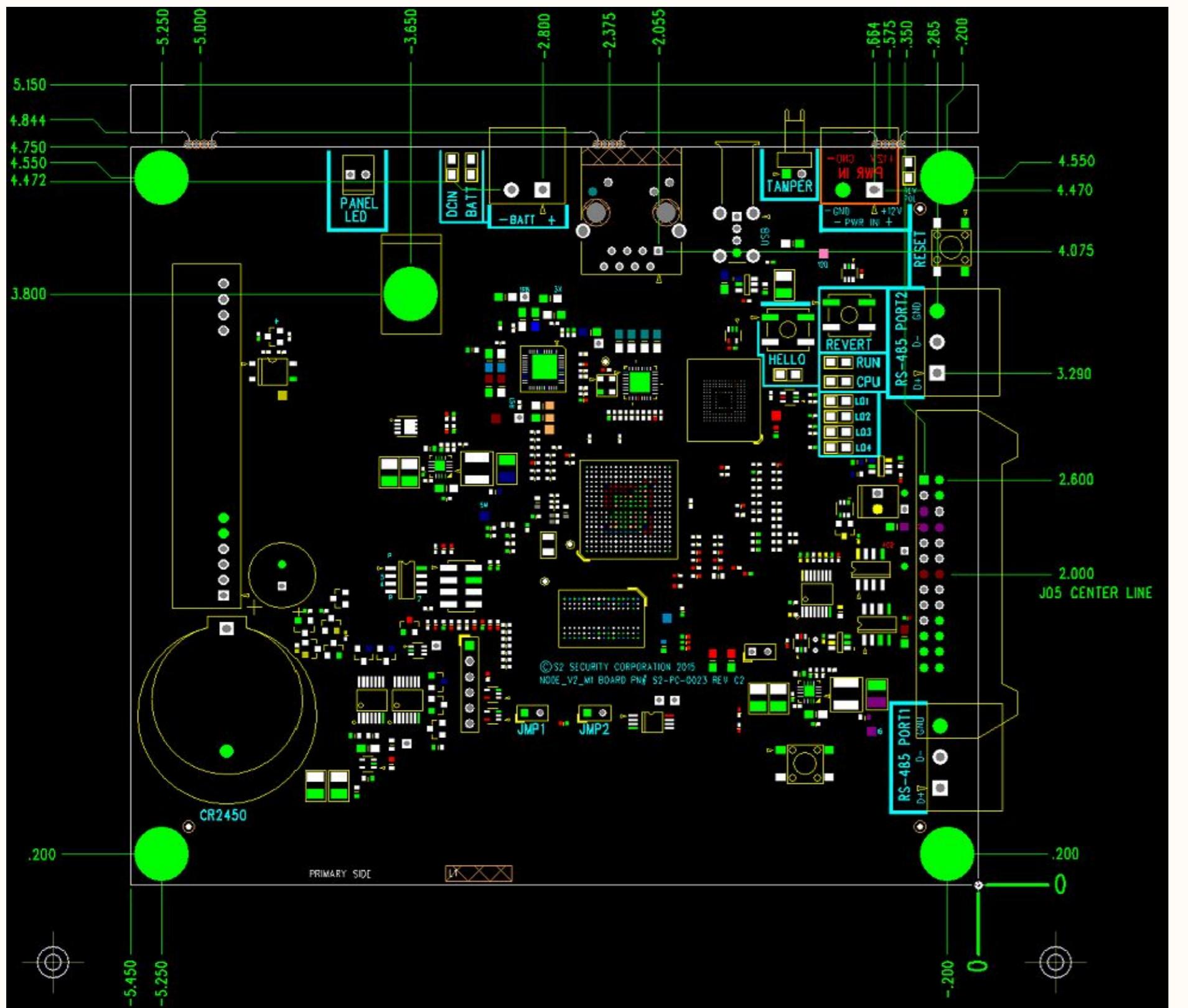


NODE_V3_M1 SCHEMATIC

SCHEMATIC
INDEX

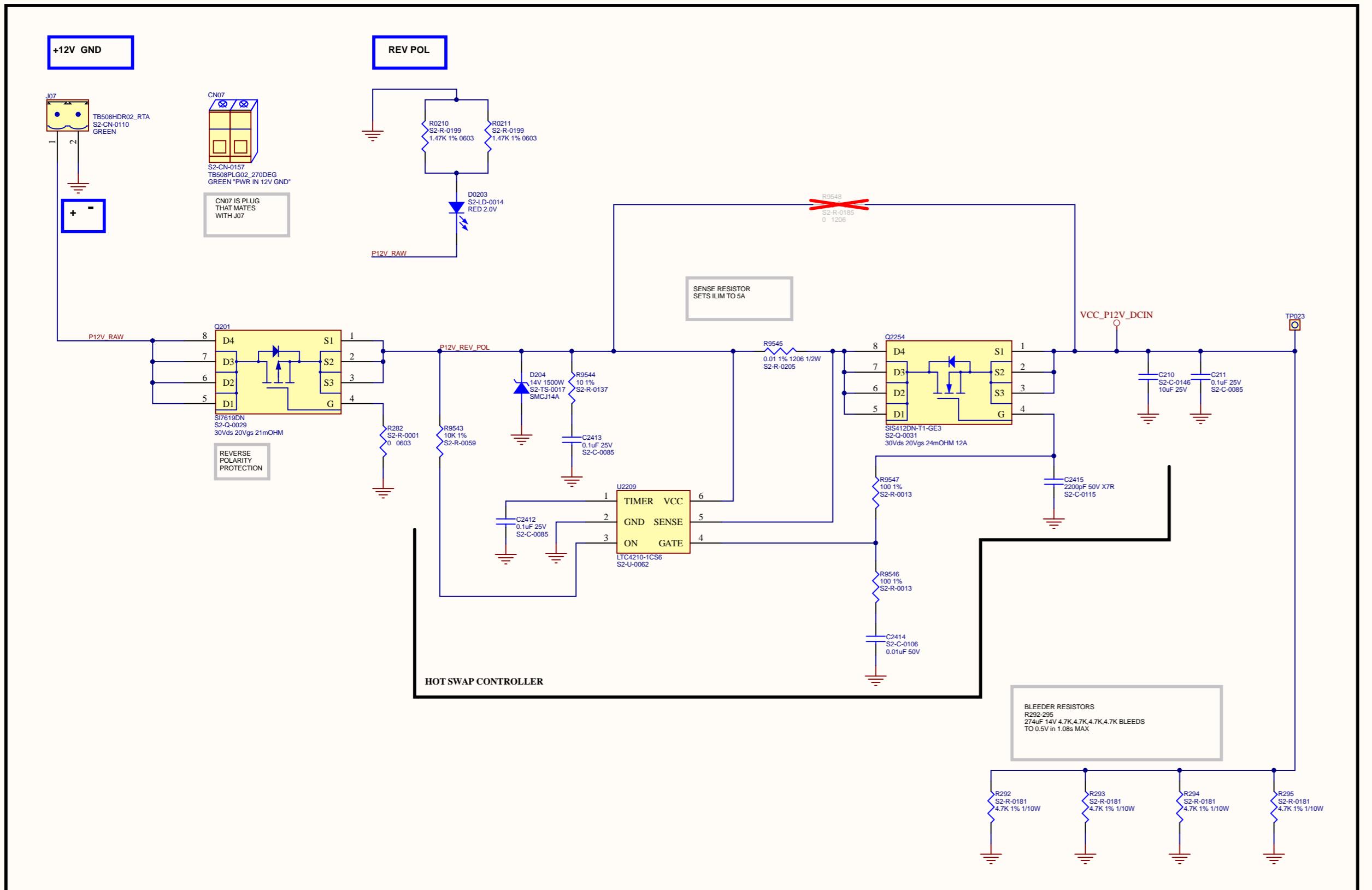
REV A



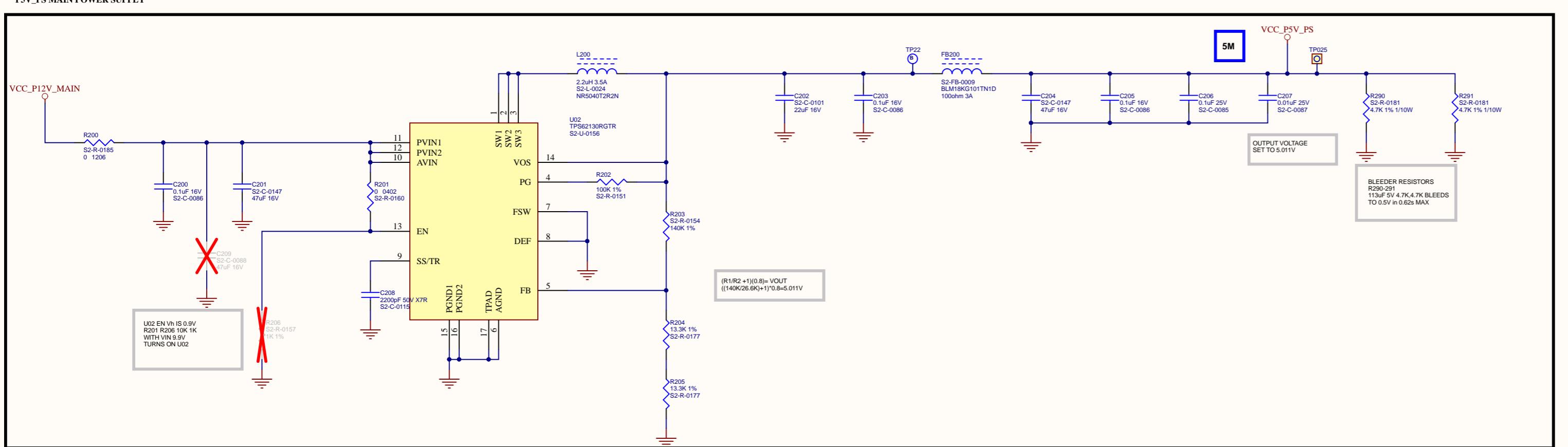
DESIGN NOTES IN GRAY ARE INFORMATION NOTES	INFO	CIRCUIT TITLE
SILKSCREEN		CIRCUIT LABEL
DESIGN NOTES IN BLUE ARE SILKSCREEN TEXT		PLACE THIS SILKSCREEN TEXT UNDER U11 DDR3 DEVICE
PCB LAYOUT		PCB PCB 6-LAYER 5.45x4.75 INCH NODE_V3_M1 REV A S2-PC-0027

- P1 -LAYOUT, INDEX
LEGEND
- P11 -RIBBON CABLE
- M 1 BLADE COMMS (I2C1)
- RS-485 4-WIRE (UART2 + GPIO)
- P6V
- P12 -RS-485 2-WIRE (2)
- M 1 SLA STAT FOR CPU
- DCIN LED
- MOUNTING BRACKET HW
- P13 -SLA CHARGER
- M 1
- P14 -BOM CONFIGURATION
- P2 -P5V_PS POWER SUPPLY
- P12V_DCIN RVRS POL PROT, LED
- HOT SW AP CONTROLLER
- P3 -PMIC SEQUENCED FOR AM335X (I2C0)
- PWR SUPPLIES : P1V8_RTC, P1V8_VDDS,
- P1V5_DDR3, P1V8_ANLG, P3V3_AUX,
- P3V3A, P1V1_MPUM, P1V1_CORE_W_HLED
- RESET SW I2C1H
- P4 -AM335X PART A (UART3,AGPIO)
- JTAG
- eMMC
- RESET CIRCUIT
- P5 -AM335X PART B (GPIO)
- BOOT MODE
- M IIETHERNET
- PoE+ RJ-45
- PHY RESET
- P6 -AM335X PART C
- (UART0,1,2,I2C0,1,2,GPIO)
- I2C EEPROM (I2C0)
- AN PWR MEAS, TEMP, PMIC
- USBBOOT CONN
- USB1 PWR SW I2C AND CONN
- P7 -AM335X DDR3 XTAL RTC
- DDR3
- CRYSTALS 24 MHZ, 32.768 KHZ
- RTC PWR BACKUP, CR2450 BATTERY
- SPISRAM W BATT BACKUP
- LM T87 TEMPERATURE
- P8 -AM335X PWR,GND,BYPASS CAPS
- MOUNTING HOLES
- P9 -TAMPER, REVERT, PNLL LED
- HELLO BUTTON AND LED
- DCIN LED
- STATUS AND DEBUG LEDs
- P10 -Miscellaneous
- DEBUG CONSOLE (UART0)
- PCB ID, PCB REV, SPARE JUMPS
- RS-485 BTAS, P5VB PWR SW I2C1H
- PWR RDWN IRQ, PWR CYCLE CIRCUIT
- AM3352 AN PROTECTION

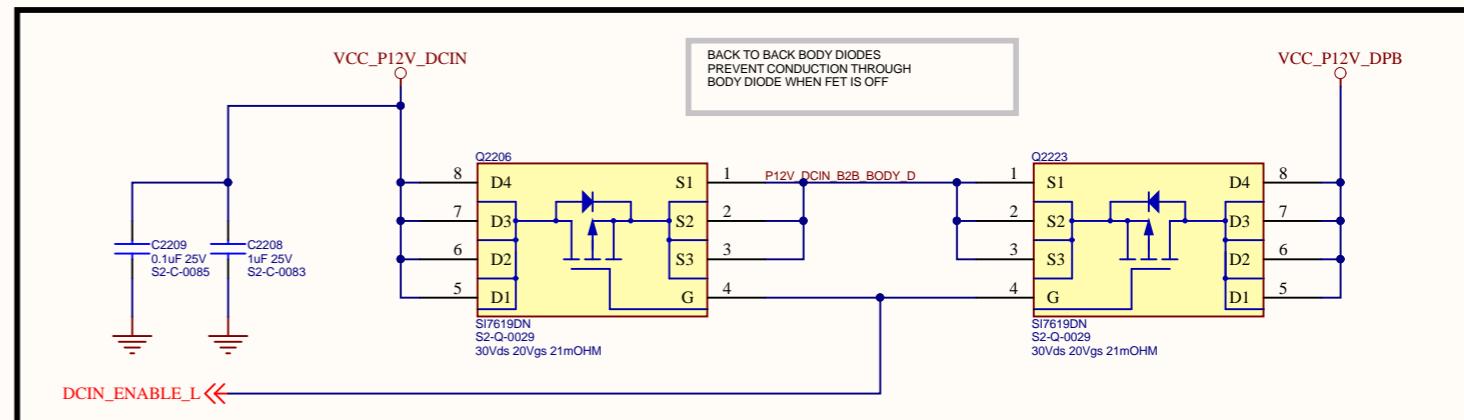
12V INPUT, REVERSE POLARITY PROTECTION, REV POL LED



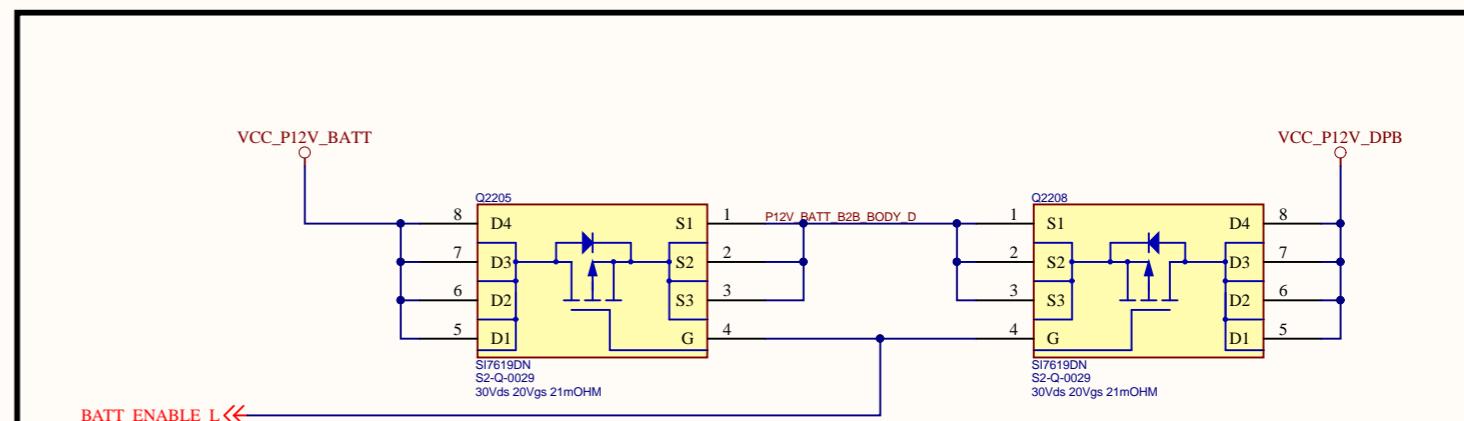
P5V_PS MAIN POWER SUPPLY



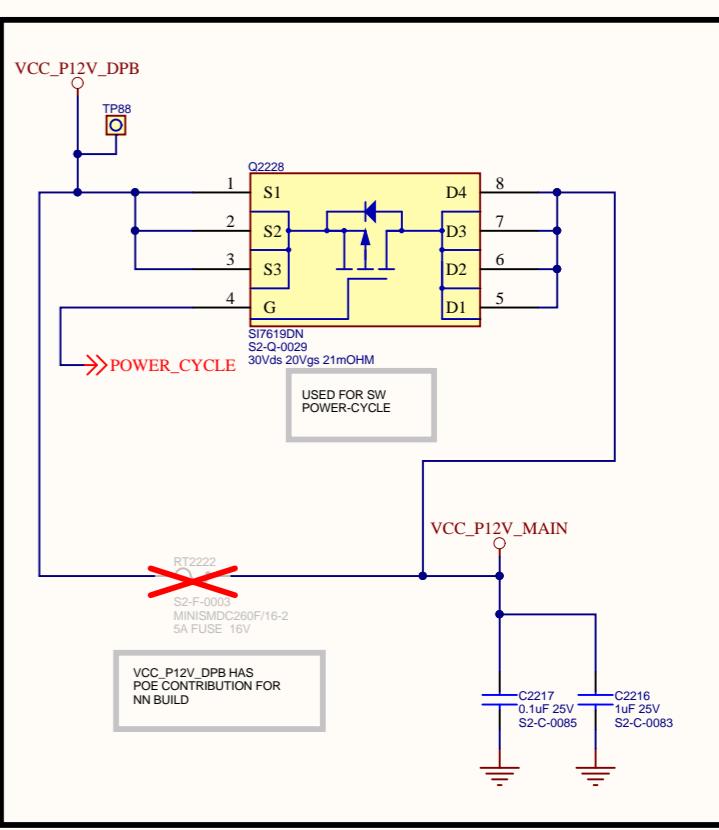
SWITCHOVER CIRCUIT DCIN TO VCC_P12V_MAIN

