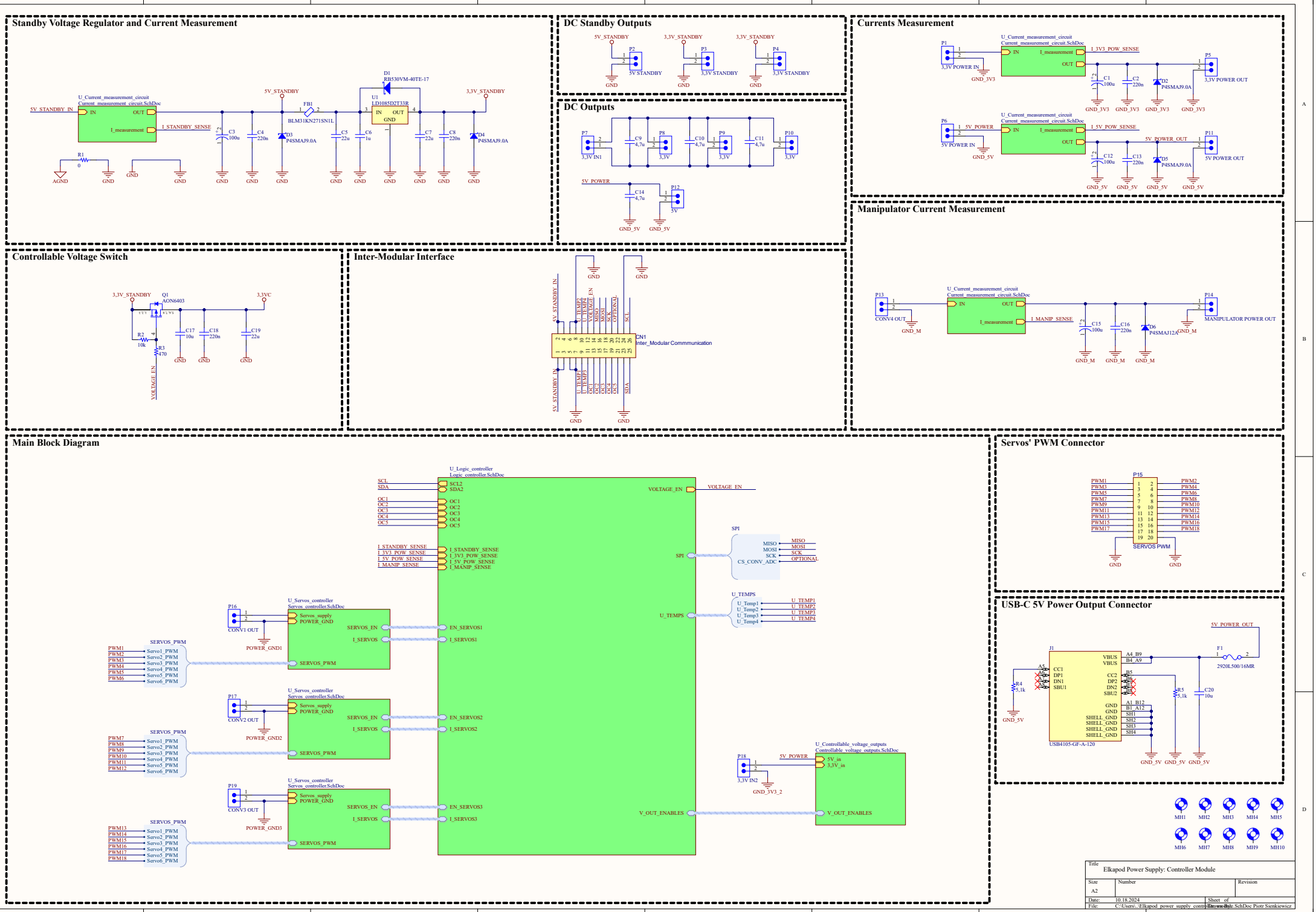
