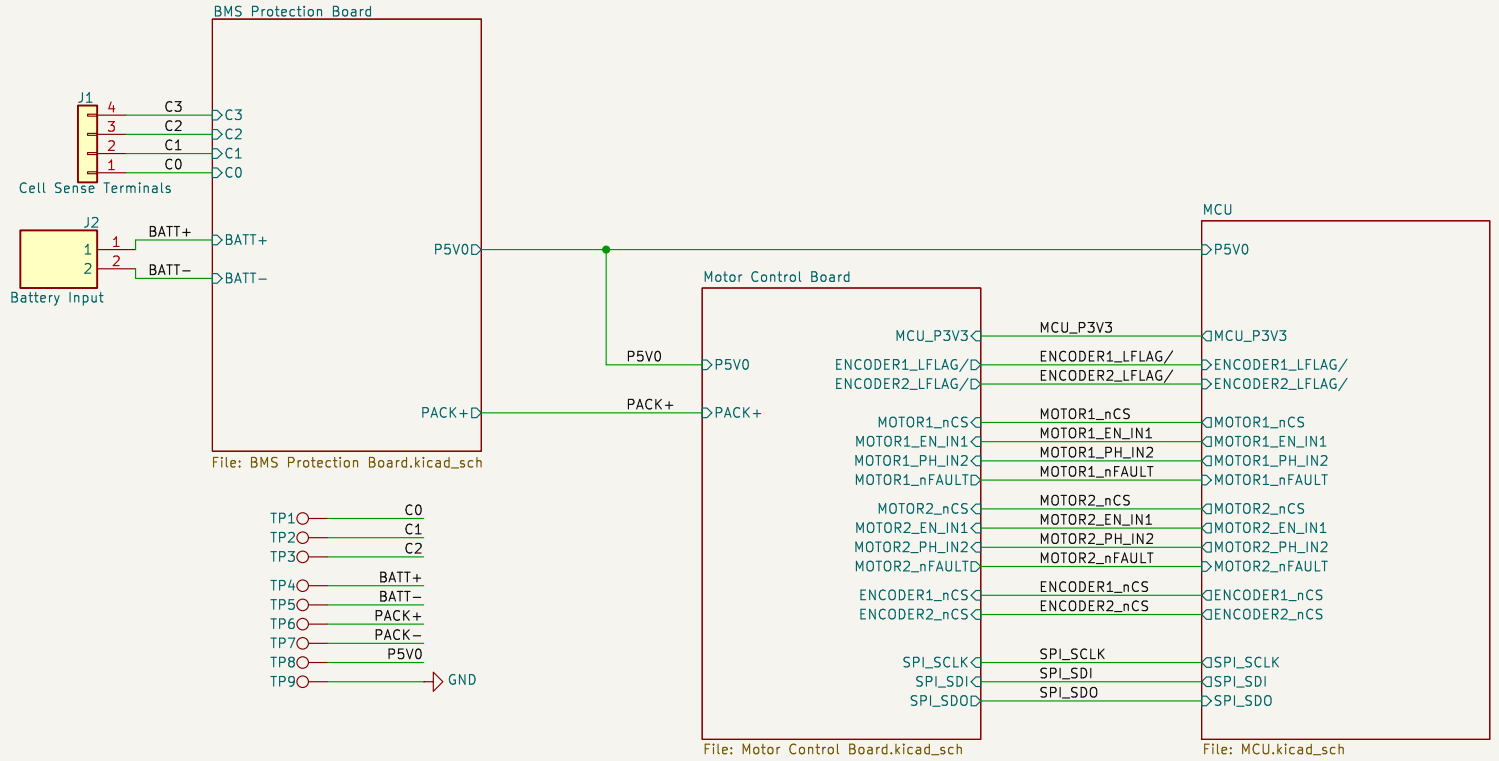

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Title:		
Size: A4	Date:	**Rev:**
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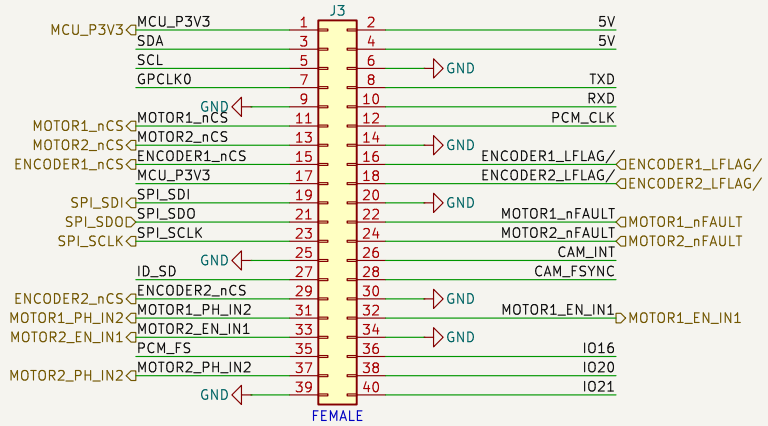

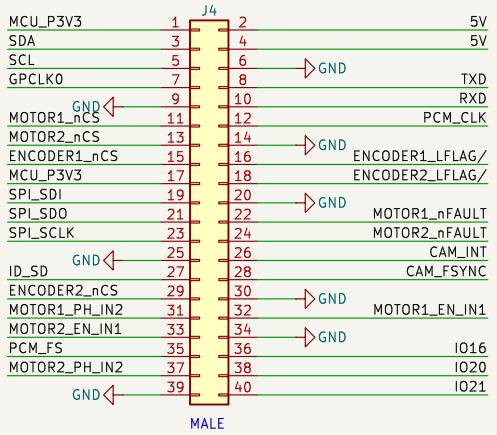

