1. Description

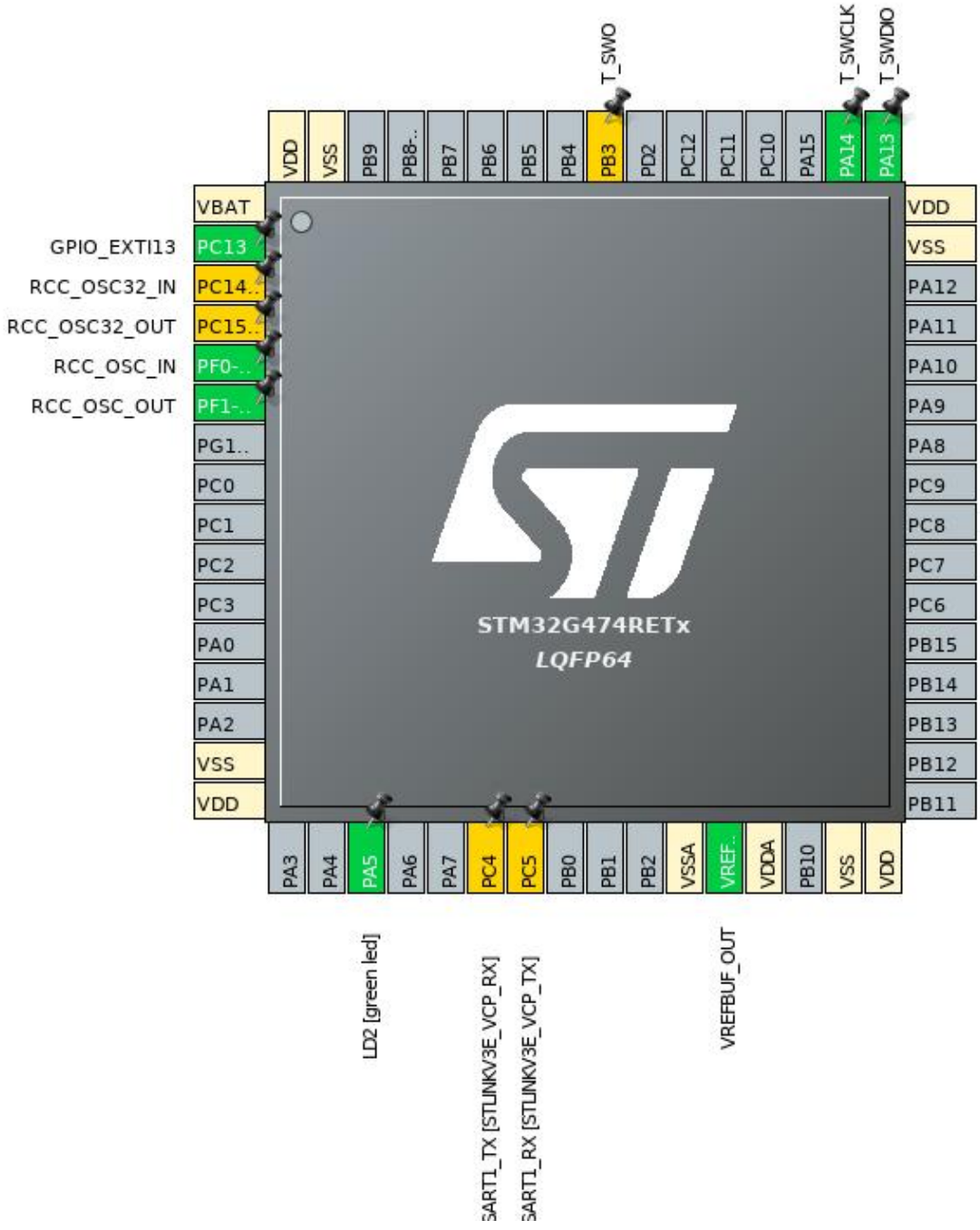
1.1. Project

Project Name	g4_led
Board Name	NUCLEO-G474RE
Generated with:	STM32CubeMX 5.3.0
Date	09/18/2019

1.2. MCU

MCU Series	STM32G4
MCU Line	STM32G4x4
MCU name	STM32G474RETx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



