

## 1. Description

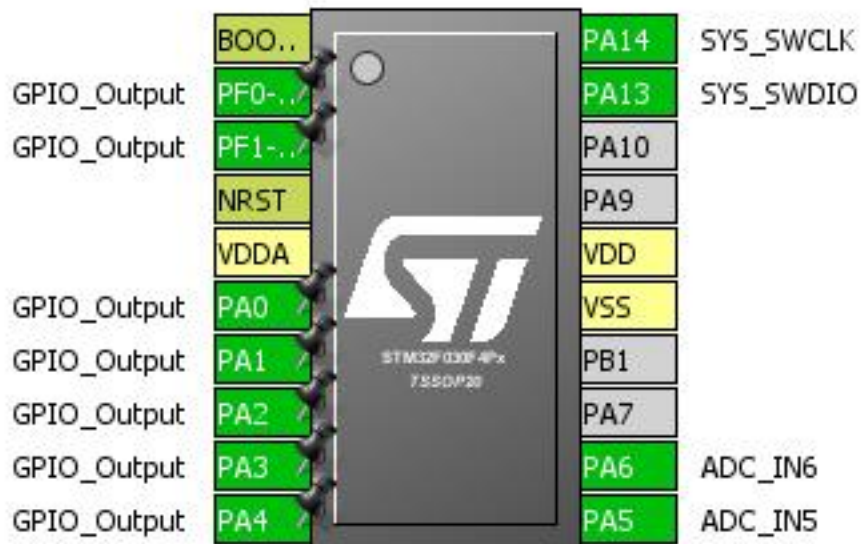
### 1.1. Project

Project Name	ChargerUSB_LIPO
Board Name	ChargerUSB_LIPO
Generated with:	STM32CubeMX 4.19.0
Date	05/18/2017

### 1.2. MCU

MCU Series	STM32F0
MCU Line	STM32F0x0 Value Line
MCU name	STM32F030F4Px
MCU Package	TSSOP20
MCU Pin number	20