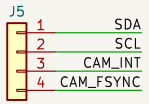

Sheet: /MCU/
File: MCU.kicad_sch

Title:

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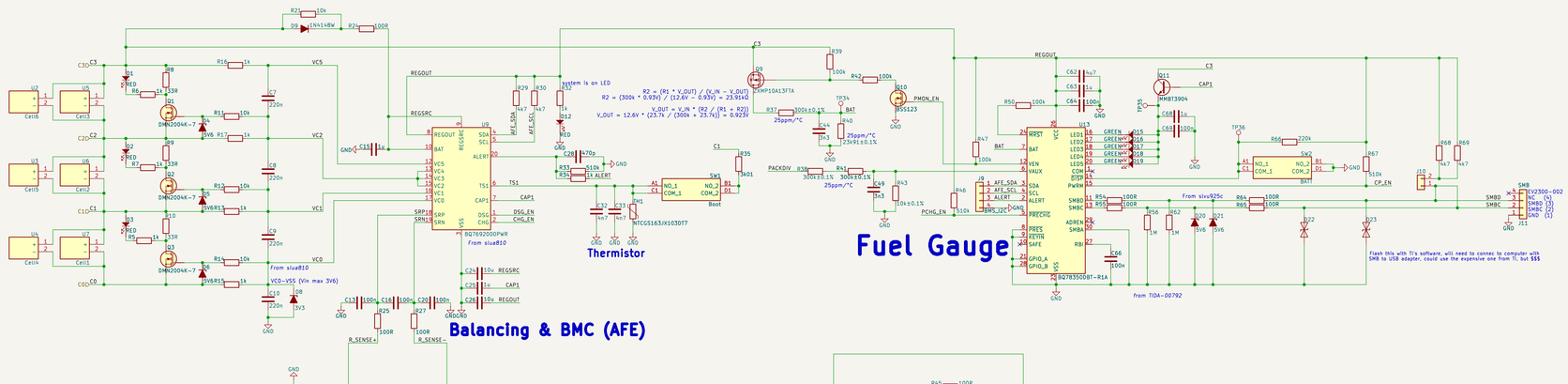
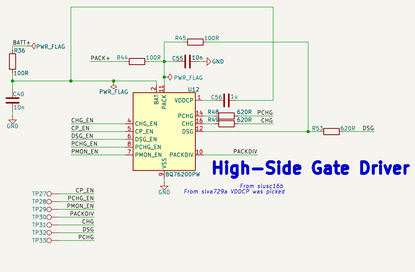
