1. Description

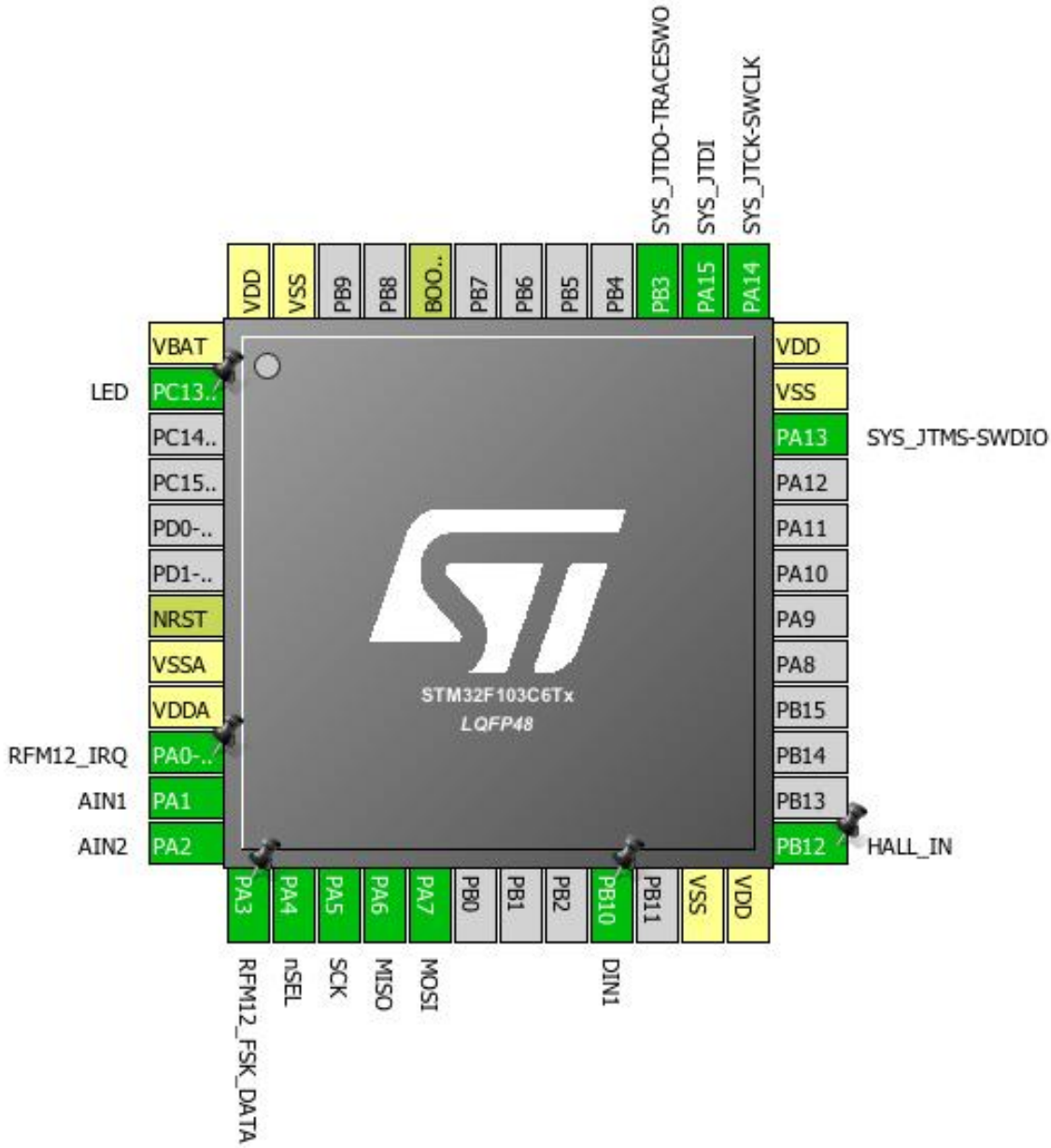
1.1. Project

Project Name	Waechter
Board Name	Waechter
Generated with:	STM32CubeMX 4.18.0
Date	01/04/2017

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103C6Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration

