1. Description

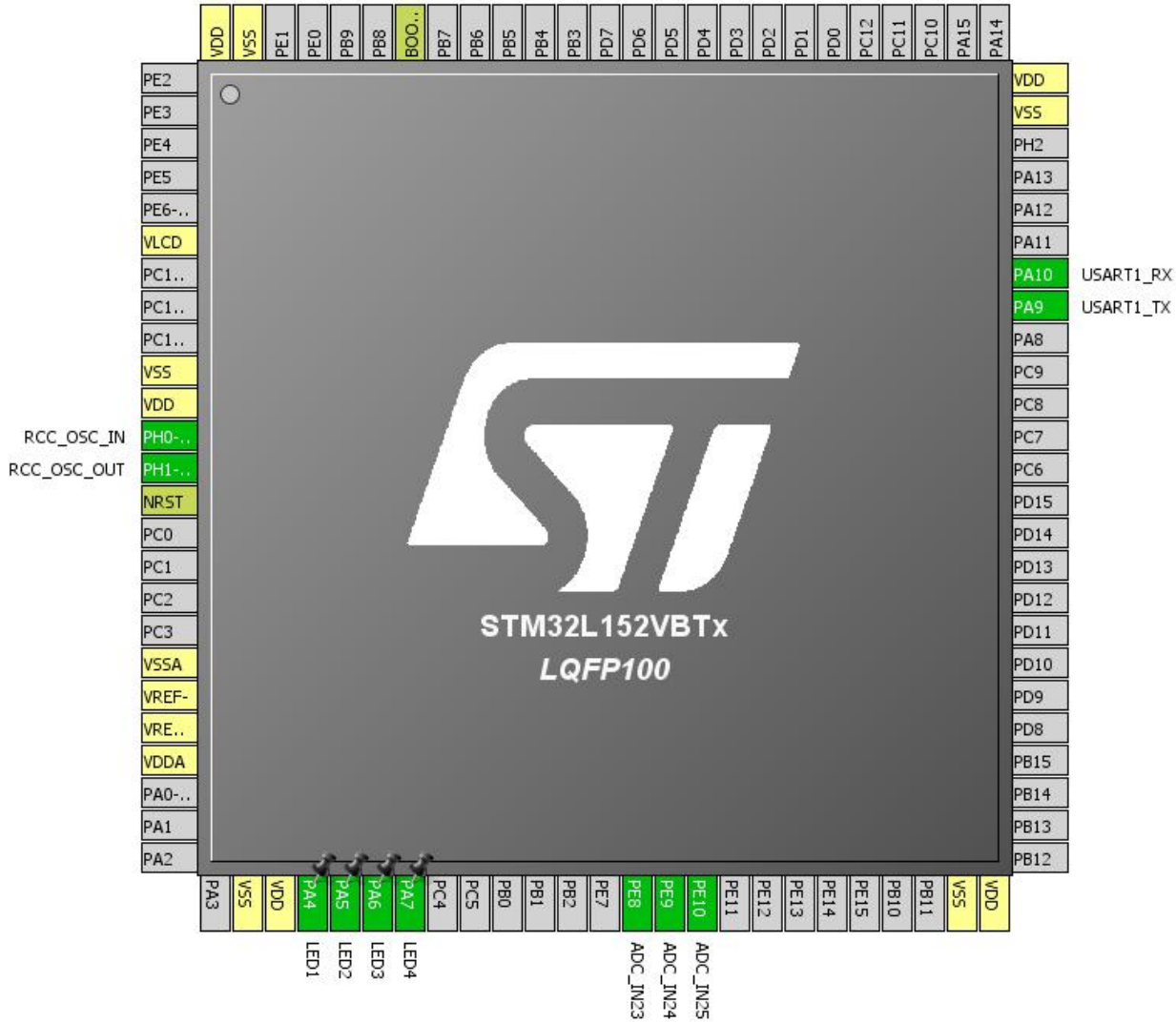
1.1. Project

Project Name	STM32L152VBTx_Nosys_Ver1
Board Name	STM32L152VBTx_Nosys_Ver1.0
Generated with:	STM32CubeMX 4.18.0
Date	06/24/2017