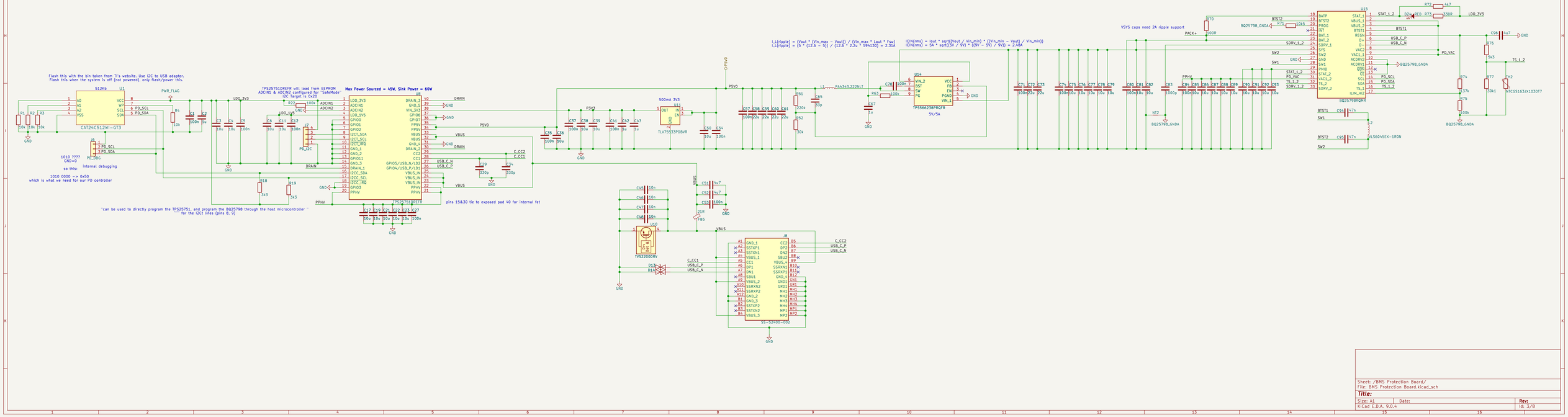
BMS Protection Board for 3S Battery Pack
In/Out: min voltage: 9.6 V, nominal voltage: 11.1 V, max voltage: 12.6 V
Output: 20A continuous discharge current
Min Each Cell set to 3.2 V, Max Each Cell set to 4.2 V







