

Peripherals

Friday, April 11, 2014
12:07 PM

HAL requirements:

PWM: 1 Timer / 4 channels for lat/vert Axes
1 Timer / 4 channels for Axis3/Axis4

SPI: 1 SPI controller for axis ADC's

GPT: 1 Timer for control loop callback (100Hz)

EXT: 1 interrupt for ADC conversion done

MAC: Enable for use with 1 PHY

USB: 1 USB controller for development port

ADC: 1 ADC for VRef Monitor

GPIO: 8 outputs (Enable/Watchdog per axis)

PWM: TIM4: lat/vert axis outputs

vert axis: PD13:12 (U:V)

lat axis: PD15:14

TIM3: Axis3/Axis4 outputs

Axis3: PC7:6 (U:V)

Axis4: PC9:8

SPI: SPI1: ADC daisy-chain serial bus

NSS: PA4

SCK: PA5

MISO: PA6

GPT: TIM1: Control loop callback

NO I/O for this peripheral

EXT: EXTI: ADC conversion done interrupt

SPI_MISO: PE7

EXT channel 7

GPIO input pull-down

MAC: MAC: Ethernet PHY interface (RMII)

ETH_RMII_REF_CLK: PA1

ETH_CRS_DV : PA7

ETH_RXD0 : PC4

ETH_RXD1 : PC5

ETH_TX_EN : PB11

ETH_TXD0 : PB12

ETH_TXD1 : PB13

ETH_MDINT : PA3

ETH_MDC : PC1

ETH_MDIO : PA2

MCO1-ETH-CLK : PA8

USB: USB1: USB development port/shell interface

VBUS : PA9

DM : PA11

DP : PA12

ID : PA10

ADC: ADC1: VRef Monitor

VRef_Monitor: PC0

ADC1: CH10

GPIO: Input

GPIO: GPIOD: Axis Enable/Watchdog outputs

lat: PD11:10

vert: PD6:5

Axis3: PD0:1 (EN:WD)

Axis4: PD2:3