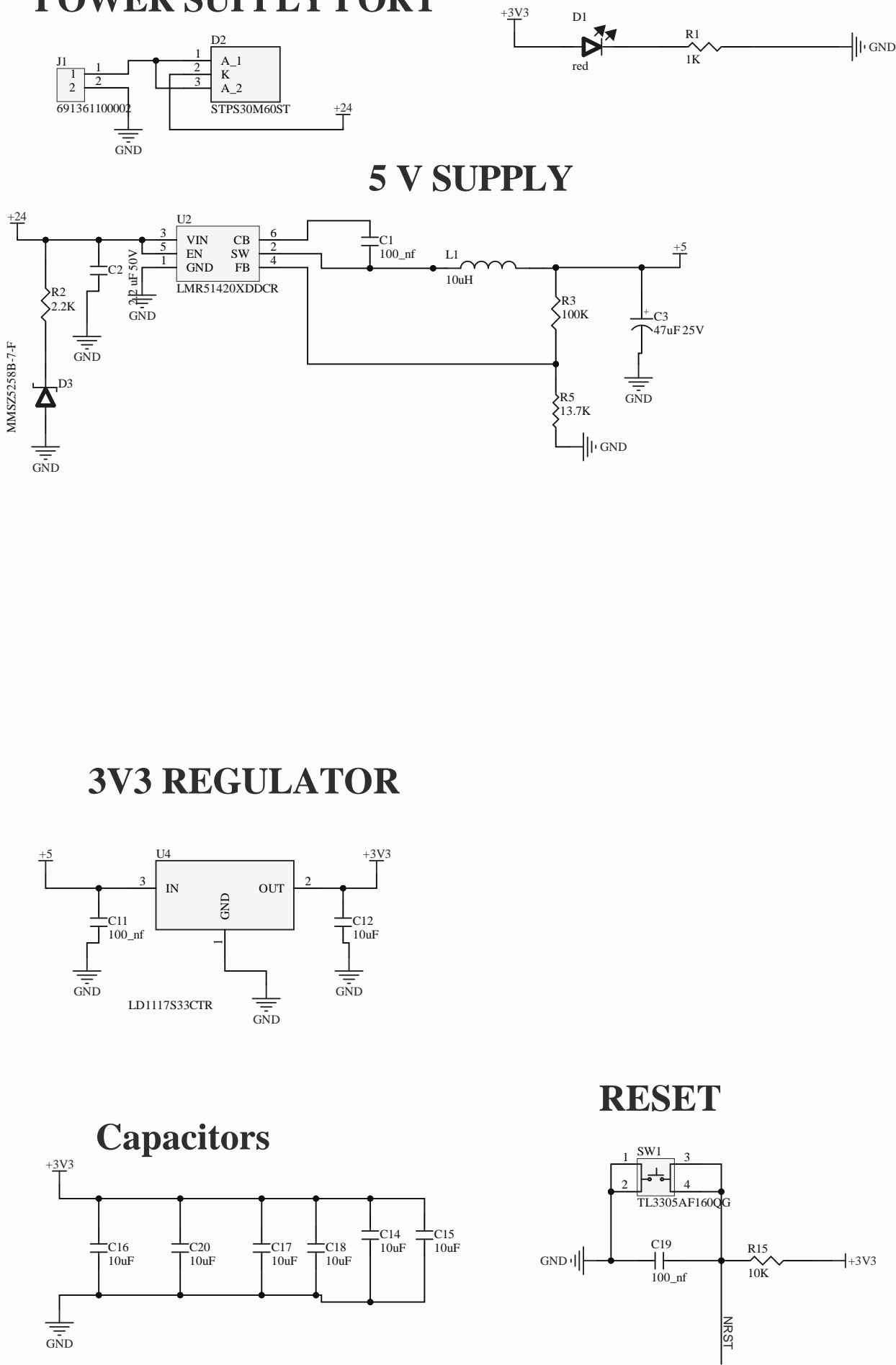
HEADERS

RS 485

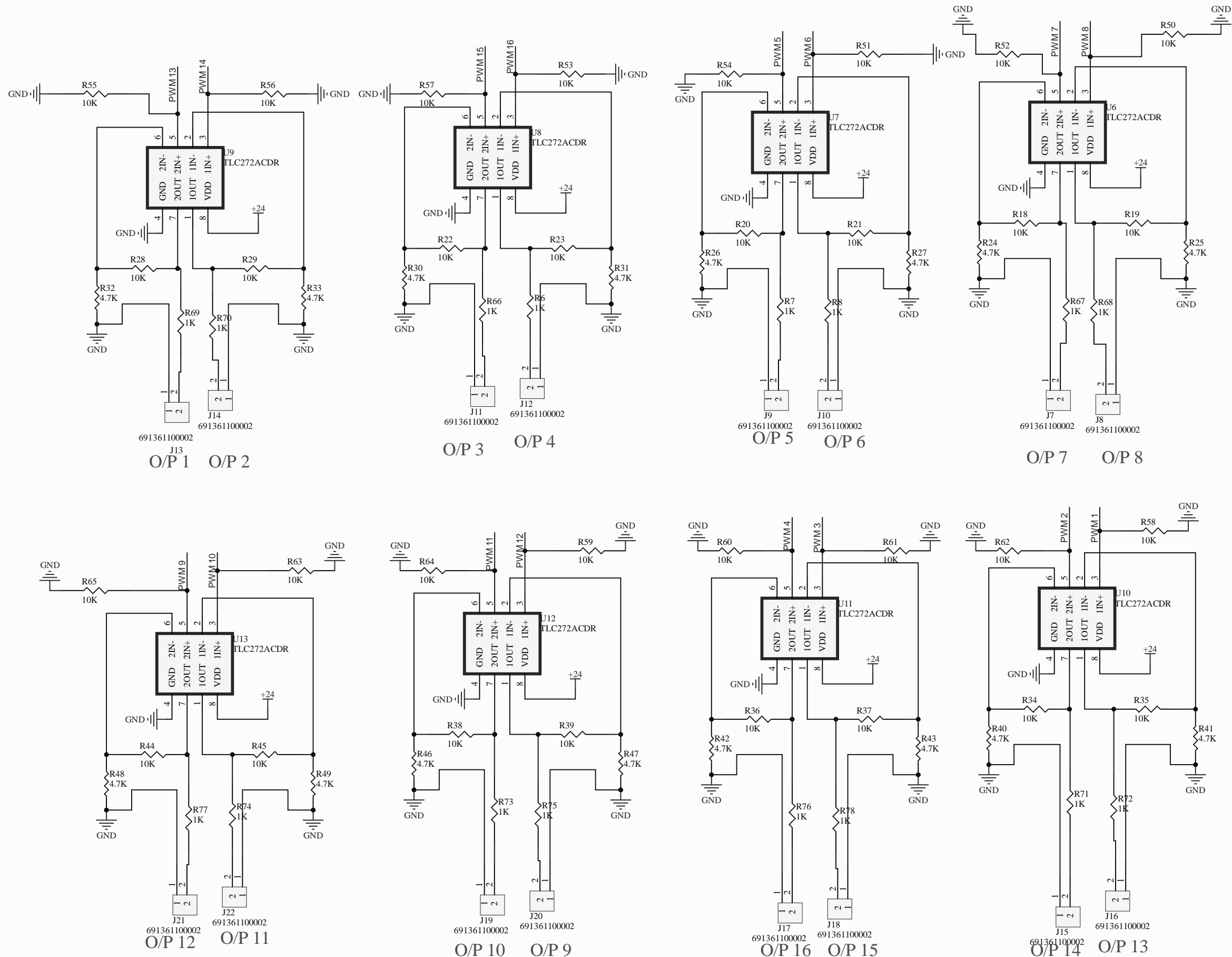
BOOT

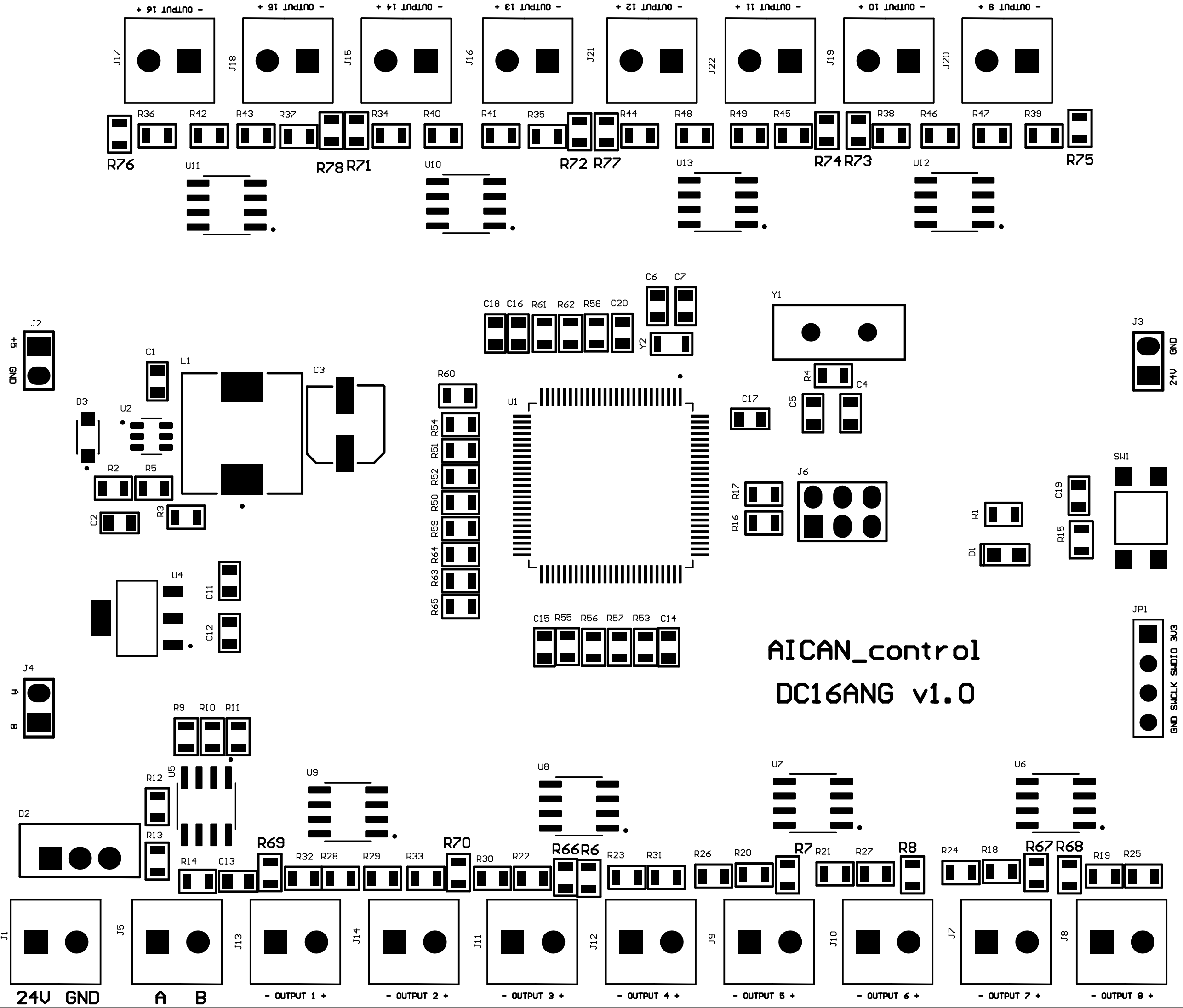
RESET

Capacitors



OUTPUTS





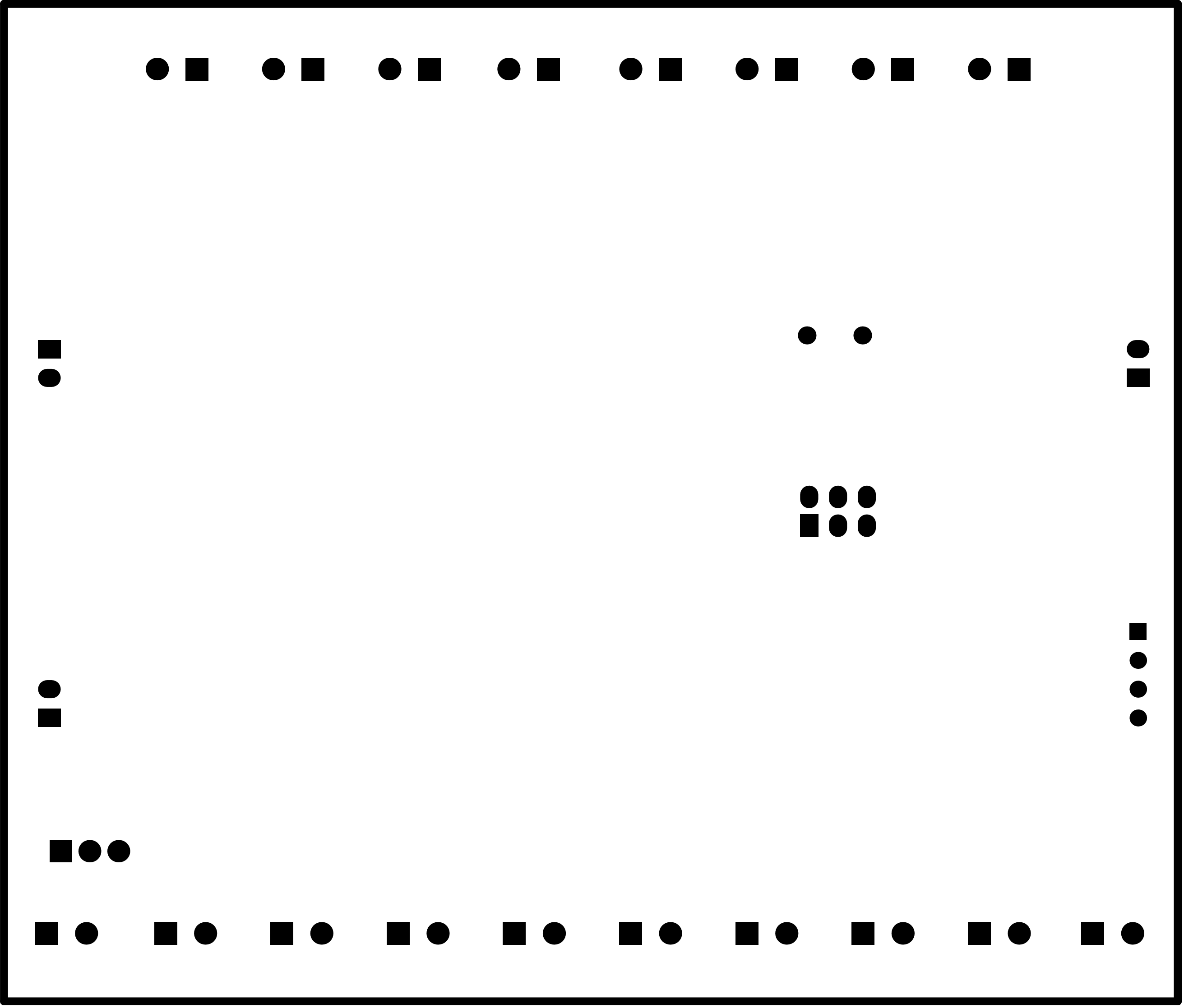
AICAN_control
DC16ANG v1.0

J3

GND 24V

JP1

GND SWCLK SMDIO 3V3



Designator	Description	Footprint	LibRef	Quantity	Manufacturer	Manufacturer Part Number
C1, C11, C13, C19	Cap Ceramic 0.1uF 50V ±7% 10% SMD 0805 125°C Bistrier Plastic T/R	CAP_0805	CAP_0.tuf		TDK	C2012K7H1H10M4125AE
C2	Cap Ceramic 2.2uF 50V JB 10% SMD 0805 85°C Bistrier Plastic T/R	CAP_0805	cap 2.2 uF 50V 0805		TDK	C2012B1H22K125AB
C3	ELF 10 电解电容 47uF ±20% 25V 1000hrs@85°C MSL: D6, D4C, 4mm, SM	CAP_ALU_D_Smd	CAP_POLAR_47uF_25 V		Panasonic	EE-1EA470MP
C4, C5, C6, C7	Cap Ceramic 22pF 50V COG 0.25pF SMD 0805 125°C Paper T/R	CAP_0805	CAP_22pF		4MEIET	1080522005GACTU
