1. Description

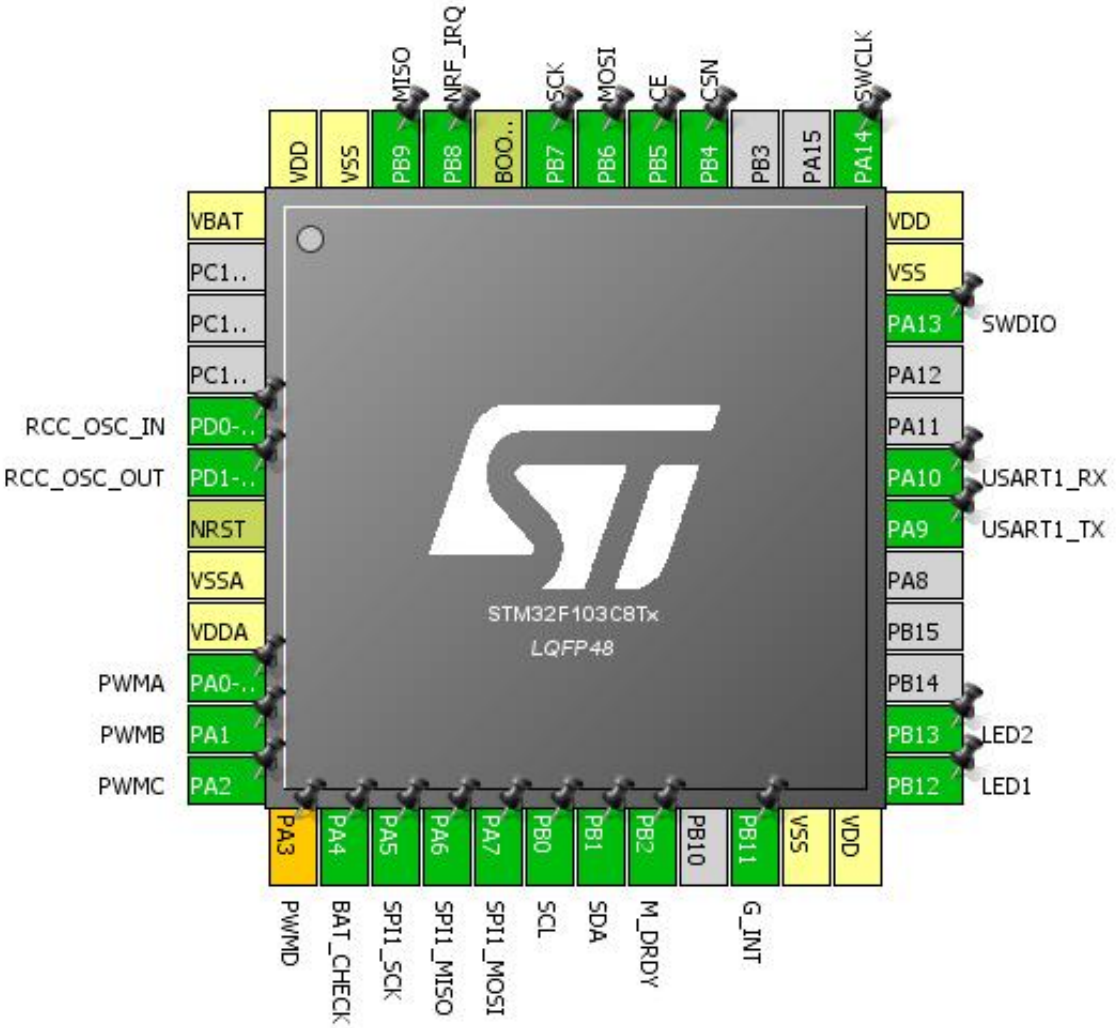
1.1. Project

Project Name	pinset
Board Name	No information
Generated with:	STM32CubeMX 4.10.0
Date	05/09/2016

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103C8Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration



