1. Description

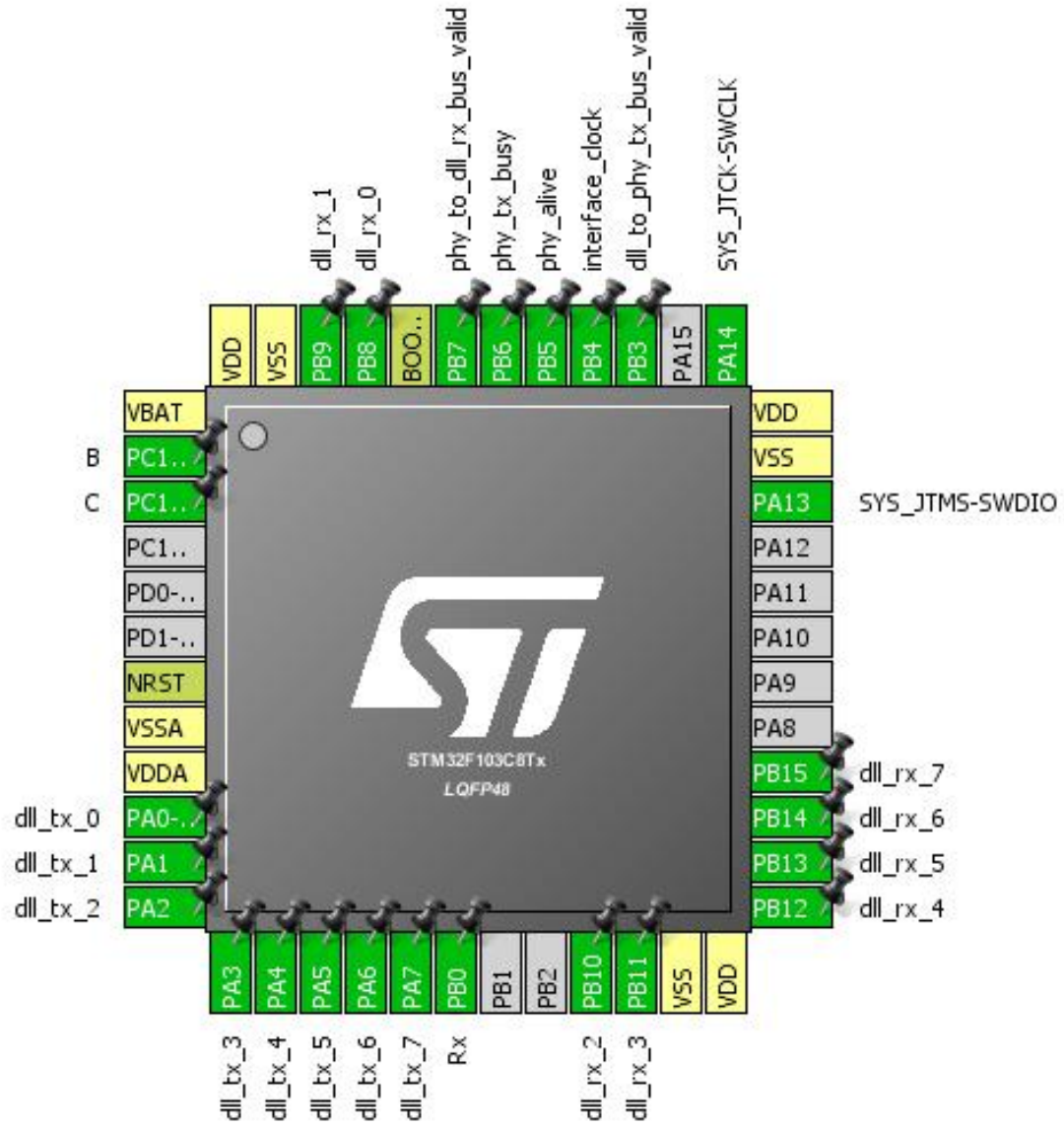
1.1. Project

Project Name	lab3
Board Name	custom
Generated with:	STM32CubeMX 4.27.0
Date	04/18/2020