C12, C14, C15, C16, C17, C18, C20	C12A01 CAPACITOR, 10uF, 16V, XSR, 20%, 0805, FULL REEL, Product Range: C Series, Capacitance: 10F, Capacitance Tolerance: 20%, Dielectric Characteristic: XSR, Voltage Rating: 16V, Ceramic Capacitor Case: 0805 (2012 Metric), MSL: - RoHS Compliant: Yes	CAP_0805	CAP_10uF_0805		TDK	C2012K5R1C10M125AC
D1	LED-SMD Red 0805 Tape	LED_RED_0805	LED_RED		Osram Opto	33976-NB-1
D2	Diode	10252F400X1020X00 6-3P	STPS30A60ST		STMicroelectronics	STPS30A60ST
D3	Diode Zener Single 36V 5% SMD Automotive 2 Pin SOD-123 T/R	SOD-123	Zener 36V		TDiodes	MM5Z358B-7-F
J1, J5, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17, J18, J19, J20, J21, J22	Belt Series 3.5mm Pitch Straight Pluggable Term Block Plug Cable Mount: 2 Way	Scree Terminal 3.5mm	Scree Terminal 3.5mm pitch		Wurth Electronics	691361100002
J2, J3, J4	Conn Unshrouded Header HDR 6 POS 2.54mm Solder ST Thru-Hole Poly Bag	HDR 1x2	MALE_HDR_1X2		Amphenol ICC / FCI	75160-327-02LF
