

1. Description

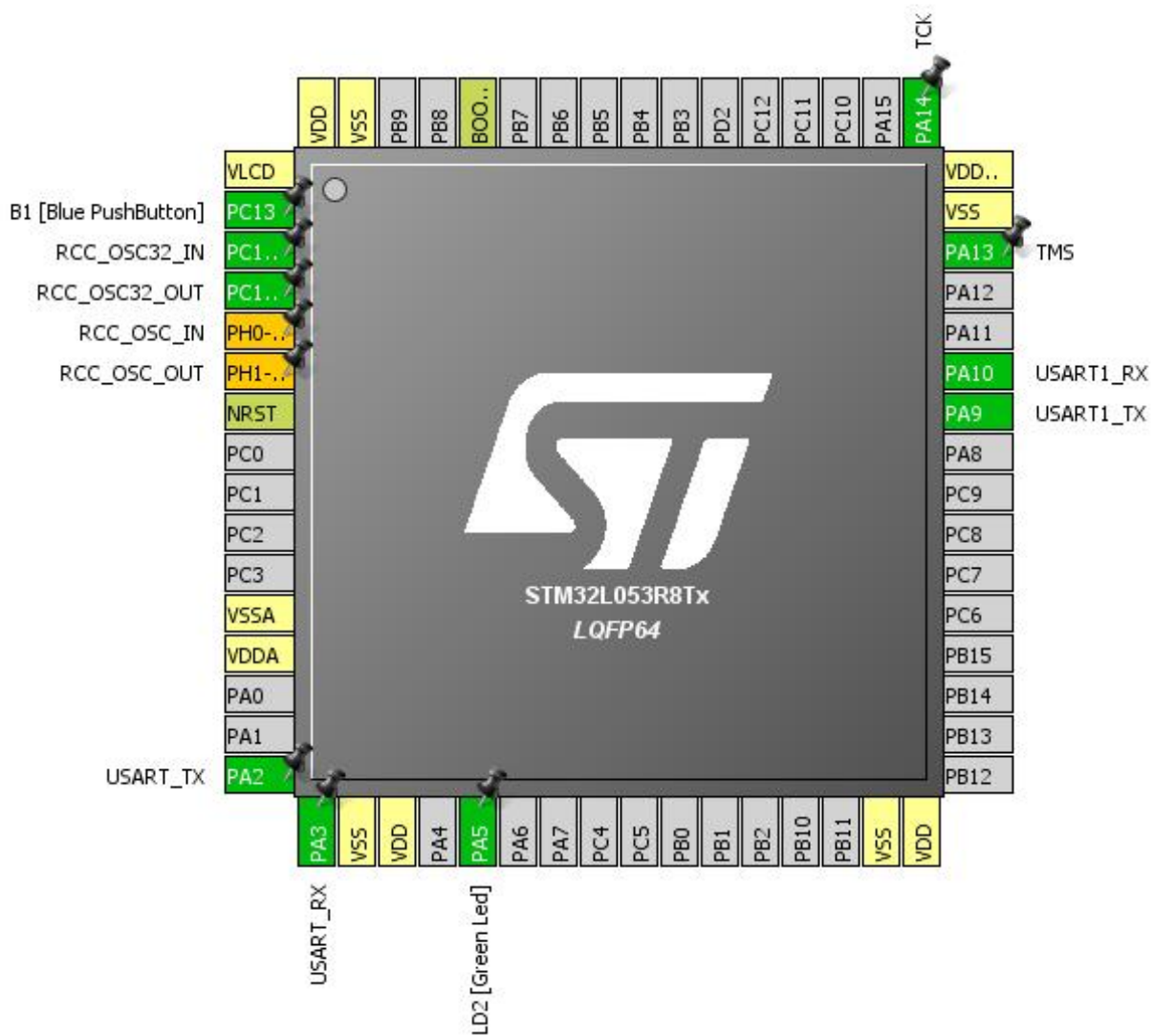
1.1. Project

Project Name	test2
Board Name	NUCLEO-L053R8
Generated with:	STM32CubeMX 4.25.0
Date	04/26/2018

1.2. MCU

MCU Series	STM32L0
MCU Line	STM32L0x3
MCU name	STM32L053R8Tx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



