1. Description

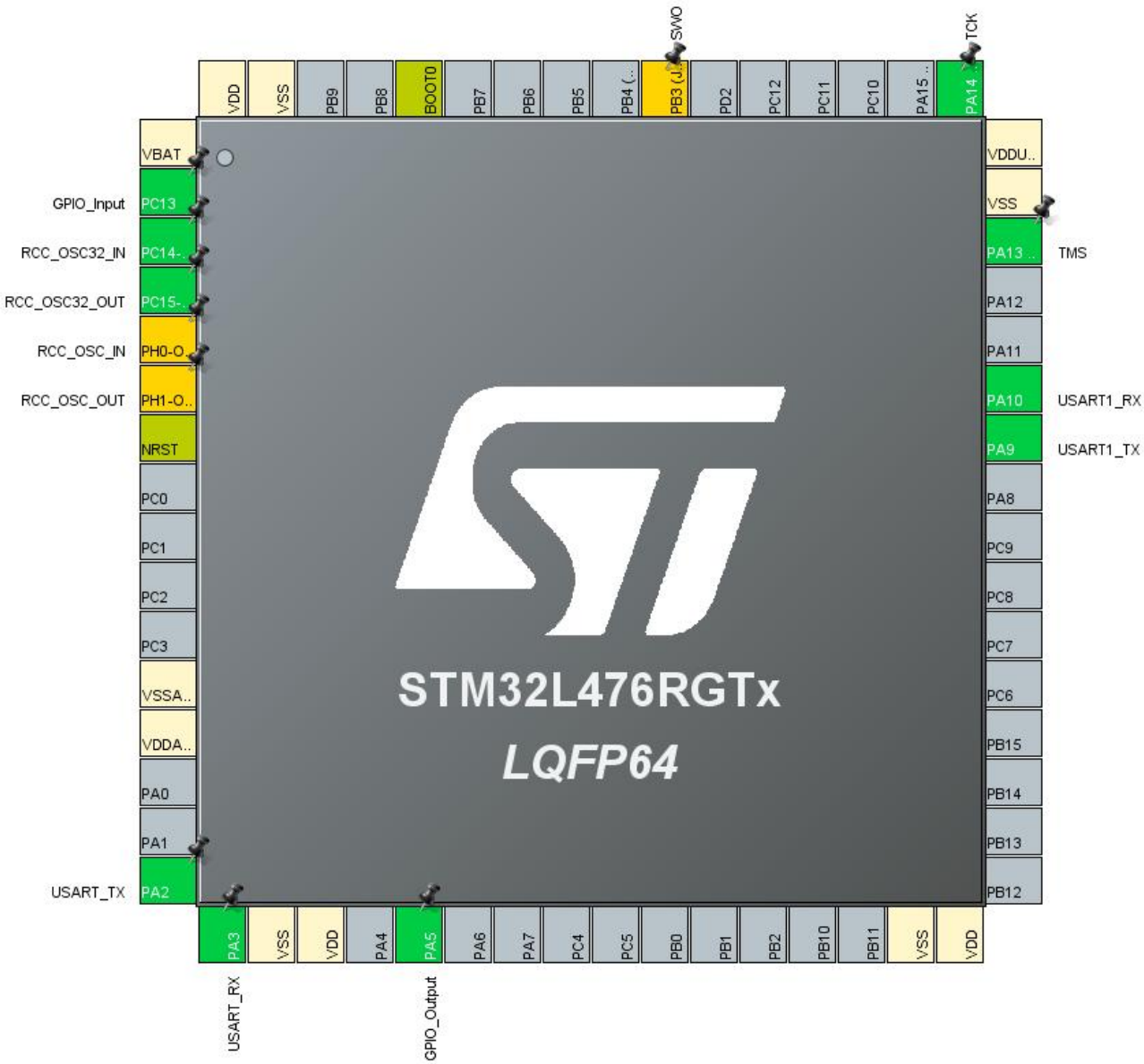
1.1. Project

Project Name	lab8-1-STM32CubeMX
Board Name	NUCLEO-L476RG
Generated with:	STM32CubeMX 5.4.0
Date	12/01/2019

1.2. MCU

MCU Series	STM32L4
MCU Line	STM32L4x6
MCU name	STM32L476RGTx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