Sheet: /BMS Protection Board/
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Title:

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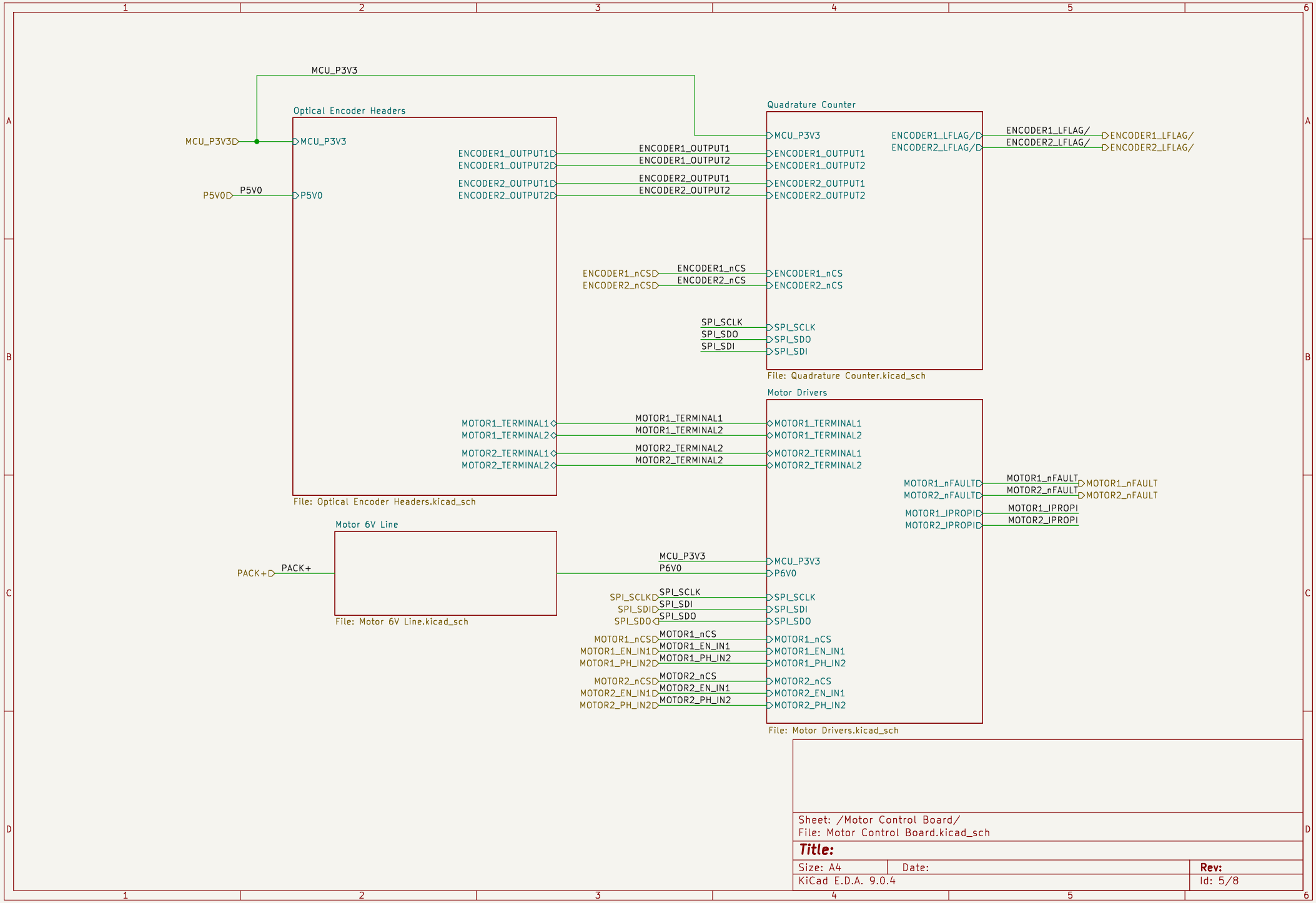
MCU_P3V3
Optical Encoder Headers
MCU_P3V3D
MCU_P3V3
P5V0D
P5V0
P5V0
ENCODER1_OUTPUT1D
ENCODER1_OUTPUT2D
ENCODER2_OUTPUT1D
ENCODER2_OUTPUT2D
ENCODER1_OUTPUT1
ENCODER1_OUTPUT2
ENCODER2_OUTPUT1
ENCODER2_OUTPUT2
File: Optical Encoder Headers.kicad_sch
Quadrature Counter
MCU_P3V3
ENCODER1_OUTPUT1
ENCODER1_OUTPUT2
ENCODER2_OUTPUT1
ENCODER2_OUTPUT2
ENCODER1_LFLAG/D
ENCODER2_LFLAG/D
ENCODER1_LFLAG/
ENCODER2_LFLAG/
ENCODER1_LFLAG/
ENCODER2_LFLAG/
ENCODER1_nCSD
ENCODER2_nCSD
ENCODER1_nCS
ENCODER2_nCS
ENCODER1_nCS
ENCODER2_nCS
SPI_SCLK
SPI_SDO
SPI_SDI
SPI_SCLK
SPI_SDO
SPI_SDI
File: Quadrature Counter.kicad_sch
Motor Drivers
MOTOR1_TERMINAL1D
MOTOR1_TERMINAL2D
MOTOR2_TERMINAL1D
MOTOR2_TERMINAL2D
MOTOR1_TERMINAL1
