

1. Description

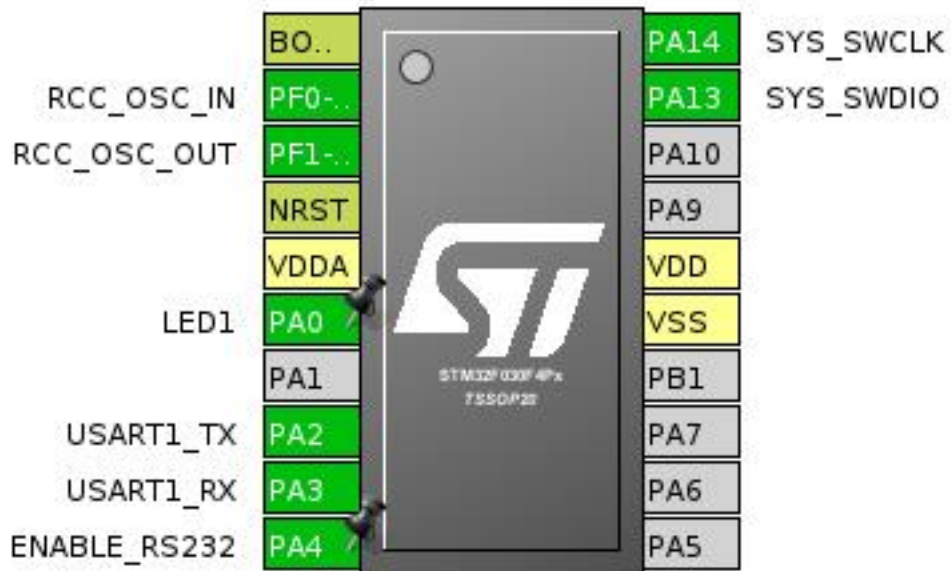
1.1. Project

Project Name	firmware
Board Name	firmware
Generated with:	STM32CubeMX 4.18.0
Date	12/09/2016

1.2. MCU

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

2. Pinout Configuration

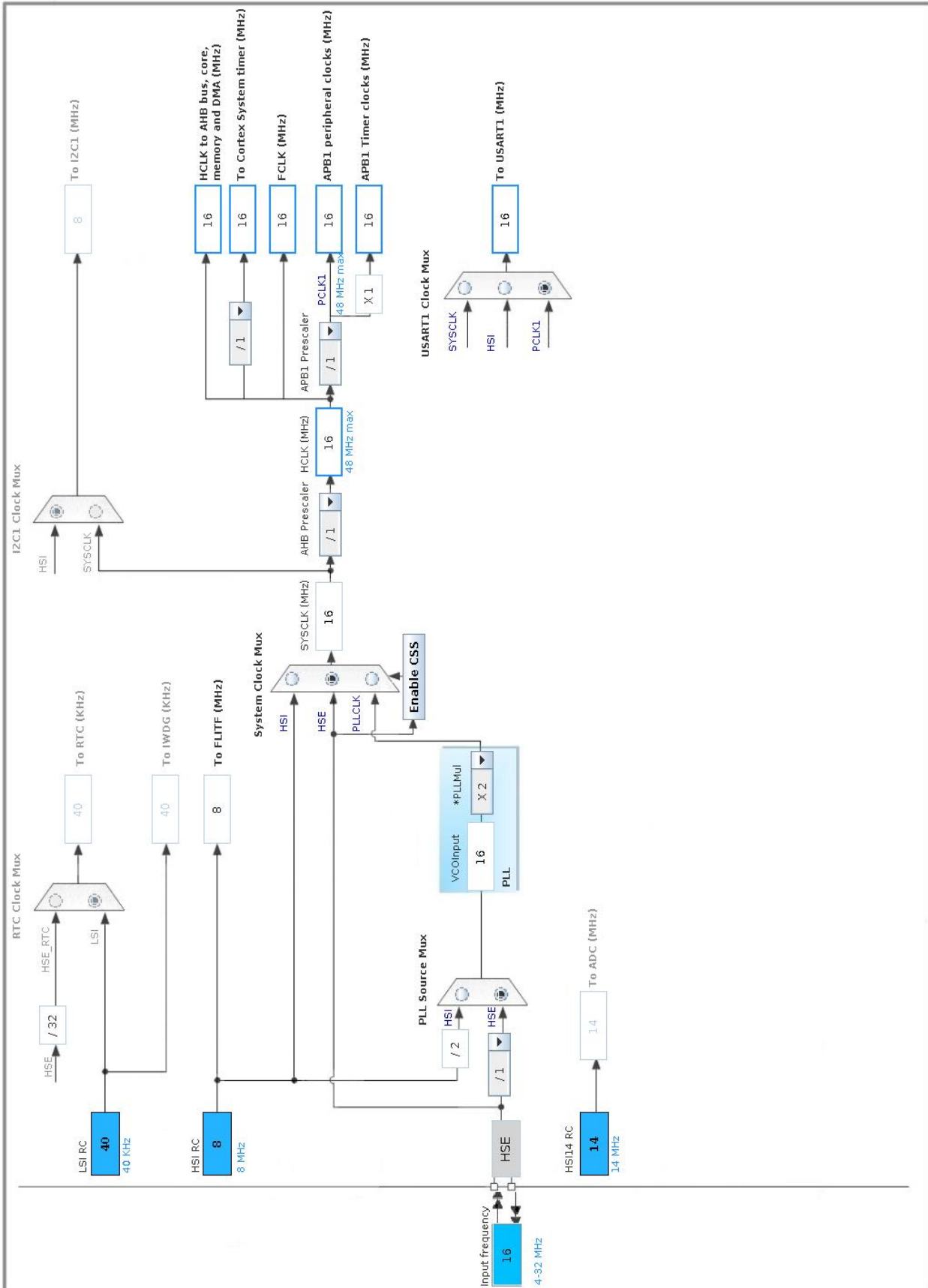


3. Pins Configuration

Pin Number TSSOP20	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	BOOT0	Boot		
2	PF0-OSC_IN	I/O	RCC_OSC_IN	
3	PF1-OSC_OUT	I/O	RCC_OSC_OUT	
4	NRST	Reset		
5	VDDA	Power		
6	PA0 *	I/O	GPIO_Output	LED1
8	PA2	I/O	USART1_TX	
9	PA3	I/O	USART1_RX	
10	PA4 *	I/O	GPIO_Output	ENABLE_RS232
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. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.1.1. Parameter Settings:

System Parameters:

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

RCC Parameters:

HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

5.2. SYS

mode: Debug Serial Wire

Timebase Source: SysTick

5.3. USART1

Mode: Asynchronous

5.3.1. Parameter Settings:

Basic Parameters:

Baud Rate	9600 *
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	PF0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PF1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
USART1	PA2	USART1_TX	Alternate Function Push Pull	Pull-up	High *	
	PA3	USART1_RX	Alternate Function Push Pull	Pull-up	High *	
GPIO	PA0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED1
	PA4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	ENABLE_RS232

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	
USART1 global 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	firmware
Project Folder	/home/xaionaro/rs232-command-sender/firmware
Toolchain / IDE	SW4STM32
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	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