1. Description

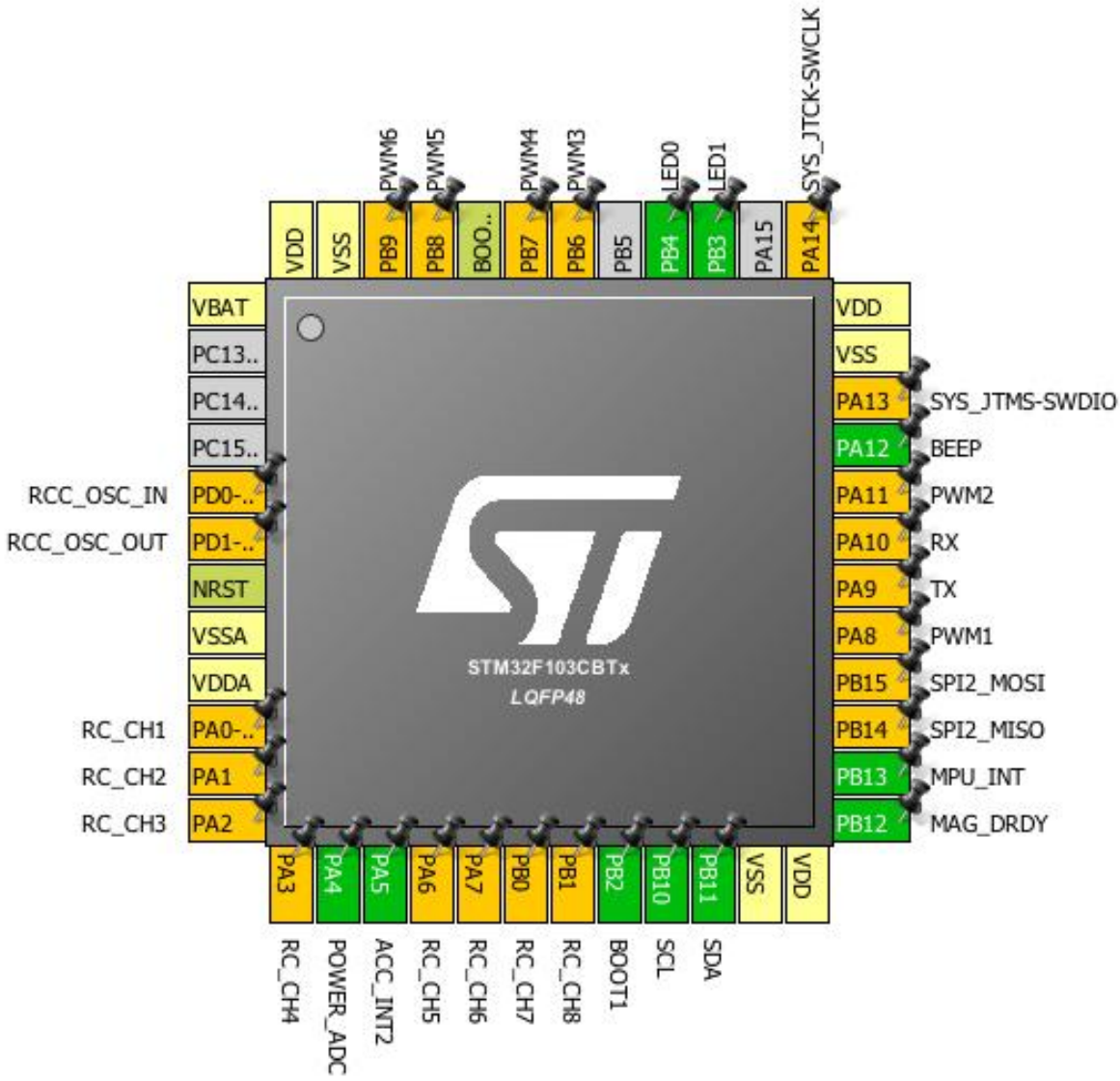
1.1. Project

Project Name	cubemx
Board Name	No information
Generated with:	STM32CubeMX 4.21.0
Date	05/31/2017

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103CBTx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration



