

## 1. Description

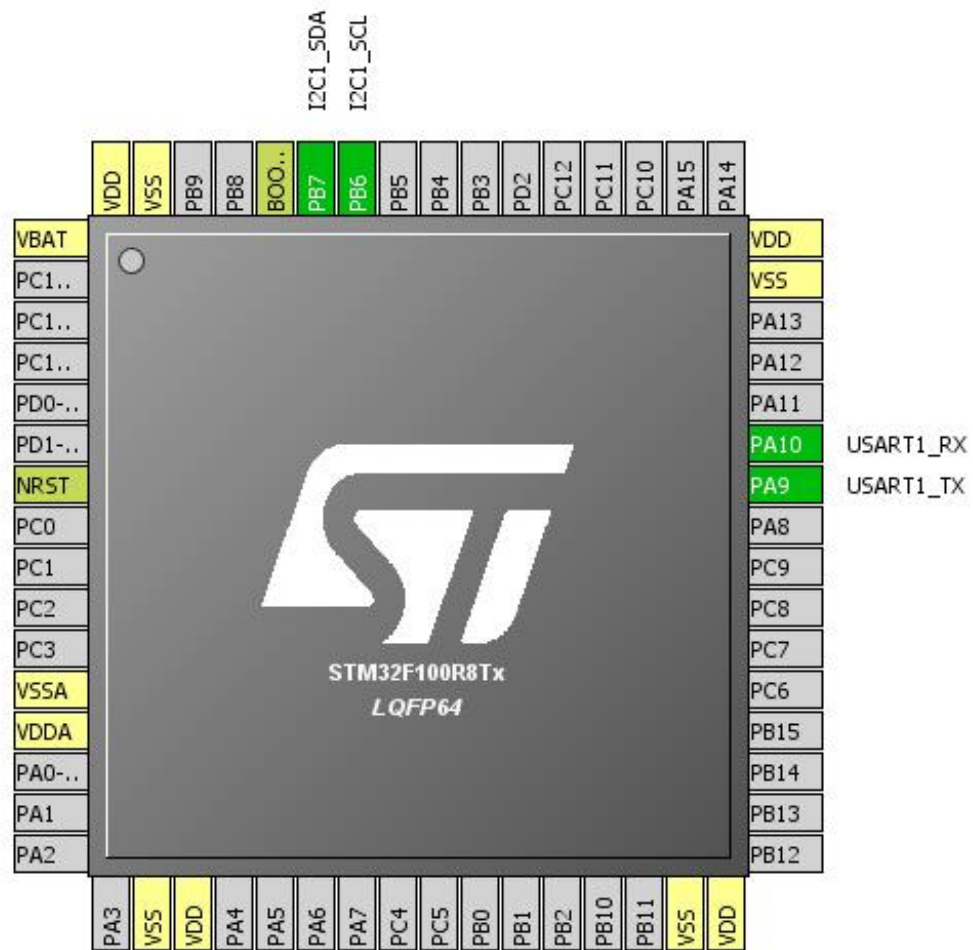
### 1.1. Project

|                 |                    |
|-----------------|--------------------|
| Project Name    | 333                |
| Board Name      | 333                |
| Generated with: | STM32CubeMX 4.23.0 |
| Date            | 09/06/2018         |

### 1.2. MCU

|                |                      |
|----------------|----------------------|
| MCU Series     | STM32F1              |
| MCU Line       | STM32F100 Value Line |
| MCU name       | STM32F100R8Tx        |
| MCU Package    | LQFP64               |
| MCU Pin number | 64                   |

