1. Description

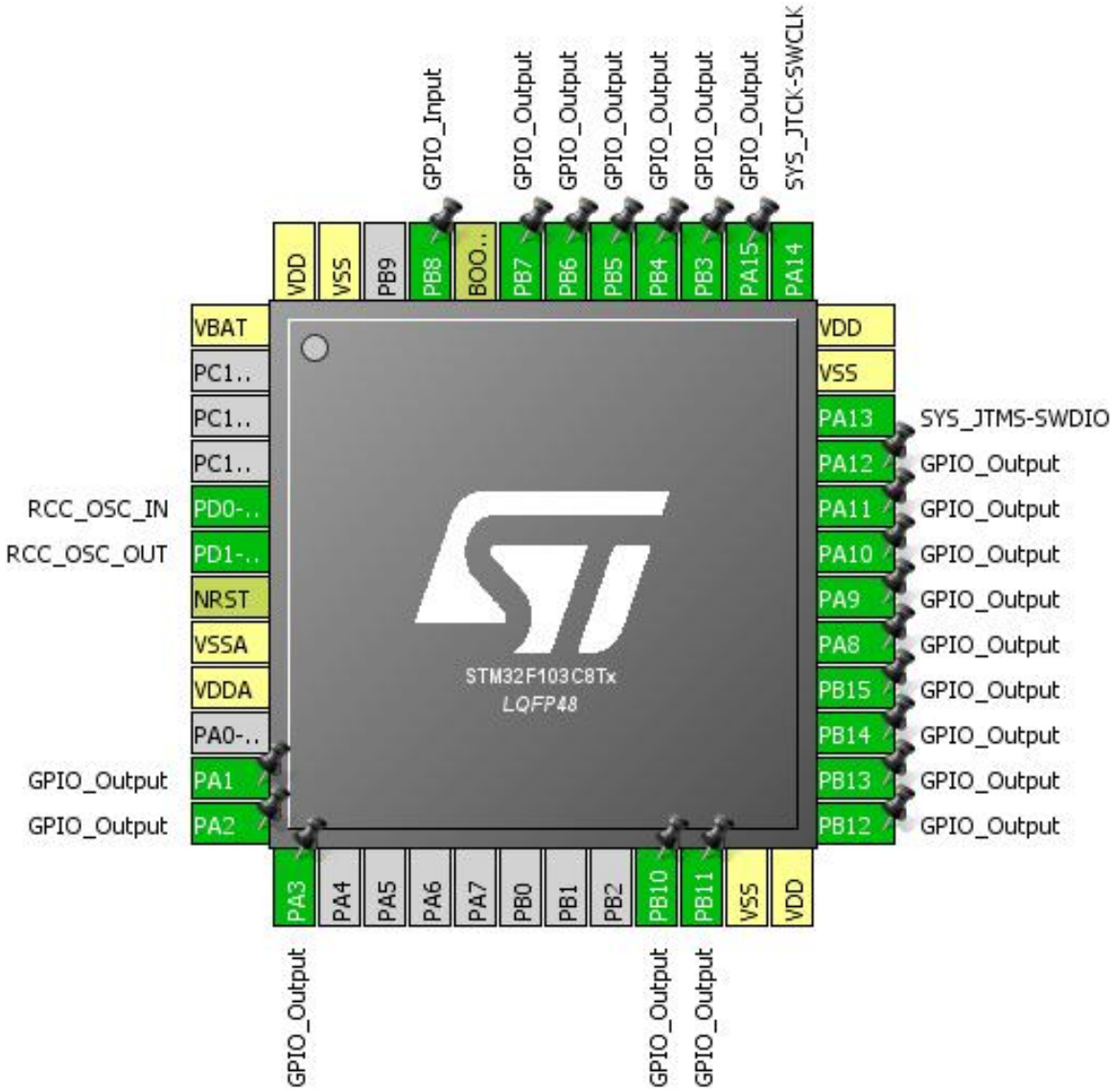
1.1. Project

Project Name	GPIO
Board Name	custom
Generated with:	STM32CubeMX 4.26.1
Date	06/08/2019

