1. Description

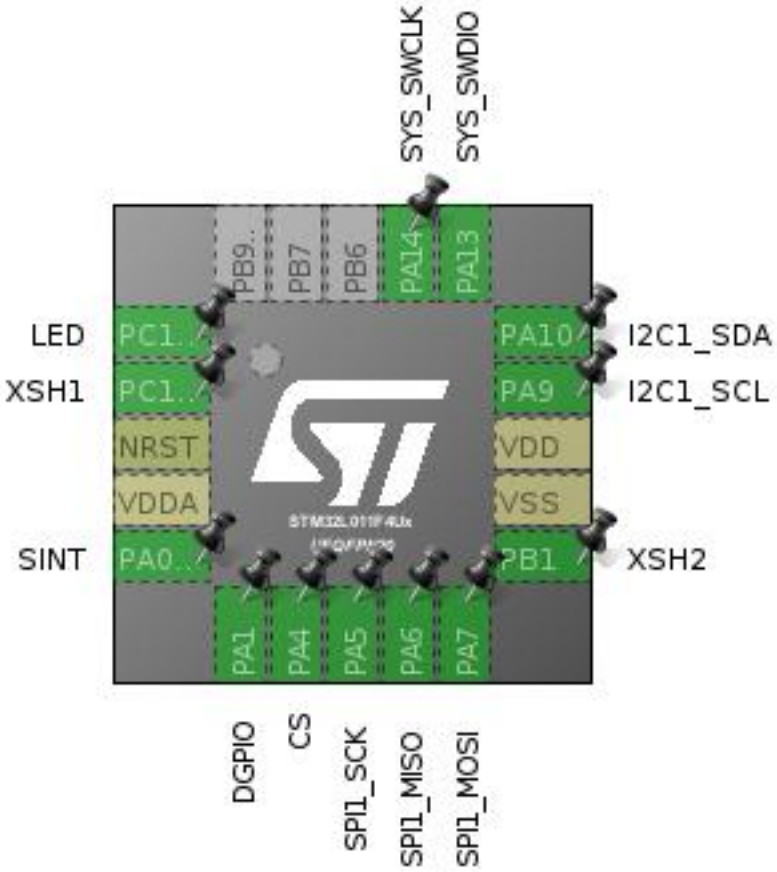
1.1. Project

Project Name	firmware
Board Name	firmware
Generated with:	STM32CubeMX 4.23.0
Date	01/08/2018

1.2. MCU

MCU Series	STM32L0
MCU Line	STM32L0x1
MCU name	STM32L011F4Ux
MCU Package	UFQFPN20
MCU Pin number	20