1.2. MCU

MCU Series	STM32L1
MCU Line	STM32L151/152
MCU name	STM32L152VBTx
MCU Package	LQFP100
MCU Pin number	100

2. Pinout Configuration

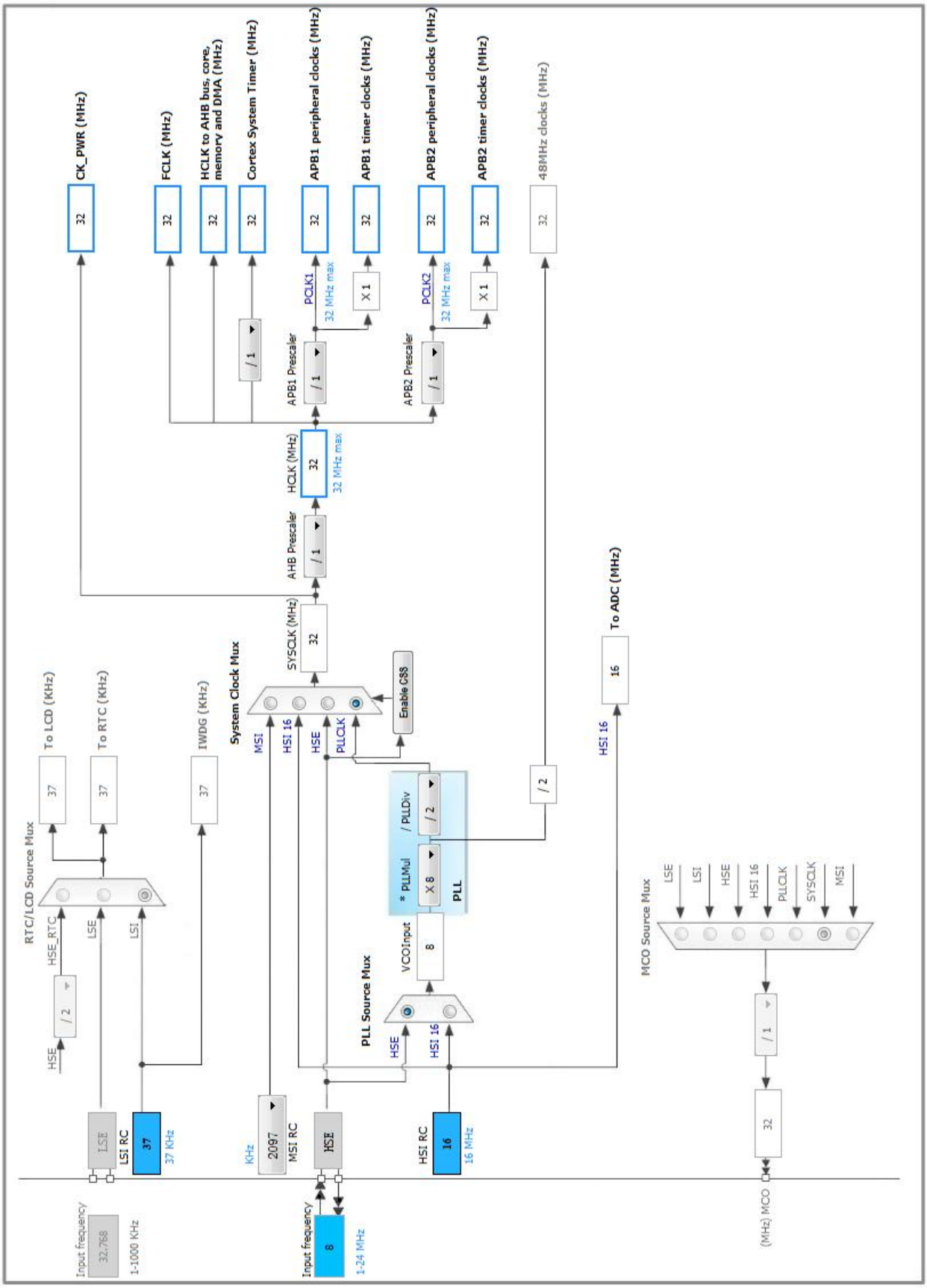


3. Pins Configuration

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VLCD	Power		
10	VSS	Power		
11	VDD	Power		
12	PH0-OSC_IN	I/O	RCC_OSC_IN	
13	PH1-OSC_OUT	I/O	RCC_OSC_OUT	
14	NRST	Reset		
19	VSSA	Power		
20	VREF-	Power		
21	VREF+	Power		
22	VDDA	Power		
27	VSS	Power		
28	VDD	Power		
29	PA4 *	I/O	GPIO_Output	LED1
30	PA5 *	I/O	GPIO_Output	LED2
31	PA6 *	I/O	GPIO_Output	LED3
32	PA7 *	I/O	GPIO_Output	LED4
39	PE8	I/O	ADC_IN23	
40	PE9	I/O	ADC_IN24	
41	PE10	I/O	ADC_IN25	
49	VSS	Power		
50	VDD	Power		
68	PA9	I/O	USART1_TX	
69	PA10	I/O	USART1_RX	
74	VSS	Power		
75	VDD	Power		
94	BOOT0	Boot		
99	VSS	Power		
100	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC

mode: IN23

mode: IN24

mode: IN25

5.1.1. Parameter Settings:

ADC_Settings:

Clock Prescaler	Asynchronous clock mode divided by 1
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Scan Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	Disabled
End Of Conversion Selection	End of sequence conversion
Low Power Auto Wait	Disabled
Low Power Auto Off	Disabled

ADC_Regular_ConversionMode:

Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
External Trigger Conversion Edge	None
Rank	1
Channel	**Channel 25 ***
Sampling Time	4 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0

WatchDog:

Enable Analog WatchDog Mode	false

5.2. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.2.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Disabled
Data Cache	Enabled
Flash Latency(WS)	1 WS (2 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
MSI Calibration Value	0
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1