MOTOR1_TERMINAL2
MOTOR2_TERMINAL2
MOTOR2_TERMINAL1
MOTOR2_TERMINAL2
MOTOR1_TERMINAL1
MOTOR1_TERMINAL2
MOTOR2_TERMINAL1
MOTOR2_TERMINAL2
MOTOR1_nFAULTD
MOTOR2_nFAULTD
MOTOR1_nFAULT
MOTOR2_nFAULT
MOTOR1_nFAULT
MOTOR2_nFAULT
MOTOR1_IPROPID
MOTOR2_IPROPID
MOTOR1_IPROPI
MOTOR2_IPROPI
Motor 6V Line
PACK+D
PACK+
File: Motor 6V Line.kicad_sch
MCU_P3V3
P6V0
MCU_P3V3
P6V0
SPI_SCLKD
SPI_SDID
SPI_SDOD
SPI_SCLK
SPI_SDI
SPI_SDO
SPI_SCLK
SPI_SDI
SPI_SDO
MOTOR1_nCSD
MOTOR1_EN_IN1D
MOTOR1_PH_IN2D
MOTOR1_nCS
MOTOR1_EN_IN1
MOTOR1_PH_IN2
MOTOR1_nCS
MOTOR1_EN_IN1
MOTOR1_PH_IN2
MOTOR2_nCSD
MOTOR2_EN_IN1D
MOTOR2_PH_IN2D
MOTOR2_nCS
MOTOR2_EN_IN1
MOTOR2_PH_IN2
MOTOR2_nCS
MOTOR2_EN_IN1
MOTOR2_PH_IN2
File: Motor Drivers.kicad_sch
Sheet: /Motor Control Board/
File: Motor Control Board.kicad_sch
Title:
Size: A4
Date:
Rev:
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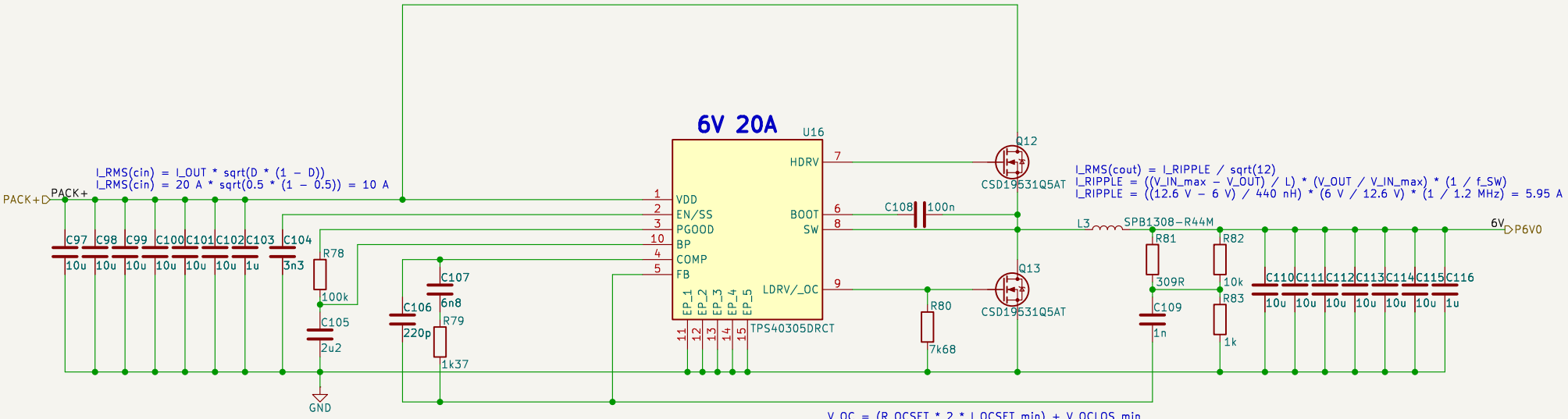