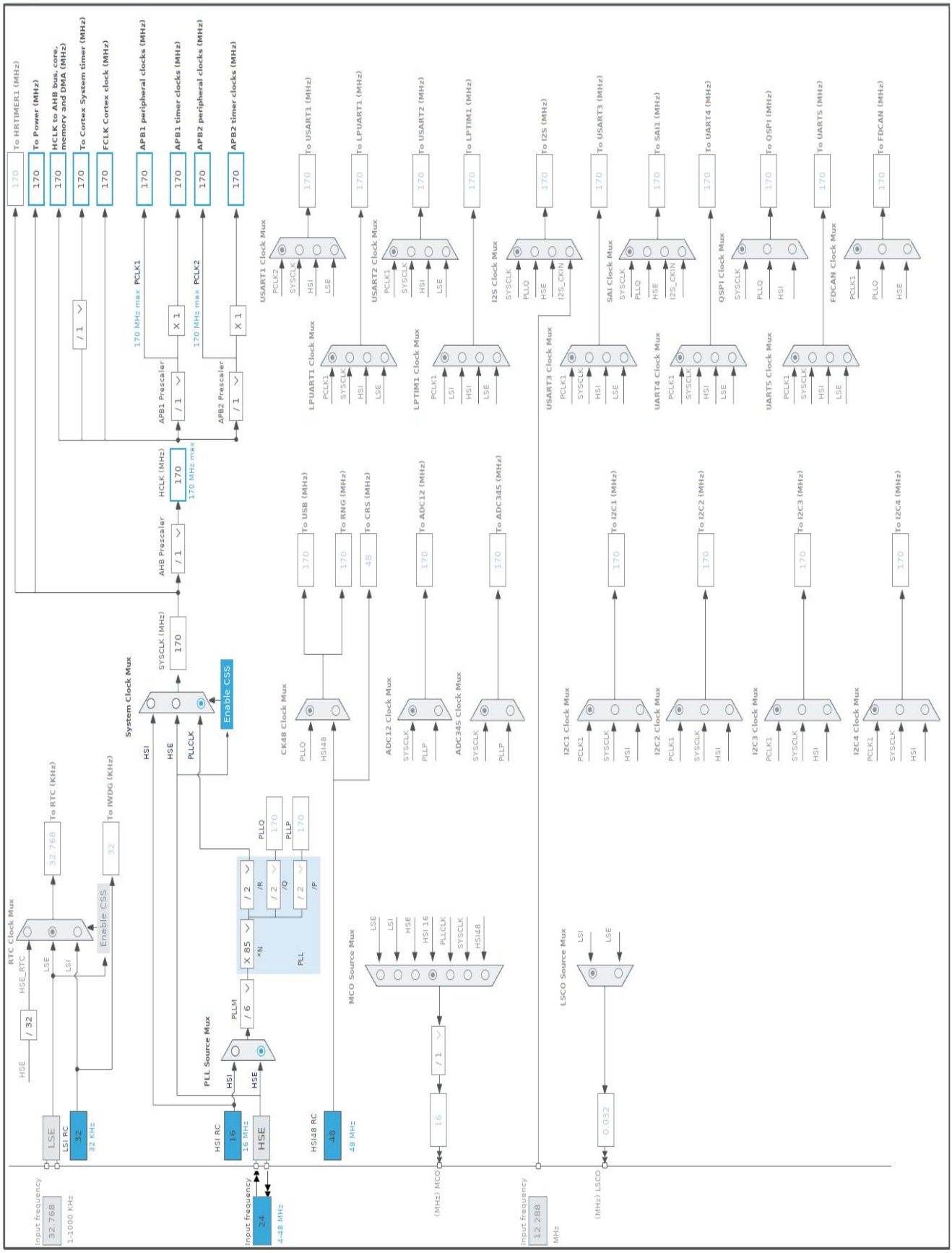
3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13	I/O	GPIO_EXTI13	
3	PC14-OSC32_IN *	I/O	RCC_OSC32_IN	
4	PC15-OSC32_OUT *	I/O	RCC_OSC32_OUT	
5	PF0-OSC_IN	I/O	RCC_OSC_IN	
6	PF1-OSC_OUT	I/O	RCC_OSC_OUT	
15	VSS	Power		
16	VDD	Power		
19	PA5 **	I/O	GPIO_Output	LD2 [green led]
22	PC4 *	I/O	USART1_TX	USART1_TX [STLINKV3E_VCP_RX]
23	PC5 *	I/O	USART1_RX	USART1_RX [STLINKV3E_VCP_TX]
27	VSSA	Power		
28	VREF+	MonoIO	VREFBUF_OUT	
29	VDDA	Power		
31	VSS	Power		
32	VDD	Power		
47	VSS	Power		
48	VDD	Power		
49	PA13	I/O	SYS_JTMS-SWDIO	T_SWDIO
50	PA14	I/O	SYS_JTCK-SWCLK	T_SWCLK
56	PB3 *	I/O	SYS_JTDO-SWO	T_SWO
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	g4_led
Project Folder	/home/danglamtung/STM32CubeIDE/workspace_1.0.2/g4_led
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_G4 V1.1.0

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	STM32G4
Line	STM32G4x4
MCU	STM32G474RETx
Datasheet	DS12288_Rev0

6.2. Parameter Selection

Temperature	25
Vdd	3.0

7. IPs and Middleware Configuration

7.1. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

7.1.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Disabled
Data Cache	Enabled
Flash Latency(WS)	8WS (7 CPU cycle)

RCC Parameters:

HSI Calibration Value	64
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1 boost

Peripherals Clock Configuration:

Generate the peripherals clock configuration	TRUE

7.2. SYS

Debug: Serial Wire

VREFBUF Mode: Internal voltage reference

Timebase Source: SysTick

mode: save power of non-active UCPD - deactive Dead Battery pull-up

7.2.1. Parameter Settings:

Voltage_Reference_Buffer_Settings:

Trimming Mode	Factory Trimming
Internal Voltage reference scale	SCALE 0: around 2.048 V

*** User modified value**

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
RCC	PF0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PF1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SYS	VREF+	VREFBUF_OUT	n/a	n/a	n/a	
	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	T_SWDIO
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	T_SWCLK
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	
	PC4	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	USART1_TX [STLINKV3E_VCP_RX]
	PC5	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	USART1_RX [STLINKV3E_VCP_TX]
	PB3	SYS_JTDO-SWO	n/a	n/a	n/a	T_SWO
GPIO	PC13	GPIO_EXTI13	External Interrupt Mode with Rising edge trigger detection	**Pull-down ***	n/a	
	PA5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LD2 [green led]

8.2. DMA configuration

nothing configured in DMA service

8.3. 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
EXTI line[15:10] interrupts	true	0	0
PVD/PVM1/PVM2/PVM3/PVM4 interrupts through EXTI lines 16/38/39/40/41	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
FPU global interrupt	unused		

*** User modified value**

9. Software Pack Report