1. Description

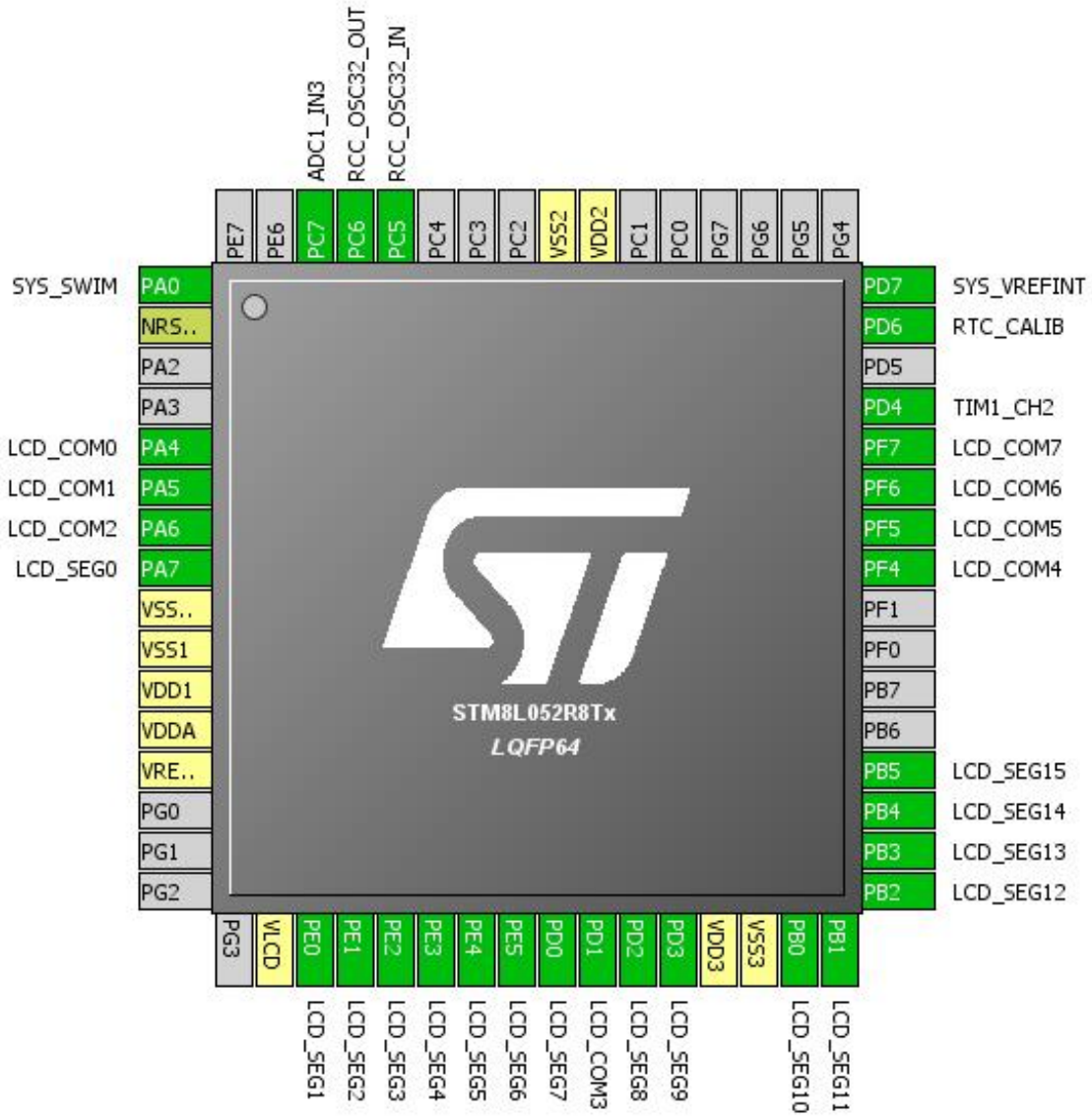
1.1. Project

Project Name	SmartValveCube
Board Name	No information
Generated with:	STM8CubeMX 1.5.0
Date	11/03/2020

