

## HAL requirements:

GPT: 1 Timer for control loop callback (100Hz)  
1 Timer for ADC sample command (2kHz)

MAC: Enable for use with 1 PHY

USB: 1 USB controller for development port

ADC: 2 ADCs for Axis Manual Inputs

GPIO: 6 outputs - Mode LED's, Aux LED's, Neutral LEDs  
3 inputs - Enable, Mode, Aux switches

GPT: TIM1: Control loop callback  
NO I/O for this peripheral  
TIM2: ADC convert command callback  
NO I/O for this peripheral

MAC: MAC: Ethernet PHY interface (RMII)

ETH\_RMII\_REF\_CLK:  
ETH\_CRS\_DV :  
ETH\_RXD0 :  
ETH\_RXD1 :  
ETH\_TX\_EN :  
ETH\_TXD0 :  
ETH\_TXD1 :  
ETH\_MDINT :

ETH\_MDIO :  
ETH\_MDINT :  
ETH\_MDC :  
MCOI-ETH-CLK :

USB : USB1: USB development port/shell interface

VBUS :  
DM :  
DP :  
ID :

ADC : ADC1: latAxis Input

ADC12-IN4: PA4

ADC1: ch4

GPIO: Analog Input

ADC2: vertAxis Input

ADC12-IN5: PA5

ADC2: ch5

GPIO: Analog Input

GPIO: GPIOA - Enable Switch input

ENABLE: PA6

GPIO: Input Pulldown

GPIOC - Aux1 Indicator LED (output)

AUXILED: PC0

GPIO: Output

GPIOE - Mode/Aux Switch(inputs)

MODE: PE4  
AUX : PE6

GPIOF - Aux2 / Neutral LED's (outputs)

AUX2LED: PF8  
LATNEUTLED: PF10  
VERTNEUTLED: PF9

GPIOG - Mode LED's (outputs)

MODE1LED: PG12  
MODE2LED: PG15