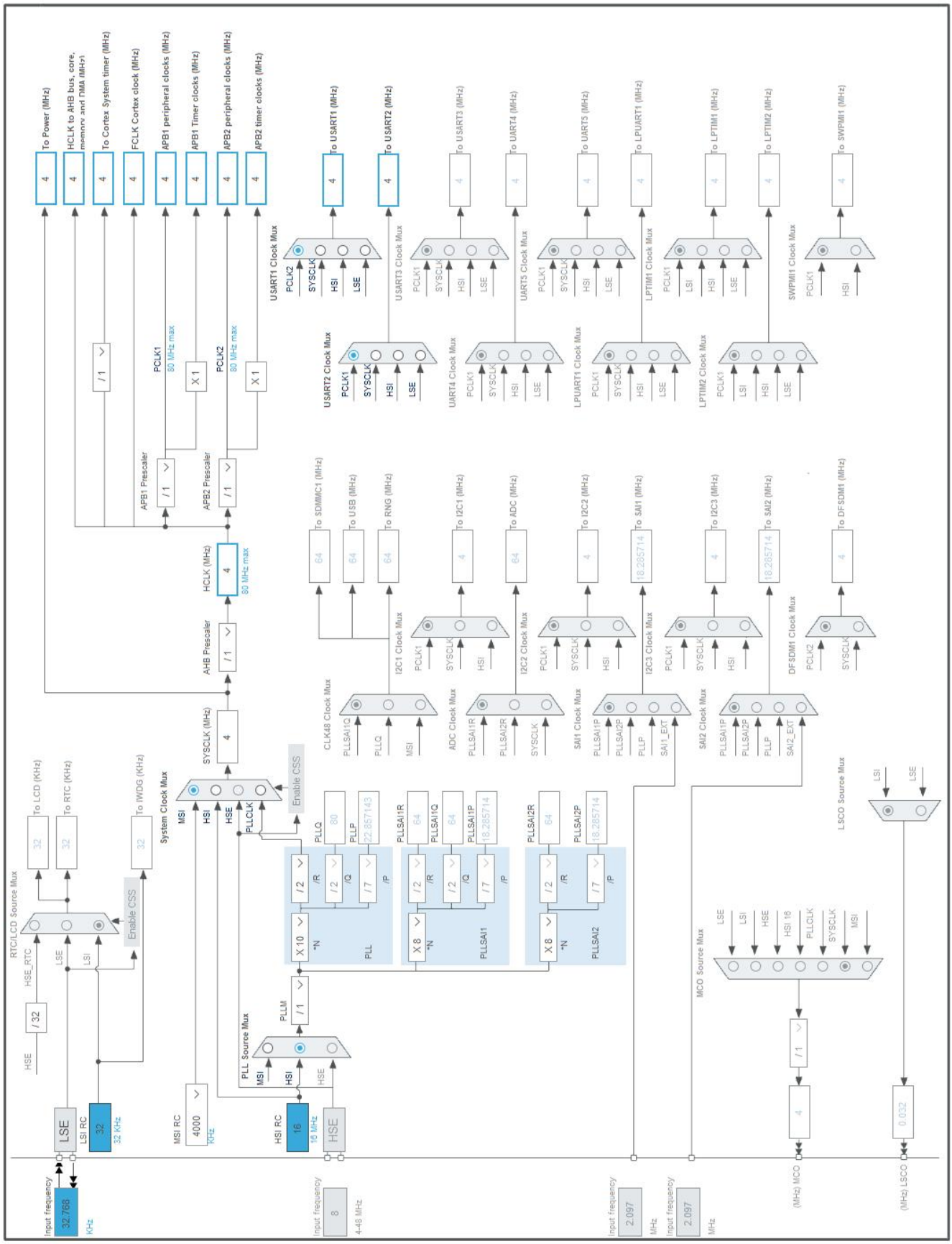
3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13 *	I/O	GPIO_Input	
3	PC14-OSC32_IN (PC14)	I/O	RCC_OSC32_IN	
4	PC15-OSC32_OUT (PC15)	I/O	RCC_OSC32_OUT	
5	PH0-OSC_IN (PH0) **	I/O	RCC_OSC_IN	
6	PH1-OSC_OUT (PH1) **	I/O	RCC_OSC_OUT	
7	NRST	Reset		
12	VSSA/VREF-	Power		
13	VDDA/VREF+	Power		
16	PA2	I/O	USART2_TX	USART_TX
17	PA3	I/O	USART2_RX	USART_RX
18	VSS	Power		
19	VDD	Power		
21	PA5 *	I/O	GPIO_Output	
31	VSS	Power		
32	VDD	Power		
42	PA9	I/O	USART1_TX	
43	PA10	I/O	USART1_RX	
46	PA13 (JTMS-SWDIO)	I/O	SYS_JTMS-SWDIO	TMS
47	VSS	Power		
48	VDDUSB	Power		
49	PA14 (JTCK-SWCLK)	I/O	SYS_JTCK-SWCLK	TCK
55	PB3 (JTDO-TRACESWO) **	I/O	SYS_JTDO-SWO	SWO
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. Software Project