Sheet: /Motor Control Board/Motor 6V Line/
File: Motor 6V Line.kicad_sch

Title:

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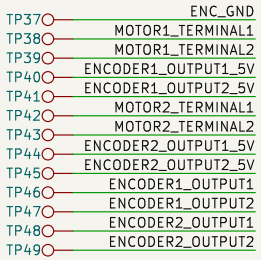
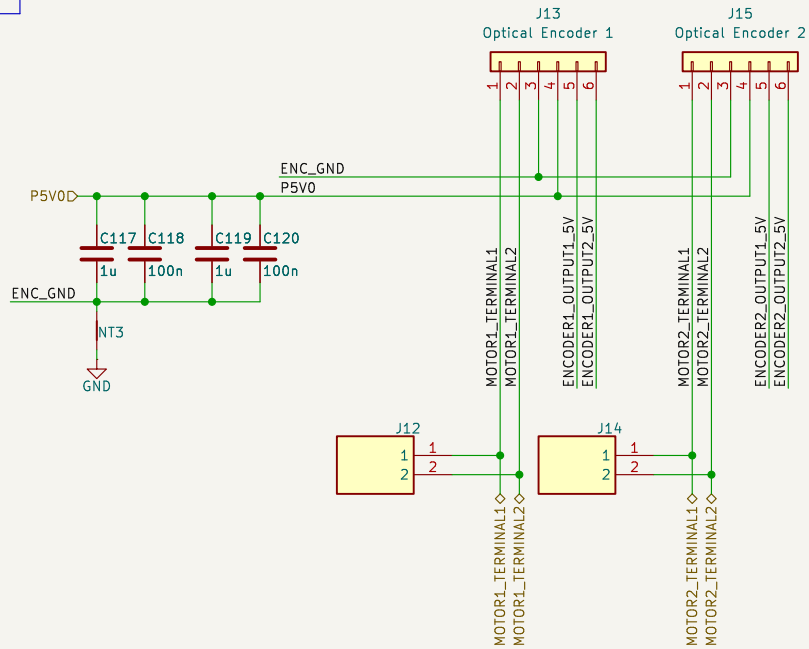
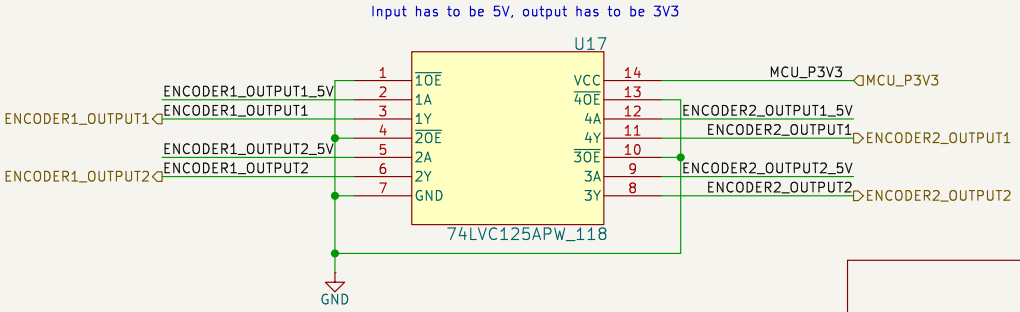
(1) Red	motor power (connects to one motor terminal)
(2) Black	motor power (connects to the other motor terminal)
(3) Green	encoder GND
(4) Blue	encoder Vcc (3.5 – 20 V)
(5) Yellow	encoder A output
(6) White	encoder B output







Sheet: /Motor Control Board/Optical Encoder Headers/
File: Optical Encoder Headers.kicad_sch

Title:

