1. Description

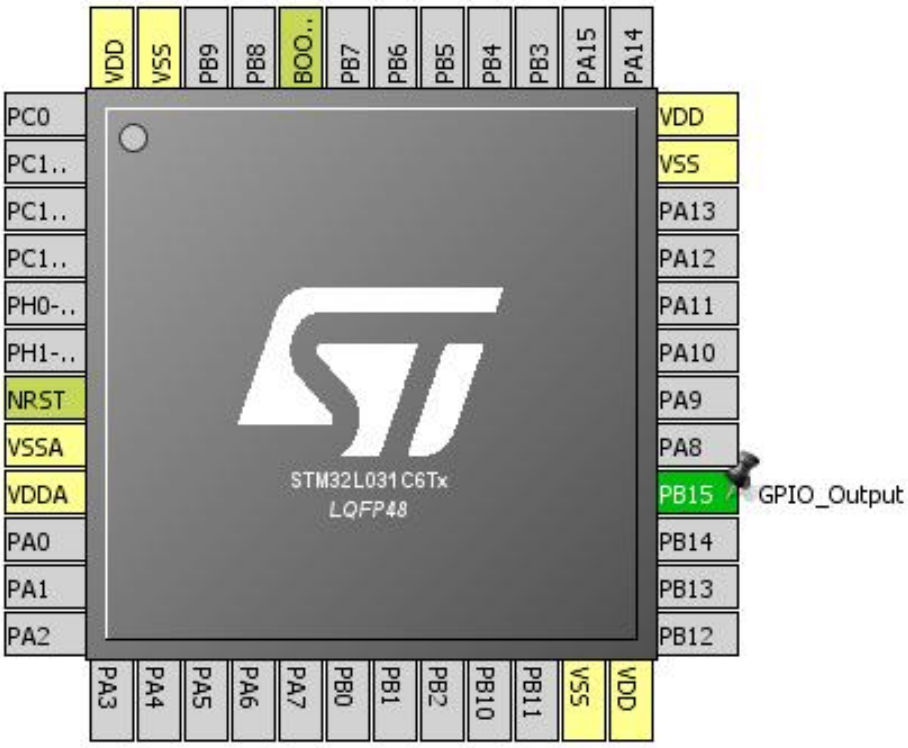
1.1. Project

Project Name	stm32_m6310
Board Name	stm32_m6310
Generated with:	STM32CubeMX 4.20.1
Date	12/25/2017

1.2. MCU

MCU Series	STM32L0
MCU Line	STM32L0x1
MCU name	STM32L031C6Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration