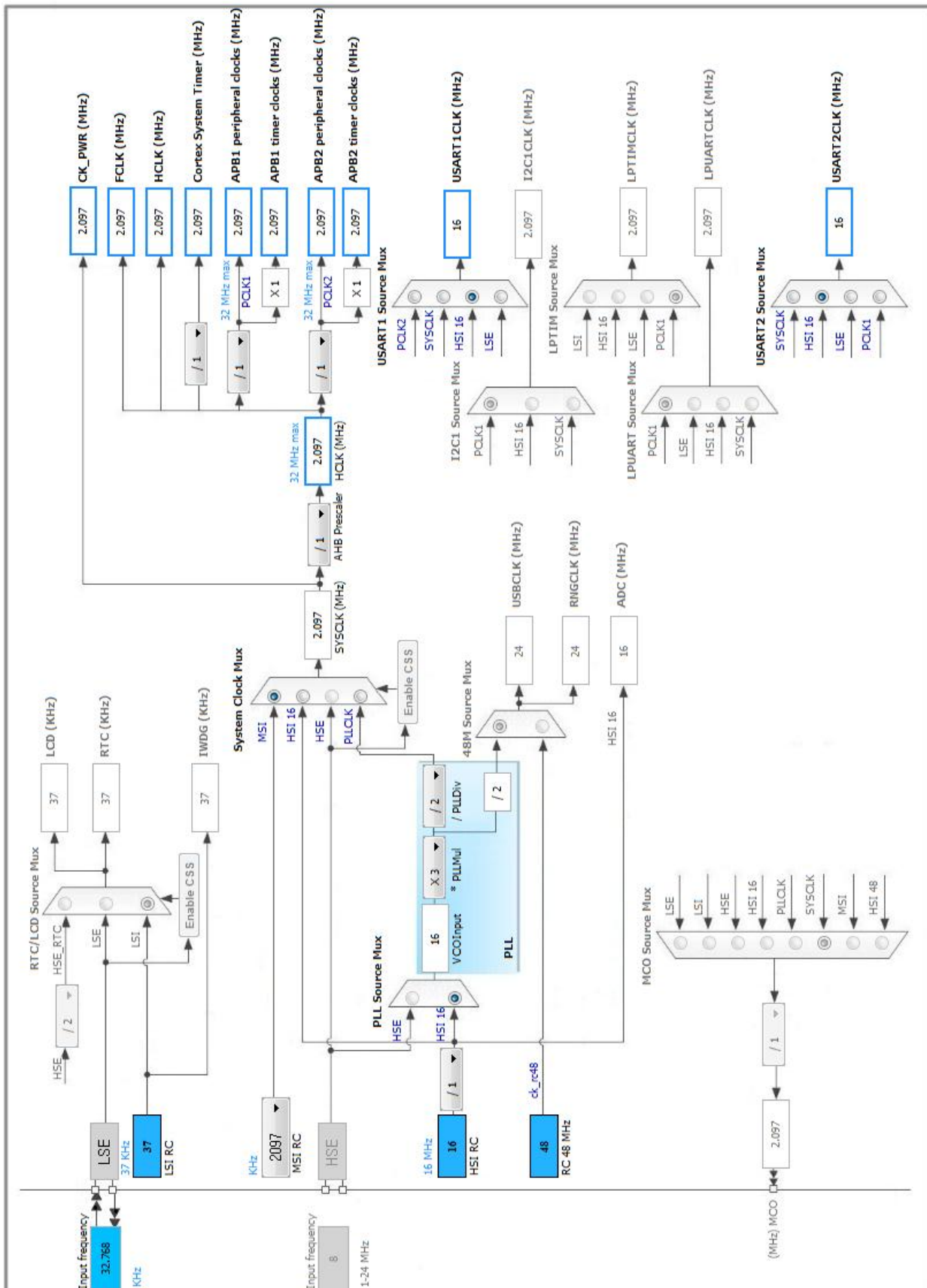
3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VLCD	Power		
2	PC13	I/O	GPIO_EXTI13	B1 [Blue PushButton]
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	Power		
13	VDDA	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	LD2 [Green Led]
31	VSS	Power		
32	VDD	Power		
42	PA9	I/O	USART1_TX	
43	PA10	I/O	USART1_RX	
46	PA13	I/O	SYS_SWDIO	TMS
47	VSS	Power		
48	VDD_USB	Power		
49	PA14	I/O	SYS_SWCLK	TCK
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

5.1. RCC

Low Speed Clock (LSE) : Crystal/Ceramic Resonator

5.1.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Buffer Cache	Enabled
Prefetch	Disabled
Preread	Enabled
Flash Latency(WS)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
MSI Calibration Value	0
HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1
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5.2. SYS

mode: Debug Serial Wire

Timebase Source: SysTick

5.3. USART1

Mode: Asynchronous

5.3.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
Word Length	8 Bits (including Parity) *
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	Receive and Transmit
Over Sampling	16 Samples
Single Sample	Disable

Advanced Features:

Auto Baudrate	Disable
TX Pin Active Level Inversion	Disable
RX Pin Active Level Inversion	Disable
Data Inversion	Disable
TX and RX Pins Swapping	Disable
Overrun	Enable
DMA on RX Error	Enable
MSB First	Disable

5.4. USART2

Mode: Asynchronous

5.4.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
Word Length	8 Bits (including Parity) *
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	Receive and Transmit
Over Sampling	16 Samples
Single Sample	Disable

Advanced Features:

Auto Baudrate	Disable
TX Pin Active Level Inversion	Disable
RX Pin Active Level Inversion	Disable
Data Inversion	Disable
TX and RX Pins Swapping	Disable
Overrun	Enable
DMA on RX Error	Enable
MSB First	Disable

* 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	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	TMS
	PA14	SYS_SWCLK	n/a	n/a	n/a	TCK
USART1	PA9	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
	PA10	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
USART2	PA2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	USART_TX
	PA3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	USART_RX
Single Mapped Signals	PH0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PH1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
GPIO	PC13	GPIO_EXTI13	External Interrupt Mode with Falling edge trigger detection	No pull-up and no pull-down	n/a	B1 [Blue PushButton]
	PA5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LD2 [Green Led]

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
System service call via SWI instruction	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 and EEPROM global interrupt	unused		
RCC and CRS global interrupt	unused		
EXTI line 4 to 15 interrupts	unused		
USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25	unused		
USART2 global interrupt / USART2 wake-up interrupt through EXTI line 26	unused		

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L0
Line	STM32L0x3
MCU	STM32L053R8Tx
Datasheet	025844_Rev7

7.2. Parameter Selection

Temperature	25
Vdd	null

8. Software Pack Report