1. Description

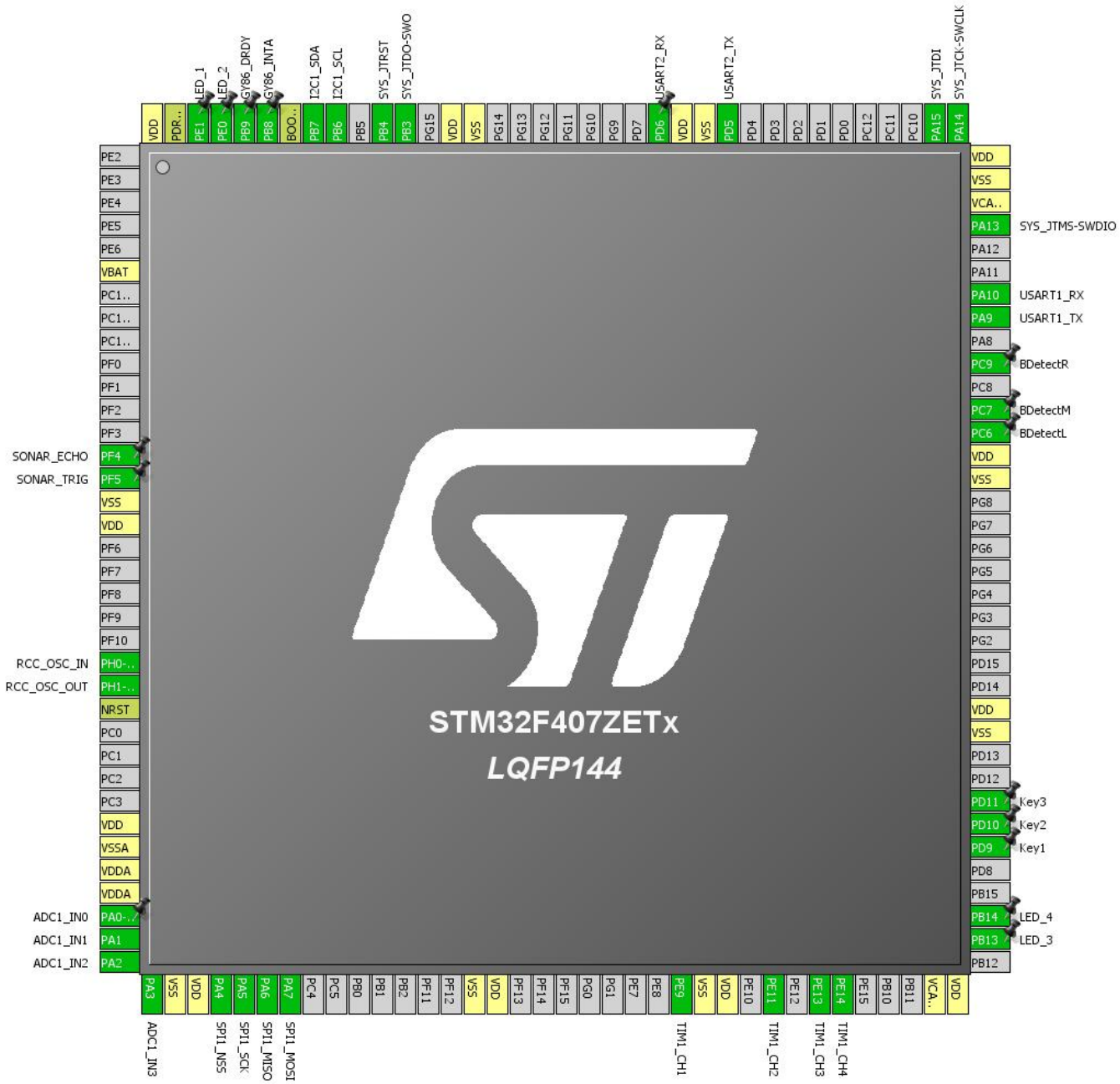
1.1. Project

Project Name	BFlight
Generated with:	STM32CubeMX 4.8.0
Date	07/04/2015

1.2. MCU

MCU Serie	STM32F4
MCU Line	STM32F407/417
MCU name	STM32F407ZETx
MCU Package	LQFP144
MCU Pin number	144

