

## 1. Description

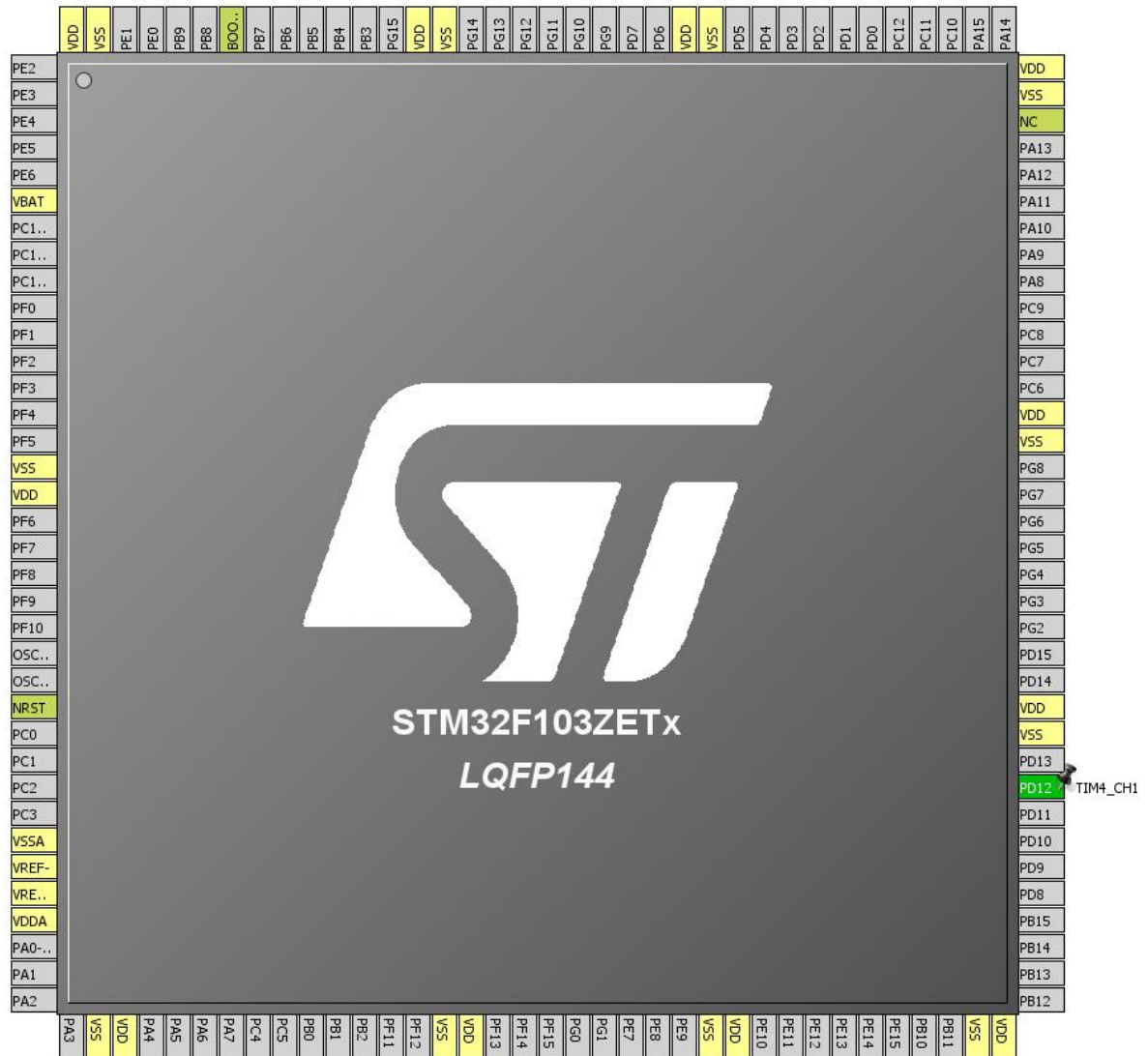
### 1.1. Project

Project Name	PWM
Board Name	PWM
Generated with:	STM32CubeMX 4.17.0
Date	11/10/2016

