1. Description

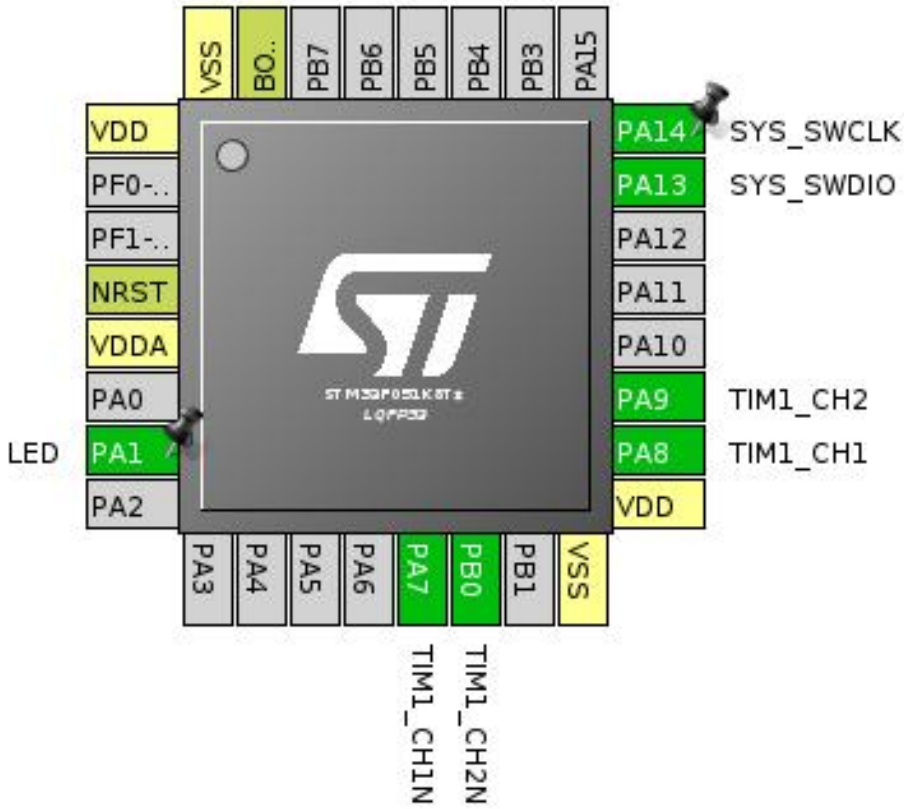
1.1. Project

Project Name	pwmaudio
Board Name	pwmaudio
Generated with:	STM32CubeMX 4.17.0
Date	11/06/2016

1.2. MCU

MCU Series	STM32F0
MCU Line	STM32F0x1
MCU name	STM32F051K8Tx
MCU Package	LQFP32
MCU Pin number	32