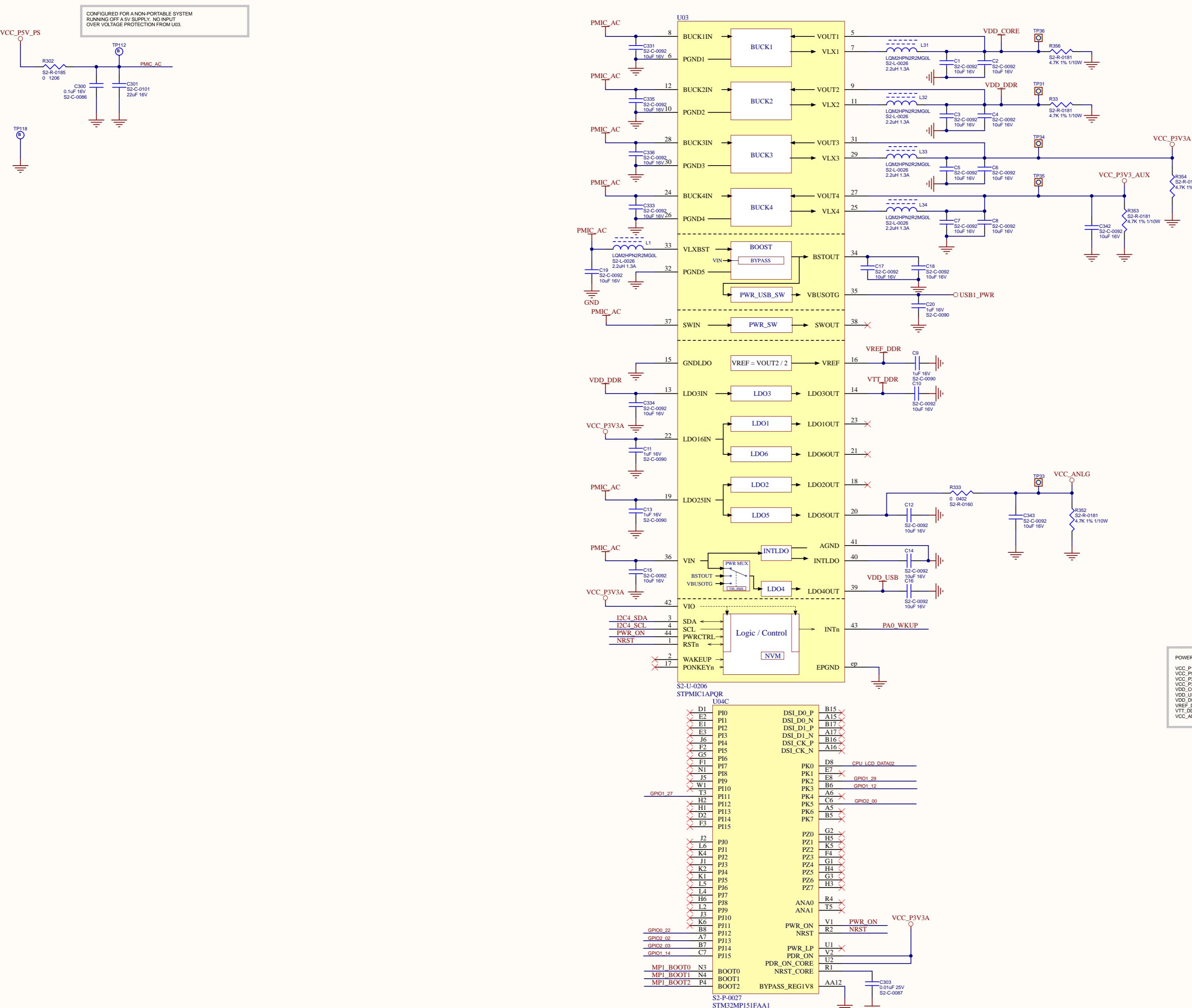


SWITCHOVER CIRCUIT BATT TO VCC_P12V_MAIN



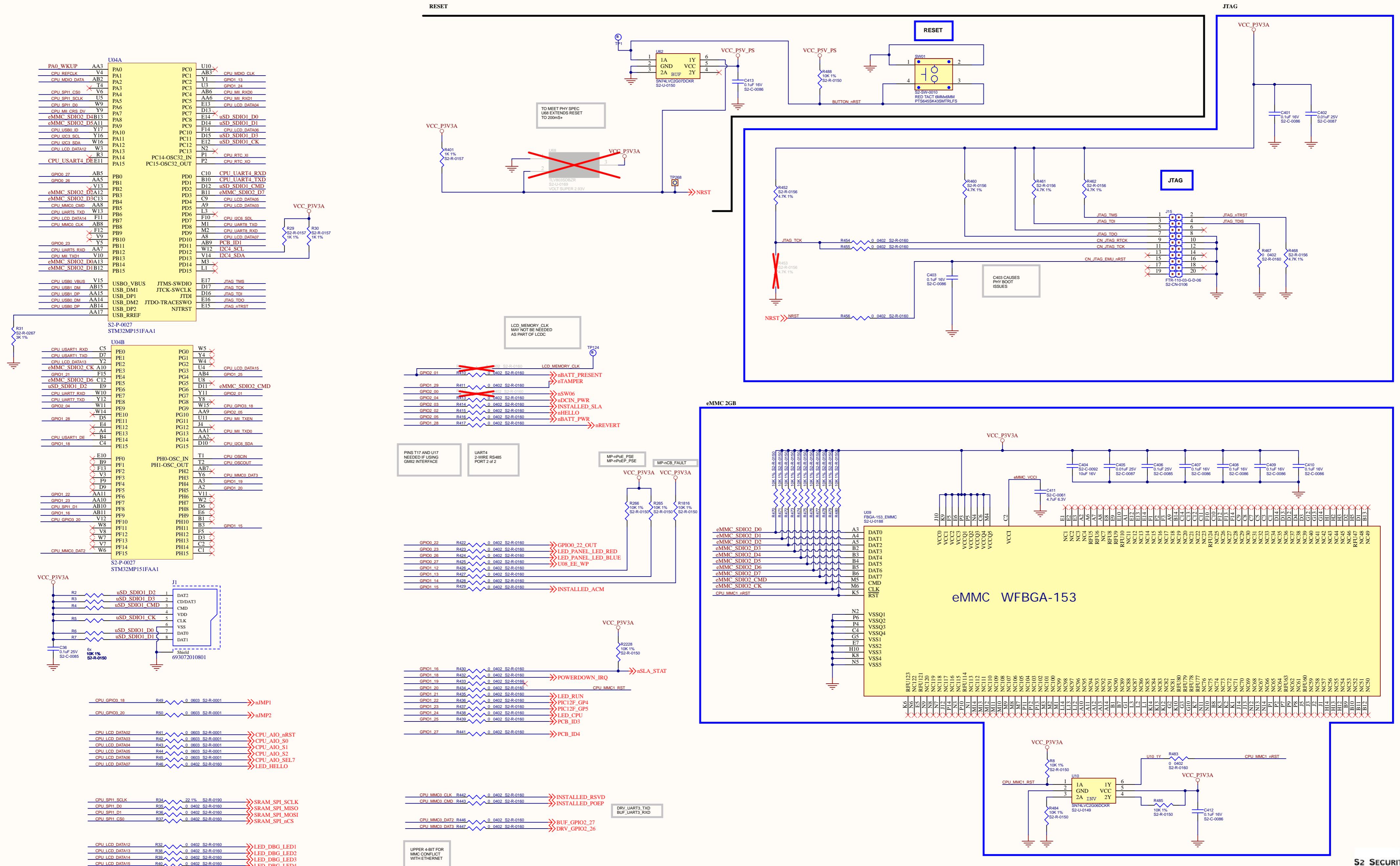
POWER CYCLE AND VCC_P12V_MAIN





POWER SUPPLY SEQUENCE

VCC_P12V_MAIN	12V
VCC_P5V_PS, VCC_P6V	- FIRST STAGE POWER
VCC_P3V3A	3.3V
VCC_P3V3A_AUX	3.3V
VDD_CORE	1.2V
VDD_USB	3.3V
VDD_PWR	1.1V
VREF_DDR	0.55V
VTT_DDR	1.8V
VCC_ANLG	2.9V



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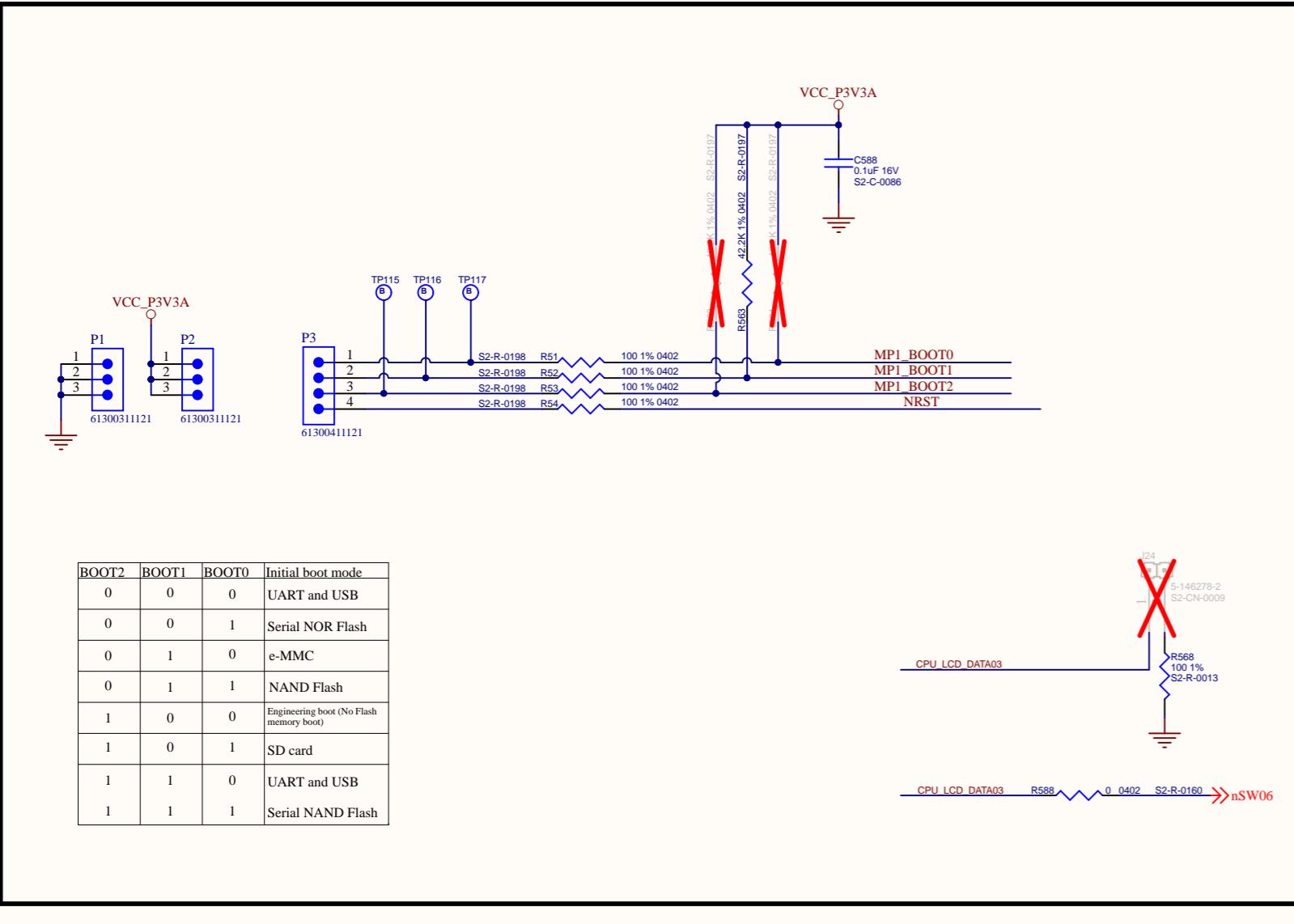
SECURITY CORPORATION CONFIDENTIAL