5.3. SYS

Timebase Source: SysTick

5.4. USART1

Mode: Asynchronous

5.4.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
Word Length	8 Bits (including Parity)
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	Receive and Transmit
Over Sampling	16 Samples

*** 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	PE8	ADC_IN23	Analog mode	No pull-up and no pull-down	n/a	
	PE9	ADC_IN24	Analog mode	No pull-up and no pull-down	n/a	
	PE10	ADC_IN25	Analog mode	No pull-up and no pull-down	n/a	
RCC	PH0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PH1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	Pull-up	**High ***	
	PA10	USART1_RX	Alternate Function Push Pull	Pull-up	**High ***	
GPIO	PA4	GPIO_Output	Output Push Pull	**Pull-up ***	Very Low	LED1
	PA5	GPIO_Output	Output Push Pull	**Pull-up ***	Very Low	LED2
	PA6	GPIO_Output	Output Push Pull	**Pull-up ***	Very Low	LED3
	PA7	GPIO_Output	Output Push Pull	**Pull-up ***	Very Low	LED4

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
Memory management fault	true	0	0
Pre-fetch fault, memory access fault	true	0	0
Undefined instruction or illegal state	true	0	0
System service call via SWI instruction	true	0	0
Debug monitor	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 global interrupt	unused		
USART1 global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L1
Line	STM32L151/152
MCU	STM32L152VBTx
Datasheet	17659_Rev12

7.2. Parameter Selection

Temperature	25
Vdd	3.6

8. Software Project

8.1. Project Settings

Name	Value
Project Name	STM32L152VBTx_Nosys_Ver1.0
Project Folder	E:\stm32+lora\source\STM32L152VBTx_Nosys_Ver1.0
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_L1 V1.6.0

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)	No