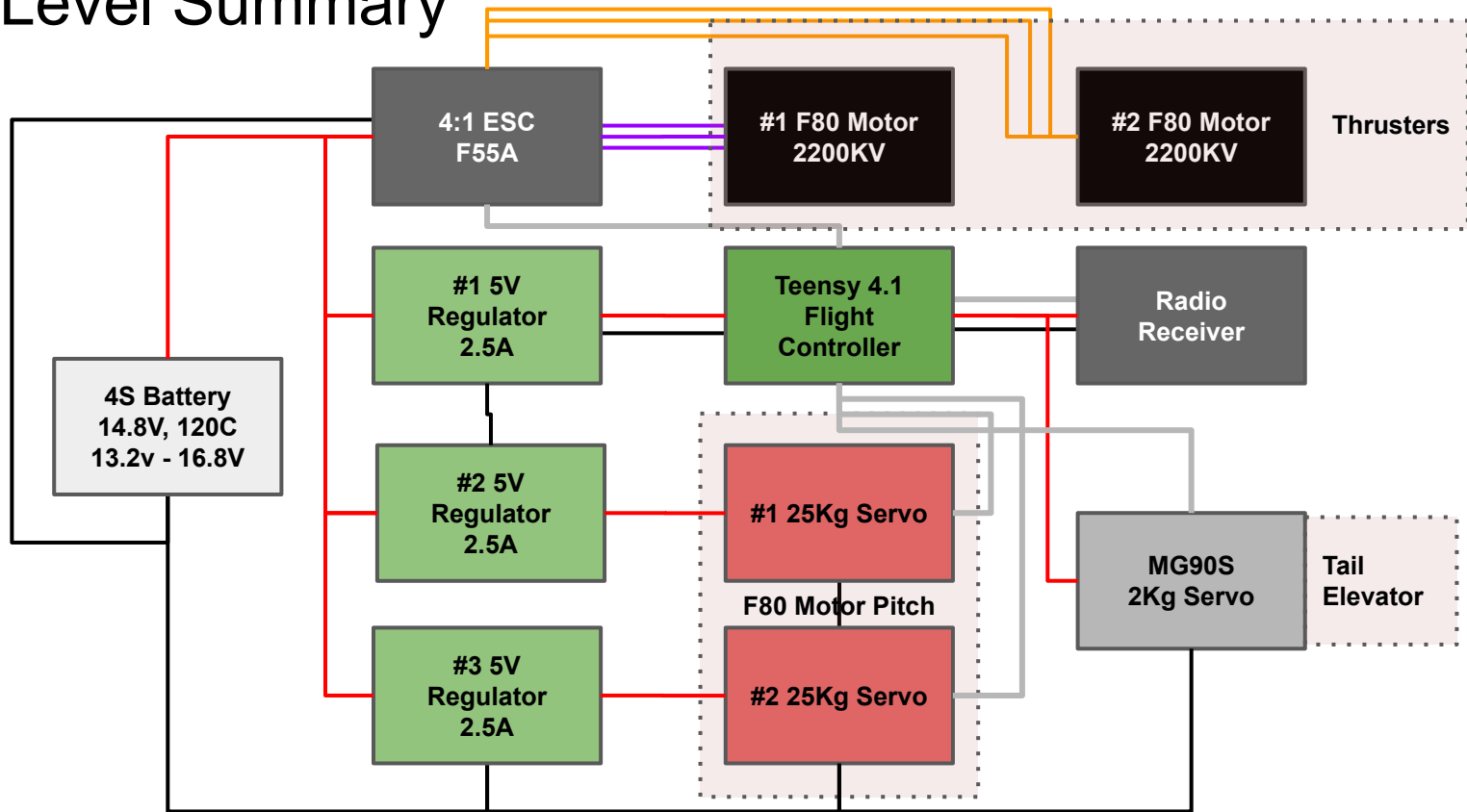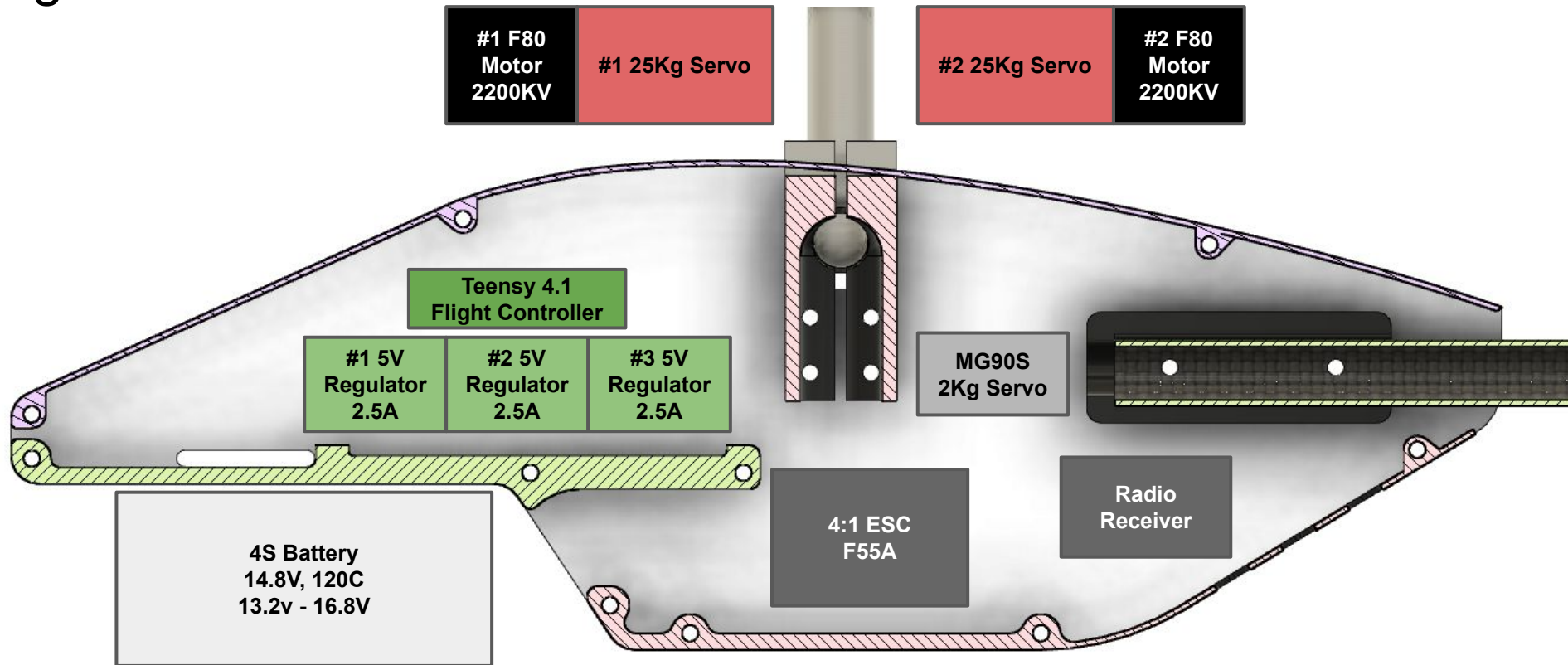# VTOL V1 Circuit