### 1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103ZETx
MCU Package	LQFP144
MCU Pin number	144

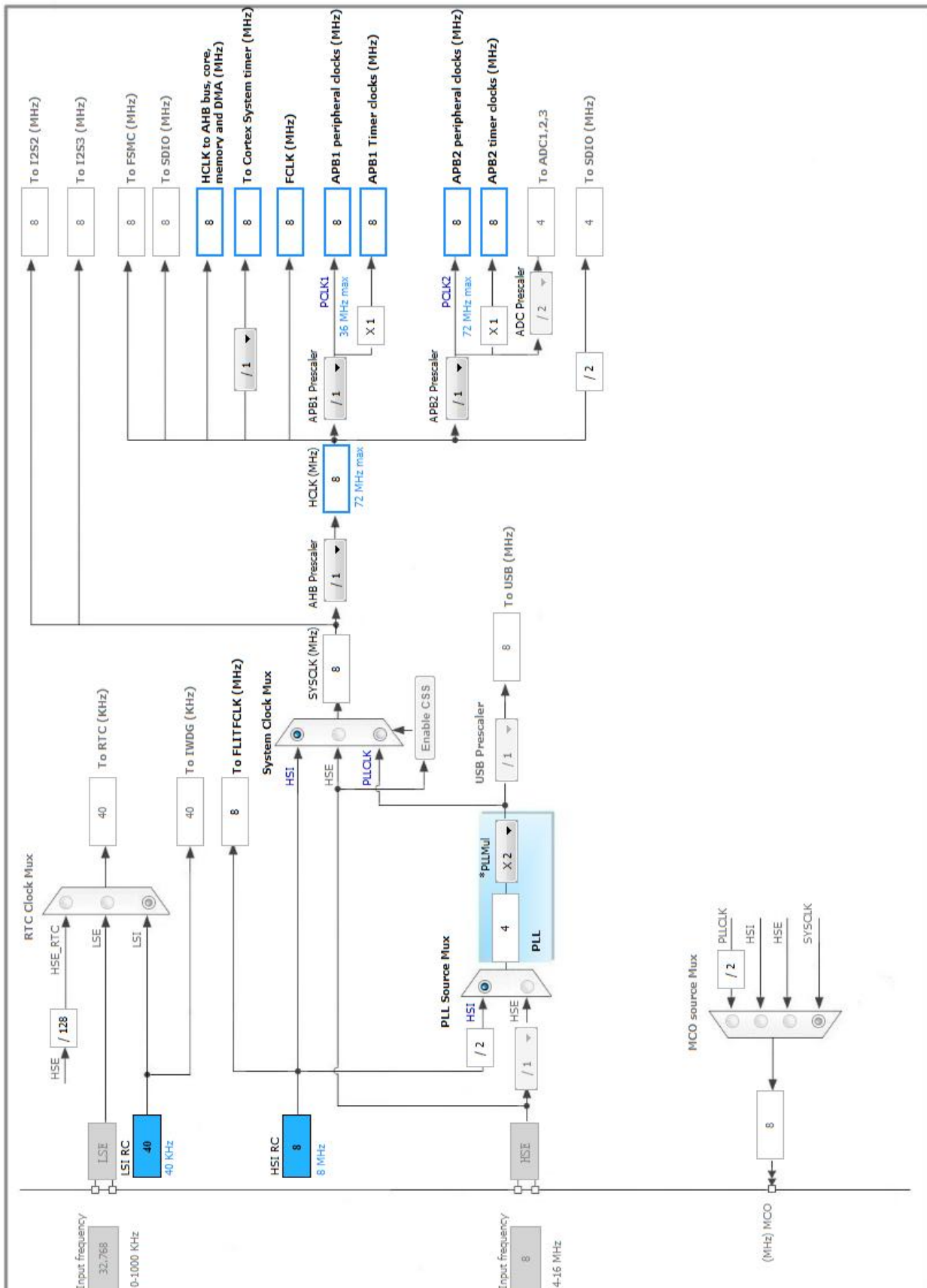
## 2. Pinout Configuration



### 3. Pins Configuration

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
16	VSS	Power		
17	VDD	Power		
25	NRST	Reset		
30	VSSA	Power		
31	VREF-	Power		
32	VREF+	Power		
33	VDDA	Power		
38	VSS	Power		
39	VDD	Power		
51	VSS	Power		
52	VDD	Power		
61	VSS	Power		
62	VDD	Power		
71	VSS	Power		
72	VDD	Power		
81	PD12	I/O	TIM4_CH1	
83	VSS	Power		
84	VDD	Power		
94	VSS	Power		
95	VDD	Power		
106	NC	NC		
107	VSS	Power		
108	VDD	Power		
120	VSS	Power		
121	VDD	Power		
130	VSS	Power		
131	VDD	Power		
138	BOOT0	Boot		
143	VSS	Power		
144	VDD	Power		

## 4. Clock Tree Configuration



## 5. IPs and Middleware Configuration

### 5.1. SYS

Debug: No Debug

Timebase Source: SysTick

### 5.2. TIM4

Channel1: PWM Generation CH1

#### 5.2.1. Parameter Settings:

##### Counter Settings:

Prescaler (PSC - 16 bits value)	<b>80-1 *</b>
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	<b>1000-1 *</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)

##### PWM Generation Channel 1:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High

\* User modified value

## 6. System Configuration

### 6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
TIM4	PD12	TIM4_CH1	Alternate Function Push Pull	n/a	Low	

### 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
TIM4 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		

\* User modified value

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

### 7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103ZETx
Datasheet	14611_Rev12

### 7.2. Parameter Selection

Temperature	25
Vdd	3.3



## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	PWM
Project Folder	D:\Open103Z-Demo-HAL\4.PWM
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 all used libraries into the project folder
Generate peripheral initialization as a pair of '.c/.h' files	Yes
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