Peripherals List

Function	peripheral
Magnetic Hall Sensor	SSI
Bluetooth	UART
USB-TTL	UART
USB-C PD	GPIO
Power Sampling	ADC
WS2812 LEDs	PWM
LCD	SPI
Touch screen	I2C
fast refresh UI	DMA
humidity &temperature Sensor	I2C
ESC Driver(half bridge)	TIM&TIMxN (complement fast PWM)

Algorithm We use

Function	Algorithm
FOC control	1. Park Transformation
	2. clerke Transformation
	3. Space Vector PWM Algorithm

Function	Algorithm
Force Feedback	PID
close loop FOC(position, speed)	PID
samples fluctuation	Lowpass filter