1.2. MCU

MCU Series	STM8L
MCU Line	STM8L Value Line
MCU name	STM8L052R8Tx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration

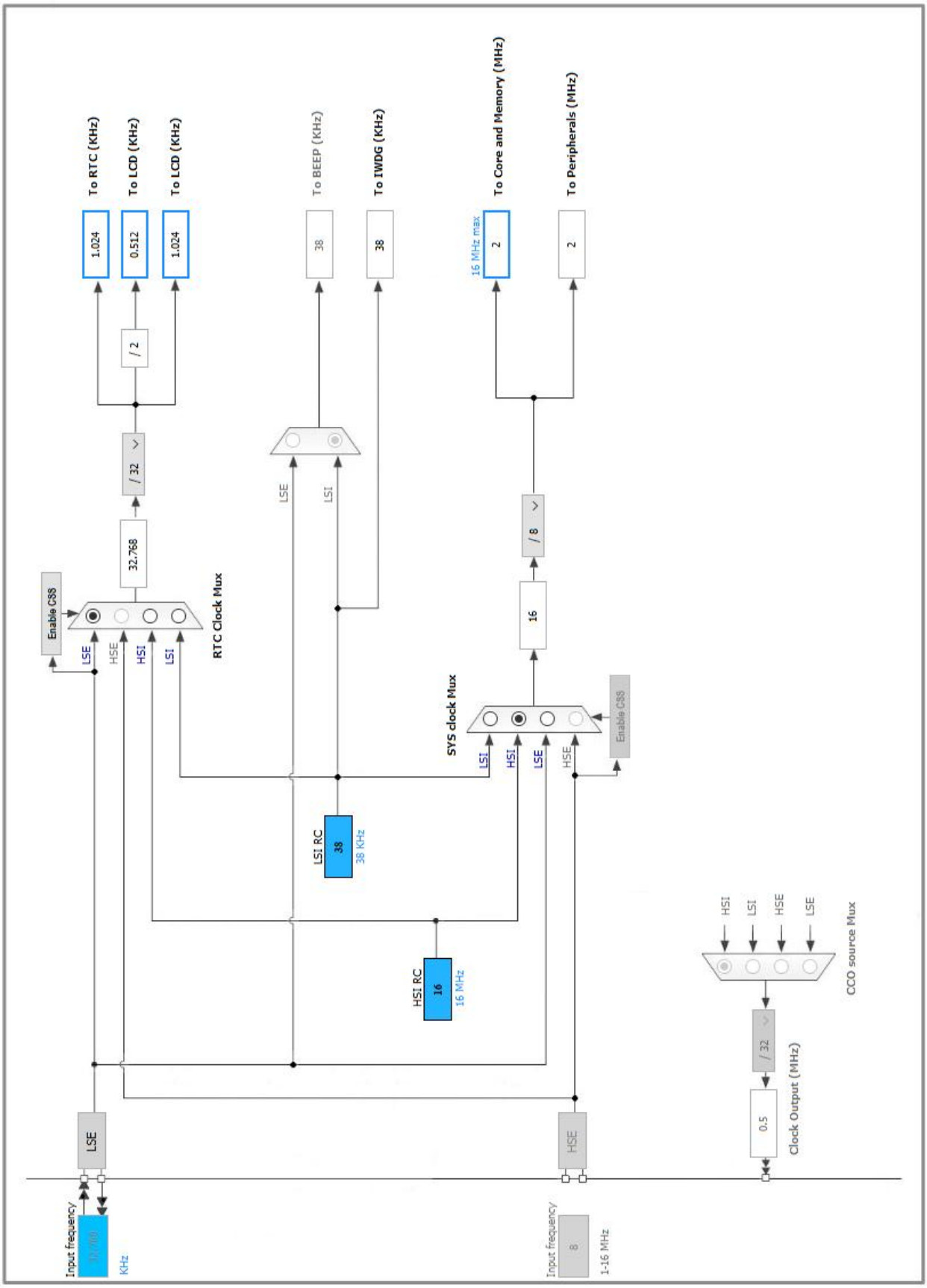


3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	PA0	I/O	SYS_SWIM	
2	NRST/PA1	Reset		
5	PA4	I/O	LCD_COM0	
6	PA5	I/O	LCD_COM1	
7	PA6	I/O	LCD_COM2	
8	PA7	I/O	LCD_SEG0	
9	VSSA/VREF-	Power		
10	VSS1	Power		
11	VDD1	Power		
12	VDDA	Power		
13	VREF+	Power		
18	VLCD	Power		
19	PE0	I/O	LCD_SEG1	
20	PE1	I/O	LCD_SEG2	
21	PE2	I/O	LCD_SEG3	
22	PE3	I/O	LCD_SEG4	
23	PE4	I/O	LCD_SEG5	
24	PE5	I/O	LCD_SEG6	
25	PD0	I/O	LCD_SEG7	
26	PD1	I/O	LCD_COM3	
27	PD2	I/O	LCD_SEG8	
28	PD3	I/O	LCD_SEG9	
29	VDD3	Power		
30	VSS3	Power		
31	PB0	I/O	LCD_SEG10	
32	PB1	I/O	LCD_SEG11	
33	PB2	I/O	LCD_SEG12	
34	PB3	I/O	LCD_SEG13	
35	PB4	I/O	LCD_SEG14	
36	PB5	I/O	LCD_SEG15	
41	PF4	I/O	LCD_COM4	
42	PF5	I/O	LCD_COM5	
43	PF6	I/O	LCD_COM6	
44	PF7	I/O	LCD_COM7	
45	PD4	I/O	TIM1_CH2	
47	PD6	I/O	RTC_CALIB	

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
48	PD7	I/O	SYS_VREFINT	
55	VDD2	Power		
56	VSS2	Power		
60	PC5	I/O	RCC_OSC32_IN	
61	PC6	I/O	RCC_OSC32_OUT	
62	PC7	I/O	ADC1_IN3	

4. Clock Tree Configuration



5. Power Consumption Calculator report

5.1. Microcontroller Selection

Series	STM8L
Line	STM8L Value Line
MCU	STM8L052R8Tx
Datasheet	23337_Rev2

5.2. Parameter Selection

Temperature	25
Vdd	3.0

5.3. Battery Selection

Battery	Salt battery
Capacity	250.0 mAh
Self Discharge	1.0 %/month
Nominal Voltage	1.5 V
Max Cont Current	1000.0 mA
Max Pulse Current	2000.0 mA
Cells in series	3
Cells in parallel	1

