1. Description

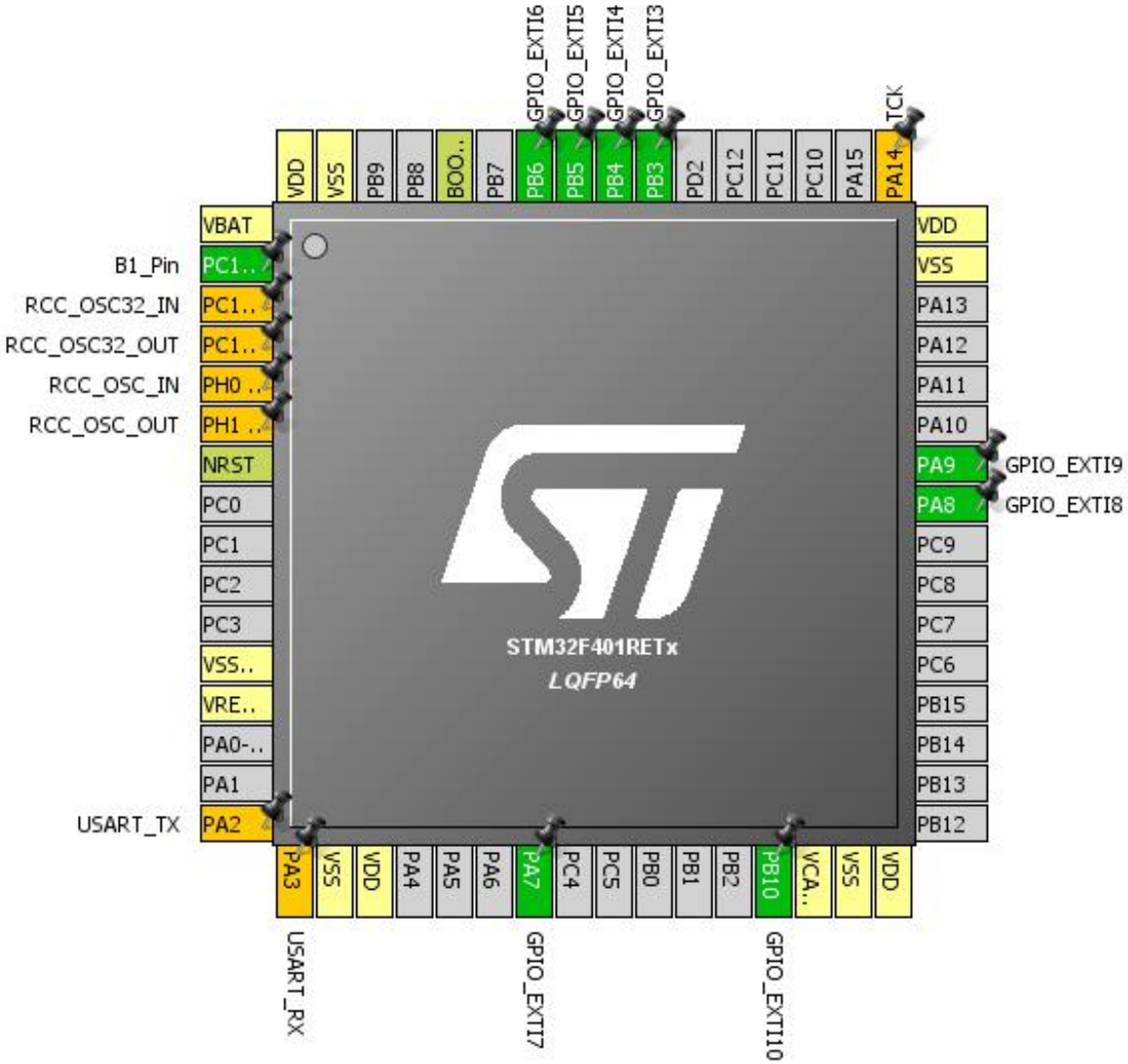
1.1. Project

Project Name	GPIO
Board Name	NUCLEO-F401RE
Generated with:	STM32CubeMX 4.11.0
Date	10/18/2015

1.2. MCU

MCU Series	STM32F4
MCU Line	STM32F401
MCU name	STM32F401RETx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