3. Pins Configuration

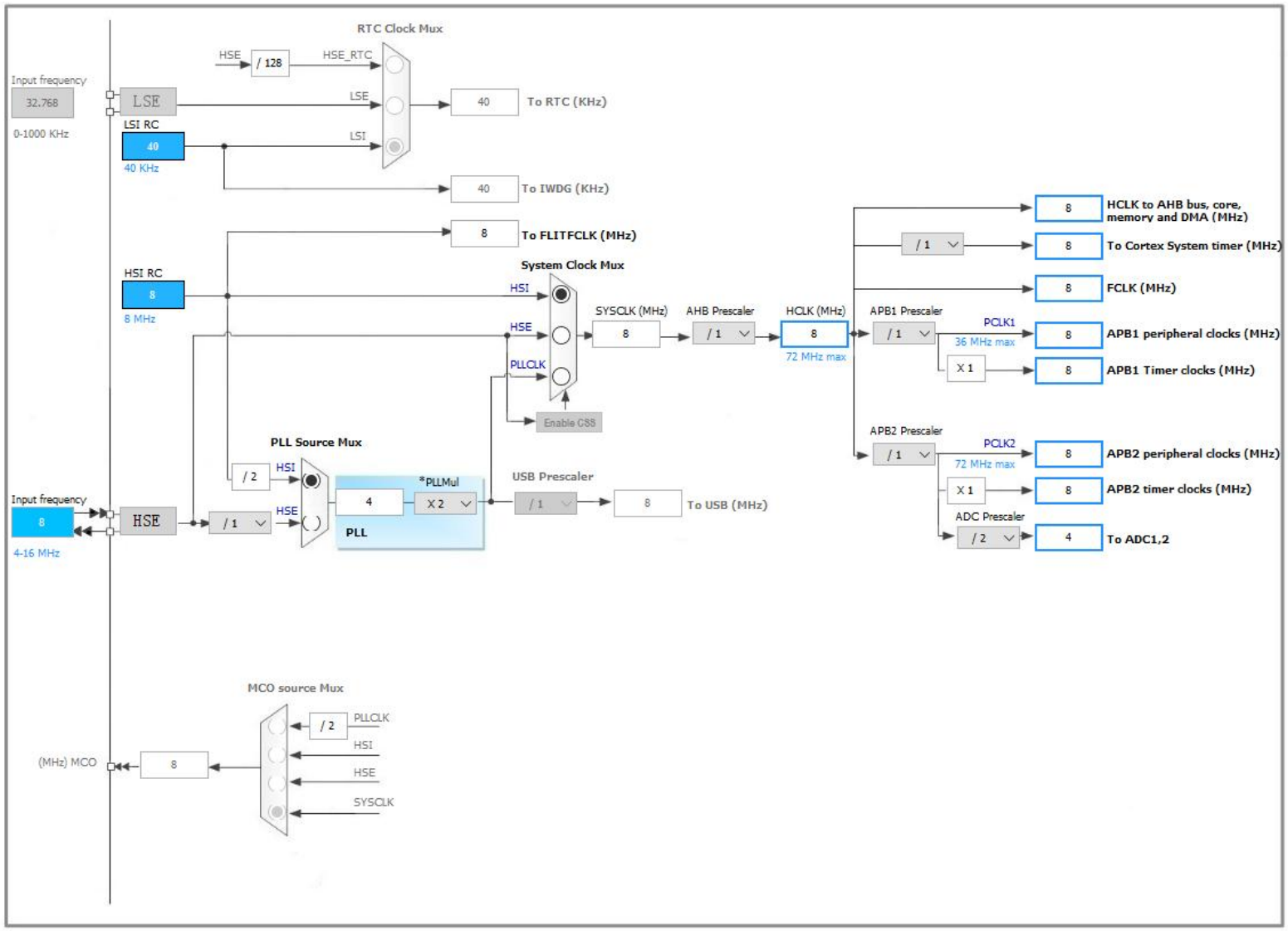
Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
5	PD0-OSC_IN	I/O	RCC_OSC_IN	
6	PD1-OSC_OUT	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
10	PA0-WKUP	I/O	TIM2_CH1	PWMA
11	PA1	I/O	TIM2_CH2	PWMB
12	PA2	I/O	TIM2_CH3	PWMC
13	PA3 *	I/O	TIM2_CH4	PWMD
14	PA4	I/O	ADC1_IN4	BAT_CHECK
15	PA5	I/O	SPI1_SCK	
16	PA6	I/O	SPI1_MISO	
17	PA7	I/O	SPI1_MOSI	
18	PB0 **	I/O	GPIO_Output	SCL
19	PB1 **	I/O	GPIO_Output	SDA
20	PB2 **	I/O	GPIO_Output	M_DRDY
22	PB11 **	I/O	GPIO_Output	G_INT
23	VSS	Power		
24	VDD	Power		
25	PB12 **	I/O	GPIO_Output	LED1
26	PB13 **	I/O	GPIO_Output	LED2
30	PA9	I/O	USART1_TX	
31	PA10	I/O	USART1_RX	
34	PA13	I/O	SYS_JTMS-SWDIO	SWDIO
35	VSS	Power		
36	VDD	Power		
37	PA14	I/O	SYS_JTCK-SWCLK	SWCLK
40	PB4 **	I/O	GPIO_Output	CSN
41	PB5 **	I/O	GPIO_Output	CE
42	PB6 **	I/O	GPIO_Output	MOSI
43	PB7 **	I/O	GPIO_Output	SCK
44	BOOT0	Boot		
45	PB8 **	I/O	GPIO_Output	NRF_IRQ
46	PB9 **	I/O	GPIO_Output	MISO
47	VSS	Power		

