

## 1. Description

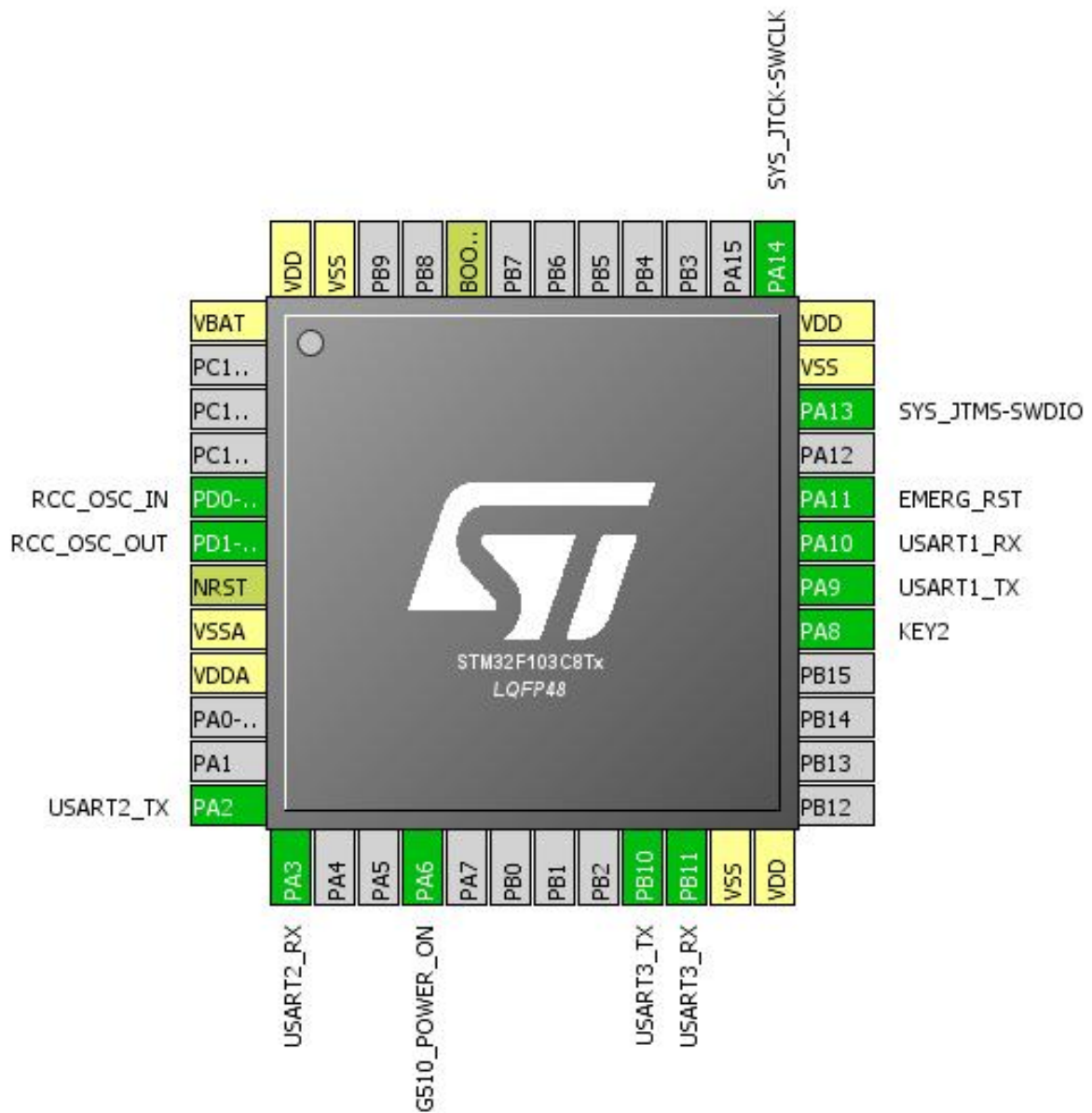
### 1.1. Project

Project Name	STM32F103C8x
Board Name	STM32F103C8x
Generated with:	STM32CubeMX 4.25.0
Date	04/02/2018