5.1. Project Settings

Name	Value
Project Name	lab8-1-STM32CubeMX
Project Folder	C:\Users\YX Zheng\workspace\lab8-1-STM32CubeMX
Toolchain / IDE	SW4STM32
Firmware Package Name and Version	STM32Cube FW_L4 V1.14.0

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	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

6. Power Consumption Calculator report

6.1. Microcontroller Selection

Series	STM32L4
Line	STM32L4x6
MCU	STM32L476RGTx
Datasheet	025976_Rev4

6.2. Parameter Selection

Temperature	25
Vdd	3.0

7. IPs and Middleware Configuration

7.1. GPIO

7.2. RCC

Low Speed Clock (LSE) : Crystal/Ceramic Resonator

7.2.1. Parameter Settings:

eters:

	3.3
	Enabled
	Enabled *
	Enabled
	0 WS (1 CPU cycle)

s:

e	16
e	0
	Enabled
Value (ms)	100
Value (ms)	5000
	LSE oscillator low drive capability

ers:

tage Scale	Power Regulator Voltage Scale 1

7.3. SYS

Debug: Serial Wire

Timebase Source: SysTick

7.4. USART1

Mode: Asynchronous

7.4.1. Parameter Settings:

rs:

	9600 *
	8 Bits (including Parity)
	None
	1

meters:

	Receive and Transmit
	16 Samples
	Disable

ures:

	Disable
nversion	Disable
Inversion	Disable
	Disable
apping	Disable
	Enable
	Enable
	Disable

7.5. USART2

Mode: Asynchronous

7.5.1. Parameter Settings:

ers:

	115200
	8 Bits (including Parity)
	None
	1

meters:

	Receive and Transmit
	16 Samples
	Disable

ures:

	Disable
nversion	Disable
Inversion	Disable
	Disable
apping	Disable
	Enable
	Enable
	Disable

*** User modified value**

8. System Configuration

8.1. GPIO configuration

in	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	
SC32_IN C14)	RCC_OSC32_IN	n/a	n/a	n/a	
C32_OUT C15)	RCC_OSC32_OUT	n/a	n/a	n/a	
(JTMS-DIO)	SYS_JTMS-SWDIO	n/a	n/a	n/a	
(JTCK-CLK)	SYS_JTCK-SWCLK	n/a	n/a	n/a	
A9	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
A10	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
A2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
A3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
_IN (PH0)	RCC_OSC_IN	n/a	n/a	n/a	
SC_OUT H1)	RCC_OSC_OUT	n/a	n/a	n/a	
JTDO-ESWO)	SYS_JTDO-SWO	n/a	n/a	n/a	
C13	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	
A5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	

8.2. DMA configuration

nothing configured in DMA service

8.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriori
Non maskable interrupt	true	0	0
Hard fault interrupt	true	0	0
Memory management fault	true	0	0
refetch fault, memory access fault	true	0	0
ndefined instruction or illegal state	true	0	0
stem service call via SWI instruction	true	0	0
Debug monitor	true	0	0
endable request for system service	true	0	0
System tick timer	true	0	0
VM2/PVM3/PVM4 interrupts through EXTI lines 16/35/36/37/38	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
USART1 global interrupt	unused		
USART2 global interrupt	unused		
FPU global interrupt	unused		

*** User modified value**

9. Software Pack Report