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
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 Edge	None
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. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.2.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Prefetch Buffer	Enabled
Flash Latency(WS)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	16

5.3. SPI1

Mode: Full-Duplex Master

5.3.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**4.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Software

5.4. SYS

Debug: Serial-Wire

5.5. TIM2

Combined Channels: XOR ON / Hall Sensor Mode

5.5.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	0
Internal Clock Division (CKD)	No Division

Hall Sensor:

Prescaler Division Ratio	No division
Polarity	Rising Edge

Input Filter	0
Commutation Delay	0

5.6. USART1

Mode: Asynchronous

5.6.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
Word Length	8 Bits (including Parity)
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	Receive and Transmit
Over Sampling	16 Samples

*** 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	BAT_CHECK
RCC	PD0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PD1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SPI1	PA5	SPI1_SCK	Alternate Function Push Pull	n/a	**High ***	
	PA6	SPI1_MISO	Input mode	No pull-up and no pull-down	**n/a**	
	PA7	SPI1_MOSI	Alternate Function Push Pull	n/a	**High ***	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	SWDIO
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	SWCLK
TIM2	PA0-WKUP	TIM2_CH1	Input mode	No pull-up and no pull-down	n/a	PWMA
	PA1	TIM2_CH2	Input mode	No pull-up and no pull-down	n/a	PWMB
	PA2	TIM2_CH3	Input mode	No pull-up and no pull-down	n/a	PWMC
USART1	PA9	USART1_TX	Alternate Function Push Pull	n/a	**High ***	
	PA10	USART1_RX	Input mode	No pull-up and no pull-down	**n/a**	
Single Mapped Signals	PA3	TIM2_CH4	Alternate Function Push Pull	n/a	Low	PWMD
GPIO	PB0	GPIO_Output	Output Push Pull	n/a	Low	SCL
	PB1	GPIO_Output	Output Push Pull	n/a	Low	SDA
	PB2	GPIO_Output	Output Push Pull	n/a	Low	M_DRDY
	PB11	GPIO_Output	Output Push Pull	n/a	Low	G_INT
	PB12	GPIO_Output	Output Push Pull	n/a	Low	LED1
	PB13	GPIO_Output	Output Push Pull	n/a	Low	LED2
	PB4	GPIO_Output	Output Push Pull	n/a	Low	CSN
	PB5	GPIO_Output	Output Push Pull	n/a	Low	CE
	PB6	GPIO_Output	Output Push Pull	n/a	Low	MOSI
	PB7	GPIO_Output	Output Push Pull	n/a	Low	SCK
	PB8	GPIO_Output	Output Push Pull	n/a	Low	NRF_IRQ
	PB9	GPIO_Output	Output Push Pull	n/a	Low	MISO

6.2. DMA configuration

nothing configured in DMA service

6.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
System tick timer	true	0	0
Non maskable interrupt	unused		
Memory management fault	unused		
Prefetch fault, memory access fault	unused		
Undefined instruction or illegal state	unused		
Debug monitor	unused		
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1 and ADC2 global interrupts	unused		
TIM2 global interrupt	unused		
SPI1 global interrupt	unused		
USART1 global interrupt	unused		

*** User modified value**

7. Power Plugin report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103C8Tx
Datasheet	13587_Rev16

7.2. Parameter Selection

Temperature	25
Vdd	3.3