1.2. MCU

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

2. Pinout Configuration

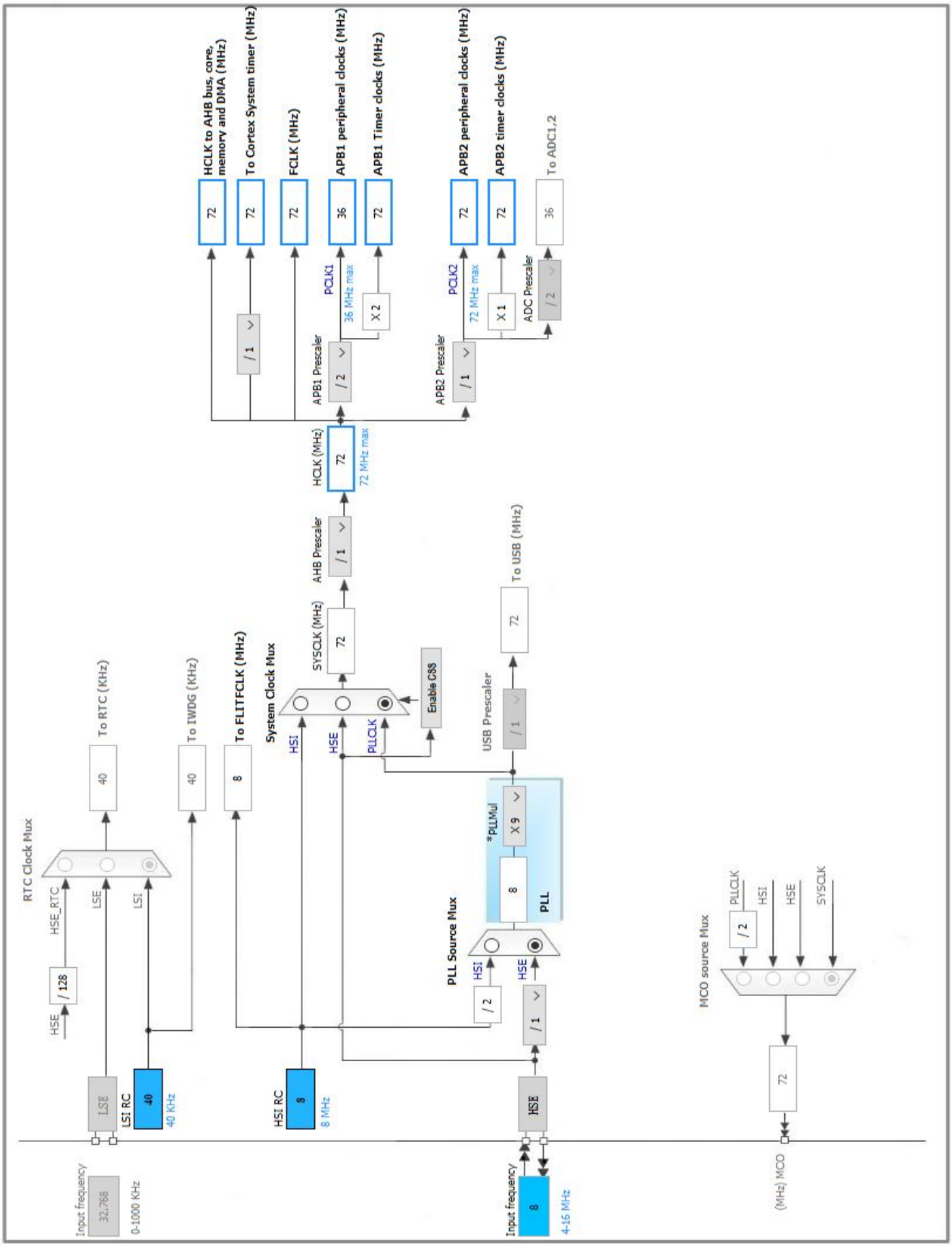


3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
5	PD0-OSC_IN	I/O	RCC_OSC_IN	
6	PD1-OSC_OUT	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
11	PA1 *	I/O	GPIO_Output	
12	PA2 *	I/O	GPIO_Output	
13	PA3 *	I/O	GPIO_Output	
21	PB10 *	I/O	GPIO_Output	
22	PB11 *	I/O	GPIO_Output	
23	VSS	Power		
24	VDD	Power		
25	PB12 *	I/O	GPIO_Output	
26	PB13 *	I/O	GPIO_Output	
27	PB14 *	I/O	GPIO_Output	
28	PB15 *	I/O	GPIO_Output	
29	PA8 *	I/O	GPIO_Output	
30	PA9 *	I/O	GPIO_Output	
31	PA10 *	I/O	GPIO_Output	
32	PA11 *	I/O	GPIO_Output	
33	PA12 *	I/O	GPIO_Output	
34	PA13	I/O	SYS_JTMS-SWDIO	
35	VSS	Power		
36	VDD	Power		
37	PA14	I/O	SYS_JTCK-SWCLK	
38	PA15 *	I/O	GPIO_Output	
39	PB3 *	I/O	GPIO_Output	
40	PB4 *	I/O	GPIO_Output	
41	PB5 *	I/O	GPIO_Output	
42	PB6 *	I/O	GPIO_Output	
43	PB7 *	I/O	GPIO_Output	
44	BOOT0	Boot		
45	PB8 *	I/O	GPIO_Input	
47	VSS	Power		
48	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.1.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Prefetch Buffer	Enabled
Flash Latency(WS)	2 WS (3 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

5.2. SYS

Debug: Serial Wire

Timebase Source: SysTick

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
RCC	PD0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PD1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
GPIO	PA1	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA2	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA3	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB10	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB11	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB12	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB13	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB14	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB15	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA8	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA9	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA10	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA11	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA12	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PA15	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB3	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB4	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB5	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB6	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB7	GPIO_Output	**Output Open Drain ***	**Pull-up ***	Low	
	PB8	GPIO_Input	Input mode	**Pull-up ***	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		

*** 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	GPIO
Project Folder	F:\ \Yoyung \Github_Repository_\GPIO
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