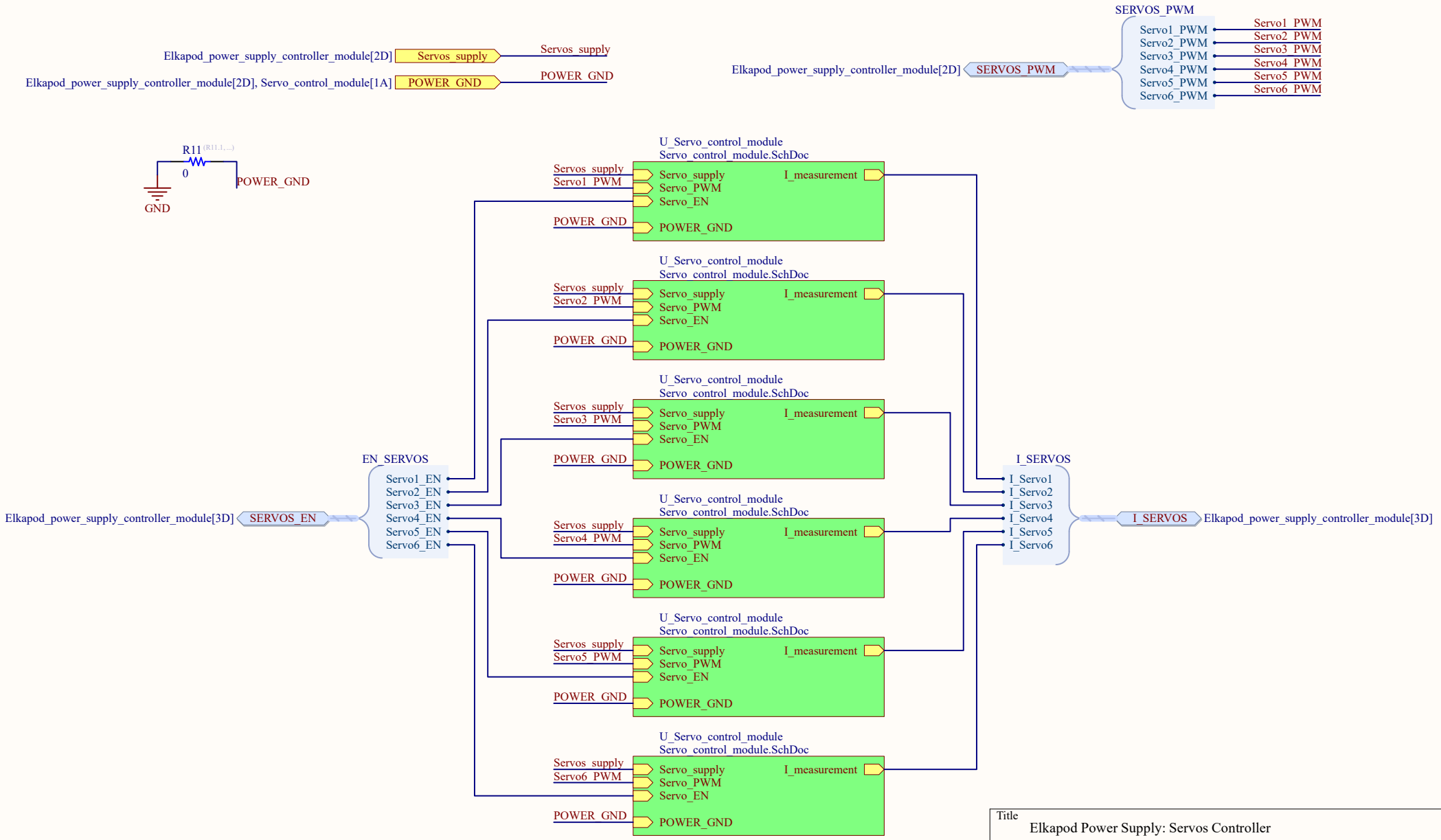
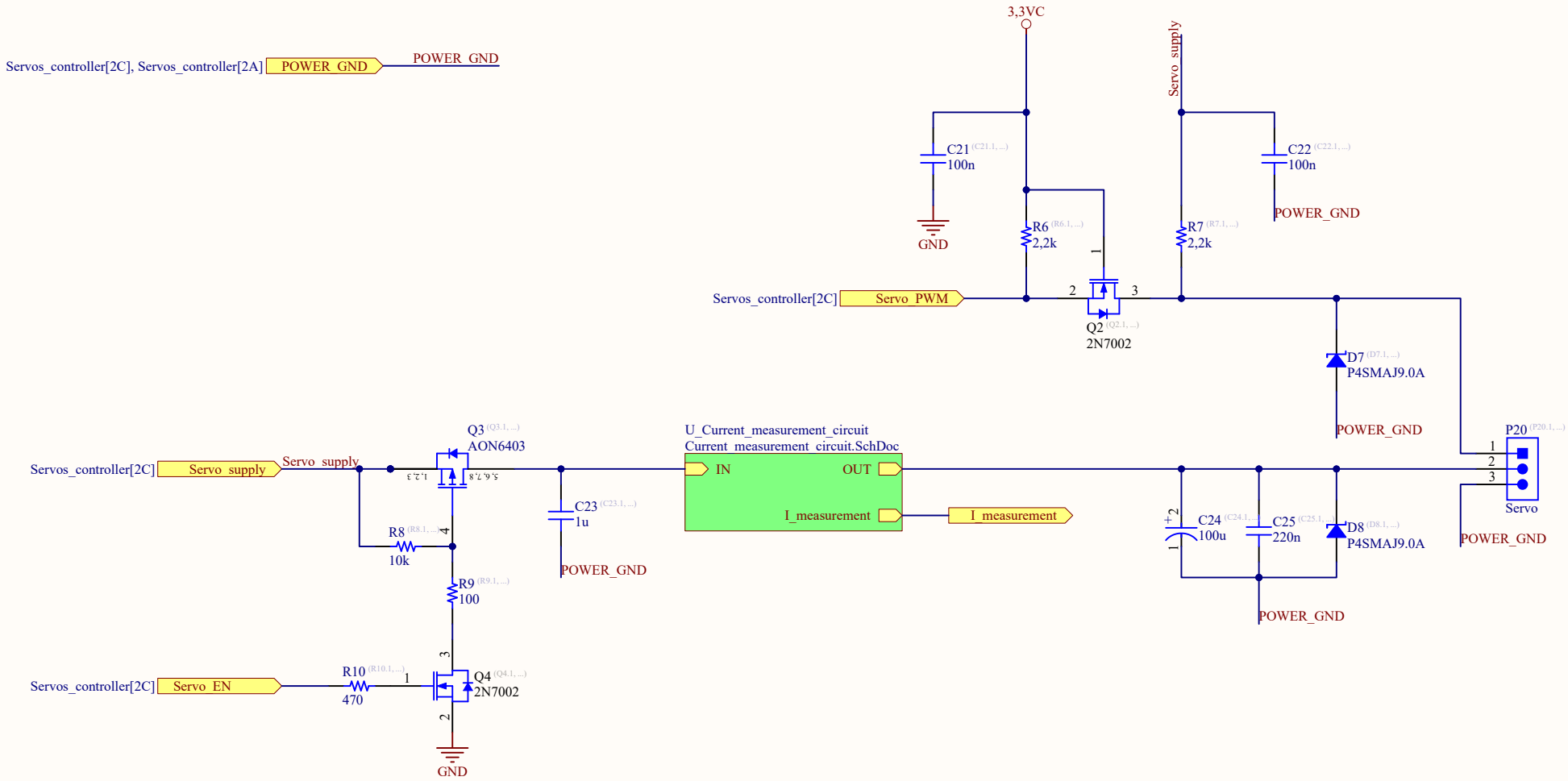
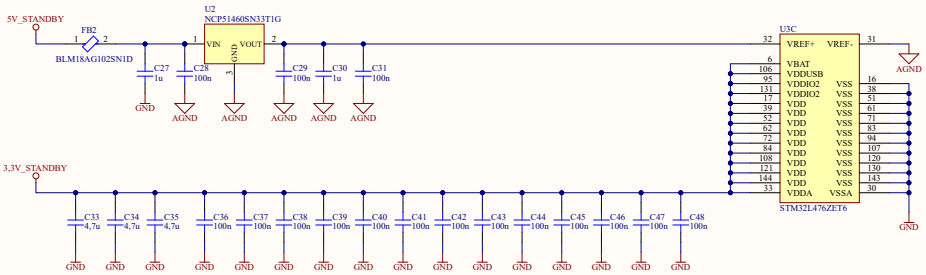