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103C8Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration



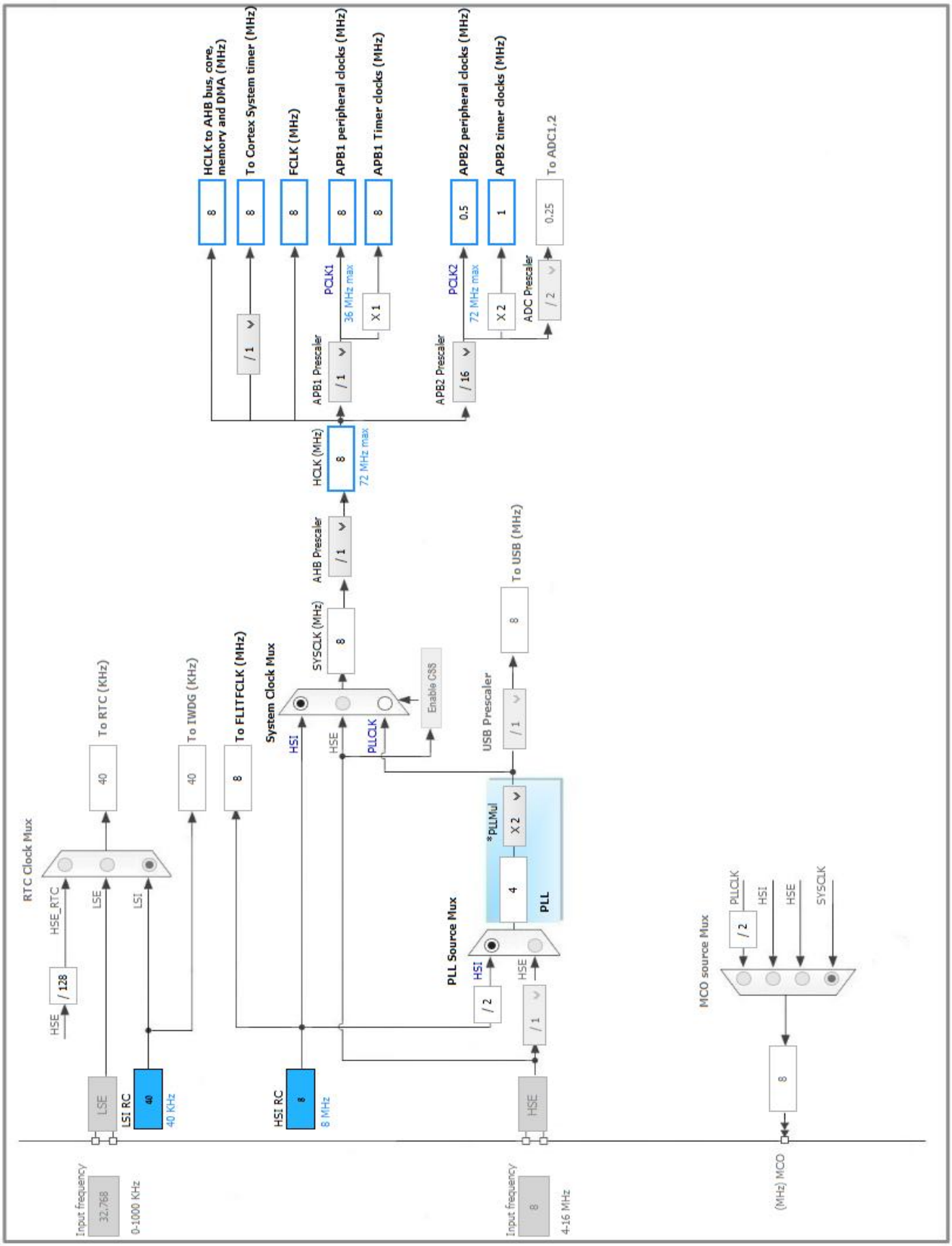
3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13-TAMPER-RTC *	I/O	GPIO_Output	B
3	PC14-OSC32_IN *	I/O	GPIO_Output	C
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
10	PA0-WKUP *	I/O	GPIO_Input	dll_tx_0
11	PA1 *	I/O	GPIO_Input	dll_tx_1
12	PA2 *	I/O	GPIO_Input	dll_tx_2
13	PA3 *	I/O	GPIO_Input	dll_tx_3
14	PA4 *	I/O	GPIO_Input	dll_tx_4
15	PA5 *	I/O	GPIO_Input	dll_tx_5
16	PA6 *	I/O	GPIO_Input	dll_tx_6
17	PA7 *	I/O	GPIO_Input	dll_tx_7
18	PB0 *	I/O	GPIO_Input	Rx
21	PB10 *	I/O	GPIO_Output	dll_rx_2
22	PB11 *	I/O	GPIO_Output	dll_rx_3
23	VSS	Power		
24	VDD	Power		
25	PB12 *	I/O	GPIO_Output	dll_rx_4
26	PB13 *	I/O	GPIO_Output	dll_rx_5
27	PB14 *	I/O	GPIO_Output	dll_rx_6
28	PB15 *	I/O	GPIO_Output	dll_rx_7
34	PA13	I/O	SYS_JTMS-SWDIO	
35	VSS	Power		
36	VDD	Power		
37	PA14	I/O	SYS_JTCK-SWCLK	
39	PB3 *	I/O	GPIO_Input	dll_to_phy_tx_bus_valid
40	PB4 *	I/O	GPIO_Output	interface_clock
41	PB5 *	I/O	GPIO_Output	phy_alive
42	PB6 *	I/O	GPIO_Output	phy_tx_busy
43	PB7 *	I/O	GPIO_Output	phy_to_dll_rx_bus_valid
44	BOOT0	Boot		
45	PB8 *	I/O	GPIO_Output	dll_rx_0
46	PB9 *	I/O	GPIO_Output	dll_rx_1
47	VSS	Power		