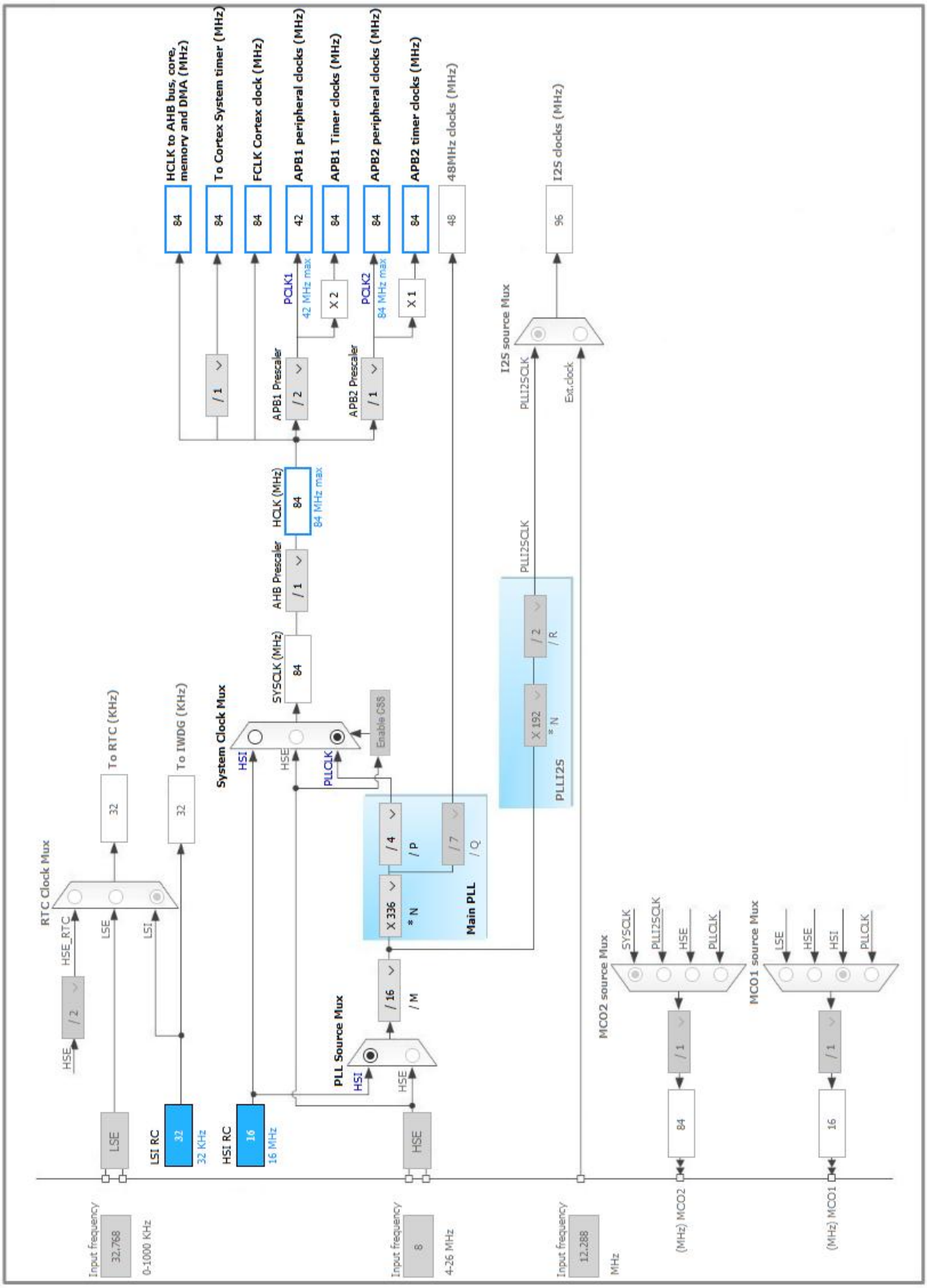
3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13-ANTI_TAMP *	I/O	GPIO_Input	B1_Pin
3	PC14-OSC32_IN **	I/O	RCC_OSC32_IN	
4	PC15-OSC32_OUT **	I/O	RCC_OSC32_OUT	
5	PH0 - OSC_IN **	I/O	RCC_OSC_IN	
6	PH1 - OSC_OUT **	I/O	RCC_OSC_OUT	
7	NRST	Reset		
12	VSSA/VREF-	Power		
13	VREF+	Power		
16	PA2 **	I/O	USART2_TX	USART_TX
17	PA3 **	I/O	USART2_RX	USART_RX
18	VSS	Power		
19	VDD	Power		
23	PA7	I/O	GPIO_EXTI7	
29	PB10	I/O	GPIO_EXTI10	
30	VCAP1	Power		
31	VSS	Power		
32	VDD	Power		
41	PA8	I/O	GPIO_EXTI8	
42	PA9	I/O	GPIO_EXTI9	
47	VSS	Power		
48	VDD	Power		
49	PA14 **	I/O	SYS_JTCK-SWCLK	TCK
55	PB3	I/O	GPIO_EXTI3	
56	PB4	I/O	GPIO_EXTI4	
57	PB5	I/O	GPIO_EXTI5	
58	PB6	I/O	GPIO_EXTI6	
60	BOOT0	Boot		
63	VSS	Power		
64	VDD	Power		

* The pin is affected with an I/O function

** The pin is affected with a peripheral function but no peripheral mode is activated

4. Clock Tree Configuration



5. IPs and Middleware Configuration

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
Single Mapped Signals	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	
	PH0 - OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PH1 - OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
	PA2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	USART_TX
	PA3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	USART_RX
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	TCK
GPIO	PC13-ANTI_TAMP	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	B1_Pin
	PA7	GPIO_EXTI7	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PB10	GPIO_EXTI10	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PA8	GPIO_EXTI8	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PA9	GPIO_EXTI9	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PB3	GPIO_EXTI3	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PB4	GPIO_EXTI4	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PB5	GPIO_EXTI5	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	
	PB6	GPIO_EXTI6	External Interrupt Mode with Rising edge trigger detection	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
System tick timer	true	0	0
Non maskable interrupt	unused		
Memory management fault	unused		
Pre-fetch fault, memory access fault	unused		
Undefined instruction or illegal state	unused		
Debug monitor	unused		
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
EXTI line3 interrupt	unused		
EXTI line4 interrupt	unused		
EXTI line[9:5] interrupts	unused		
EXTI line[15:10] interrupts	unused		

*** User modified value**

7. Power Plugin report

7.1. Microcontroller Selection

Series	STM32F4
Line	STM32F401
MCU	STM32F401RETx
Datasheet	025644_Rev3

7.2. Parameter Selection

Temperature	25
Vdd	null

8. Software Project

8.1. Project Settings

Name	Value
Project Name	GPIO
Project Folder	W:\Repositories\Personal\Nucleo\GPIO
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F4 V1.9.0

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