Standby Voltage Regulator and Current Measurement
DC Standby Outputs
DC Outputs
Currents Measurement
Manipulator Current Measurement
Controllable Voltage Switch
Inter-Modular Interface
Main Block Diagram
Servos' PWM Connector
USB-C 5V Power Output Connector
U_Logic_controller
Logic_controller.SchDoc
U_Servos_controller
Servos_controller.SchDoc
U_Controllable_voltage_outputs
Controllable_voltage_outputs.SchDoc
U_Current_measurement_circuit
Current_measurement_circuit.SchDoc
Inter_Modular Commmunication
SERVOS PWM
USB4105-GF-A-120
Elkapod Power Supply: Controller Module
Date: 10.18.2024
Drawn By: Piotr Sienkiewicz


Elkapod_power_supply_controller_module[2D]
Servos_supply
Servos_supply
Elkapod_power_supply_controller_module[2D], Servo_control_module[1A]
POWER_GND
POWER_GND
SERVOS_PWM
Elkapod_power_supply_controller_module[2D]
SERVOS_PWM
Servo1_PWM
Servo2_PWM
Servo3_PWM
Servo4_PWM
Servo5_PWM
Servo6_PWM
Servo1_PWM
Servo2_PWM
Servo3_PWM
Servo4_PWM
Servo5_PWM
Servo6_PWM
R11
0
POWER_GND
GND
U_Servo_control_module
Servo_control_module.SchDoc
Servos_supply
Servo1_PWM
POWER_GND
Servo_supply
Servo_PWM
Servo_EN
POWER_GND
I_measurement
U_Servo_control_module
Servo_control_module.SchDoc
Servos_supply
Servo2_PWM
POWER_GND
Servo_supply
Servo_PWM
Servo_EN
POWER_GND
I_measurement
U_Servo_control_module
Servo_control_module.SchDoc
Servos_supply
Servo3_PWM
POWER_GND
Servo_supply
Servo_PWM
Servo_EN
POWER_GND
I_measurement
U_Servo_control_module
Servo_control_module.SchDoc
Servos_supply
Servo4_PWM
POWER_GND
Servo_supply
Servo_PWM
Servo_EN
POWER_GND
I_measurement
U_Servo_control_module
Servo_control_module.SchDoc
Servos_supply
Servo5_PWM
POWER_GND
Servo_supply
Servo_PWM
Servo_EN
POWER_GND
I_measurement
U_Servo_control_module
Servo_control_module.SchDoc
Servos_supply
Servo6_PWM
POWER_GND
Servo_supply
Servo_PWM
Servo_EN
POWER_GND
I_measurement
EN_SERVOS
Elkapod_power_supply_controller_module[3D]
SERVOS_EN
Servo1_EN
Servo2_EN
Servo3_EN
Servo4_EN
Servo5_EN
Servo6_EN
I_SERVOS
I_Servo1
I_Servo2
I_Servo3
I_Servo4
I_Servo5
I_Servo6
I_SERVOS
Elkapod_power_supply_controller_module[3D]
Title
Elkapod Power Supply: Servos Controller
Size
A4
Number
Revision
Date:
10.18.2024
Sheet of
File:
C:\Users\..\Servos_controller.SchDoc
Drawn By:
Piotr Sienkiewicz