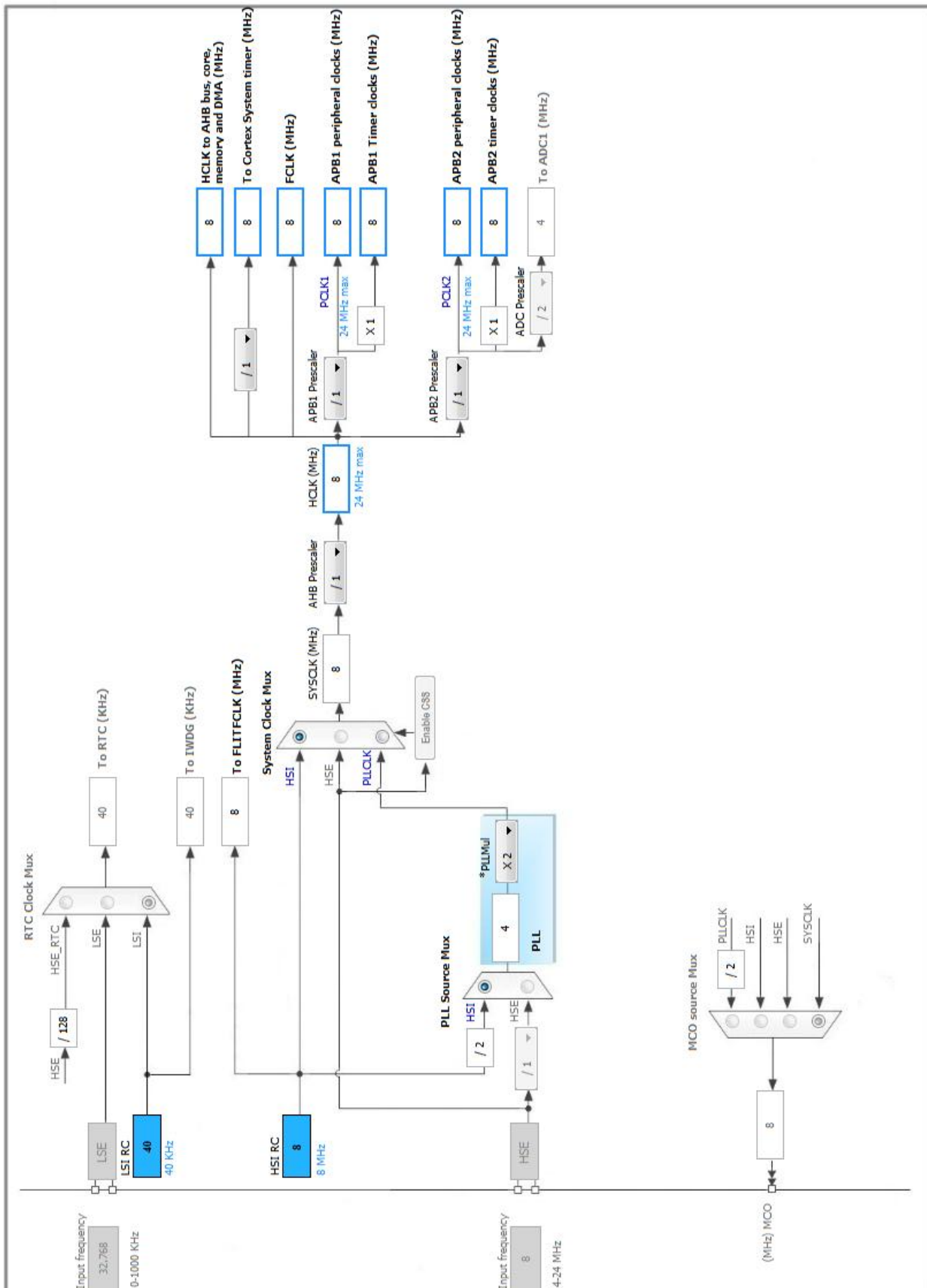
## 2. Pinout Configuration



### 3. Pins Configuration

| Pin Number<br>LQFP64 | Pin Name<br>(function after<br>reset) | Pin Type | Alternate<br>Function(s) | Label |
|----------------------|---------------------------------------|----------|--------------------------|-------|
| 1                    | VBAT                                  | Power    |                          |       |
| 7                    | NRST                                  | Reset    |                          |       |
| 12                   | VSSA                                  | Power    |                          |       |
| 13                   | VDDA                                  | Power    |                          |       |
| 18                   | VSS                                   | Power    |                          |       |
| 19                   | VDD                                   | Power    |                          |       |
| 31                   | VSS                                   | Power    |                          |       |
| 32                   | VDD                                   | Power    |                          |       |
| 42                   | PA9                                   | I/O      | USART1_TX                |       |
| 43                   | PA10                                  | I/O      | USART1_RX                |       |
| 47                   | VSS                                   | Power    |                          |       |
| 48                   | VDD                                   | Power    |                          |       |
| 58                   | PB6                                   | I/O      | I2C1_SCL                 |       |
| 59                   | PB7                                   | I/O      | I2C1_SDA                 |       |
| 60                   | BOOT0                                 | Boot     |                          |       |
| 63                   | VSS                                   | Power    |                          |       |
| 64                   | VDD                                   | Power    |                          |       |

## 4. Clock Tree Configuration



## 5. IPs and Middleware Configuration

### 5.1. I2C1

#### I2C: I2C

##### 5.1.1. Parameter Settings:

###### Master Features:

|                      |               |
|----------------------|---------------|
| I2C Speed Mode       | Standard Mode |
| I2C Clock Speed (Hz) | 100000        |

###### Slave Features:

|                                  |          |
|----------------------------------|----------|
| Clock No Stretch Mode            | Disabled |
| Primary Address Length selection | 7-bit    |
| Dual Address Acknowledged        | Disabled |
| Primary slave address            | 0        |
| General Call address detection   | Disabled |

### 5.2. SYS

Debug: No Debug

Timebase Source: SysTick

### 5.3. USART1

Mode: Asynchronous

##### 5.3.1. 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 |
|--------|------|-----------|-------------------------------|-----------------------------|-----------|------------|
| I2C1   | PB6  | I2C1_SCL  | Alternate Function Open Drain | n/a                         | High *    |            |
|        | PB7  | I2C1_SDA  | Alternate Function Open Drain | n/a                         | High *    |            |
| 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       |            |

### 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           |
| PVD interrupt through EXTI line 16      | unused |                      |             |
| Flash global interrupt                  | unused |                      |             |
| RCC global interrupt                    | unused |                      |             |
| I2C1 event interrupt                    | unused |                      |             |
| I2C1 error interrupt                    | unused |                      |             |
| USART1 global interrupt                 | unused |                      |             |

\* User modified value



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

### 7.1. Microcontroller Selection

|           |                      |
|-----------|----------------------|
| Series    | STM32F1              |
| Line      | STM32F100 Value Line |
| MCU       | STM32F100R8Tx        |
| Datasheet | 16455_Rev9           |

### 7.2. Parameter Selection

|             |     |
|-------------|-----|
| Temperature | 25  |
| Vdd         | 3.3 |

## 8. Software Project

### 8.1. Project Settings

| Name                              | Value                         |
|-----------------------------------|-------------------------------|
| Project Name                      | 333                           |
| Project Folder                    | C:\Users\\Documents\XCUBE\333 |
| Toolchain / IDE                   | EWARM                         |
| 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  |