

## 1. Description

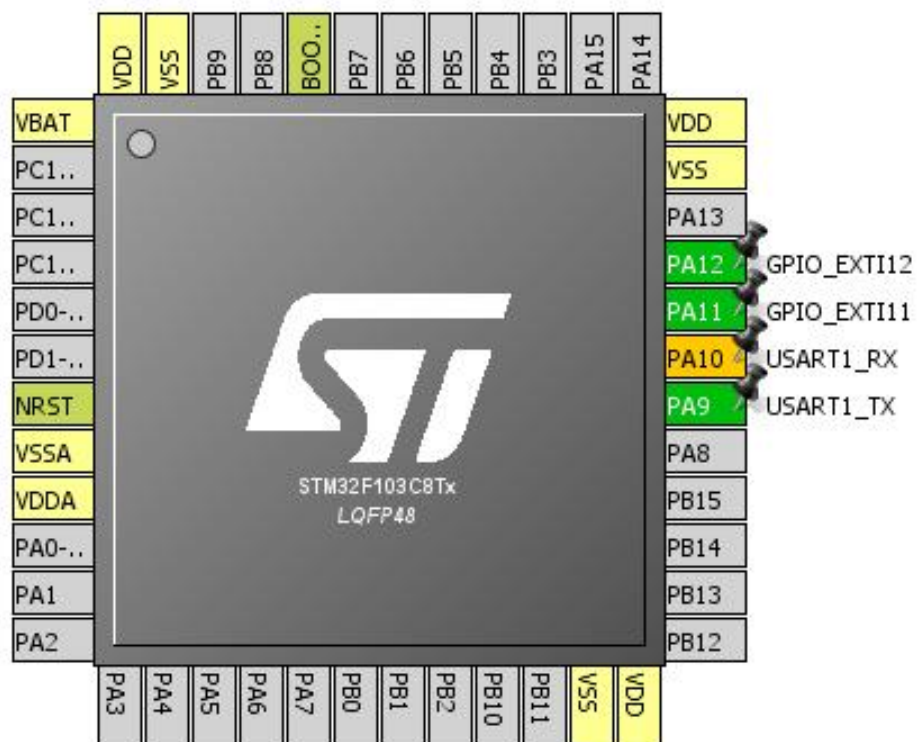
### 1.1. Project

Project Name	Lab3_Cyclometer
Board Name	Lab3_Cyclometer
Generated with:	STM32CubeMX 4.9.0
Date	05/04/2019

### 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		
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
23	VSS	Power		
24	VDD	Power		
30	PA9	I/O	USART1_TX	
31	PA10 *	I/O	USART1_RX	
32	PA11	I/O	GPIO_EXTI11	
33	PA12	I/O	GPIO_EXTI12	
35	VSS	Power		
36	VDD	Power		
44	BOOT0	Boot		
47	VSS	Power		
48	VDD	Power		

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

## 4. IPs and Middleware Configuration

### 4.1. TIM3

**mode: Clock Source**

#### Counter Settings:

Prescaler (PSC - 16 bits value)	<b>8000 *</b>
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	<b>199 *</b>
Internal Clock Division (CKD)	No Division

#### Trigger Output (TRGO) Parameters:

Master/Slave Mode	Disable (no sync between this TIM (Master) and its Slaves
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

### 4.2. USART1

**Mode: Single Wire (Half-Duplex)**

#### 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

**\* User modified value**

## 5. System Configuration

### 5.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
USART1	PA9	USART1_TX	Alternate Function Open Drain	n/a	<b>High *</b>	
Single Mapped Signals	PA10	USART1_RX	Input mode	No pull-up and no pull-down	n/a	
GPIO	PA11	GPIO_EXTI11	<b>External Interrupt Mode with Falling edge trigger detection</b>	<b>Pull-up *</b>	n/a	
	PA12	GPIO_EXTI12	<b>External Interrupt Mode with Falling edge trigger detection</b>	<b>Pull-up *</b>	n/a	