J6	Conn Unshrouded Header HDR 6 POS 2.54mm Solder ST Top Entry Thru-Hole Berg508 Bulk	MALE_HDR_3X2_2.54 mm_Pitch	Male_HDR_3X2_2.54 mm_Pitch		Amphenol ICC / FCI	67997-106HLF
JP1	Conn Unshrouded Header HDR 4 POS 2.54mm Solder ST Thru-Hole Bag	HDR 1X4	MALE_HDR_4X1_Unshrouded		Amphenol ICC	68001-204HLF
L1	Inductor Power Shielded Wirewound 10uH 20% 1000Hz Ferrite 2.1A 0.044Ohm DCR 4040 T/R	R952K5-H-100M-P3	Inductor 10uH A		Murata	49W52K5-H-100M-P3
R1, R6, R7, R8, R6A, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78	Res High Precision Thin Film 0805 2.2k Ohm 0.1% 1/8W ±15ppm/°C Molded Paper T/R	R_0805	RES_1_K_0805		Yageo	RC0805R-071KL
R2	Res High Precision Thin Film 0805 2.2k Ohm 0.1% 1/8W ±15ppm/°C Molded Paper T/R	R_0805	RES_2_2K_0805		Yageo	RT0805BR0272KL
R3, R16, R17	Res Thick Film 0805 100000 ±1.00% 0.125W ±100ppm/°C 0805	R_0805	RES_100_K_0805		Yageo	RC0805R-0710ML
R4	Res Thick Film 0805 10000000 ±1.00% 0.125W ±100ppm/°C 0805	R_0805	Res_10 M_Ohm		Yageo	RC0805R-0710ML