STM32MP1_PART_A €

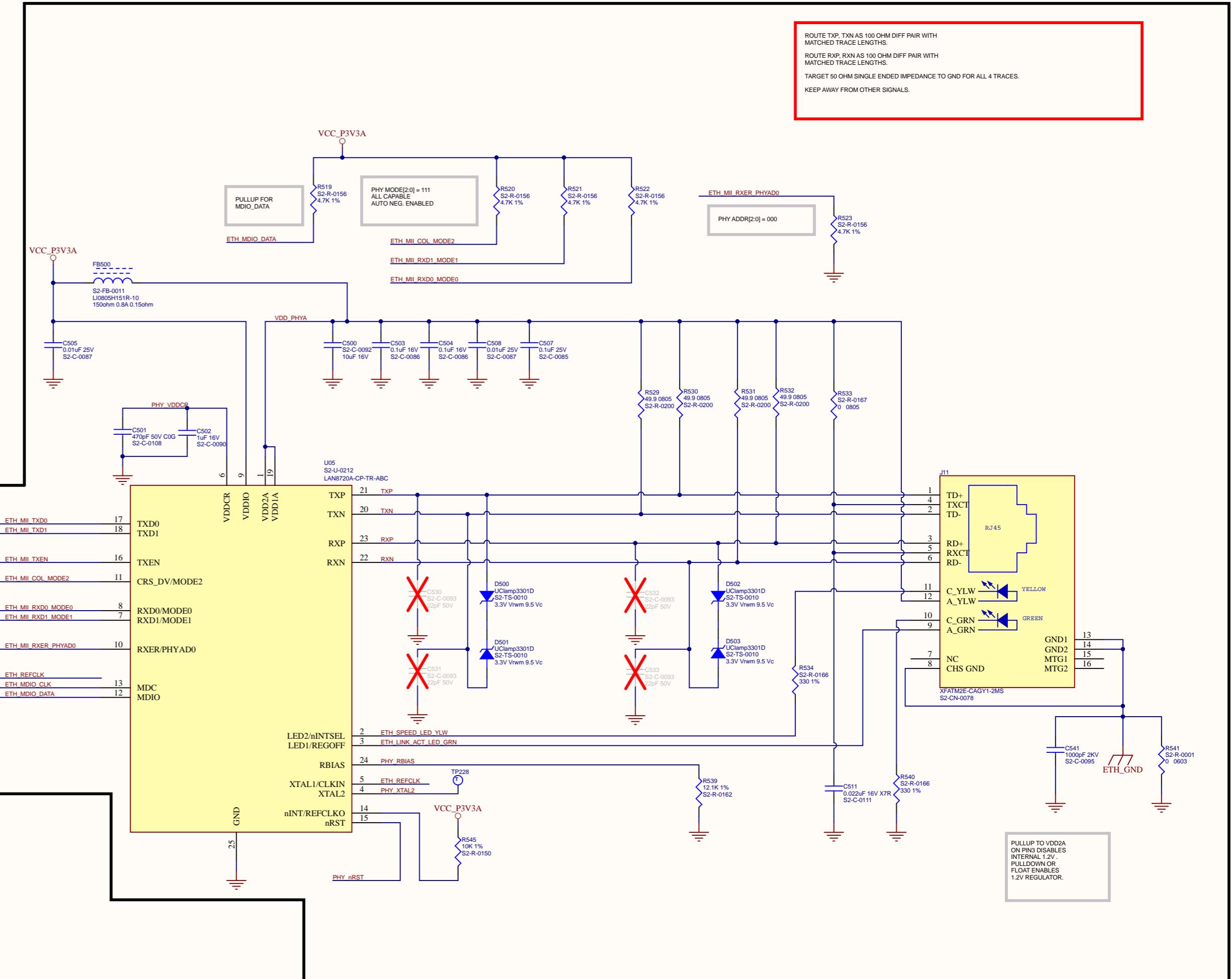
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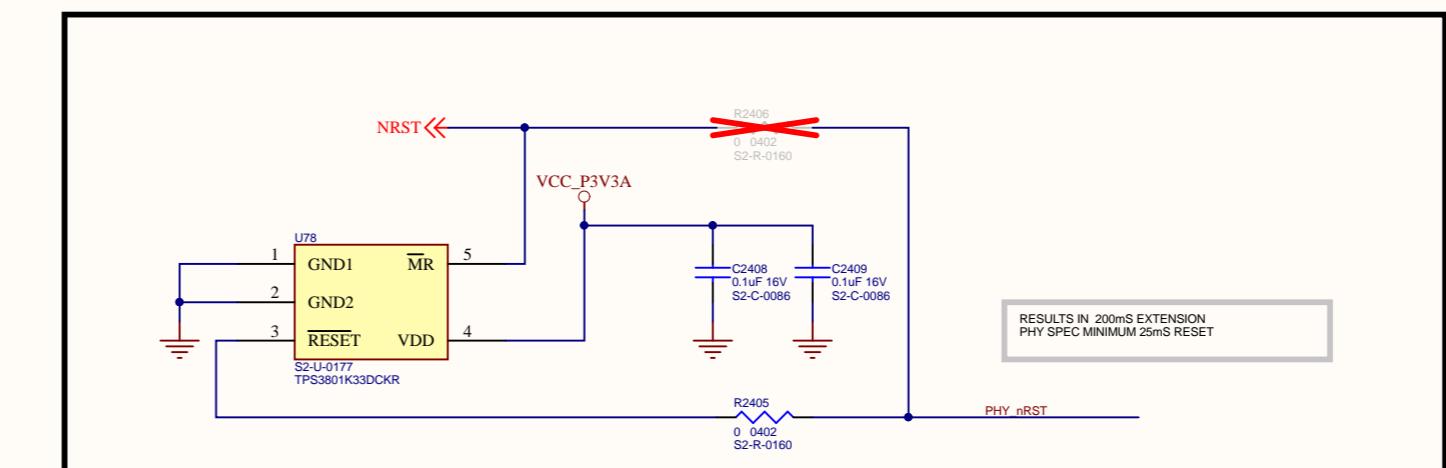
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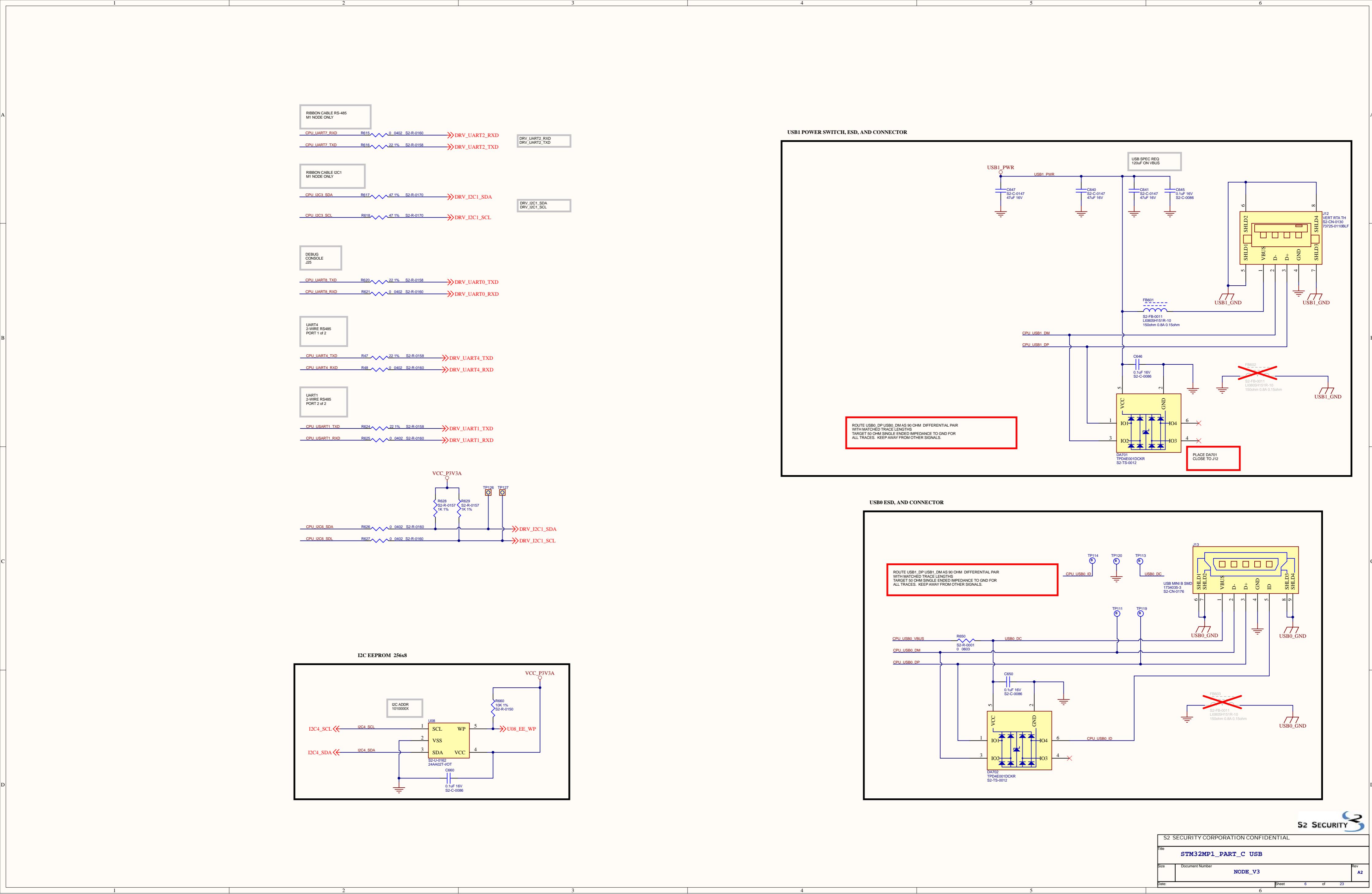


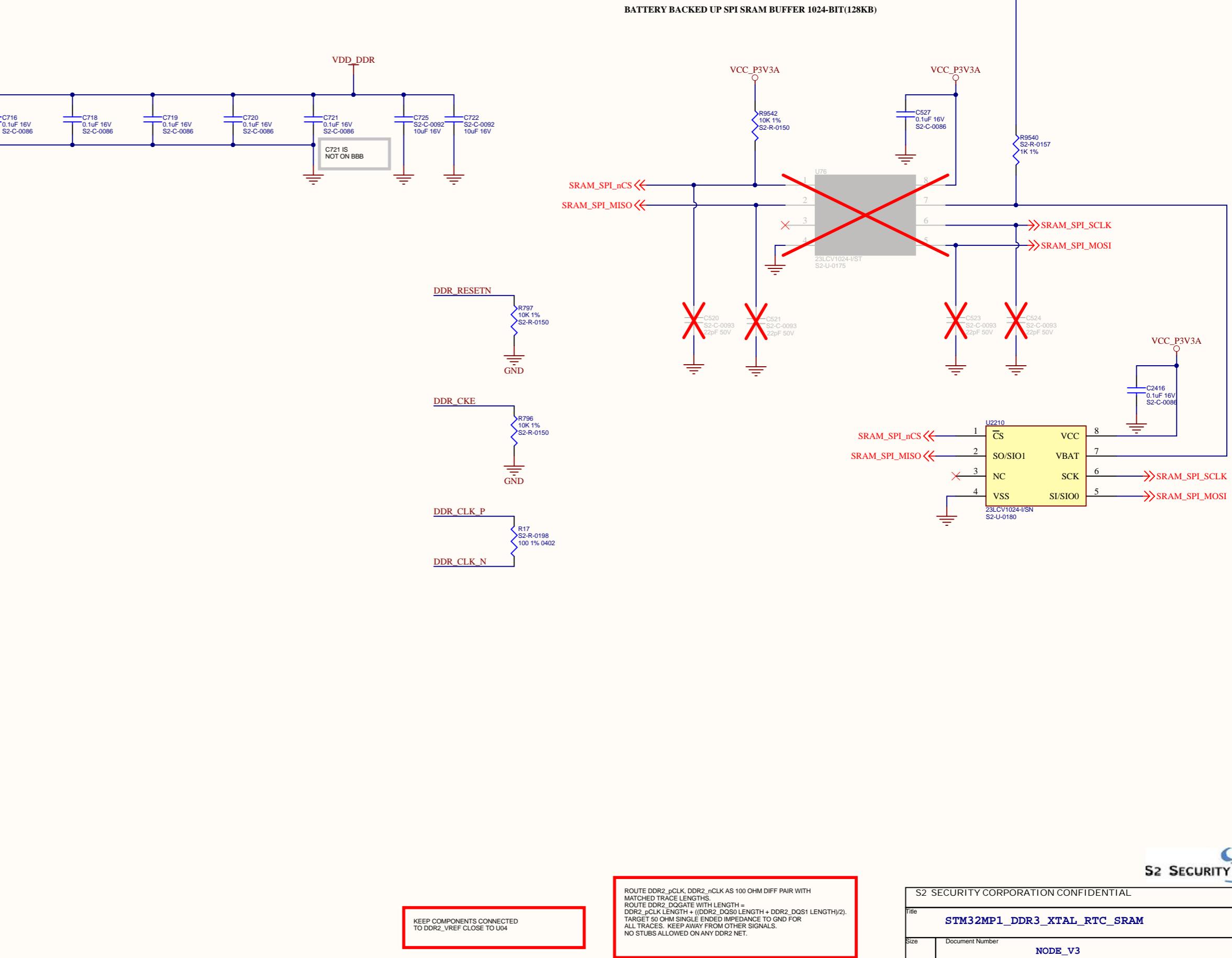
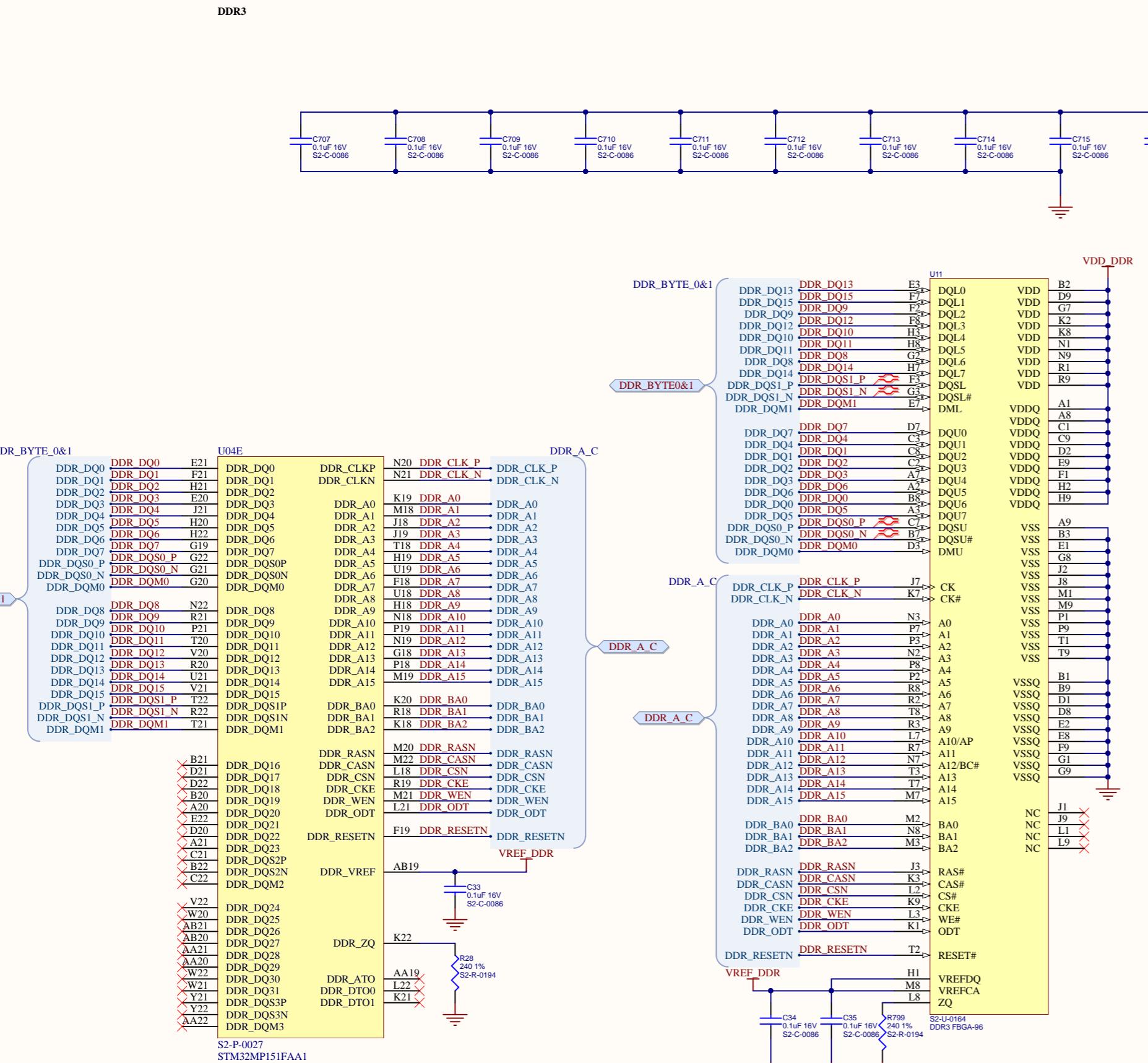
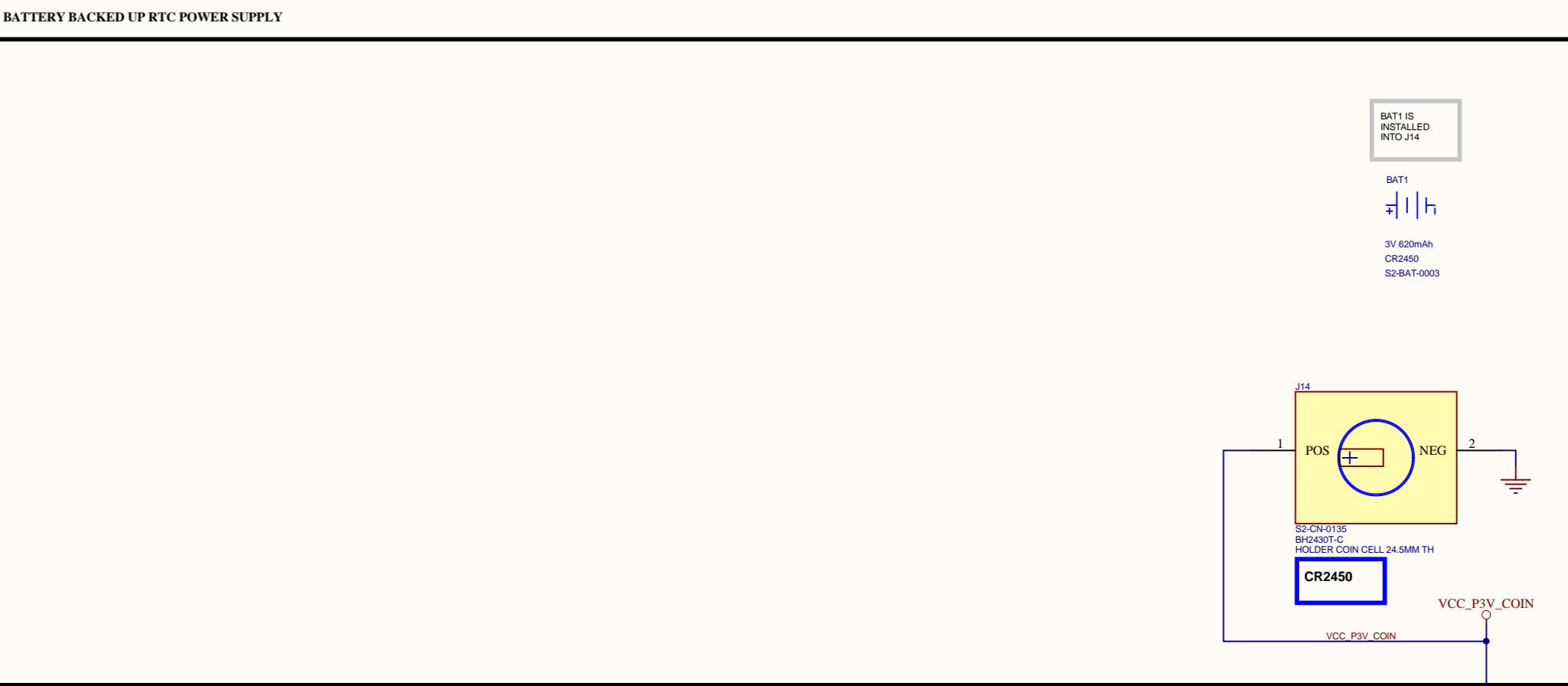
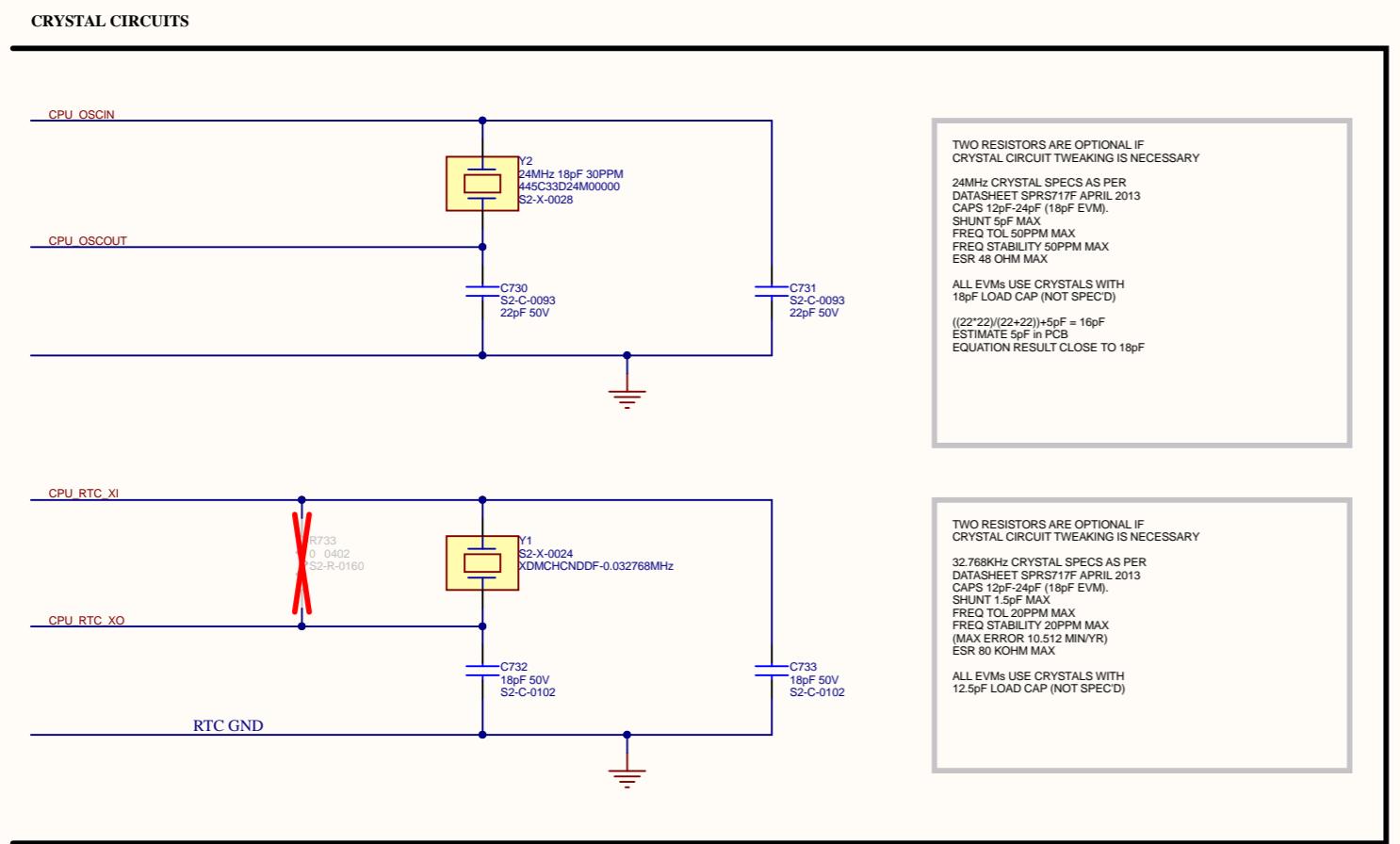
ETHERNET 10/100

