# 1. Description

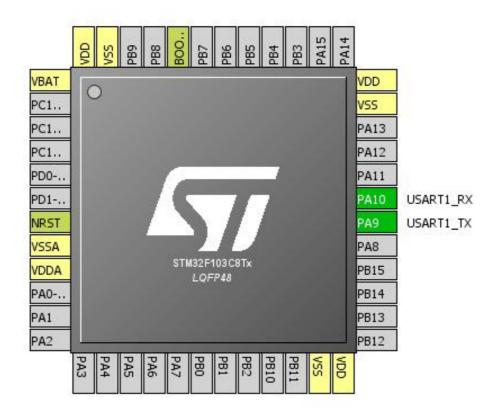
### 1.1. Project

| Project Name    | Lab4_BootLoader   |
|-----------------|-------------------|
| Board Name      | test              |
| Generated with: | STM32CubeMX 4.9.0 |
| Date            | 05/30/2019        |

### 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<br>LQFP48 | Pin Name<br>(function after<br>reset) | Pin Type | Alternate<br>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                |       |
| 35                   | VSS                                   | Power    |                          |       |
| 36                   | VDD                                   | Power    |                          |       |
| 44                   | воото                                 | Boot     |                          |       |
| 47                   | VSS                                   | Power    |                          |       |
| 48                   | VDD                                   | Power    |                          |       |

## 4. IPs and Middleware Configuration

### 4.1. USART1

**Mode: Asynchronous** 

#### **Basic Parameters:**

Baud Rate 9600 \*

Word Length 8 Bits (including Parity)

Parity None Stop Bits 1

**Advanced Parameters:** 

Data Direction Receive and Transmit

Over Sampling 16 Samples

<sup>\*</sup> User modified value

# 5. System Configuration

### 5.1. GPIO configuration

| IP     | Pin  | Signal    | GPIO mode                    | GPIO pull/up pull           | Max    | User Label |
|--------|------|-----------|------------------------------|-----------------------------|--------|------------|
|        |      |           |                              | down                        | Speed  |            |
| 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    |            |

## 5.2. DMA configuration

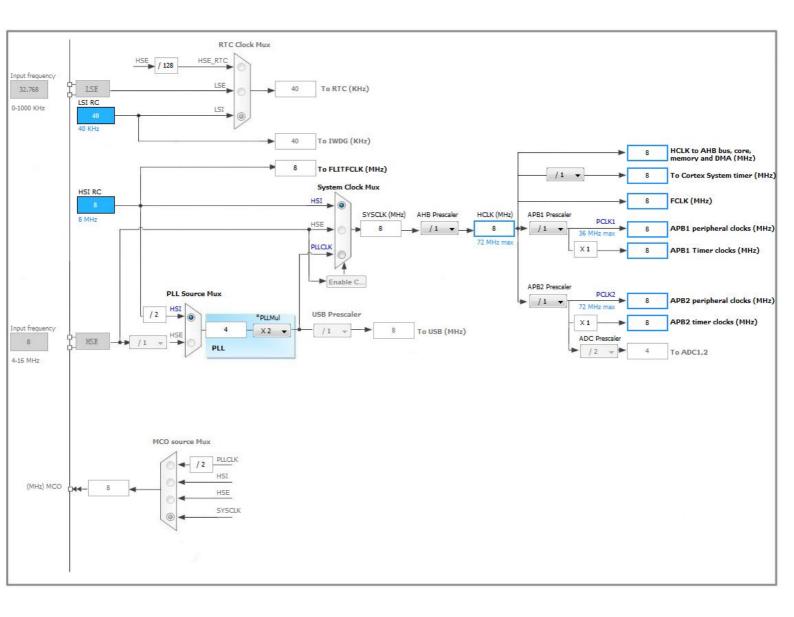
nothing configured in DMA service

## 5.3. NVIC configuration

| Interrupt Table                        | Enable | Preenmption Priority | SubPriority |
|--|--------|----------------------|-------------|
| System tick timer                      | true   | 0                    | 0           |
| USART1 global interrupt                | 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 |                      |             |
| RCC global interrupt                   | unused |                      |             |

<sup>\*</sup> 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                      | Lab4_BootLoader  |
| Project Folder                    | C:\Users\Jessie\SchoolWork\EmbeddedSystems\Lab4_BootLoader |
| 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            | No  |
| consumption)  |   |

### 8.3. Toolchains Settings

| Name                   | Value               |
|------------------------|---------------------|
| Compiler Optimizations | Balanced Size/Speed |