Size: A4	Date:	**Rev:**
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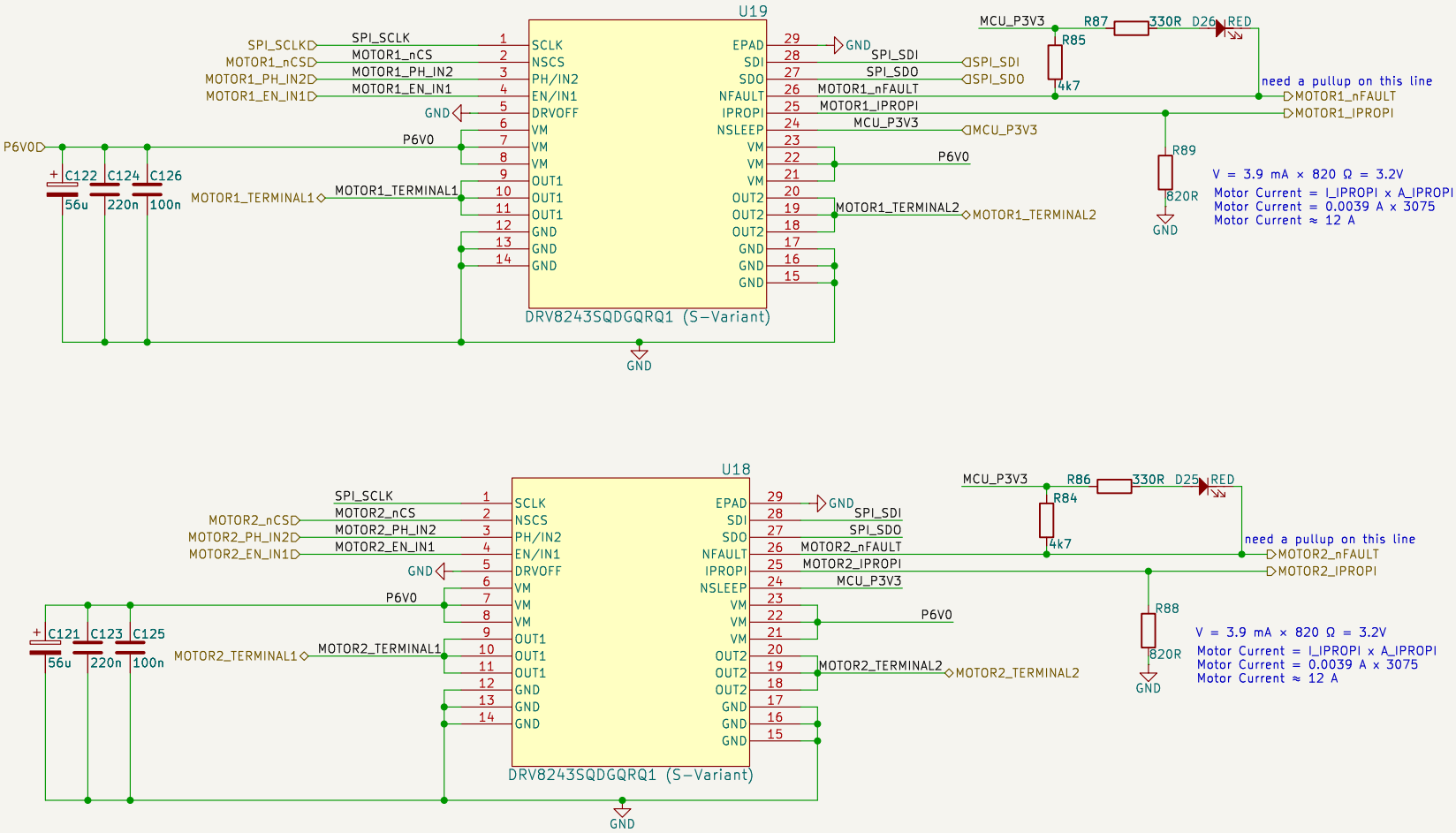
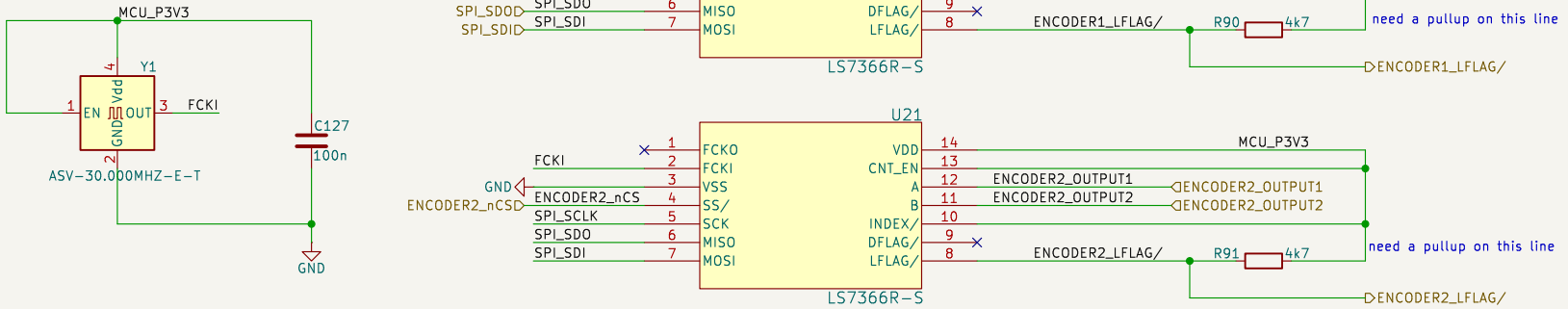


Sheet: /Motor Control Board/Motor Drivers/
File: Motor Drivers.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.4		Id: 8/8



Sheet: /Motor Control Board/Quadrature Counter/		
File: Quadrature Counter.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
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