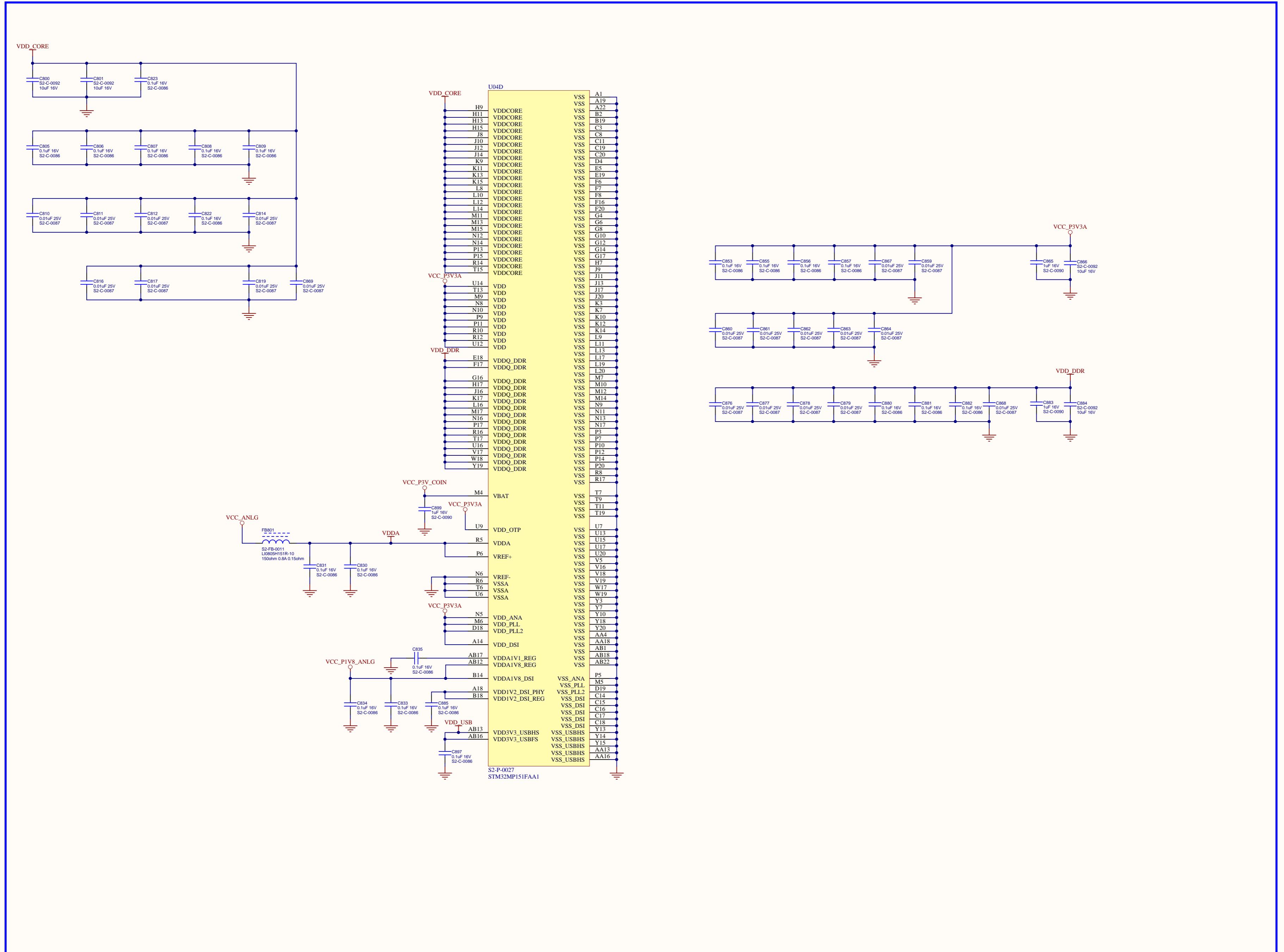


PHY RESET EXTENDER

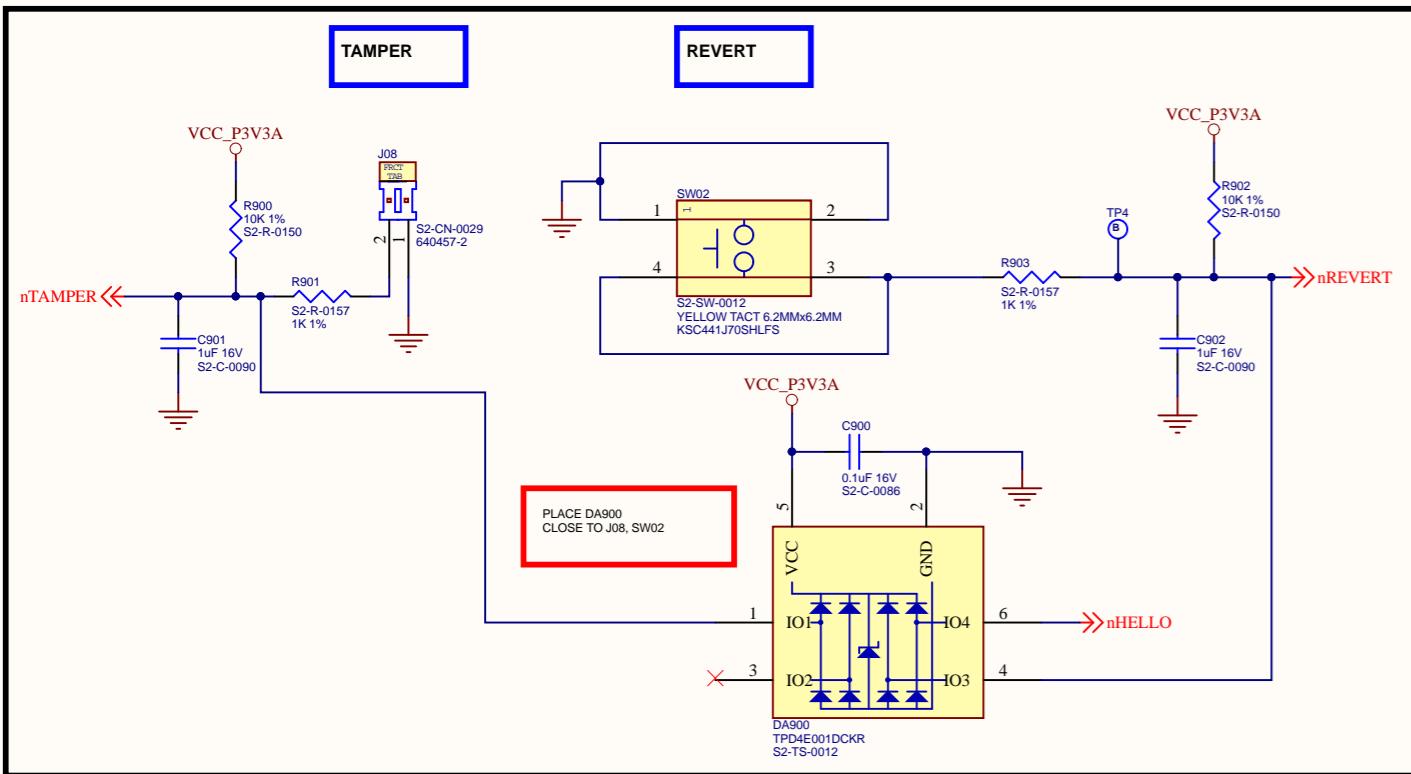




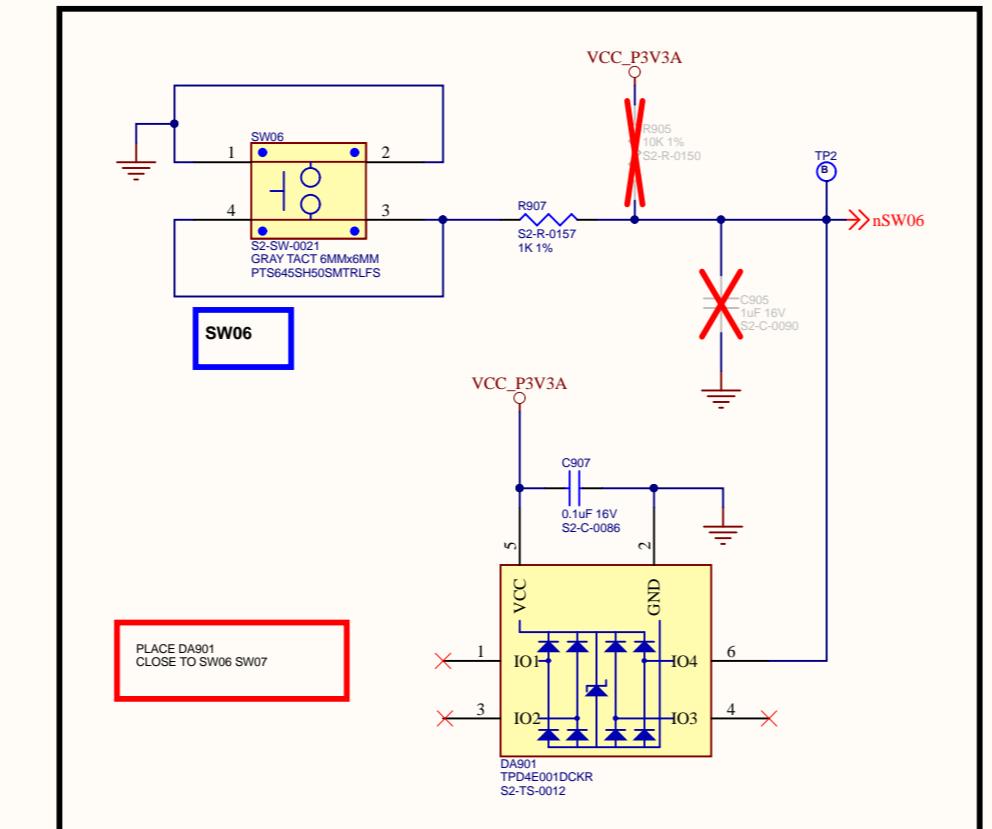




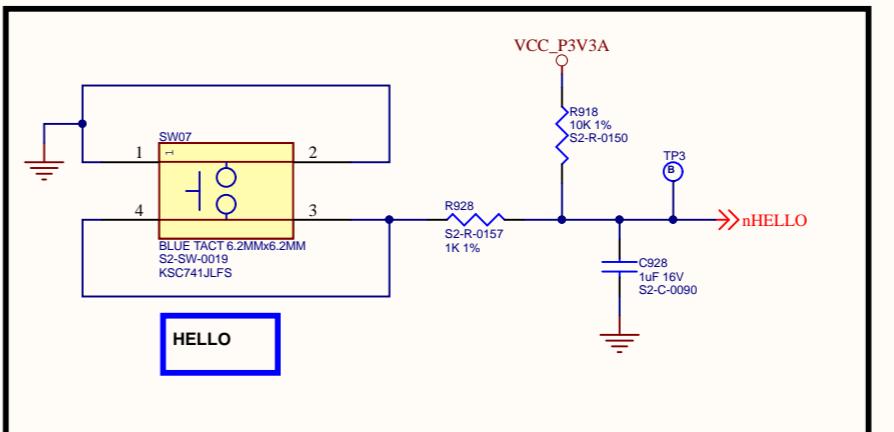
TAMPER CONN AND REVERT SWITCH



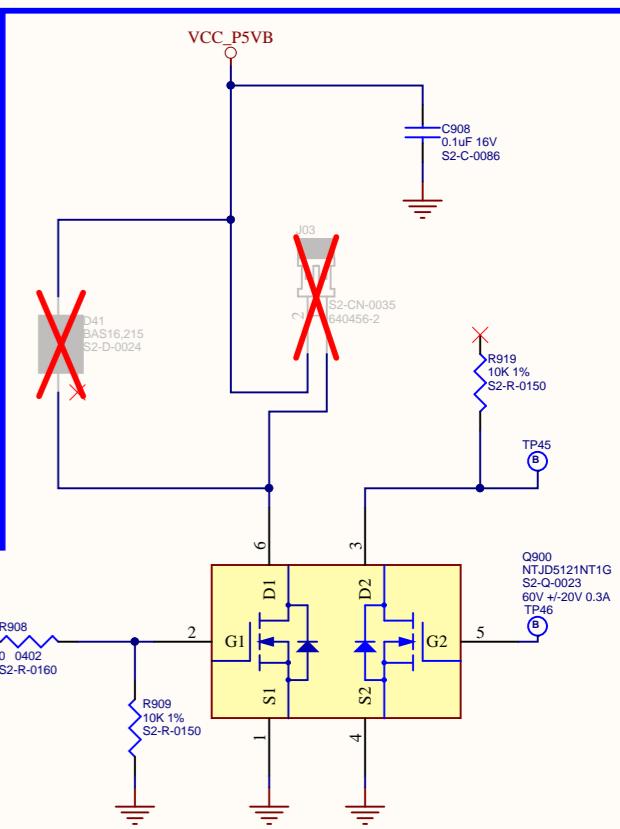
SPARE PUSH BUTTON SWITCH SW06



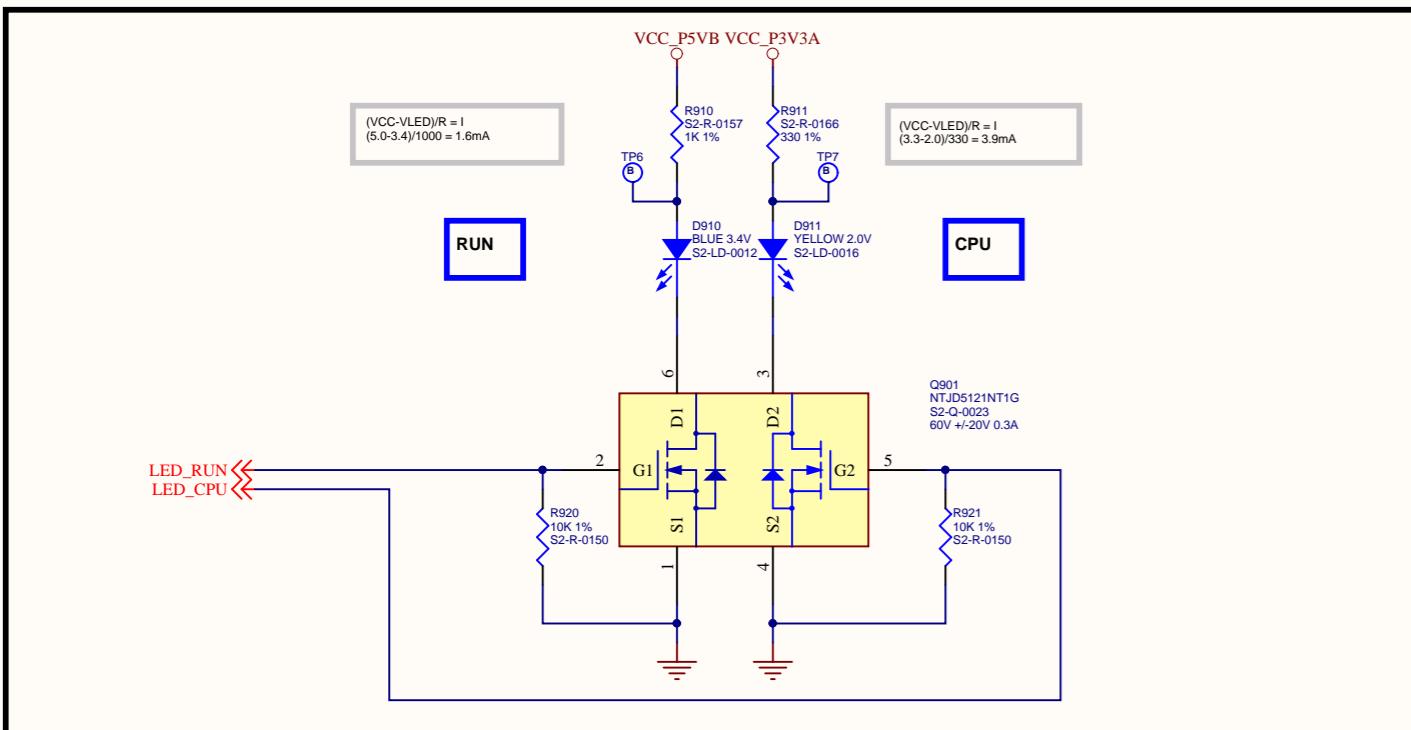
HELLO BUTTON



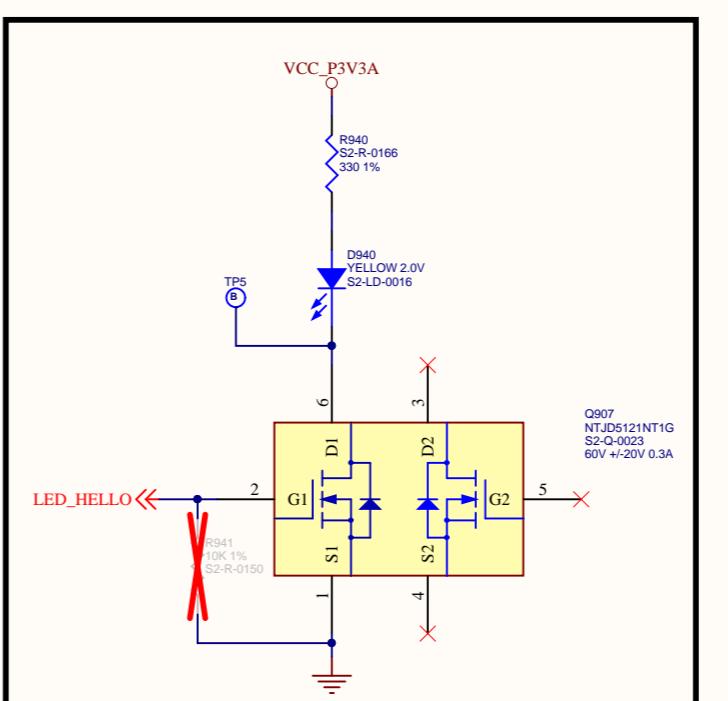
GPIO OUT SWITCHED 5V



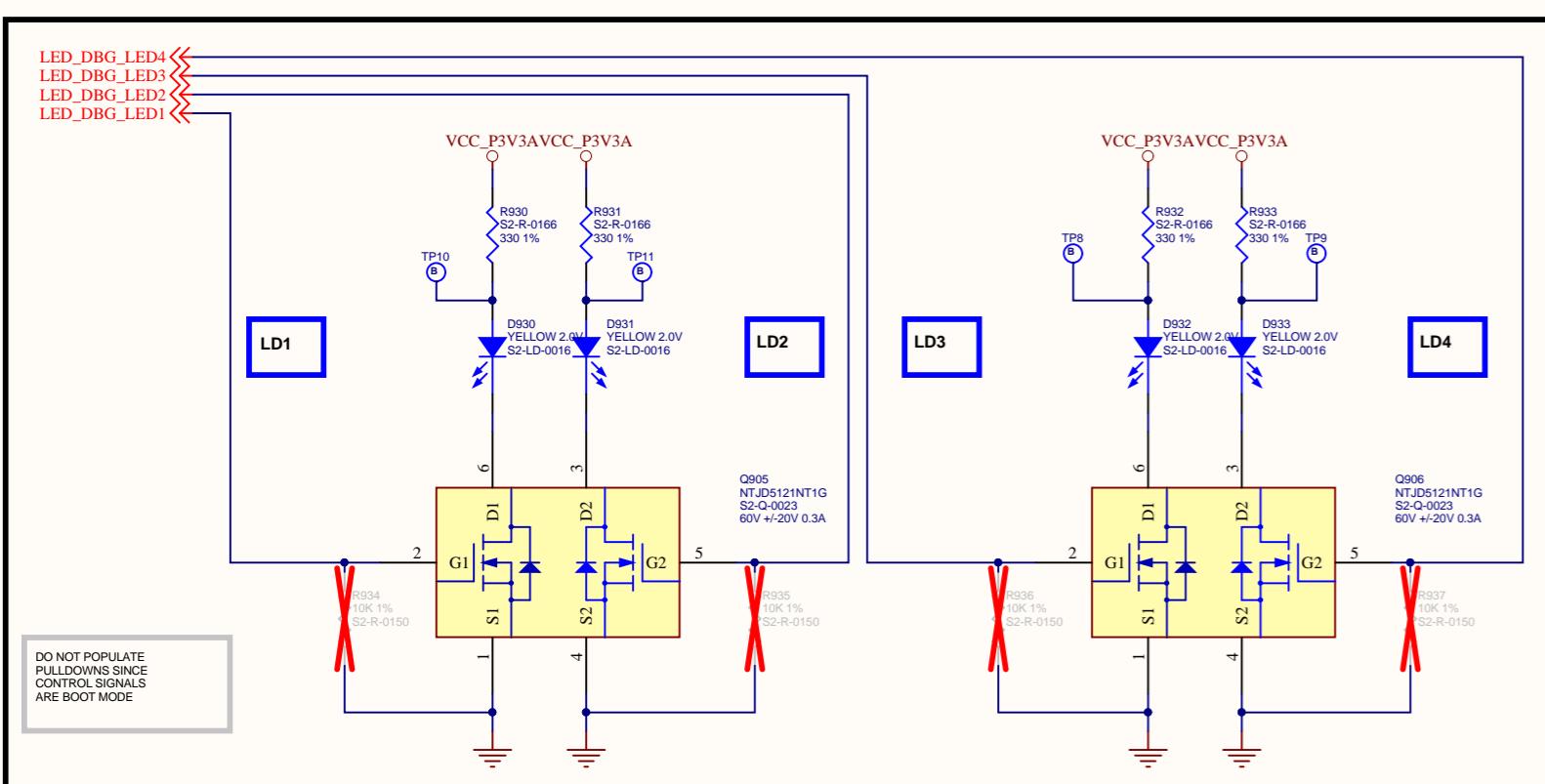
STATUS LEDs