R5	Res Thick Film 0805 13.7k Ohm 1% 1/8W ±100ppm/°C SMD Paper T/R	R_0805	RES_13.7K_0805		Yageo	RC0805R-0713KL
R9, R10, R11, R13, R19, R19, R20, R21, R22, R23, R26, R29, R34, R35, R36, R37, R38, R39, R44, R45, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65	Res Thin Film 0805 100000 ±1.00% 0.125W ±100ppm/°C 0805	R_0805	RES_10_K_0805		Yageo	RC0805R-0710KL
R12, R14	Res Thin Film 0805 25k Ohm 0.1% 1/10W ±25ppm/°C Molded SMD SMD Paper T/R	R_0805	RES_25K_0805		TE Connectivity	1614911-6
R13	Anti-Sulfurated Chip Resistor Automotive Grade Thick Film 0805 150Ohm 5% Paper 1/8W	R_0805	Res 75 ohm 0805		Yageo	AA0805R-0775RL
R24, R25, R26, R27, R30, R31, R32, R33, R40, R41, R42, R43, R46, R67, R68, R69	Res Thick Film 0805 4.7k Ohm 1% 0.125W ±100ppm/°C Molded SMD Paper T/R	R_0805	Res 4.7 K		Blackpole Electronics	RMCF0805F4K70
SW1	TL3305A Series SPST 12V 4.5 x 4.5 mm 160 uF Top Actuated SMT Toggle Switch	SW_PB_SMD	SW_PB		TE Switch	TL3305AF160CG