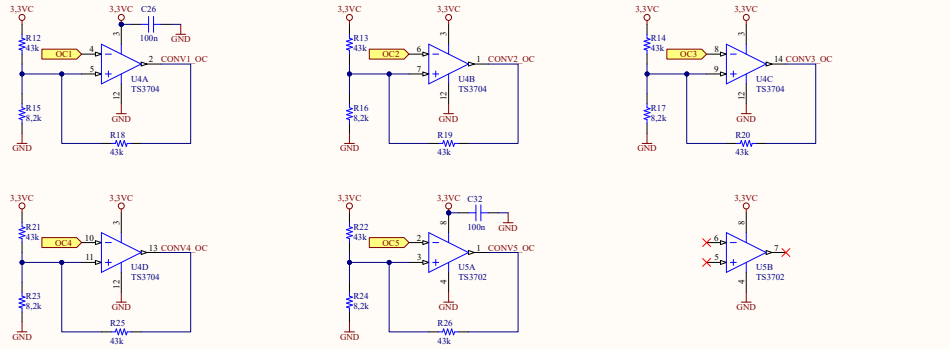


Title	Elkapod Power Supply: Servo Controll Module	
Size: A4	Number	Revision
Date: 10.18.2024		Sheet of
File: C:\Users\..\Servo_control_module.SchDoc		Drawn By: Piotr Sienkiewicz