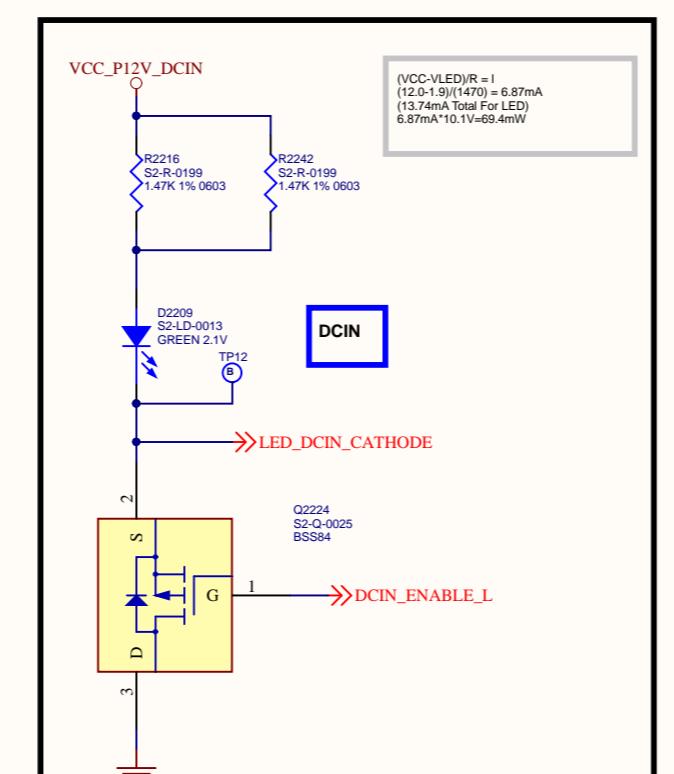
HELLO LED



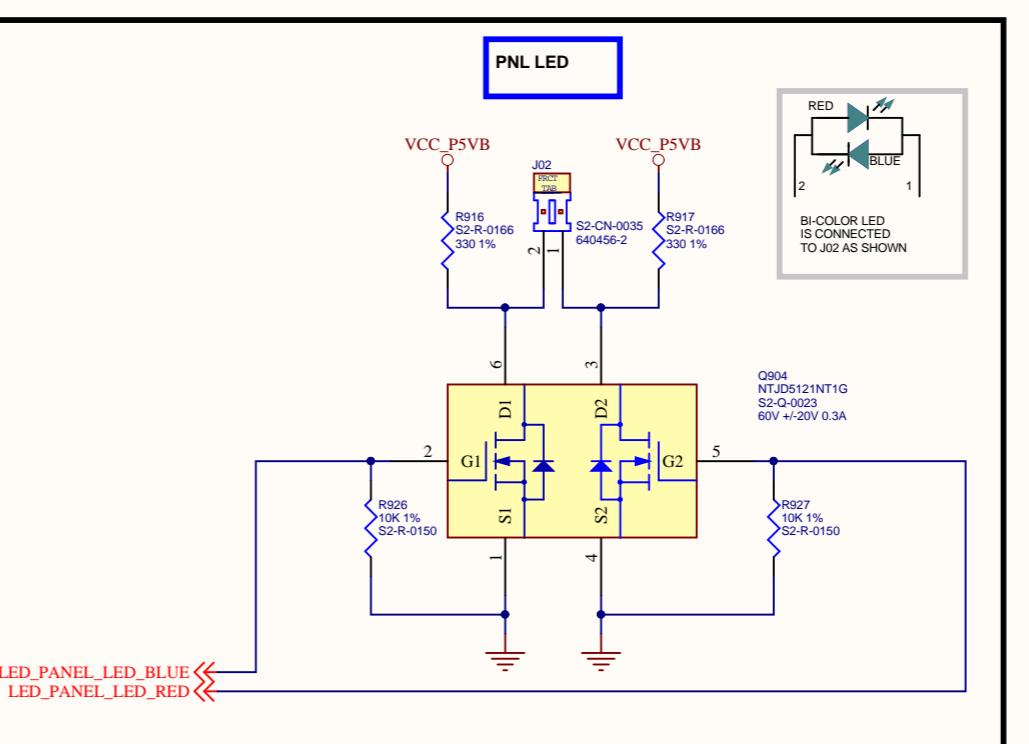
DEBUG LEDs



POWER ON LED P12V



PANEL LED



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Title: LEDs_BUTTONS_JUMPERS

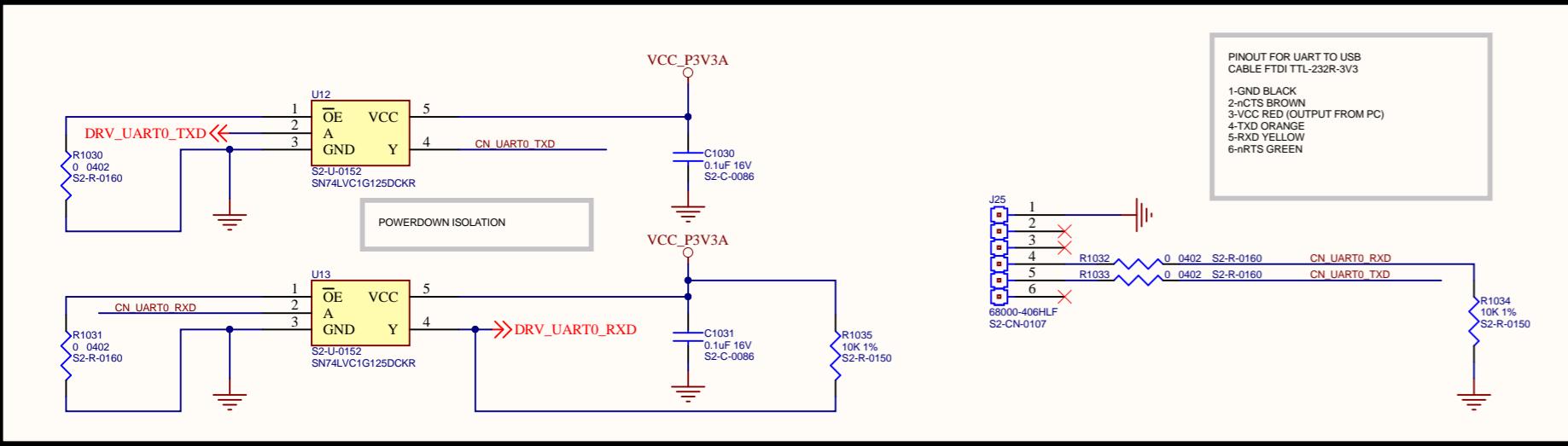
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Rev: A2

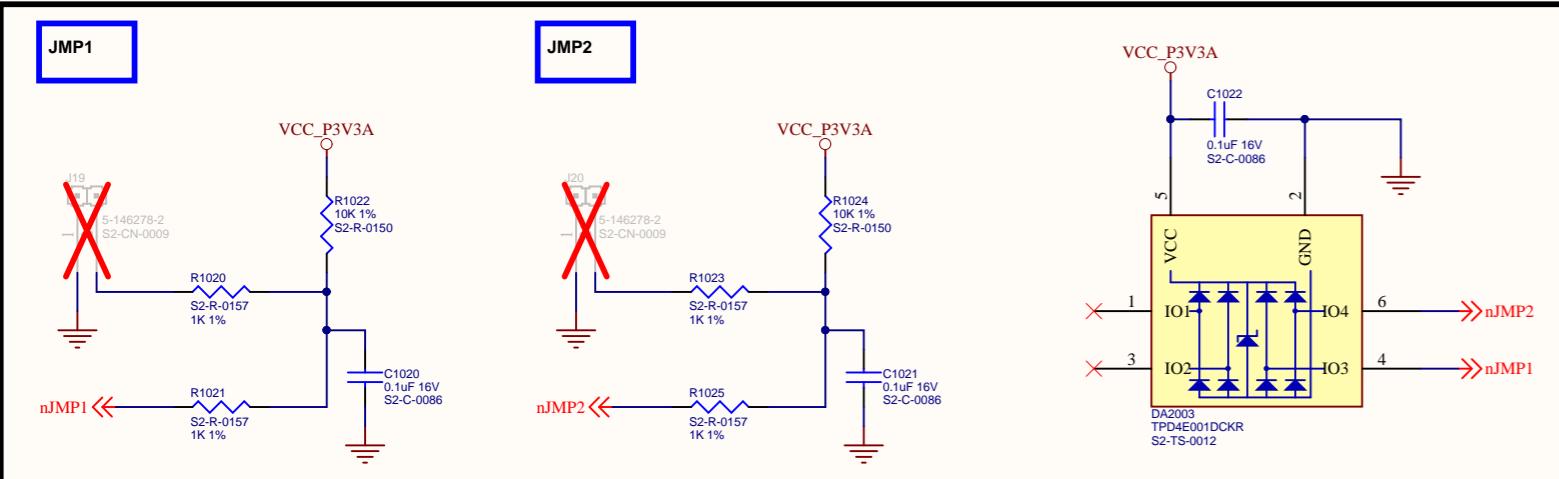
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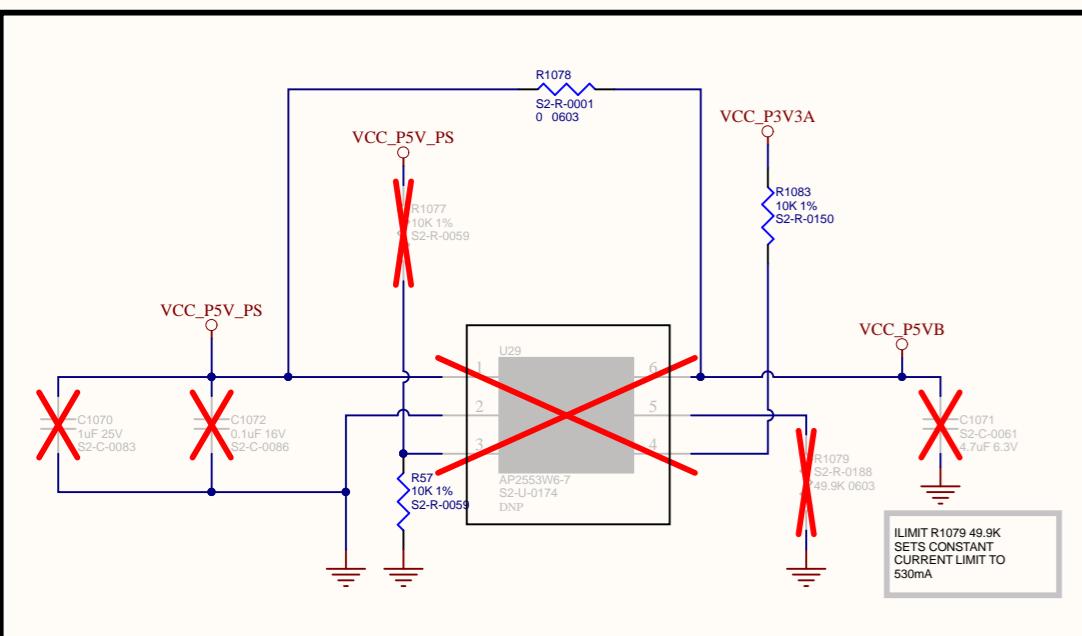
POWERDOWN ISOLATION AND UART0 CONSOLE CONNECTOR