U1	ARM® Cortex®-M3 STM32F1 Microcontroller IC 32-Bit 72MHz 128KB (128K x 8) FLASH	STM32F103VBt6	STM32F103VBt6		STMicroelectronics	STM32F103VBt6
U2	SIMPLE SWITCHER® power converter 4.5-V to 36-V 2-A synchronous buck with 40-µA IQ 6-SOT-23 TQFN-40 (x10-15)	SOT 23-6	LMR51420DDCR		Texas Instruments	LMR51420DDCR
U4	Linear Voltage Regulator IC Positive Fixed 1-Output 3.3V 800mA SOT-223	SOT 223-3	LDO 3V3		STMicroelectronics	L01117533CTR
U5	1/1 Transceiver Half RS422 RS485 8-SOIC	8-SOIC	MAX485CA+		Maxim	MAX485CA+
U6, U7, U8, U9, U10, U11, U12, U13	Op Amp, 1.7MHz, 3.6V/US, SOIC-8, Reversed, Mini-MI 1, Unlimited, Subc: No Subc (15 JAN 2019)	8-SOIC	TLC222ACDR		Texas Instruments	TLC222ACDR
Y1	Crytal 8MHz ±3ppm (Tol) ±50ppm (Stability) 20pF FUND 8000Hz 2-Pin HC-49/USX Thru-Hole Bulk	XTAL_8_MHz	Xtal_8MHz		ECG International	ECG-80-20-40
Y2	CY219W 0 032760MHz ±20ppm (Tol) 4pf Fundamental 7000000Hz 2-Pin SMD T/R	XTAL_32.768	XTAL_32.768_KHz		Abraxon	AB507-32.768KHz-6-1