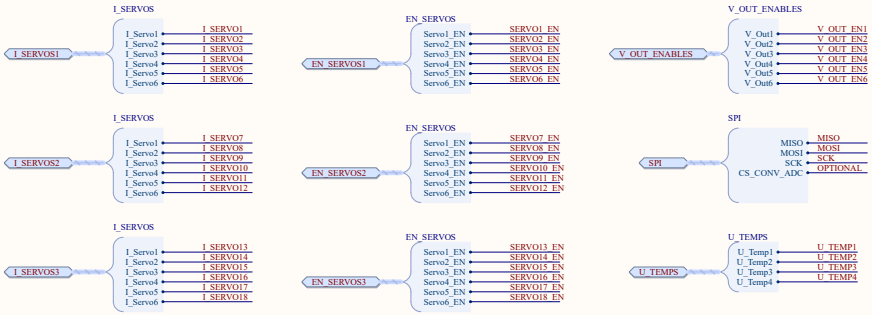
MCU Power Supply



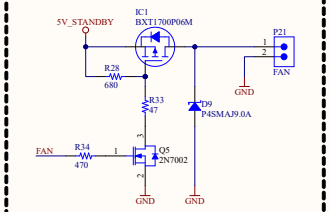
Overcurrent Signals Comparators



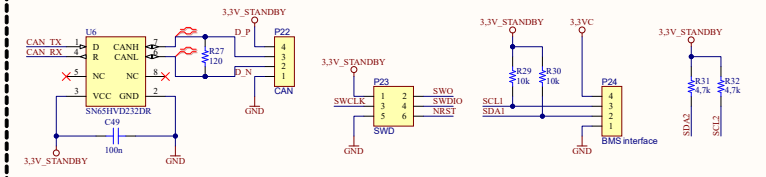
Multi-Sheets Interfaces



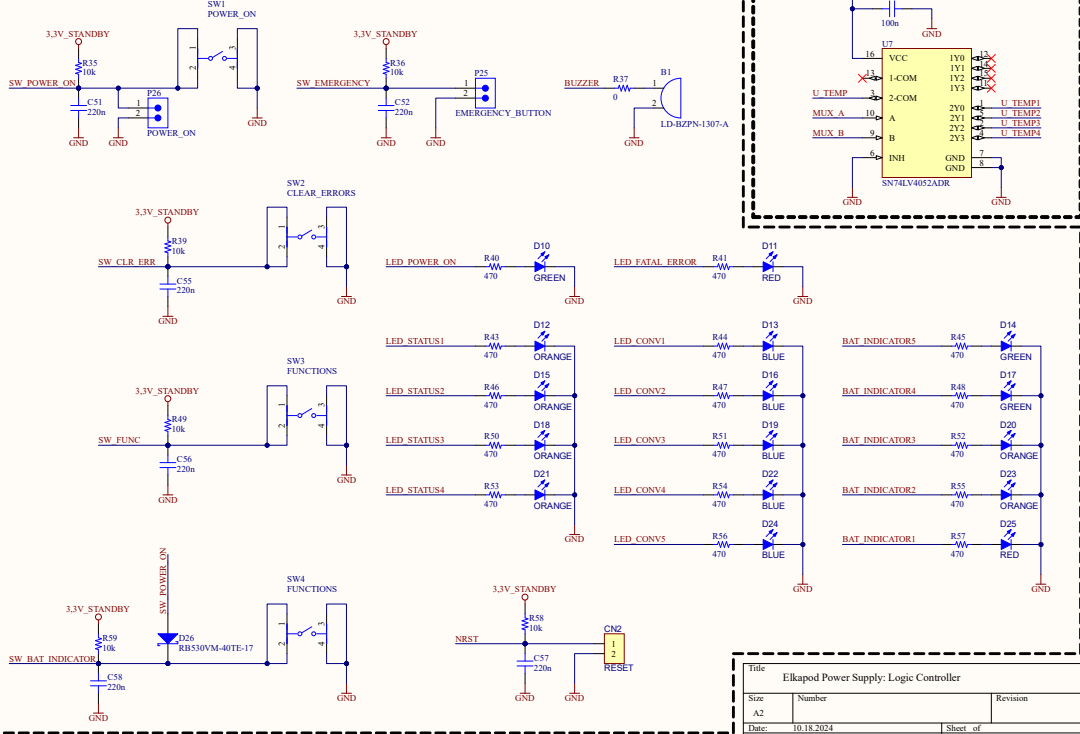
Fan Power Switch



Interfaces

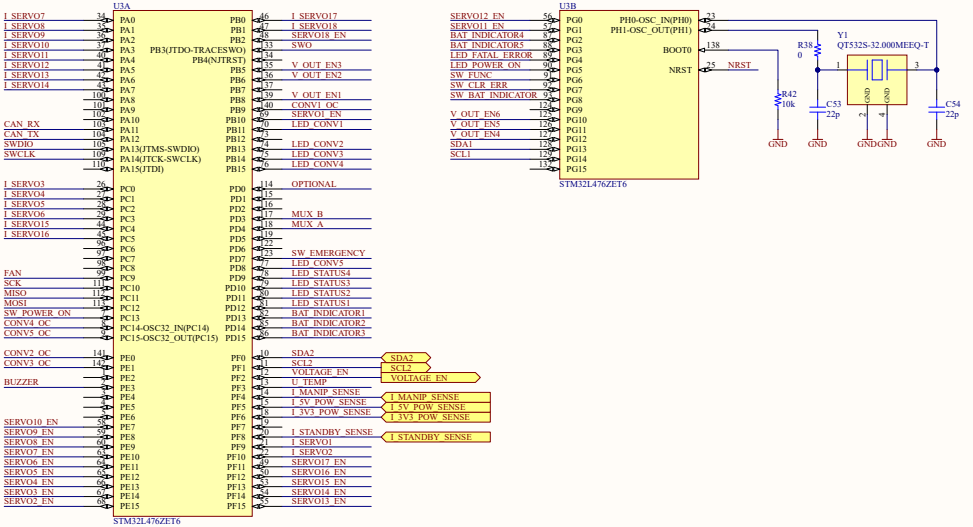


User Interface (Switches and LEDs)