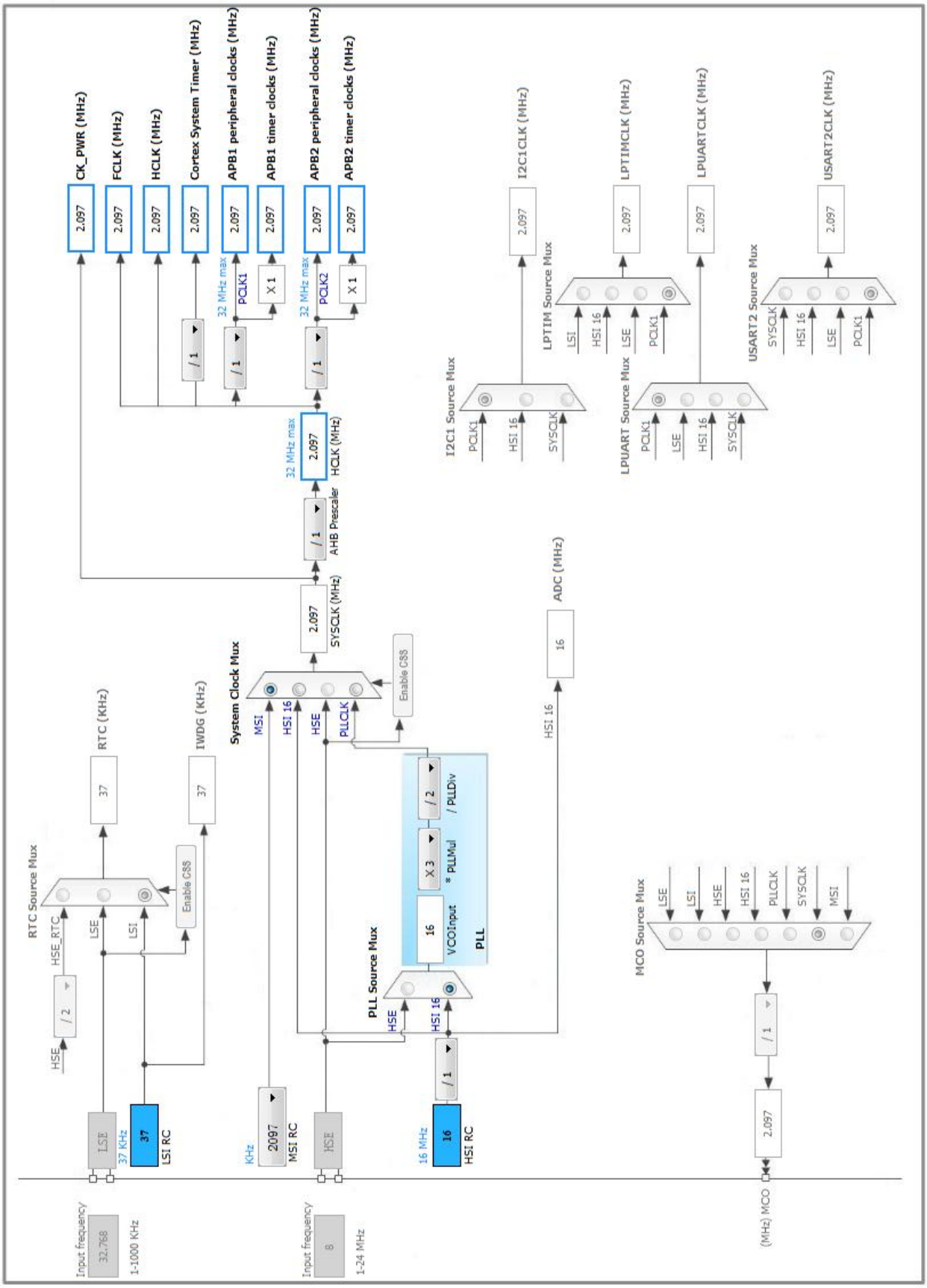


3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
23	VSS	Power		
24	VDD	Power		
28	PB15 *	I/O	GPIO_Output	
35	VSS	Power		
36	VDD	Power		
44	BOOT0	Boot		
47	VSS	Power		
48	VDD	Power		

* The pin is affected with an I/O function

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
GPIO	PB15	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	

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 global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L0
Line	STM32L0x1
MCU	STM32L031C6Tx
Datasheet	027063_Rev3

7.2. Parameter Selection

Temperature	25
Vdd	3.0

7.3. Battery Selection

Battery	Li-SOCL2(D19000)
Capacity	19000.0 mAh
Self Discharge	0.08 %/month
Nominal Voltage	3.6 V
Max Cont Current	230.0 mA
Max Pulse Current	500.0 mA
Cells in series	1
Cells in parallel	1