## ***5.2. DMA configuration***

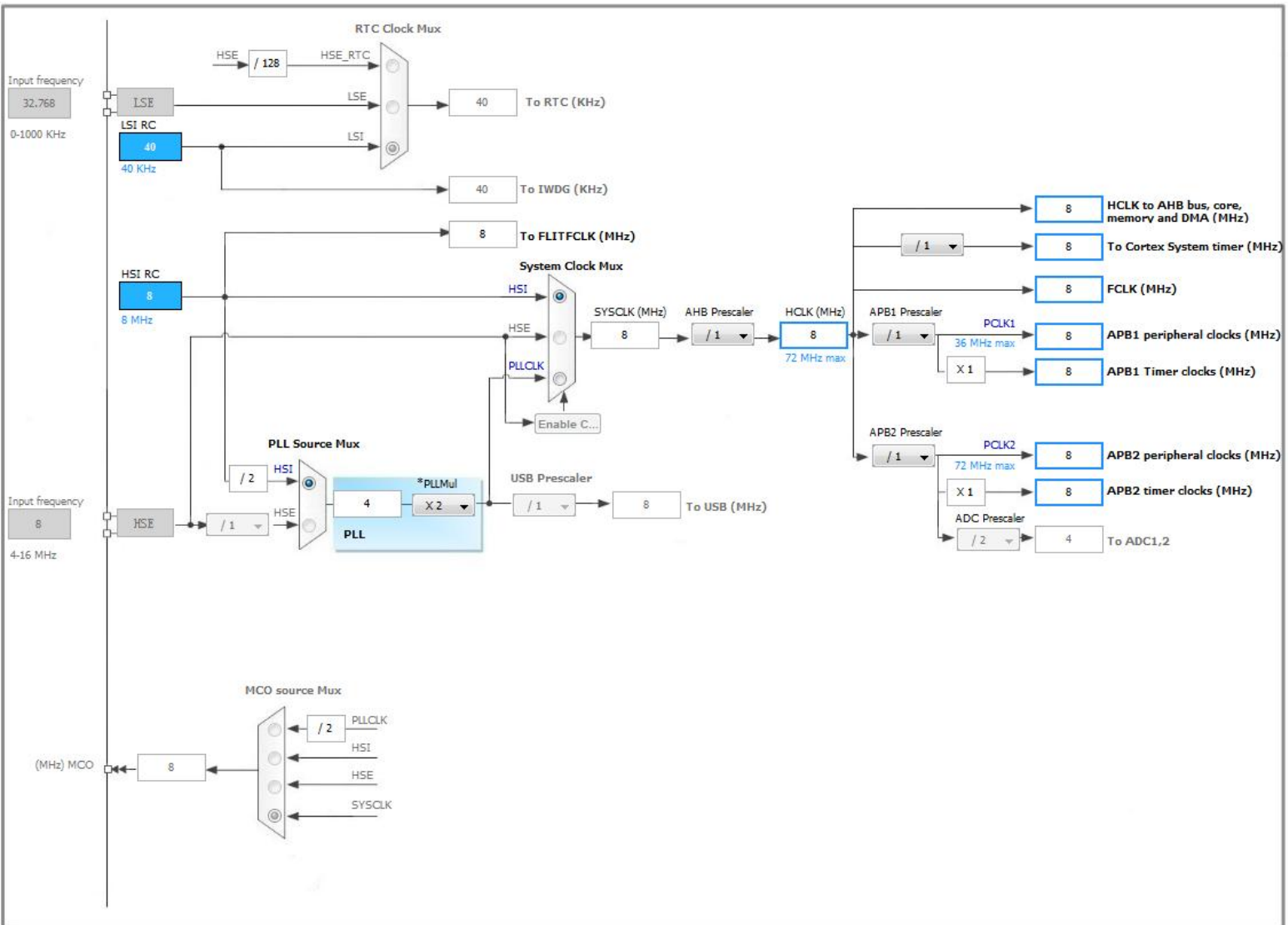
nothing configured in DMA service

### 5.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
Non maskable 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
Debug monitor	true	0	0
System tick timer	true	0	0
PVD interrupt through EXTI line 16	true	0	0
RCC global interrupt	true	0	0
TIM3 global interrupt	true	0	0
USART1 global interrupt	true	0	0
EXTI line[15:10] interrupts	true	0	0

\* User modified value

## 6. Clock Tree Configuration





## ***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

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	Lab3_Cyclometer
Project Folder	C:\Users\Jessie\SchoolWork\EmbeddedSystems\Lab3_Cyclometer
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.1.0

### 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

### 8.3. Toolchains Settings

Name	Value
Compiler Optimizations	Balanced Size/Speed