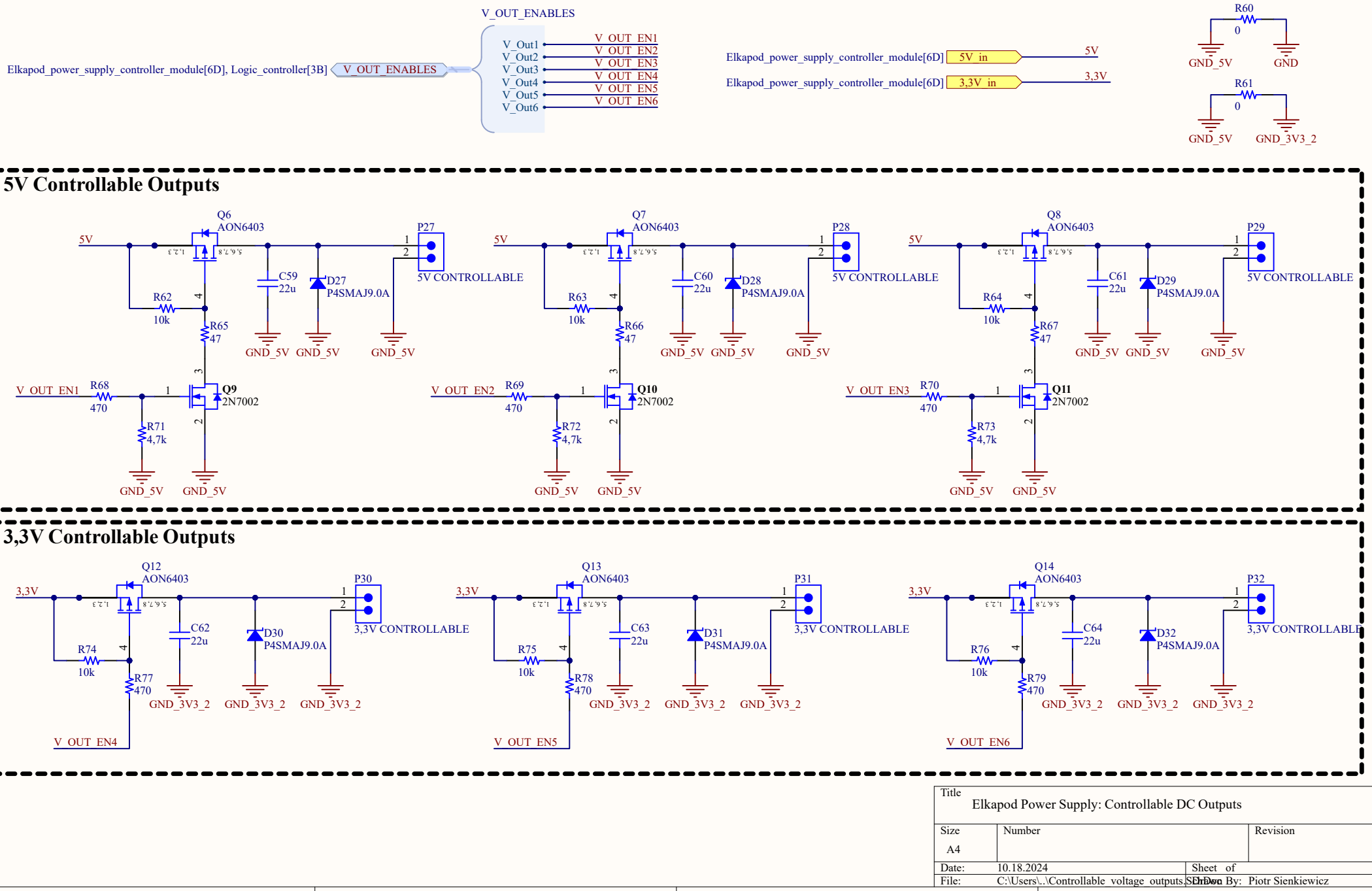


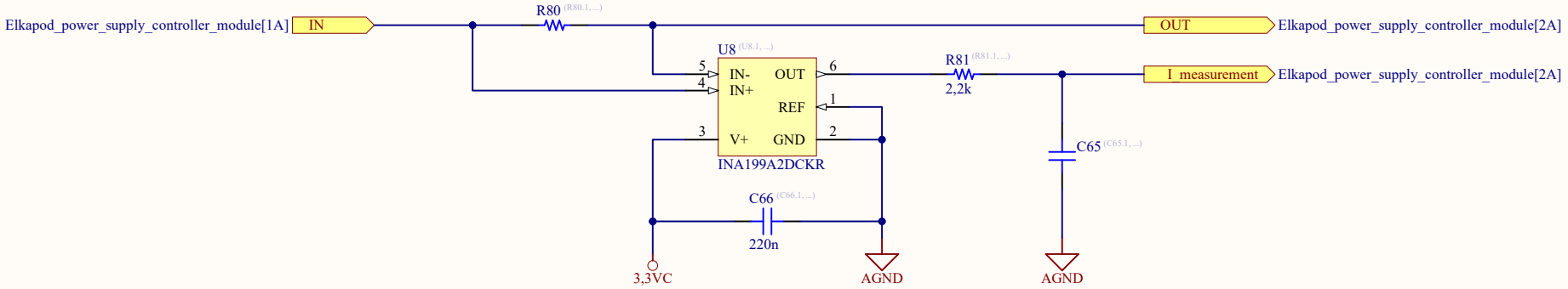
Analog Temperatures Signals Multiplexer

MCU



Title	Elkapod Power Supply: Logic Controller		
Size	Number		Revision
A2			
Date:	10.18.2024	Sheet of	
File:	C:\Users\...\Logic_controller.SchDoc	Drawn By:	Piotr Sienkiewicz


V_OUT_ENABLES
Elkapod_power_supply_controller_module[6D], Logic_controller[3B]
V_OUT_ENABLES
V_Out1
V_Out2
V_Out3
V_Out4
V_Out5
V_Out6
V_OUT_EN1
V_OUT_EN2
V_OUT_EN3
V_OUT_EN4
V_OUT_EN5
V_OUT_EN6
Elkapod_power_supply_controller_module[6D]
5V_in
5V
Elkapod_power_supply_controller_module[6D]
3,3V_in
3,3V
R60
0
GND_5V
GND
R61
0
GND_5V
GND_3V3_2
5V Controllable Outputs
Q6
AON6403
Q7
AON6403
Q8
AON6403
5V
P27
P28
P29
5V CONTROLLABLE
C59
22u
C60
22u
C61
22u
D27
P4SMAJ9.0A
D28