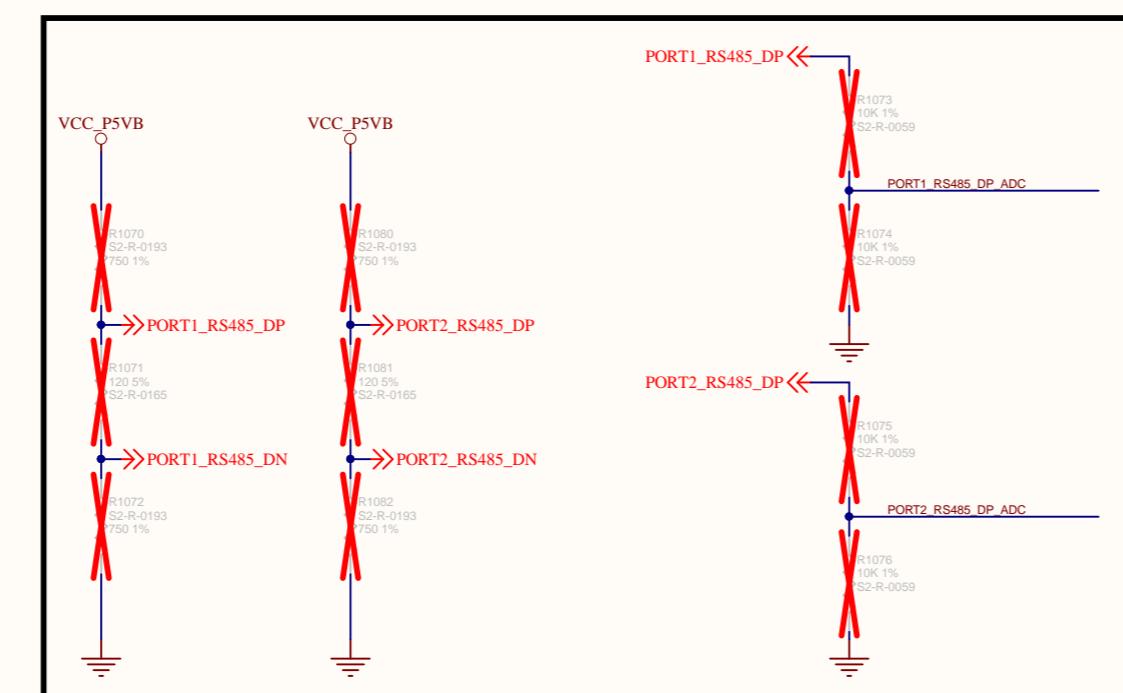
SPARE JUMPERS



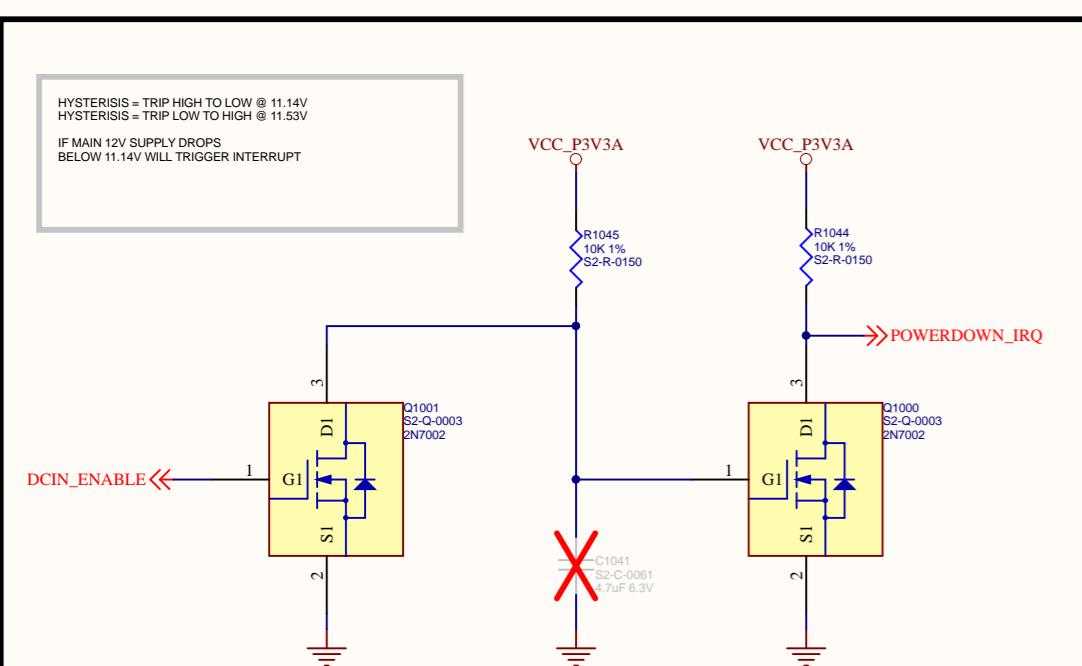
POWER SWITCH VCC_PSVB FOR PROTECTION OF RS-485



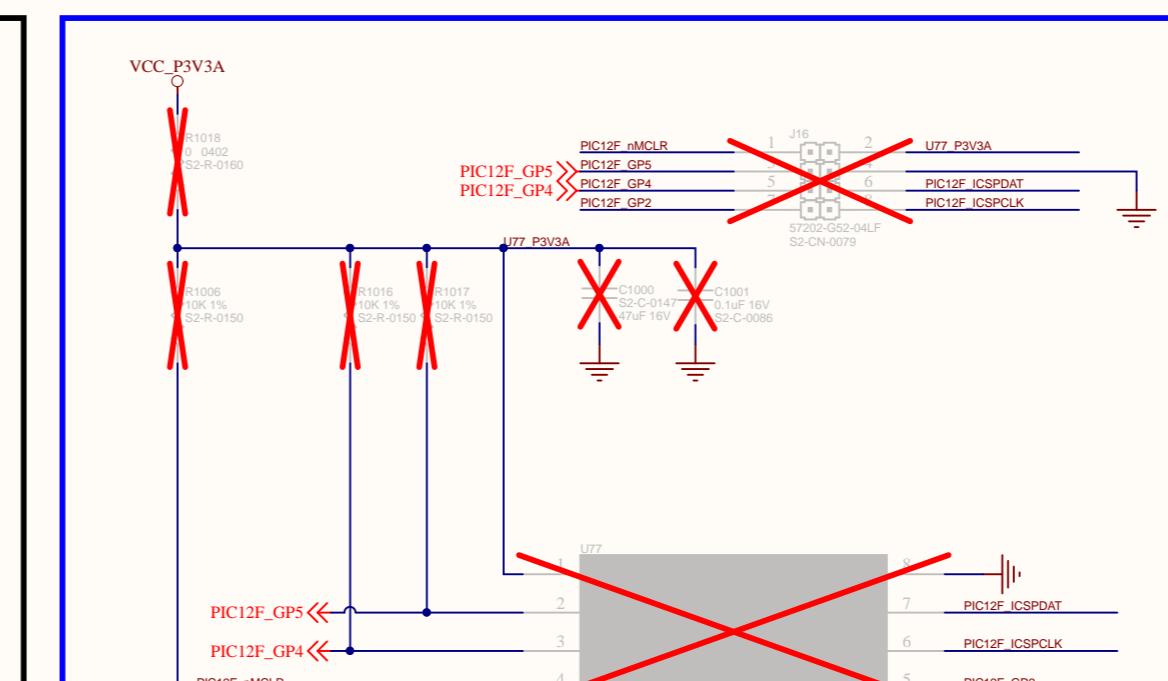
FAILSAFE BIAS FOR 2-WIRE RS-485 AND ADC MEASURE POINTS



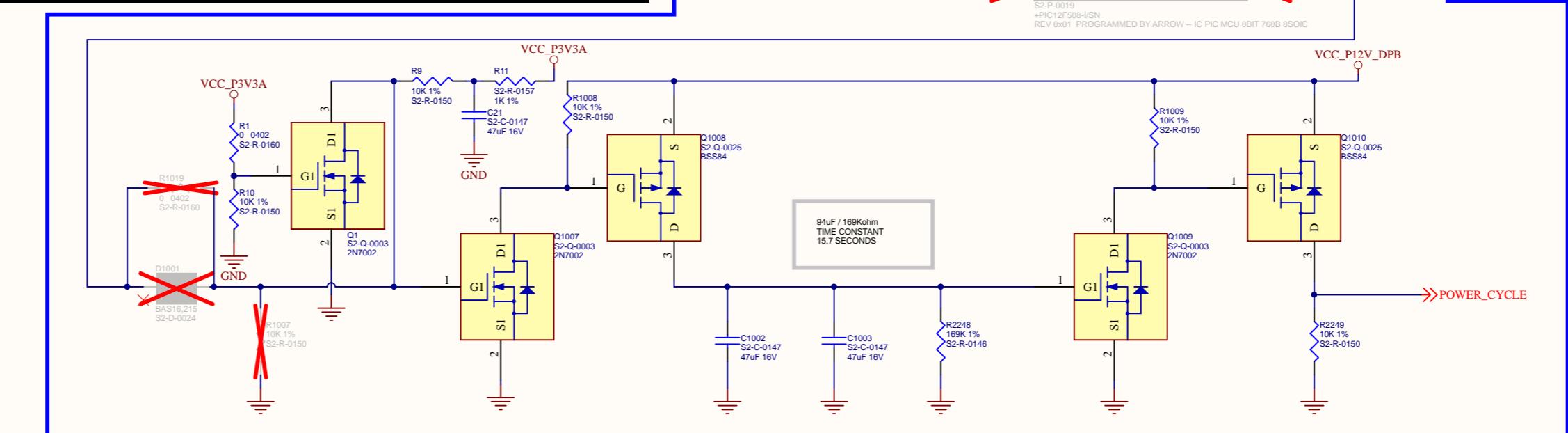
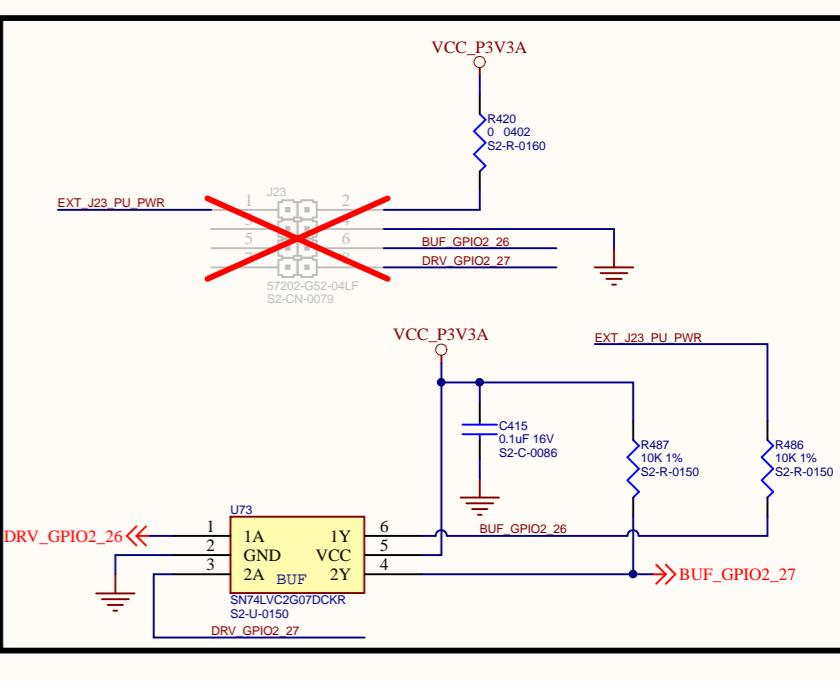
POWERDOWN INTERRUPT CIRCUIT



POWER CYCLE CONTROL



SPARE GPIO J23



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Title: M1NN MISCELLANEOUS

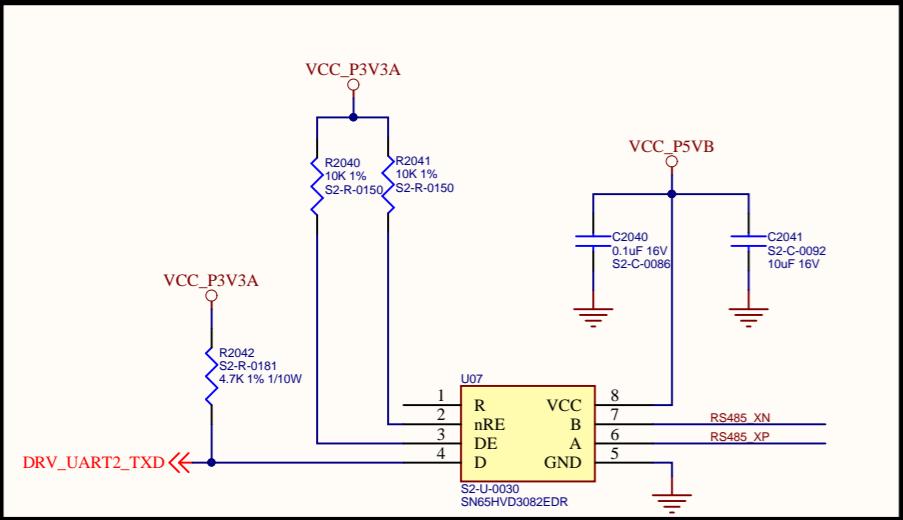
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Rev: A2