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
48	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. SYS

Debug: Serial Wire

Timebase Source: SysTick

5.2. TIM2

Clock Source : Internal Clock

5.2.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**4999 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**1 ***
Internal Clock Division (CKD)	No Division
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

5.3. TIM3

mode: Clock Source

5.3.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**4999 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**4 ***
Internal Clock Division (CKD)	No Division
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

5.4. TIM4

mode: Clock Source

5.4.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**4999 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**1 ***
Internal Clock Division (CKD)	No Division
auto-reload preload	**Enable ***

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

*** 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_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
GPIO	PC13-TAMPER-RTC	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	B
	PC14-OSC32_IN	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	C
	PA0-WKUP	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_0
	PA1	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_1
	PA2	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_2
	PA3	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_3
	PA4	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_4
	PA5	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_5
	PA6	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_6
	PA7	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_tx_7
	PB0	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	Rx
	PB10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_2
	PB11	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_3
	PB12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_4
	PB13	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_5
	PB14	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_6
	PB15	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_7
	PB3	GPIO_Input	Input mode	**Pull-down ***	n/a	dll_to_phy_tx_bus_valid
	PB4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	interface_clock
	PB5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	phy_alive
	PB6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	phy_tx_busy
	PB7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	phy_to_dll_rx_bus_valid
	PB8	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_0
	PB9	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	dll_rx_1

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
TIM2 global interrupt	true	0	0
TIM3 global interrupt	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	STM32F103C8Tx
Datasheet	13587_Rev17

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	lab3
Project Folder	C:\Users\User\Desktop\\ \ 1\projects\lab3
Toolchain / IDE	MDK-ARM V5
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

9. Software Pack Report