### 1.2. MCU

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

## 2. Pinout Configuration

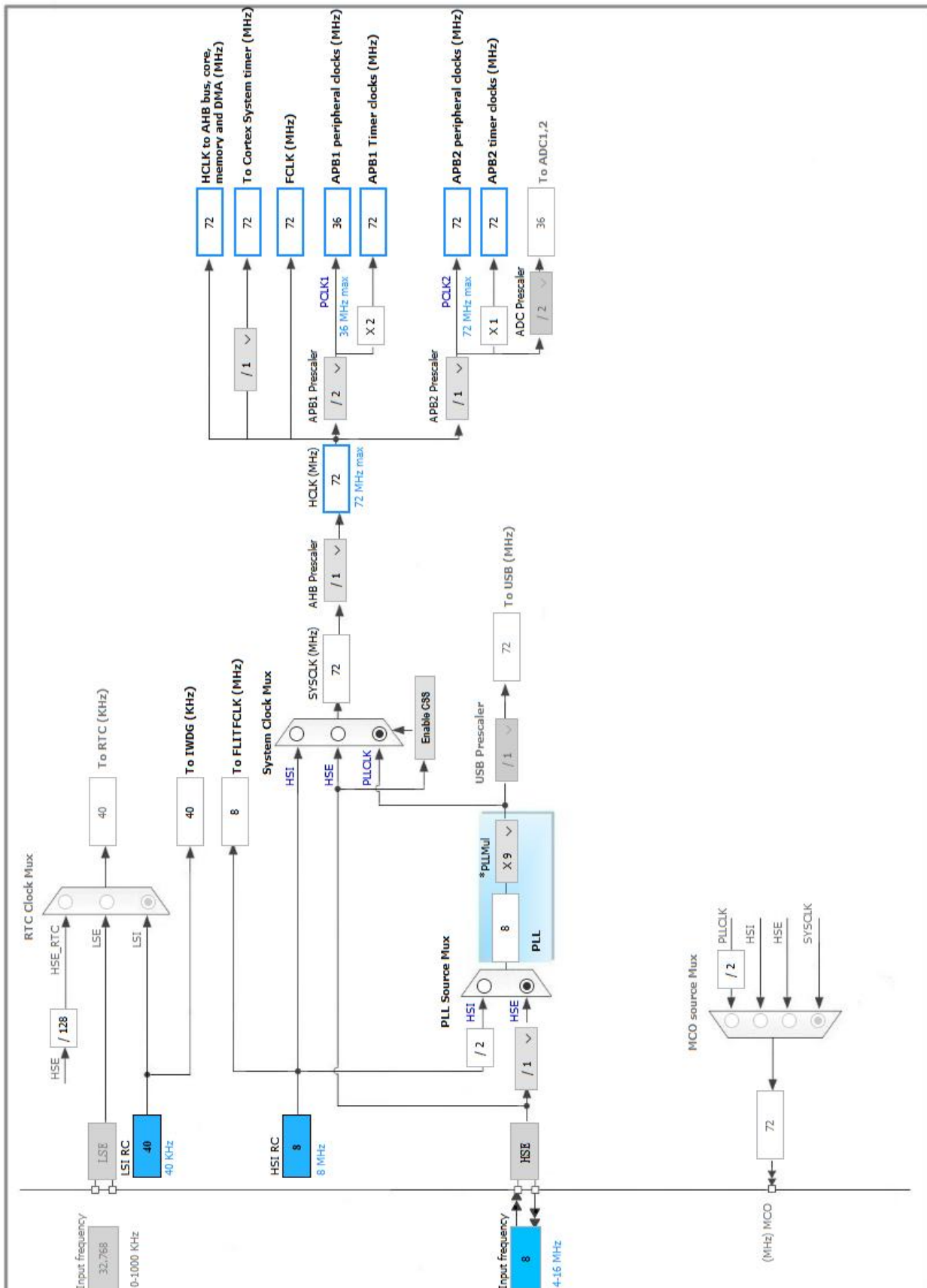


### 3. Pins Configuration

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		
12	PA2	I/O	USART2_TX	
13	PA3	I/O	USART2_RX	
16	PA6 *	I/O	GPIO_Output	G510_POWER_ON
21	PB10	I/O	USART3_TX	
22	PB11	I/O	USART3_RX	
23	VSS	Power		
24	VDD	Power		
29	PA8 *	I/O	GPIO_Input	KEY2
30	PA9	I/O	USART1_TX	
31	PA10	I/O	USART1_RX	
32	PA11 *	I/O	GPIO_Output	EMERG_RST
34	PA13	I/O	SYS_JTMS-SWDIO	
35	VSS	Power		
36	VDD	Power		
37	PA14	I/O	SYS_JTCK-SWCLK	
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. IWDG

mode: Activated

#### 5.1.1. Parameter Settings:

##### Clocking:

IWDG counter clock prescaler	4
IWDG down-counter reload value	4095

### 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)	2 WS (3 CPU cycle)

##### RCC Parameters:

HSI Calibration Value	16
HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

### 5.3. SYS

Debug: Serial Wire

Timebase Source: SysTick

### 5.4. TIM2

Clock Source : Internal Clock

### 5.4.1. Parameter Settings:

#### Counter Settings:

Prescaler (PSC - 16 bits value)	<b>7200-1 *</b>
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	<b>10-1 *</b>
Internal Clock Division (CKD)	No Division
auto-reload preload	Disable

#### Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

## 5.5. USART1

### Mode: Asynchronous

### 5.5.1. 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

## 5.6. USART2

### Mode: Asynchronous

### 5.6.1. Parameter Settings:

#### Basic Parameters:

Baud Rate	<b>9600 *</b>
Word Length	8 Bits (including Parity)
Parity	None
Stop Bits	1

**Advanced Parameters:**

Data Direction	Receive and Transmit
Over Sampling	16 Samples

## 5.7. USART3

**Mode: Asynchronous**

### 5.7.1. 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
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	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
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	
USART2	PA2	USART2_TX	Alternate Function Push Pull	n/a	High *	
	PA3	USART2_RX	Input mode	No pull-up and no pull-down	n/a	
USART3	PB10	USART3_TX	Alternate Function Push Pull	n/a	High *	
	PB11	USART3_RX	Input mode	No pull-up and no pull-down	n/a	
GPIO	PA6	GPIO_Output	Output Push Pull	n/a	Low	G510_POWER_ON
	PA8	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	KEY2
	PA11	GPIO_Output	Output Push Pull	n/a	Low	EMERG_RST

### 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
TIM2 global interrupt	true	1	0
USART2 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
USART1 global interrupt	unused		
USART3 global interrupt	unused		

\* User modified value

## ***7. Power Consumption Calculator report***

### 7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103C8Tx
Datasheet	13587_Rev17

### 7.2. Parameter Selection

Temperature	25
Vdd	3.3

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	STM32F103C8x
Project Folder	D:\Projects\LinkPaperFirmware
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.6.1

### 8.2. 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

## ***9. Software Pack Report***