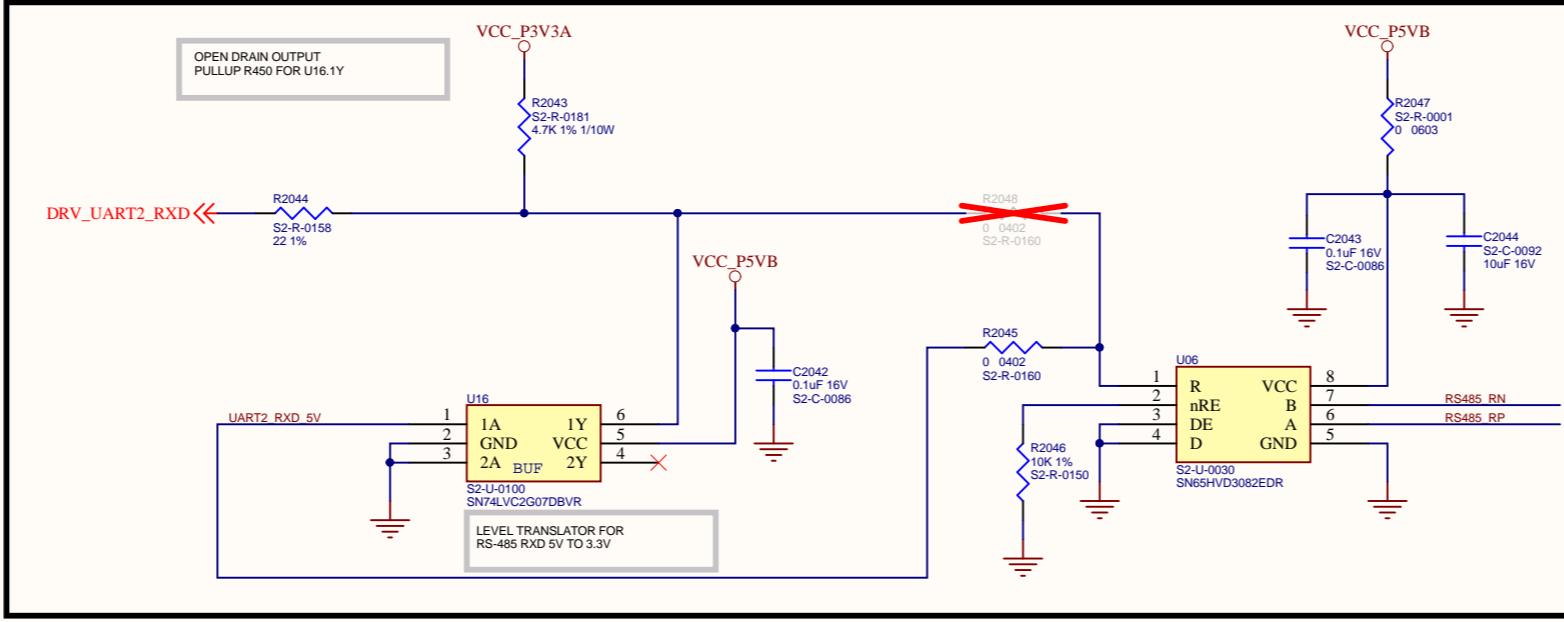
Date: Sheet 10 of 14



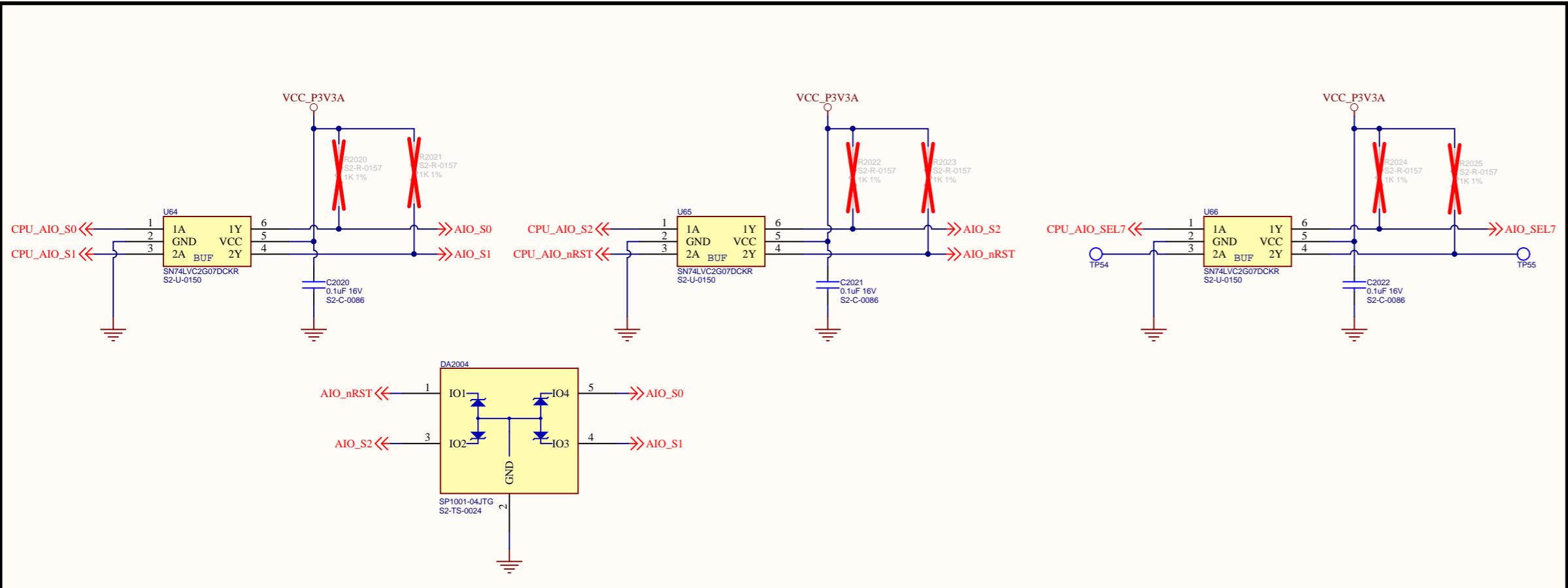
RS-485 TRANSMIT FOR RIBBON CABLE



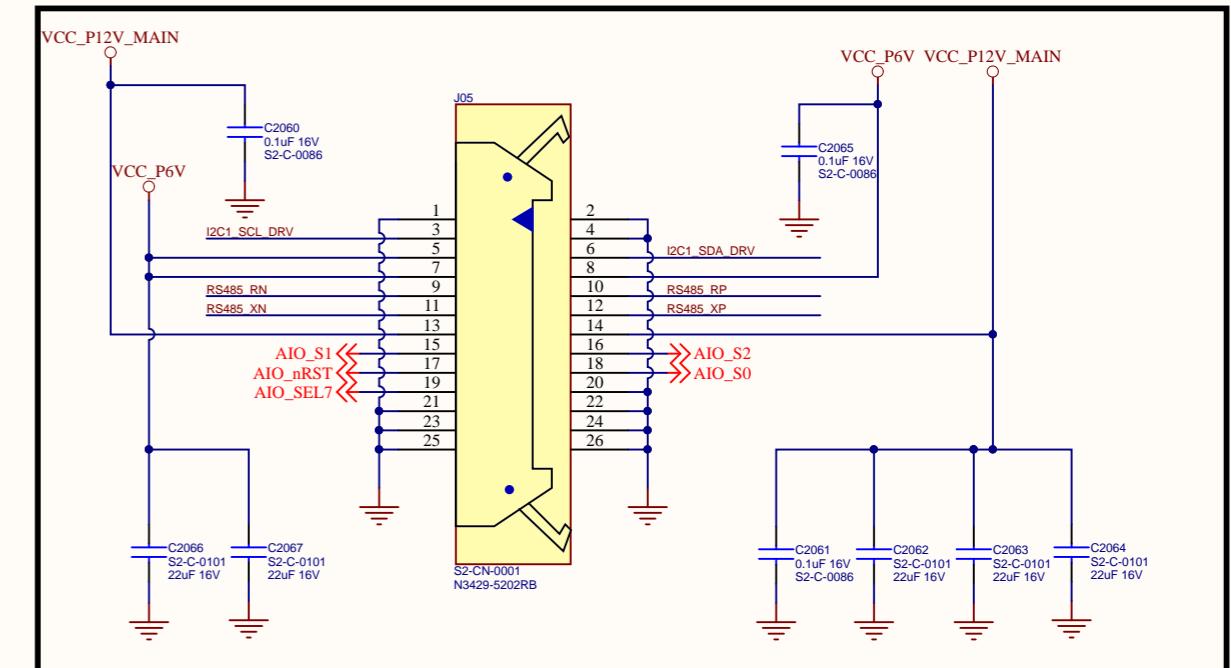
RS-485 RECEIVER FOR RIBBON CABLE



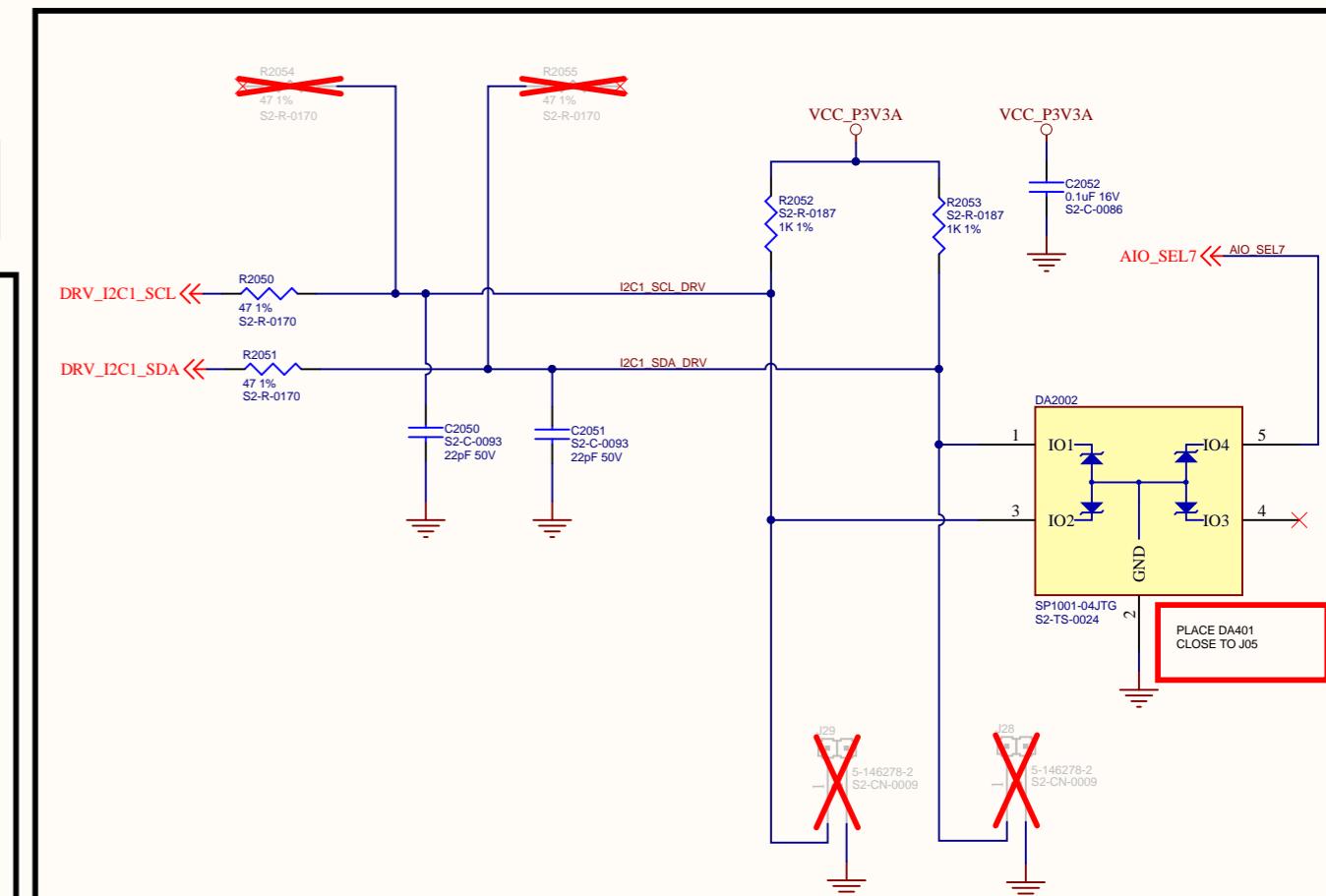
AIO BLADE SELECT AND RESET FOR RIBBON CABLE



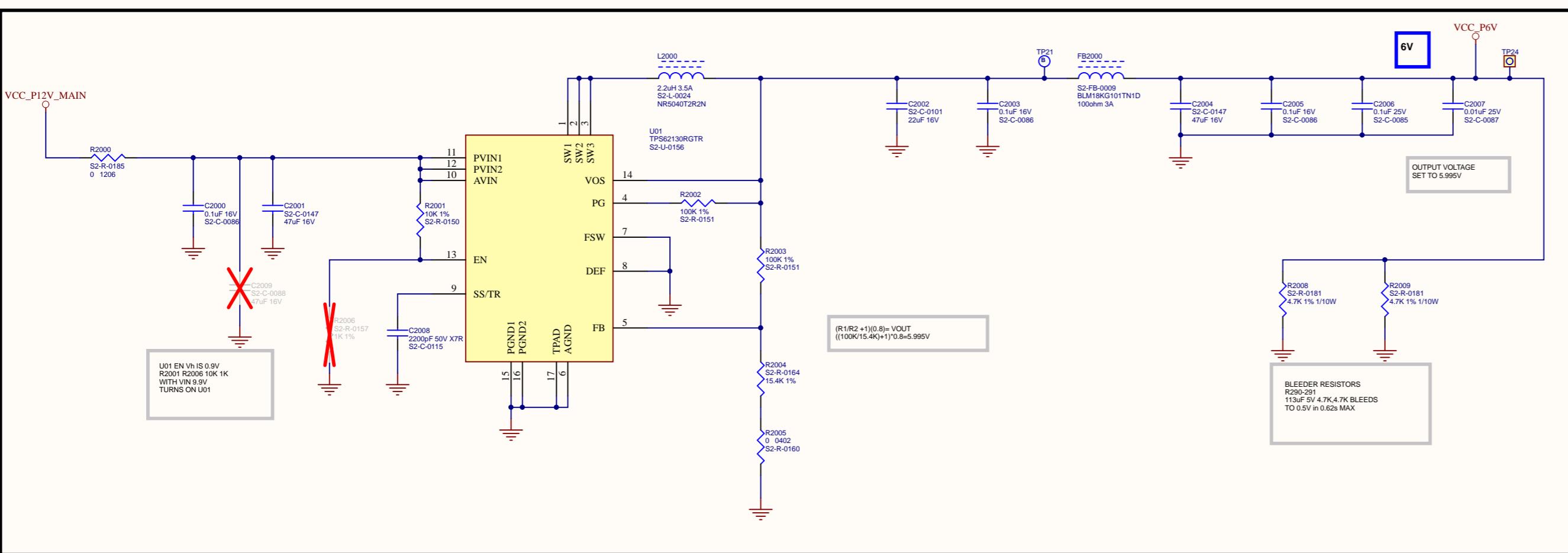
AIO BLADE RIBBON CABLE CONNECTOR



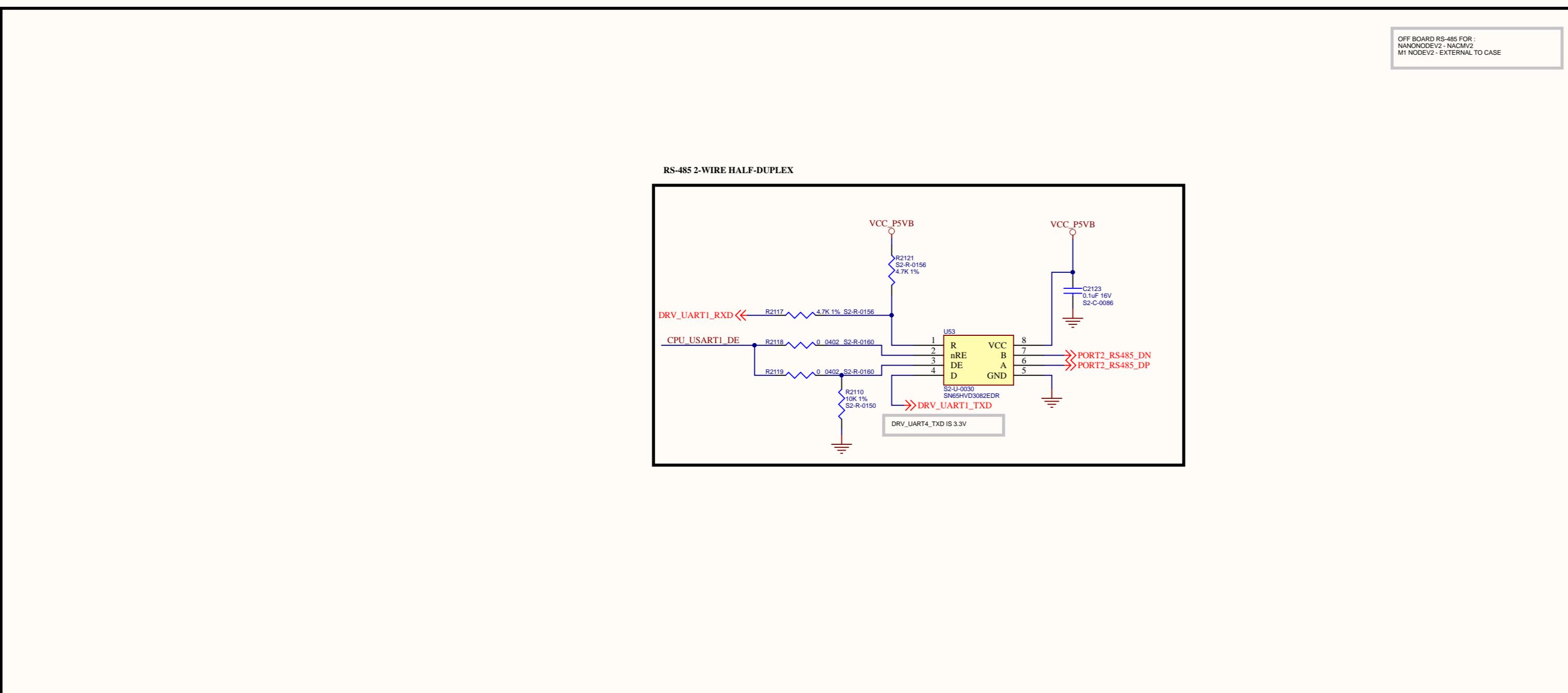
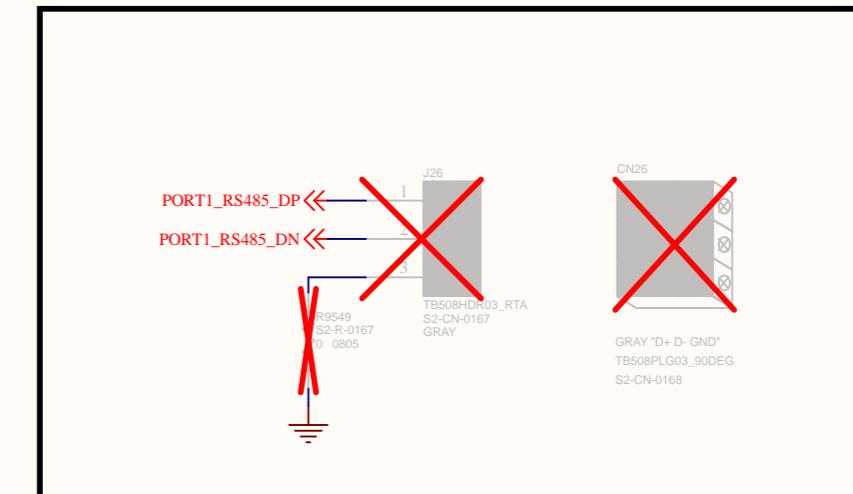
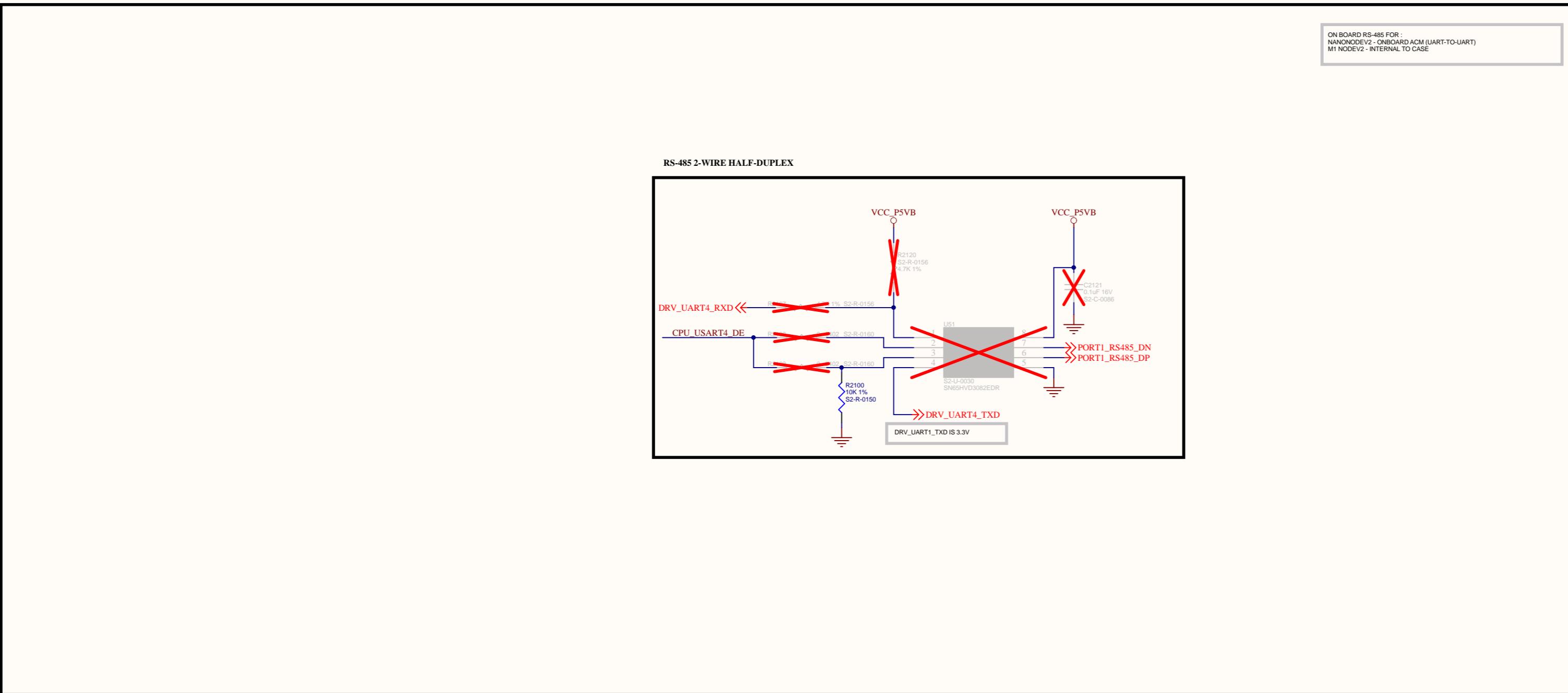
I2C DRIVE AND ESD PROTECTION FOR RIBBON CABLE