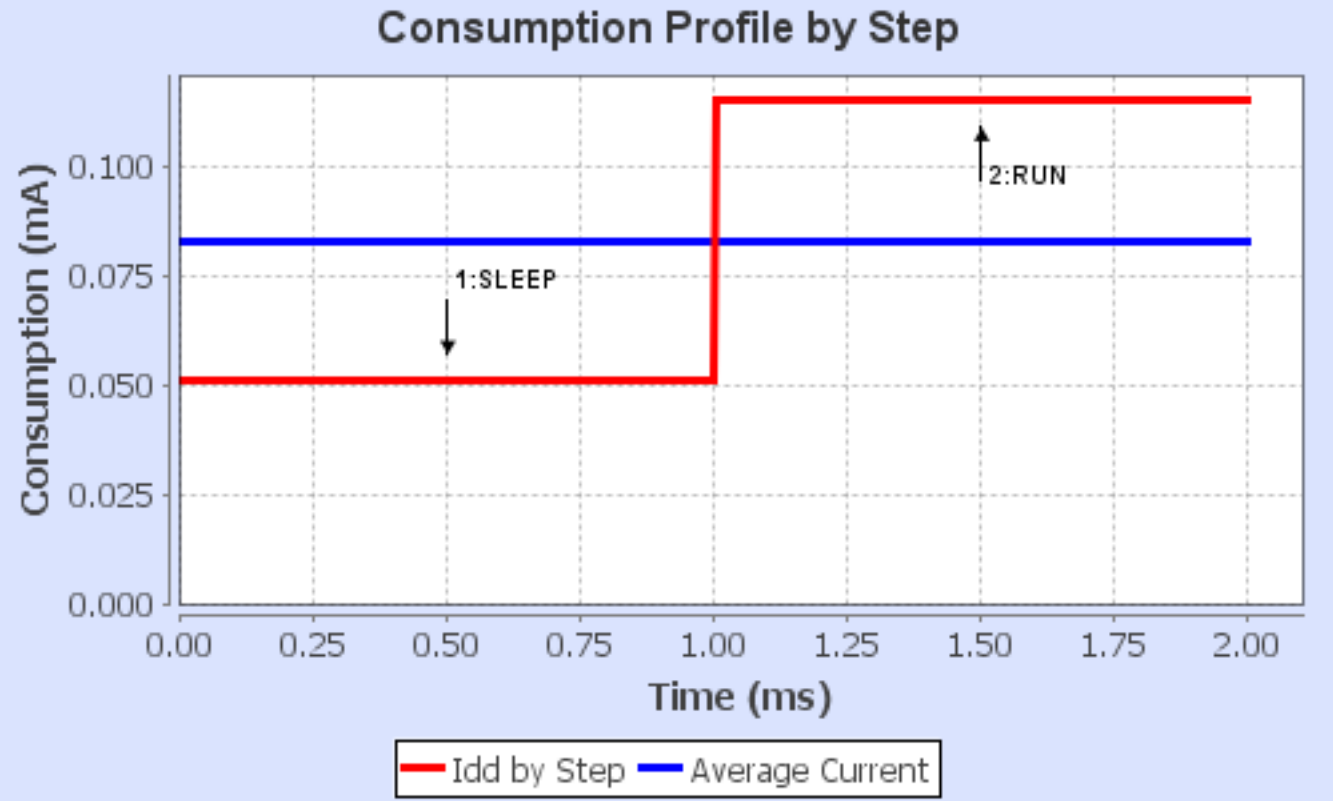
7.4. Sequence

Step	Step1	Step2
Mode	SLEEP	RUN
Vdd	3.0	3.0
Voltage Source	Battery	Battery
Range	Range3-Low	Range3-Low
Fetch Type	FLASH	RAM
Clock Configuration	HSEBYP	HSEBYP
Clock Source Frequency	1.0 MHz	1.0 MHz
CPU Frequency	1.0 MHz	1.0 MHz
Peripherals	GPIOB	
Additional Cons.	0 mA	0 mA
Average Current	51 µA	115 µA
Duration	1 ms	1 ms
DMIPS	0.95	0.95
Ta Max	104.99	104.98
Category	In DS Table	In DS Table

7.5. RESULTS

Sequence Time	2 ms	Average Current	83 µA
Battery Life	20 years, 10 months, 4 days, 1 hour	Average DMIPS	0.95 DMIPS

7.6. Chart


Consumption Profile by Step
Consumption (mA)
0.100
0.075
0.050
0.025
0.000
1:SLEEP
2:RUN
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Time (ms)
Idd by Step
Average Current

8. Software Project

8.1. Project Settings

Name	Value
Project Name	stm32_m6310
Project Folder	C:\Users\Administrator\Desktop\code\GPRS STM32\CubeMX\stm32_m6310
Toolchain / IDE	EWARM
Firmware Package Name and Version	STM32Cube FW_L0 V1.9.0

8.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Copy all used libraries into the project folder
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