1. Description

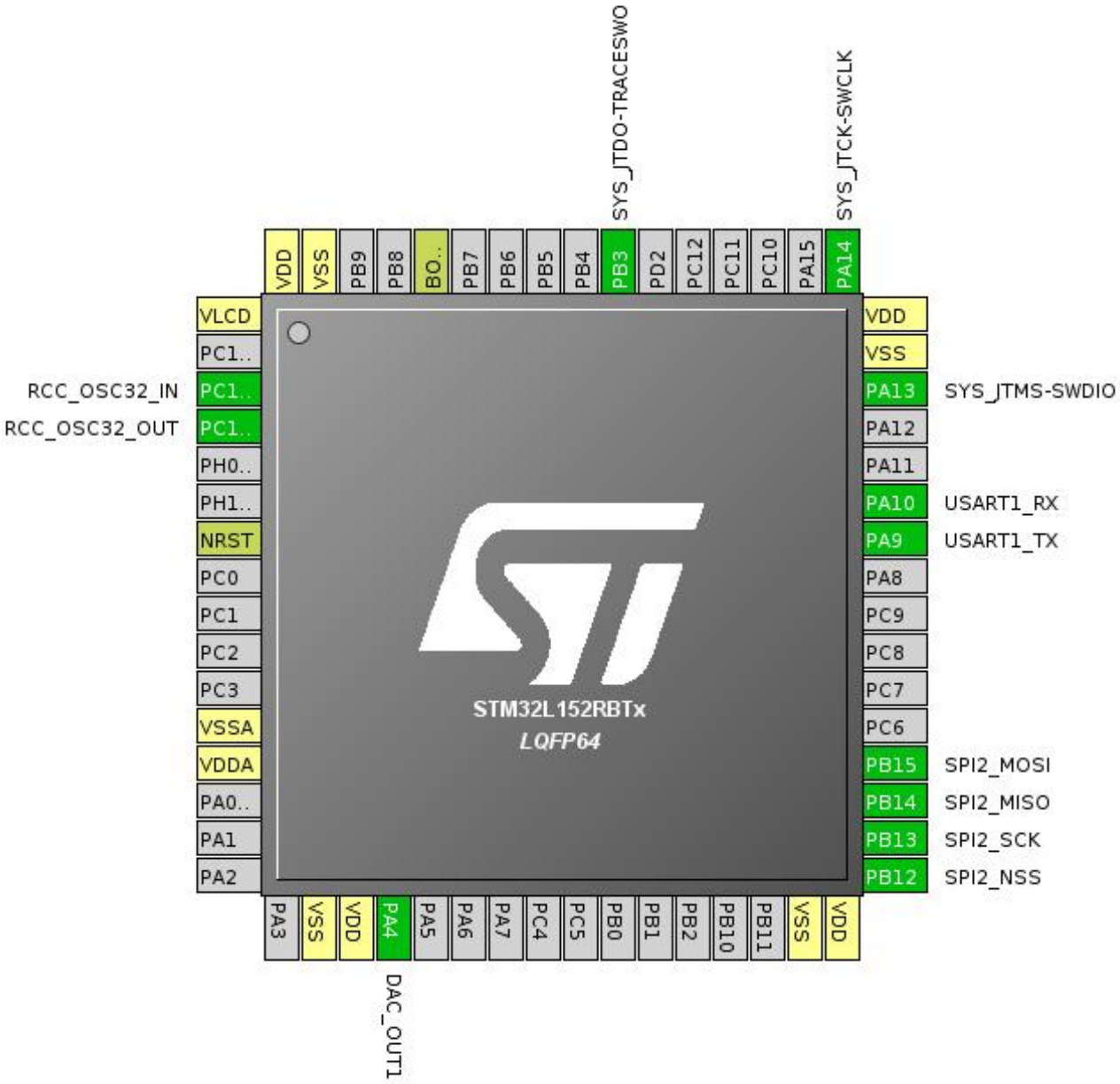
1.1. Project

Project Name	stm32l152-wave
Board Name	custom
Generated with:	STM32CubeMX 4.9.0
Date	02/07/2016

1.2. MCU

MCU Series	STM32L1
MCU Line	STM32L151/152
MCU name	STM32L152RBTx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VLCD	Power		
3	PC14-OSC32_IN	I/O	RCC_OSC32_IN	
4	PC15-OSC32_OUT	I/O	RCC_OSC32_OUT	
7	NRST	Reset		
12	VSSA	Power		
13	VDDA	Power		
18	VSS	Power		
19	VDD	Power		
20	PA4	I/O	DAC_OUT1	
31	VSS	Power		
32	VDD	Power		
33	PB12	I/O	SPI2_NSS	
34	PB13	I/O	SPI2_SCK	
35	PB14	I/O	SPI2_MISO	
36	PB15	I/O	SPI2_MOSI	
42	PA9	I/O	USART1_TX	
43	PA10	I/O	USART1_RX	
46	PA13	I/O	SYS_JTMS-SWDIO	
47	VSS	Power		
48	VDD	Power		
49	PA14	I/O	SYS_JTCK-SWCLK	
55	PB3	I/O	SYS_JTDO-TRACESWO	
60	BOOT0	Boot		
63	VSS	Power		
64	VDD	Power		

4. IPs and Middleware Configuration

4.1. DAC

mode: OUT1 Configuration

DAC Out1 Settings:

Output Buffer	Enable
Trigger	None

4.2. RCC

Low Speed Clock (LSE) : Crystal/Ceramic Resonator

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

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1

4.3. SPI2

Mode: Full-Duplex Master

mode: Hardware NSS Signal

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**16.0 MBits/s ***
Clock Polarity (CPOL)	Low

Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Output Hardware

4.4. SYS

Debug: Trace-Asynchronous_SW

4.5. TIM6

mode: Activated

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	0

Trigger Output (TRGO) Parameters:

Trigger Event Selection	Reset (UG bit from TIMx_EGR)

4.6. USART1

Mode: Asynchronous

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

5. System Configuration

5.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
DAC	PA4	DAC_OUT1	Analog mode	No pull-up and no pull-down	n/a	
RCC	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	
SPI2	PB12	SPI2_NSS	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	
	PB13	SPI2_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	
	PB14	SPI2_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	
	PB15	SPI2_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PB3	SYS_JTDO-TRACESWO	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 ***	

5.2. DMA configuration

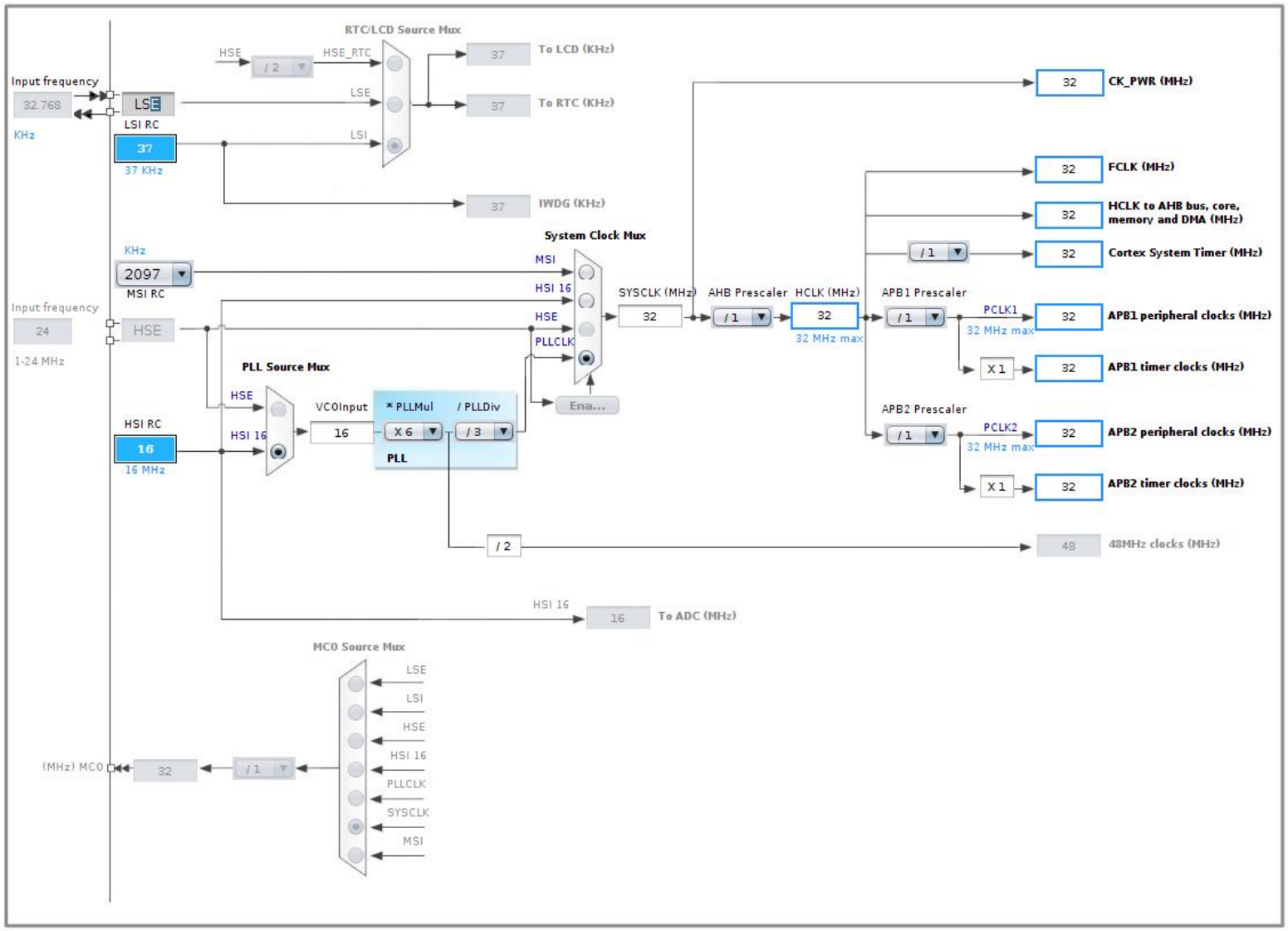
nothing configured in DMA service

5.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
System tick timer	true	0	0
Non Maskable Interrupt	unused		
Memory management fault	unused		
Pre-fetch fault, memory access fault	unused		
Undefined instruction or illegal state	unused		
Debug Monitor	unused		
RCC global interrupt	unused		
DAC interrupt	unused		
SPI2 global interrupt	unused		
USART1 global interrupt	unused		
TIM6 global interrupt	unused		

*** User modified value**

6. Clock Tree Configuration



7. Power Plugin report

7.1. Microcontroller Selection

Series	STM32L1
Line	STM32L151/152
MCU	STM32L152RBTx
Datasheet	17659_Rev11

7.2. Parameter Selection

Temperature	25
Vdd	3.6