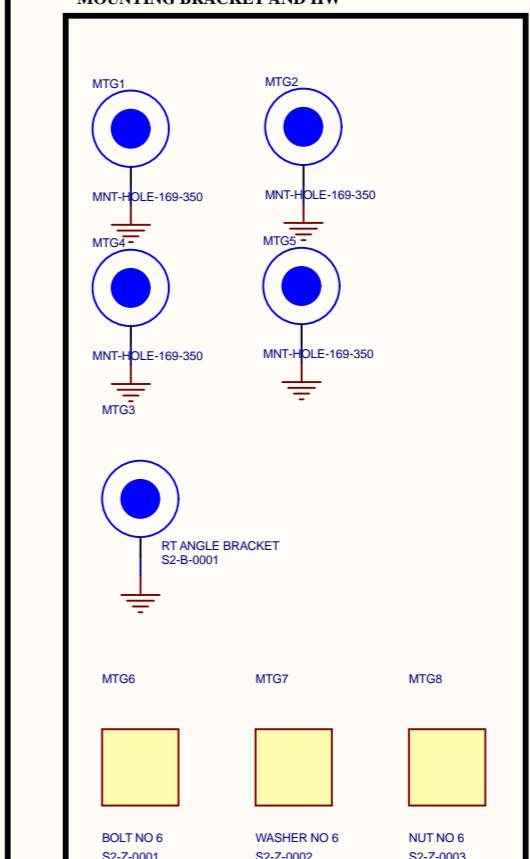
P6V POWER SUPPLY

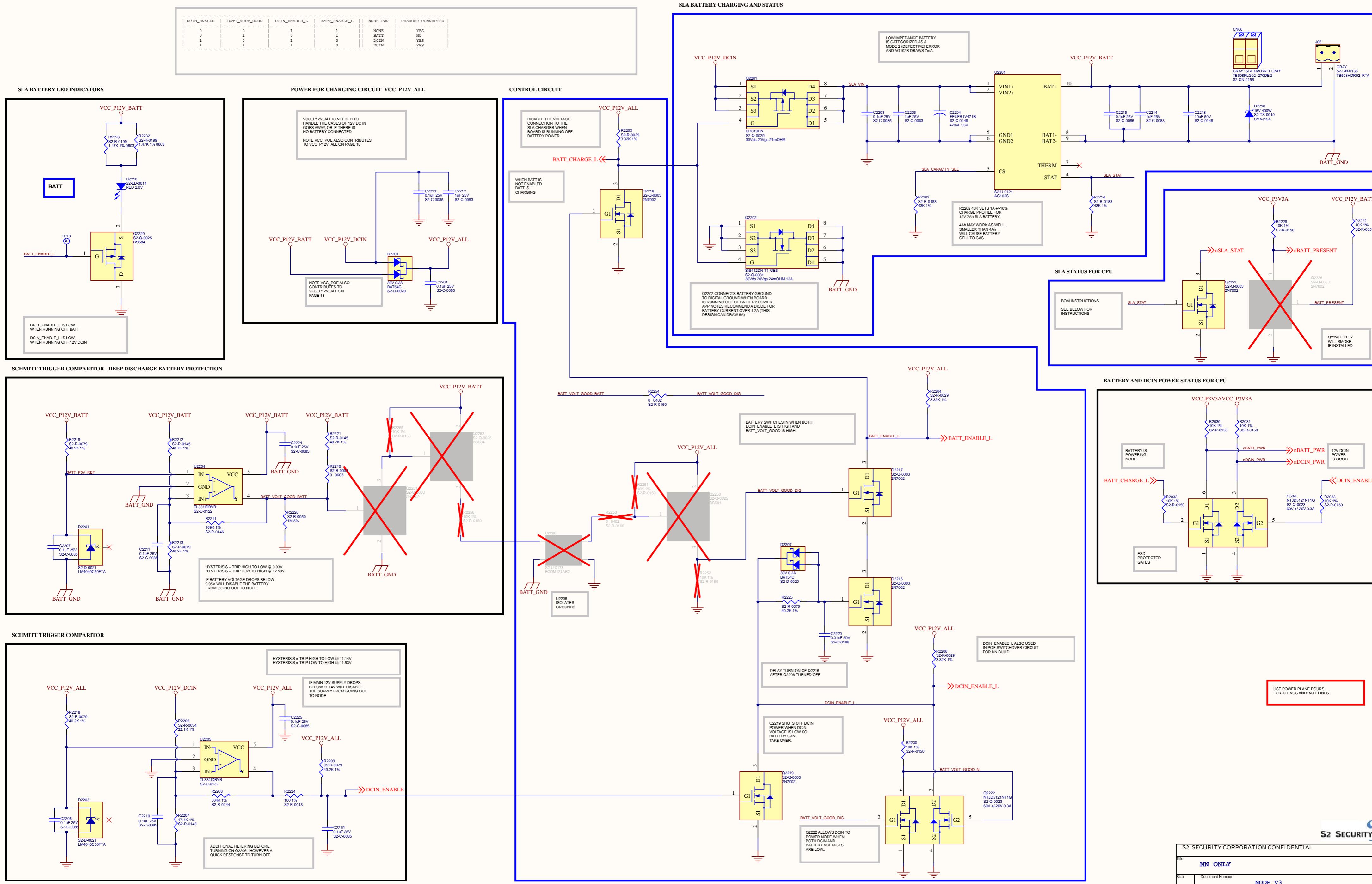


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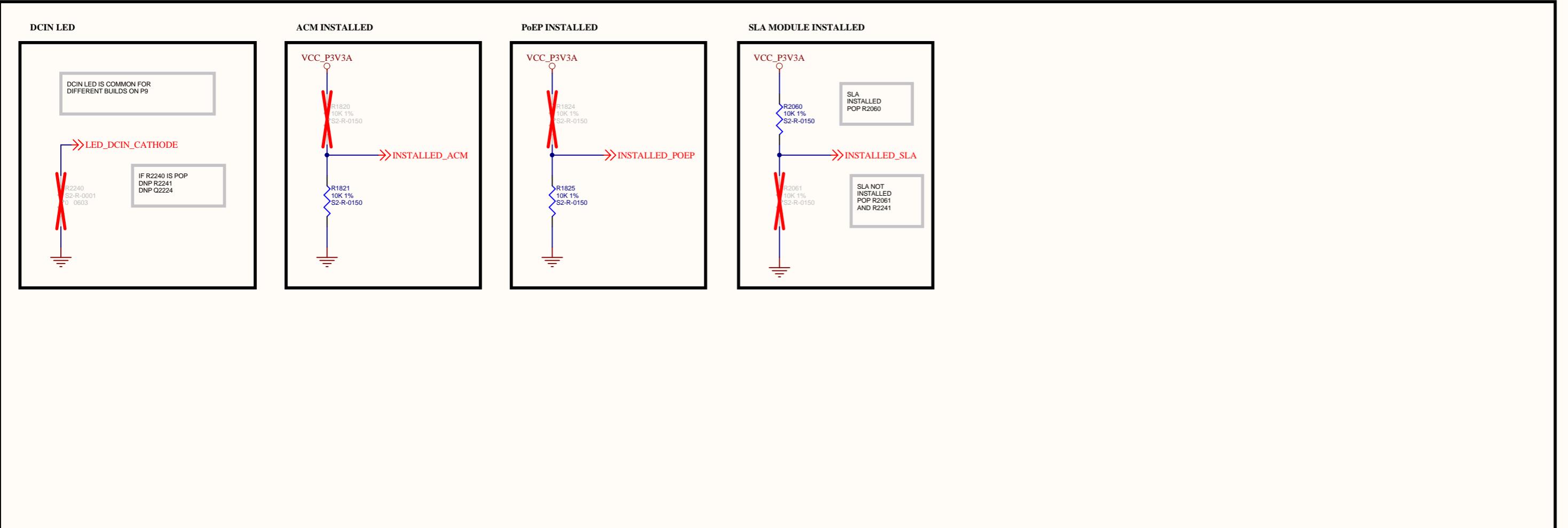


MOUNTING BRACKET AND HW

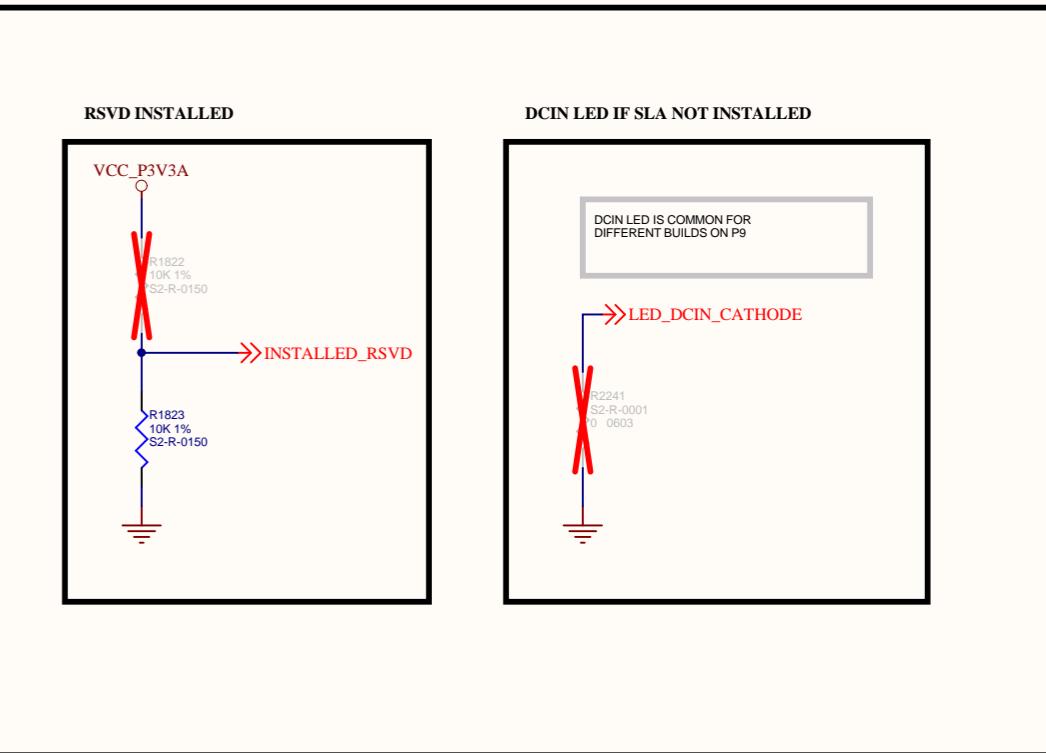




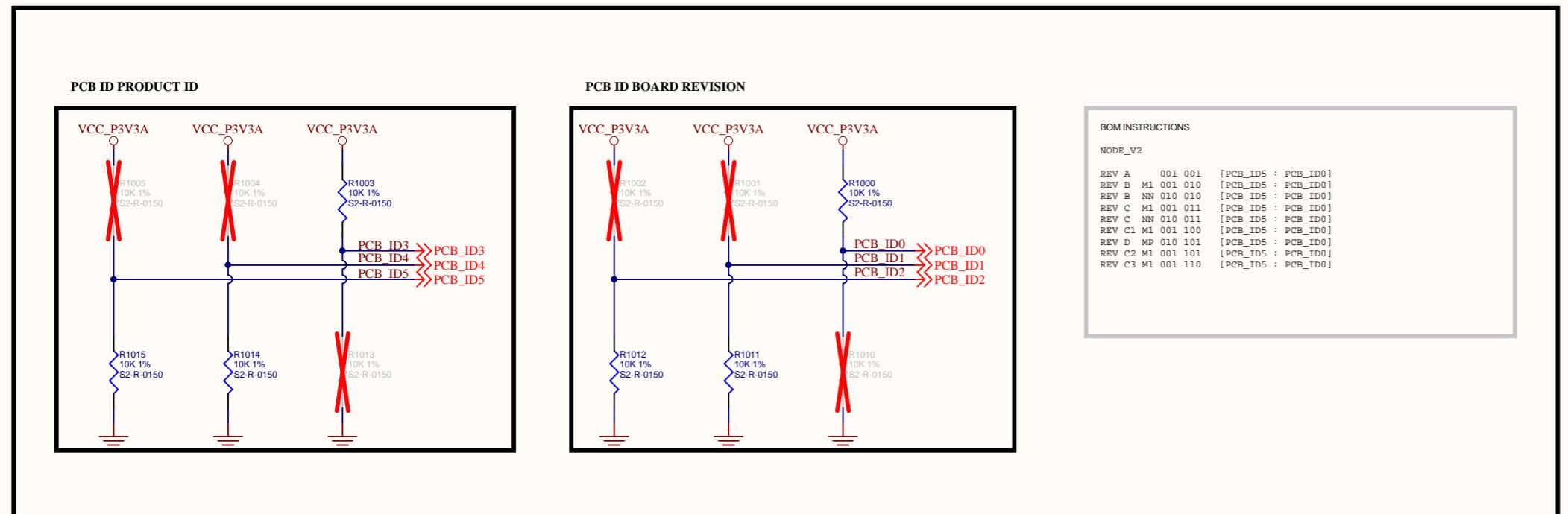
M1 BUILD AND MP BUILD BOM GENERATION INSTRUCTIONS



OTHER BUILD VARIANTS



M1 BUILD AND MP BUILD BOM GENERATION INSTRUCTIONS



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