2. Pinout Configuration

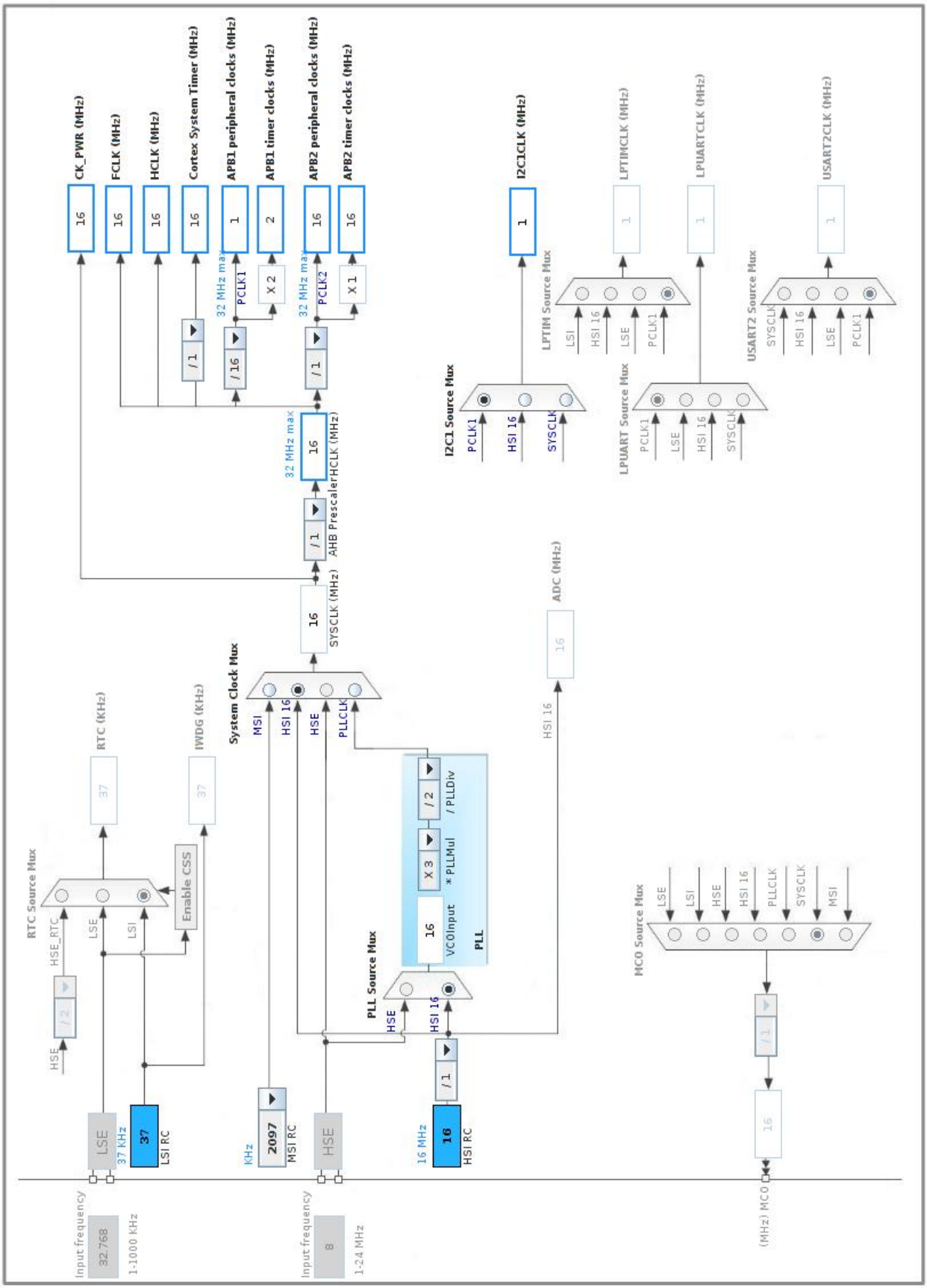


3. Pins Configuration

Pin Number UFQFPN20	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	PC14-OSC32_IN *	I/O	GPIO_Output	LED
2	PC15-OSC32_OUT *	I/O	GPIO_Output	XSH1
3	NRST	Reset		
4	VDDA	Power		
5	PA0-CK_IN *	I/O	GPIO_Output	SINT
6	PA1 *	I/O	GPIO_Input	DGPIO
7	PA4 *	I/O	GPIO_Input	CS
8	PA5	I/O	SPI1_SCK	
9	PA6	I/O	SPI1_MISO	
10	PA7	I/O	SPI1_MOSI	
11	PB1 *	I/O	GPIO_Output	XSH2
12	VSS	Power		
13	VDD	Power		
14	PA9	I/O	I2C1_SCL	
15	PA10	I/O	I2C1_SDA	
16	PA13	I/O	SYS_SWDIO	
17	PA14	I/O	SYS_SWCLK	

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. I2C1

I2C: I2C

5.1.1. Parameter Settings:

Timing configuration:

I2C Speed Mode	Standard Mode
I2C Speed Frequency (KHz)	100
Rise Time (ns)	0
Fall Time (ns)	0
Coefficient of Digital Filter	0
Analog Filter	Enabled
Timing	**0x00000103 ***

Slave Features:

Clock No Stretch Mode	Disabled
General Call Address Detection	Disabled
Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0

5.2. SPI1

Mode: Full-Duplex Slave

5.2.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled

NSS Signal Type	Software

5.3. SYS

mode: Debug Serial Wire

Timebase Source: SysTick

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
I2C1	PA9	I2C1_SCL	Alternate Function Open Drain	Pull-up	**Very High ***	
	PA10	I2C1_SDA	Alternate Function Open Drain	Pull-up	**Very High ***	
SPI1	PA5	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
	PA6	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
	PA7	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
GPIO	PC14-OSC32_IN	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED
	PC15-OSC32_OUT	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	XSH1
	PA0-CK_IN	GPIO_Output	**Output Open Drain ***	No pull-up and no pull-down	Low	SINT
	PA1	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	DGPIO
	PA4	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	CS
	PB1	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	XSH2

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		
I2C1 event global interrupt / I2C1 wake-up interrupt through EXTI line 23	unused		
SPI1 global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L0
Line	STM32L0x1
MCU	STM32L011F4Ux
Datasheet	027973_Rev4

7.2. Parameter Selection

Temperature	25
Vdd	3.6

8. Software Project

8.1. Project Settings

Name	Value
Project Name	firmware
Project Folder	/home/atmelfan/firmware
Toolchain / IDE	Makefile
Firmware Package Name and Version	STM32Cube FW_L0 V1.10.0

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	Yes
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)	Yes