P4SMAJ9.0A
D29
P4SMAJ9.0A
R62
10k
R63
10k
R64
10k
R65
47
R66
47
R67
47
GND_5V
V_OUT_EN1
V_OUT_EN2
V_OUT_EN3
R68
470
R69
470
R70
470
Q9
2N7002
Q10
2N7002
Q11
2N7002
R71
4,7k
R72
4,7k
R73
4,7k
3,3V Controllable Outputs
Q12
AON6403
Q13
AON6403
Q14
AON6403
3,3V
P30
P31
P32
3,3V CONTROLLABLE
C62
22u
C63
22u
C64
22u
D30
P4SMAJ9.0A
D31
P4SMAJ9.0A
D32
P4SMAJ9.0A
R74
10k
R75
10k
R76
10k
R77
470
R78
470
R79
470
GND_3V3_2
Title
Elkapod Power Supply: Controllable DC Outputs
Size
A4
Number
Revision
Date:
10.18.2024
Sheet of
File:
C:\Users\...\Controllable_voltage_outputs.SchDoc
Drawn By:
Piotr Sienkiewicz



Title	Elkapod Power Supply: Current Measurement		
Size A4	Number		Revision
Date:	10.18.2024	Sheet of	
File:	C:\Users\..\Current_measurement_circuit.SchDoc	Drawn By:	Piotr Sienkiewicz