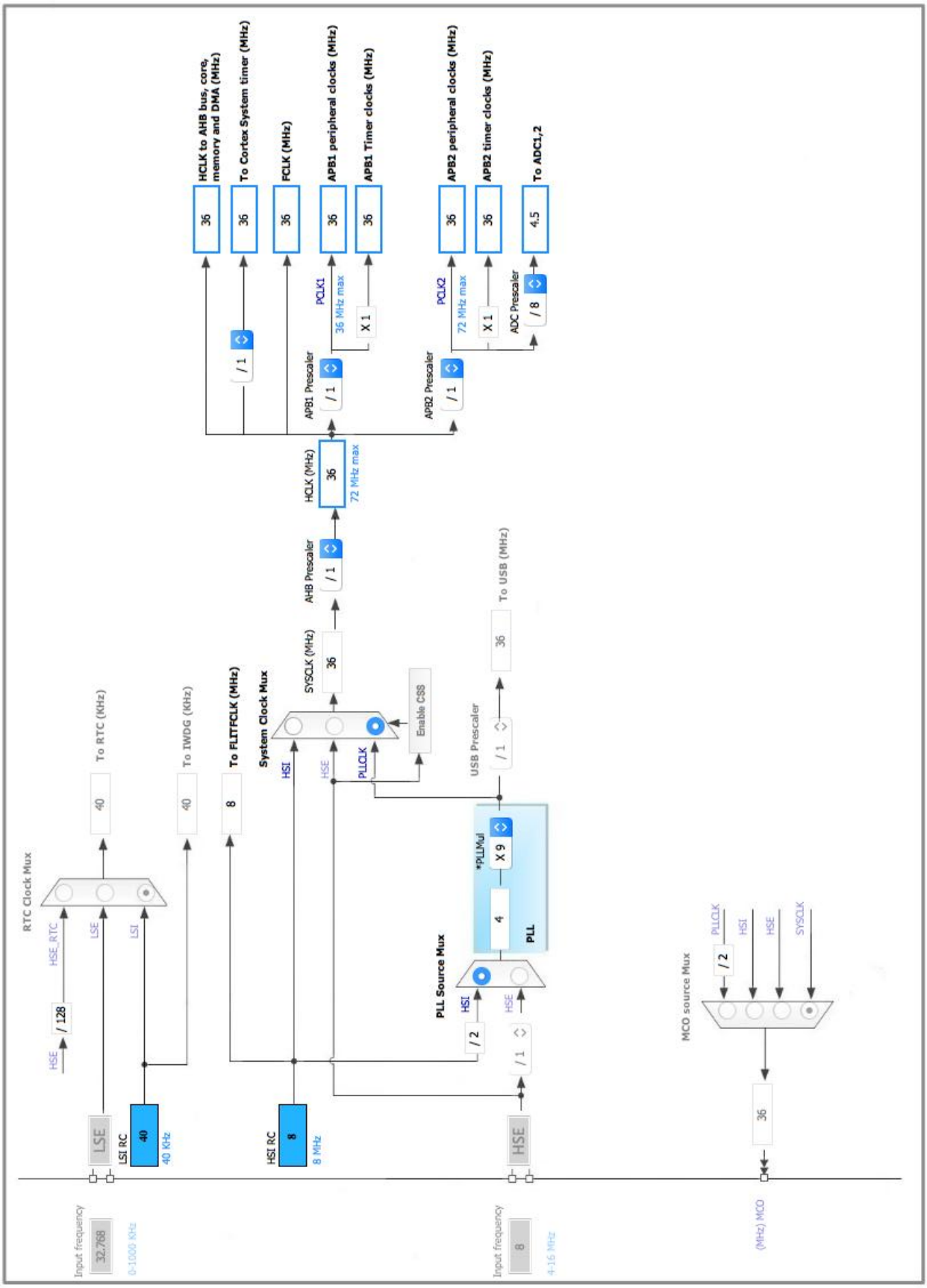


3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13-TAMPER-RTC *	I/O	GPIO_Output	LED
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
10	PA0-WKUP	I/O	GPIO_EXTI0	RFM12_IRQ
11	PA1	I/O	ADC1_IN1	AIN1
12	PA2	I/O	ADC1_IN2	AIN2
13	PA3 *	I/O	GPIO_Input	RFM12_FSK_DATA
14	PA4	I/O	SPI1_NSS	nSEL
15	PA5	I/O	SPI1_SCK	SCK
16	PA6	I/O	SPI1_MISO	MISO
17	PA7	I/O	SPI1_MOSI	MOSI
21	PB10 *	I/O	GPIO_Input	DIN1
23	VSS	Power		
24	VDD	Power		
25	PB12	I/O	GPIO_EXTI12	HALL_IN
34	PA13	I/O	SYS_JTMS-SWDIO	
35	VSS	Power		
36	VDD	Power		
37	PA14	I/O	SYS_JTCK-SWCLK	
38	PA15	I/O	SYS_JTDI	
39	PB3	I/O	SYS_JTDO-TRACESWO	
44	BOOT0	Boot		
47	VSS	Power		
48	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC1

mode: IN1

mode: IN2

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 1
Sampling Time	1.5 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0

WatchDog:

Enable Analog WatchDog Mode	false

5.2. SPI1

Mode: Full-Duplex Master

Hardware NSS Signal: Hardware NSS Output Signal

5.2.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	**16 Bits ***

First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	**128 ***
Baud Rate	**281.25 KBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Output Hardware

5.3. SYS

Debug: JTAG (4 pins)

Timebase Source: SysTick

*** 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	PA1	ADC1_IN1	Analog mode	n/a	n/a	AIN1
	PA2	ADC1_IN2	Analog mode	n/a	n/a	AIN2
SPI1	PA4	SPI1_NSS	Alternate Function Push Pull	n/a	**High ***	nSEL
	PA5	SPI1_SCK	Alternate Function Push Pull	n/a	**High ***	SCK
	PA6	SPI1_MISO	Input mode	No pull-up and no pull-down	**n/a**	MISO
	PA7	SPI1_MOSI	Alternate Function Push Pull	n/a	**High ***	MOSI
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PA15	SYS_JTDI	n/a	n/a	n/a	
	PB3	SYS_JTDO-TRACESWO	n/a	n/a	n/a	
GPIO	PC13-TAMPER-RTC	GPIO_Output	Output Push Pull	n/a	**High ***	LED
	PA0-WKUP	GPIO_EXTI0	External Interrupt Mode with Rising edge trigger detection	**Pull-up ***	**n/a**	RFM12_IRQ
	PA3	GPIO_Input	Input mode	**Pull-up ***	**n/a**	RFM12_FSK_DATA
	PB10	GPIO_Input	Input mode	No pull-up and no pull-down	**n/a**	DIN1
	PB12	GPIO_EXTI12	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	**n/a**	HALL_IN

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
EXTI line0 interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1 and ADC2 global interrupts	unused		
SPI1 global 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	STM32F103C6Tx
Datasheet	15060_Rev7

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	Waechter
Project Folder	/Users/heilig/Documents/Programmieren/Waechter/CubeMXGeneratedSource/W
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.4.0

8.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Copy only the necessary library files
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