3. Pins Configuration

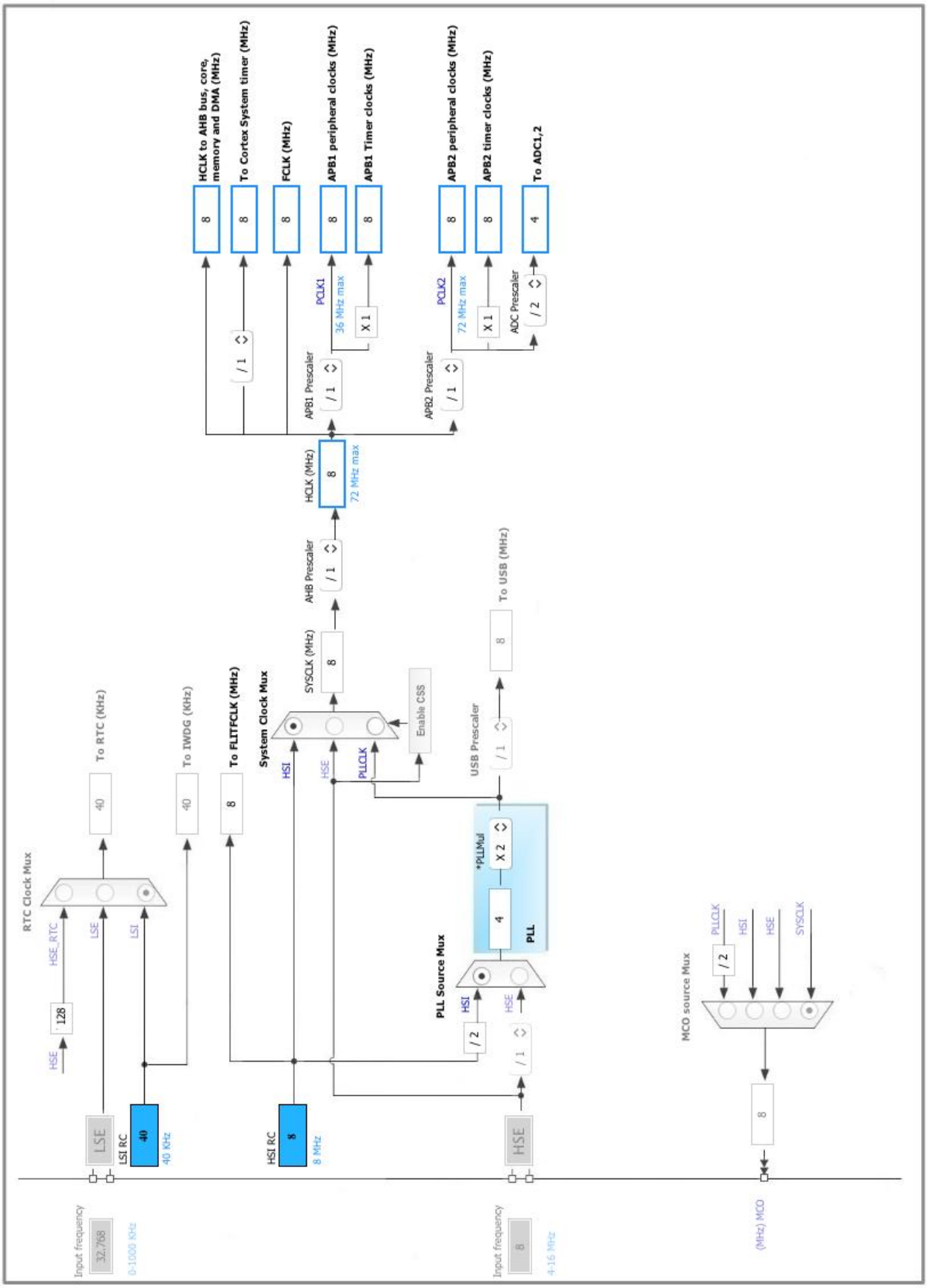
Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
5	PD0-OSC_IN *	I/O	RCC_OSC_IN	
6	PD1-OSC_OUT *	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
10	PA0-WKUP *	I/O	TIM2_CH1	RC_CH1
11	PA1 *	I/O	TIM2_CH2	RC_CH2
12	PA2 *	I/O	TIM2_CH3	RC_CH3
13	PA3 *	I/O	TIM2_CH4	RC_CH4
14	PA4	I/O	ADC1_IN4	POWER_ADC
15	PA5	I/O	GPIO_EXTI5	ACC_INT2
16	PA6 *	I/O	TIM3_CH1	RC_CH5
17	PA7 *	I/O	TIM3_CH2	RC_CH6
18	PB0 *	I/O	TIM3_CH3	RC_CH7
19	PB1 *	I/O	TIM3_CH4	RC_CH8
20	PB2 **	I/O	GPIO_Input	BOOT1
21	PB10	I/O	I2C2_SCL	SCL
22	PB11	I/O	I2C2_SDA	SDA
23	VSS	Power		
24	VDD	Power		
25	PB12 **	I/O	GPIO_Input	MAG_DRDY
26	PB13	I/O	GPIO_EXTI13	MPU_INT
27	PB14 *	I/O	SPI2_MISO	
28	PB15 *	I/O	SPI2_MOSI	
29	PA8 *	I/O	TIM1_CH1	PWM1
30	PA9 *	I/O	USART1_TX	TX
31	PA10 *	I/O	USART1_RX	RX
32	PA11 *	I/O	TIM1_CH4	PWM2
33	PA12 **	I/O	GPIO_Output	BEEP
34	PA13 *	I/O	SYS_JTMS-SWDIO	
35	VSS	Power		
36	VDD	Power		
37	PA14 *	I/O	SYS_JTCK-SWCLK	
39	PB3 **	I/O	GPIO_Output	LED1
40	PB4 **	I/O	GPIO_Output	LED0

