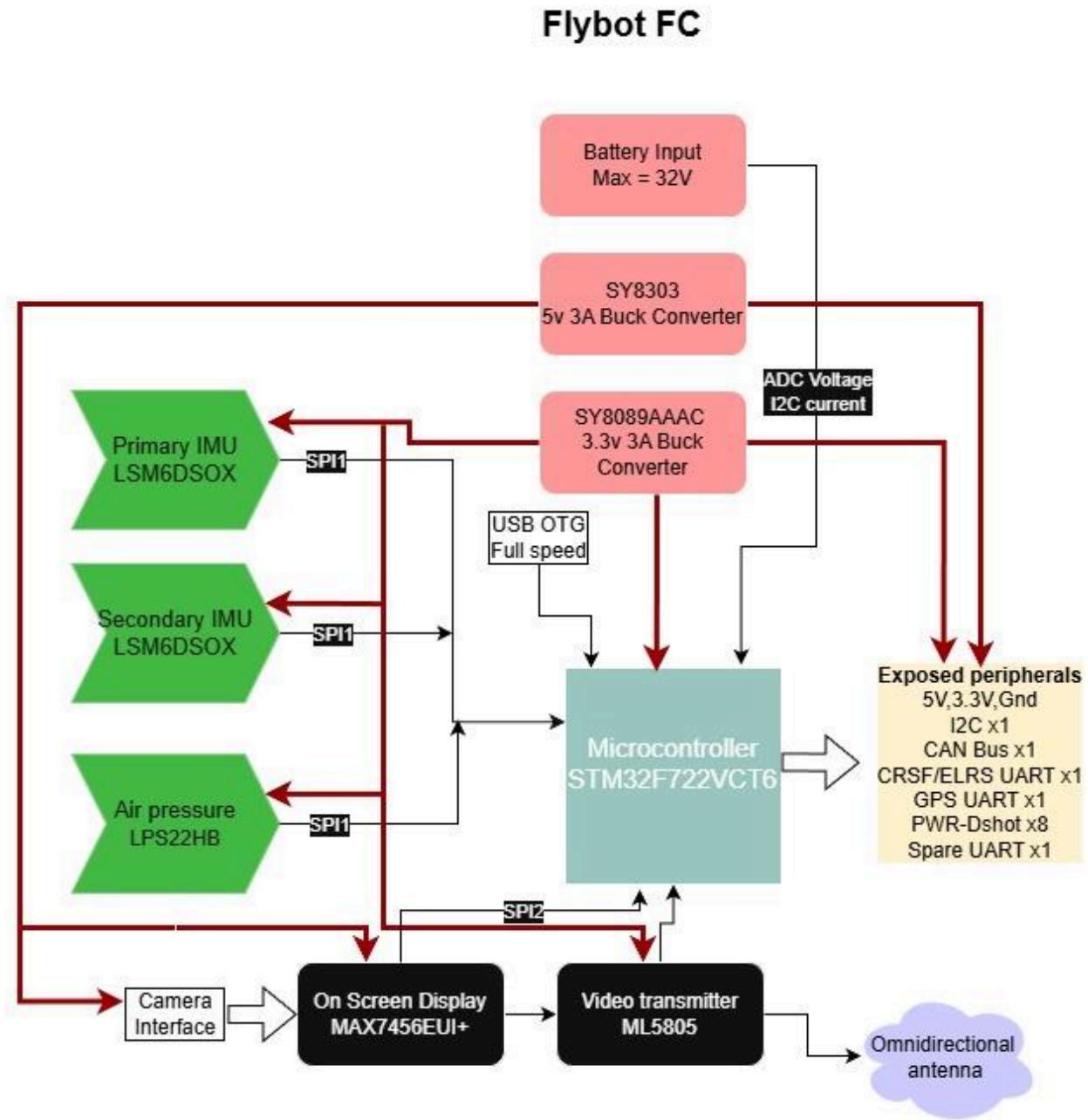


Flying FC architecture



Power Budget

Component	Voltage	Current	Power	Power Dissipation
LSM6DSOXTR	3.3V	0.055mA	182mW	negligible
LPS22HBTR	3.3V	0.012mA	39mW	negligible
STM32F722VC	3.3V	300mA	990mW	1117mW
ML5805	3.3V	100mA	330mW	~300mW
Max7456	5V	100mA	500mW	2162mW
Total			2041mW x 1.5 = 3062mW	

Component selection

Parameter	Integrated Circuit	Datasheet	Pros
Inertia measurement unit	LSM6DSOXTR/ICM-42688-P/B MI270	https://www.st.com/resource/en/datasheet/lsm6dsox.pdf	Low power consumption Small footprint Full-scale acceleration and angular range High robustness to mechanical shock
Air pressure	LPS22HBTR	https://www.st.com/resource/en/datasheet/lps22hb.pdf	High shock survivability Low current consumption Small footprint
Microcontroller	STM32F722VC	https://www.st.com/resource/en/datasheet/stm32f722vc.pdf	Similar to recommendation by Betaflight, STM32F7x2 Small footprint.
Video transmitter	ML5805	https://datasheet.octopart.com/ML5805D-M-Micro-Linear-datasheet-8614608.pdf	Integrated power amplifier (PA) and low noise amplifier (LNA). ISM band Licence free
On Screen Display	Max7456	https://www.analog.com/media/en/technical-documentation/data-sheets/MAX7456.pdf	Integrated EEPROM and video driver.