Drew Britten
2/1/2023

Higher Level Summary

Higher Level Location

| #1 F80 Motor 2200KV | #1 25Kg Servo | | #2 25Kg Servo | #2 F80 Motor 2200KV |

Teensy 4.1 Flight Controller

#1 5V Regulator 2.5A

#2 5V Regulator 2.5A

#3 5V Regulator 2.5A

MG90S 2Kg Servo

4S Battery
14.8V, 120C
13.2v - 16.8V

4:1 ESC F55A

Radio Receiver

Teensy I/O Summary

Teensy 4.0 Pinout

Top: GND — [USB] — 5V · Vin (3.6 to 5.5 volts)

Left side (pins 0–12)

				Pin
PWM	CRX2	CS1	RX1	0
PWM	CTX2	MISO1	TX1	1
PWM	OUT2			2
PWM	LRCLK2			3
PWM	BCLK2			4
PWM	IN2			5
PWM	OUT1D			6
PWM	OUT1A	RX2		7
PWM	IN1	TX2		8
PWM	OUT1C			9
PWM	MQSR	CS		10
PWM	CTX1	MOSI		11
PWM	MQSL	MISO		12

All digital pins have Interrupt capability.

GND

3.3V (250 mA max)

Right side (pins 23–13)

Pin				
23	A9	CRX1	MCLK1	PWM
22	A8	CTX1		PWM
21	A7	RX5	BCLK1	
20	A6	TX5	LRCLK1	
19	A5		SCL	PWM
18	A4		SDA	PWM
17	A3	TX4	SDA1	
16	A2	RX4	SCL1	
15	A1	RX3	S/PDIF IN	PWM
14	A0	TX3	S/PDIF OUT	PWM
13	(LED)	SCK		PWM

3.3V   GND

Bottom left (pins 24–32)

				Pin
PWM	SCL2	TX6	A10	24
PWM	SDA2	RX6	A11	25
		MOSI1	A12	26
		SCK1	A13	27
		RX7		28
PWM		TX7		29
PWM				
		CRX3		30
		CTX3		31
		OUT1B		32

Bottom right (pins 41–33)

Pin			
41	A17		PWM
40	A16		PWM
39	A15	MISO1	OUT1A
38	A14	CS1	IN1
37		CS	PWM
36		CS	PWM
35		TX8	
34		RX8	
33		MCLK2	PWM

MIMXRT1062
DVJ6A
0N00X
CTAB1912J