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
42	PB6 *	I/O	TIM4_CH1	PWM3
43	PB7 *	I/O	TIM4_CH2	PWM4
44	BOOT0	Boot		
45	PB8 *	I/O	TIM4_CH3	PWM5
46	PB9 *	I/O	TIM4_CH4	PWM6
47	VSS	Power		
48	VDD	Power		

** The pin is affected with an I/O function

* The pin is affected with a peripheral function but no peripheral mode is activated

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC1

mode: IN4

5.1.1. Parameter Settings:

ADCs_Common_Settings:

Mode	Independent mode

ADC_Settings:

Data Alignment	Right alignment
Scan Conversion Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
Rank	1
Channel	Channel 4
Sampling Time	1.5 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0

WatchDog:

Enable Analog WatchDog Mode	false

5.2. I2C2

I2C: I2C

5.2.1. Parameter Settings:

Master Features:

I2C Speed Mode	Standard Mode
I2C Clock Speed (Hz)	100000

Slave Features:

Clock No Stretch Mode	Disabled

Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0
General Call address detection	Disabled

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC1	PA4	ADC1_IN4	Analog mode	n/a	n/a	POWER_ADC
I2C2	PB10	I2C2_SCL	Alternate Function Open Drain	n/a	**High ***	SCL
	PB11	I2C2_SDA	Alternate Function Open Drain	n/a	**High ***	SDA
Single Mapped Signals	PD0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PD1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
	PA0-WKUP	TIM2_CH1	Alternate Function Push Pull	n/a	Low	RC_CH1
	PA1	TIM2_CH2	Alternate Function Push Pull	n/a	Low	RC_CH2
	PA2	TIM2_CH3	Alternate Function Push Pull	n/a	Low	RC_CH3
	PA3	TIM2_CH4	Alternate Function Push Pull	n/a	Low	RC_CH4
	PA6	TIM3_CH1	Alternate Function Push Pull	n/a	Low	RC_CH5
	PA7	TIM3_CH2	Alternate Function Push Pull	n/a	Low	RC_CH6
	PB0	TIM3_CH3	Alternate Function Push Pull	n/a	Low	RC_CH7
	PB1	TIM3_CH4	Alternate Function Push Pull	n/a	Low	RC_CH8
	PB14	SPI2_MISO	Alternate Function Push Pull	n/a	**High ***	
	PB15	SPI2_MOSI	Alternate Function Push Pull	n/a	**High ***	
	PA8	TIM1_CH1	Alternate Function Push Pull	n/a	Low	PWM1
	PA9	USART1_TX	Alternate Function Push Pull	n/a	**High ***	TX
	PA10	USART1_RX	Input mode	No pull-up and no pull-down	**n/a**	RX
	PA11	TIM1_CH4	Alternate Function Push Pull	n/a	Low	PWM2
	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PB6	TIM4_CH1	Alternate Function Push Pull	n/a	Low	PWM3
	PB7	TIM4_CH2	Alternate Function Push Pull	n/a	Low	PWM4
	PB8	TIM4_CH3	Alternate Function Push Pull	n/a	Low	PWM5
	PB9	TIM4_CH4	Alternate Function Push Pull	n/a	Low	PWM6
GPIO	PA5	GPIO_EXTI5	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	ACC_INT2
	PB2	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	BOOT1
	PB12	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	MAG_DRDY

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PB13	GPIO_EXTI13	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	MPU_INT
	PA12	GPIO_Output	Output Push Pull	n/a	Low	BEEP
	PB3	GPIO_Output	Output Push Pull	n/a	Low	LED1
	PB4	GPIO_Output	Output Push Pull	n/a	Low	LED0

6.2. DMA configuration

nothing configured in DMA service

6.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
Non maskable interrupt	true	0	0
Hard fault interrupt	true	0	0
Memory management fault	true	0	0
Prefetch fault, memory access fault	true	0	0
Undefined instruction or illegal state	true	0	0
System service call via SWI instruction	true	0	0
Debug monitor	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1 and ADC2 global interrupts	unused		
EXTI line[9:5] interrupts	unused		
I2C2 event interrupt	unused		
I2C2 error interrupt	unused		
EXTI line[15:10] interrupts	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103CBTx
Datasheet	13587_Rev17

7.2. Parameter Selection

Temperature	25
Vdd	3.3