2. Pinout Configuration



3. IPs and Middlewares Configuration

IP	Mode	Fonction	Pin
ADC1	IN0	ADC1_IN0	PA0-WKUP
	IN1	ADC1_IN1	PA1
	IN2	ADC1_IN2	PA2
	IN3	ADC1_IN3	PA3
I2C1	I2C: I2C	I2C1_SCL	PB6
		I2C1_SDA	PB7
RCC	High Speed Clock (HSE): Crystal/Ceramic Resonator	RCC_OSC_IN	PH0-OSC_IN
		RCC_OSC_OUT	PH1-OSC_OUT
SPI1	Mode: Full-Duplex Master	SPI1_MISO	PA6
		SPI1_MOSI	PA7
		SPI1_SCK	PA5
	Hardware NSS Signal	SPI1_NSS	PA4
SYS	Debug: JTAG (5 pins)	SYS_JTCK-SWCLK	PA14
		SYS_JTDI	PA15
		SYS_JTDO-SWO	PB3
		SYS_JTMS-SWDIO	PA13
		SYS_JTRST	PB4
TIM1	Channel1: PWM Generation CH1	TIM1_CH1	PE9
	Channel2: PWM Generation CH2	TIM1_CH2	PE11
	Channel3: PWM Generation CH3	TIM1_CH3	PE13
	Channel4: PWM Generation CH4	TIM1_CH4	PE14
TIM4	Clock Source : Internal Clock	N/A	N/A
TIM6	Activated	N/A	N/A
USART1	Mode: Asynchronous	USART1_RX	PA10
		USART1_TX	PA9
USART2	Mode: Asynchronous	USART2_RX	PD6
		USART2_TX	PD5

4. Pins Configuration

Pin	Pos	Function(s)	Label
PF4	14	GPIO_EXTI4	SONAR_ECHO
PF5 *	15	GPIO_Output	SONAR_TRIG
PH0-OSC_IN	23	RCC_OSC_IN	
PH1-OSC_OUT	24	RCC_OSC_OUT	
PA0-WKUP	34	ADC1_IN0	
PA1	35	ADC1_IN1	
PA2	36	ADC1_IN2	
PA3	37	ADC1_IN3	
PA4	40	SPI1_NSS	
PA5	41	SPI1_SCK	
PA6	42	SPI1_MISO	
PA7	43	SPI1_MOSI	
PE9	60	TIM1_CH1	
PE11	64	TIM1_CH2	
PE13	66	TIM1_CH3	
PE14	67	TIM1_CH4	
PB13 *	74	GPIO_Output	LED_3
PB14 *	75	GPIO_Output	LED_4
PD9 *	78	GPIO_Input	Key1
PD10 *	79	GPIO_Input	Key2
PD11 *	80	GPIO_Input	Key3
PC6 *	96	GPIO_Input	BDetectL
PC7 *	97	GPIO_Input	BDetectM
PC9 *	99	GPIO_Input	BDetectR
PA9	101	USART1_TX	
PA10	102	USART1_RX	
PA13	105	SYS_JTMS-SWDIO	
PA14	109	SYS_JTCK-SWCLK	
PA15	110	SYS_JTDI	
PD5	119	USART2_TX	
PD6	122	USART2_RX	
PB3	133	SYS_JTDO-SWO	
PB4	134	SYS_JTRST	
PB6	136	I2C1_SCL	
PB7	137	I2C1_SDA	
PB8	139	GPIO_EXTI8	GY86_INTA
PB9	140	GPIO_EXTI9	GY86_DRDY
PE0 *	141	GPIO_Output	LED_2
PE1 *	142	GPIO_Output	LED_1

* The pin is affected with an I/O function

5. Power Plugin report

5.1. Microcontroller Selection

Serie	STM32F4
Line	STM32F407/417
MCU	STM32F407ZETx
Datasheet	022152_Rev5

5.2. Parameter Selection

Temperature	25
Vdd	3.3

6. Software Project

6.1. Project Settings

Name	Value
Project Name	BFlight
Project Folder	E:\C\ARM\32CUBE\FlyVBTx
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F4 V1.6.0

6.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Copy all used libraries into the project folder
Generate peripheral initialization as a pair of '.c/.h' files	No
Backup previously generated files when re-generating	No
Delete previously generated files when not re-generated	Yes
Set all free pins as analog (to optimize the power consumption)	No

6.3. Toolchains Settings

Name	Value
Compiler Optimizations	Balanced Size/Speed