## 2. Pinout Configuration

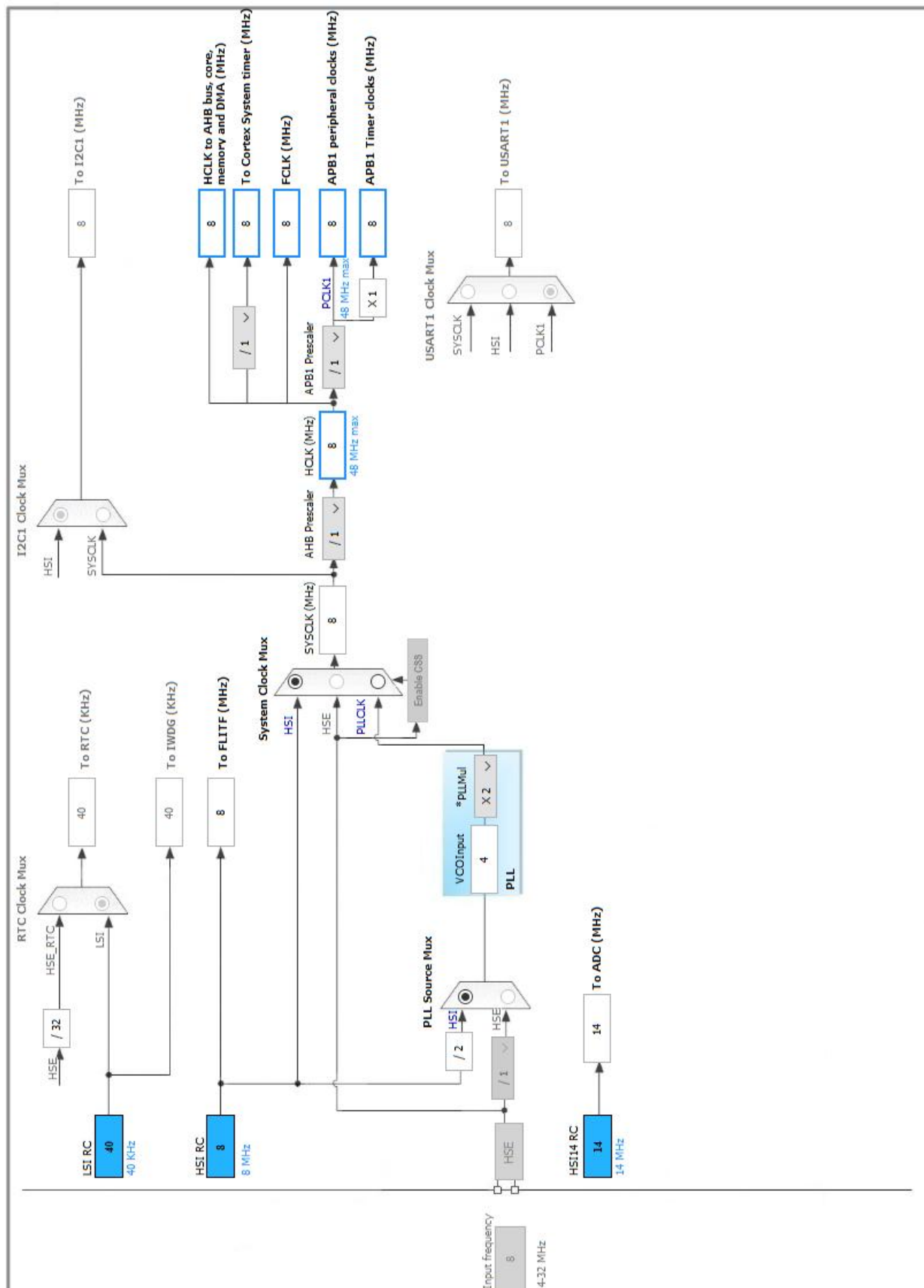


### 3. Pins Configuration

Pin Number TSSOP20	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	BOOT0	Boot		
2	PF0-OSC_IN *	I/O	GPIO_Output	
3	PF1-OSC_OUT *	I/O	GPIO_Output	
4	NRST	Reset		
5	VDDA	Power		
6	PA0 *	I/O	GPIO_Output	
7	PA1 *	I/O	GPIO_Output	
8	PA2 *	I/O	GPIO_Output	
9	PA3 *	I/O	GPIO_Output	
10	PA4 *	I/O	GPIO_Output	
11	PA5	I/O	ADC_IN5	
12	PA6	I/O	ADC_IN6	
15	VSS	Power		
16	VDD	Power		
19	PA13	I/O	SYS_SWDIO	
20	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. ADC

mode: IN5

mode: IN6

#### 5.1.1. Parameter Settings:

##### ADC\_Settings:

Clock Prescaler	Asynchronous clock mode
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Scan Conversion Mode	Forward
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	Disabled
End Of Conversion Selection	End of single conversion
Overrun behaviour	Overrun data preserved
Low Power Auto Wait	Disabled
Low Power Auto Power Off	Disabled

##### ADC\_Regular\_ConversionMode:

Sampling Time	1.5 Cycles
External Trigger Conversion Source	Regular Conversion launched by software
External Trigger Conversion Edge	None

##### WatchDog:

Enable Analog WatchDog Mode	false
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### 5.2. SYS

mode: Debug Serial Wire

\* User modified value

## 6. System Configuration

### 6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC	PA5	ADC_IN5	Analog mode	No pull-up and no pull-down	n/a	
	PA6	ADC_IN6	Analog mode	No pull-up and no pull-down	n/a	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
GPIO	PF0-OSC_IN	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PF1-OSC_OUT	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA1	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA4	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
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC interrupt	unused		

\* User modified value

## ***7. Power Consumption Calculator report***

### 7.1. Microcontroller Selection

Series	STM32F0
Line	STM32F0x0 Value Line
MCU	STM32F030F4Px
Datasheet	024849_Rev2

### 7.2. Parameter Selection

Temperature	25
Vdd	3.6



## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	ChargerUSB_LIPO
Project Folder	D:\GoogleDrive\ProjectInWork\ChargerUSB_LIPO\STM32Cube\ChargerUSB_LIP
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F0 V1.7.0

### 8.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Copy only the necessary library files
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)	No