2. Pinout Configuration

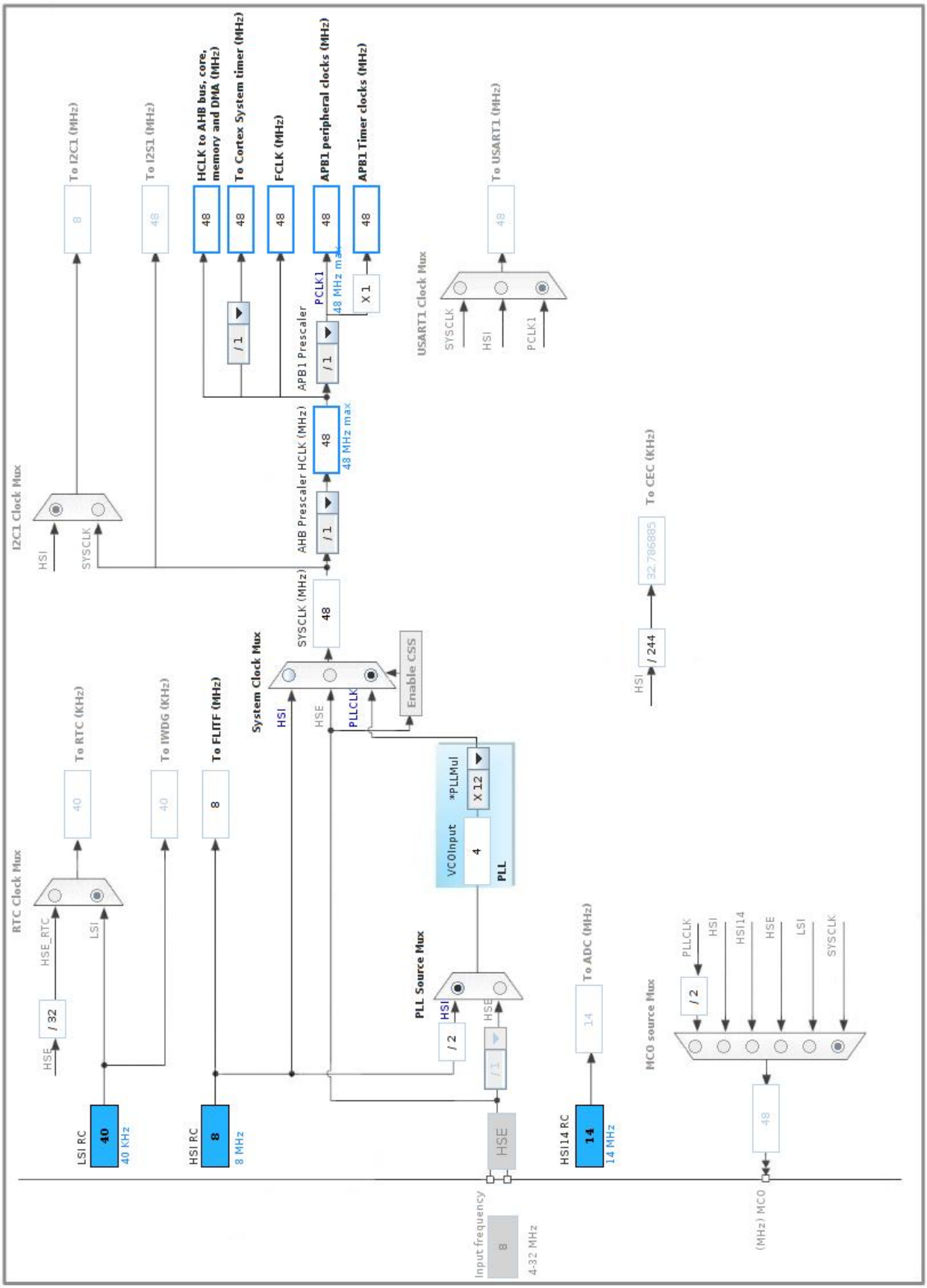


3. Pins Configuration

Pin Number LQFP32	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VDD	Power		
4	NRST	Reset		
5	VDDA	Power		
7	PA1 *	I/O	GPIO_Output	LED
13	PA7	I/O	TIM1_CH1N	
14	PB0	I/O	TIM1_CH2N	
16	VSS	Power		
17	VDD	Power		
18	PA8	I/O	TIM1_CH1	
19	PA9	I/O	TIM1_CH2	
23	PA13	I/O	SYS_SWDIO	
24	PA14	I/O	SYS_SWCLK	
31	BOOT0	Boot		
32	VSS	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. SYS

mode: Debug Serial Wire

Timebase Source: SysTick

5.2. TIM1

Channel1: Output Compare CH1 CH1N

Channel2: Output Compare CH2 CH2N

5.2.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	0
Internal Clock Division (CKD)	No Division
Repetition Counter (RCR - 8 bits value)	0

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)

Break And Dead Time management - BRK Configuration:

BRK State	Disable
BRK Polarity	High

Break And Dead Time management - Output Configuration:

Automatic Output State	Disable
Off State Selection for Run Mode (OSSR)	Disable
Off State Selection for Idle Mode (OSSI)	Disable
Lock Configuration	Off
Dead Time	0

Output Compare Channel 1 and 1N:

Mode	**Active Level on match ***
Pulse (16 bits value)	**1024 ***
CH Polarity	High
CHN Polarity	**Low ***
CH Idle State	Reset
CHN Idle State	Reset

Output Compare Channel 2 and 2N:

Mode	**Active Level on match ***
Pulse (16 bits value)	**2048 ***
CH Polarity	High
CHN Polarity	**Low ***
CH Idle State	Reset
CHN Idle State	Reset

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
TIM1	PA7	TIM1_CH1N	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB0	TIM1_CH2N	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA8	TIM1_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA9	TIM1_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	
GPIO	PA1	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED

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
System service call via SWI instruction	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	0	0
TIM1 capture compare interrupt	true	0	0
PVD interrupt through EXTI Line16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
TIM1 break, update, trigger and commutation interrupts	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F0
Line	STM32F0x1
MCU	STM32F051K8Tx
Datasheet	022265_Rev6

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	pwmaudio
Project Folder	/home/brian/Projects/PwmAudio/code/pwmaudio
Toolchain / IDE	SW4STM32
Firmware Package Name and Version	STM32Cube FW_F0 V1.6.0

8.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Copy only the necessary library files
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