5.4. Sequence

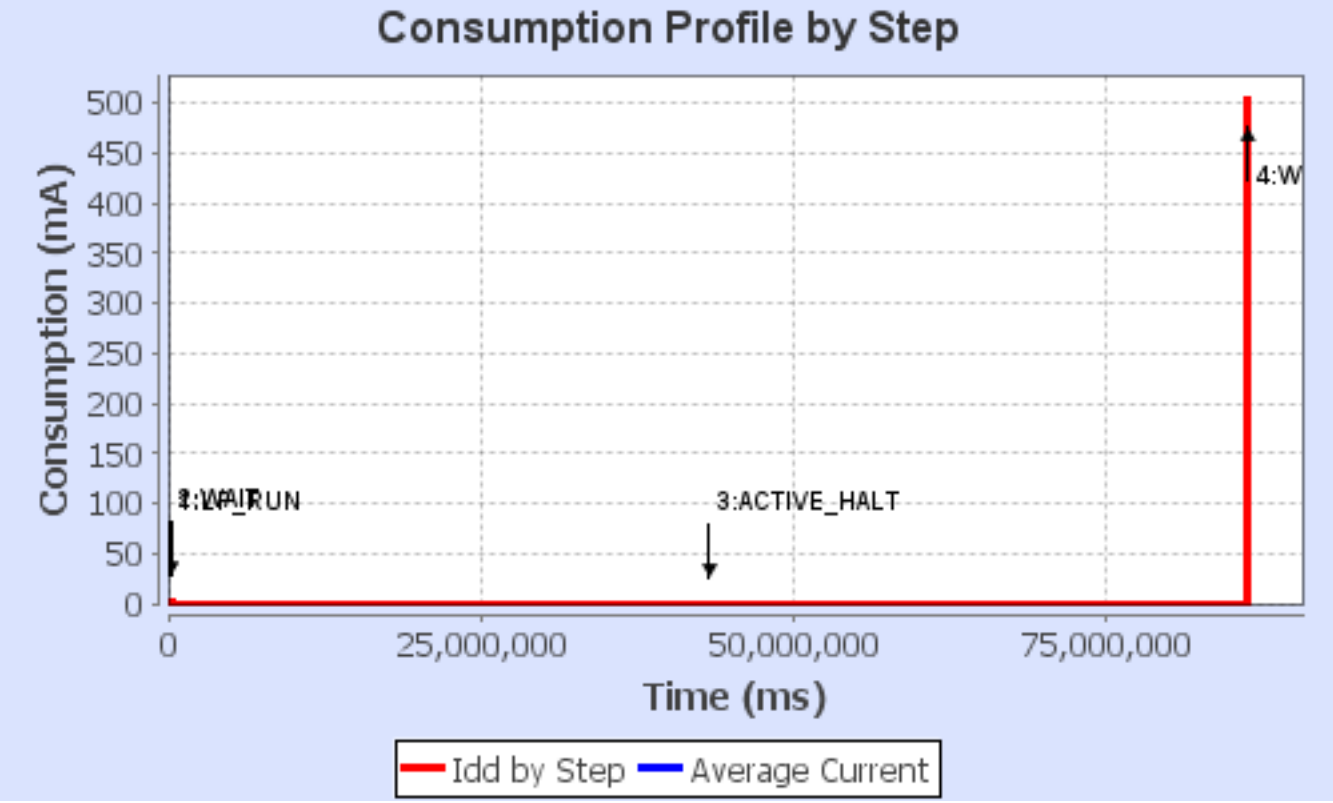
Step	Step1	Step2	Step3	Step4
Mode	LOWPOWER_RUN	WAIT	ACTIVE_HALT	WAIT
Vdd	3.0	3.0	3.0	3.0
Voltage Source	Battery	Battery	Battery	Battery
Range	No Scale	No Scale	No Scale	No Scale

Fetch Type	N/A	FLASH	N/A	FLASH
Clock Configuration	LSEBYP	HSEBYP	LSEBYP	HSEBYP
Clock Source Frequency	32.768 kHz	4.0 MHz	32.768 kHz	4.0 MHz
CPU Frequency	32.768 kHz	4.0 MHz	0 Hz	4.0 MHz
Peripherals	ADC1 IWDG:With_LSI LCD PVD/BOR RTC	ADC1 LCD PVD/BOR RTC TIM1	LCD:1/4_duty_internal_clocked_by_LSI RTC*	ADC1 LCD PVD/BOR RTC TIM1
Additional Cons.	0 mA	0 mA	10 µA	500 mA
Average Current	1.51 mA	1.87 mA	13.82 µA	501.87 mA
Duration	10 ms	60 s	86340 s	1000 ms
DMIPS	0.0	4.0	0.0	4.0
Ta Max	104.78	104.73	105	32.73
Category	In DS Table	In DS Table	In DS Table	In DS Table

5.5. RESULTS

Sequence Time	86,401.01 s	Average Current	20.92 µA
Battery Life	1 year, 2 months, 2 days, 2 hours	Average DMIPS	4.0 DMIPS

5.6. Chart


Consumption Profile by Step
Consumption (mA)
500
450
400
350
300
250
200
150
100
50
0
3:ACTIVE_HALT
4:W
0
25,000,000
50,000,000
75,000,000
Time (ms)
Idd by Step
Average Current