1. Description

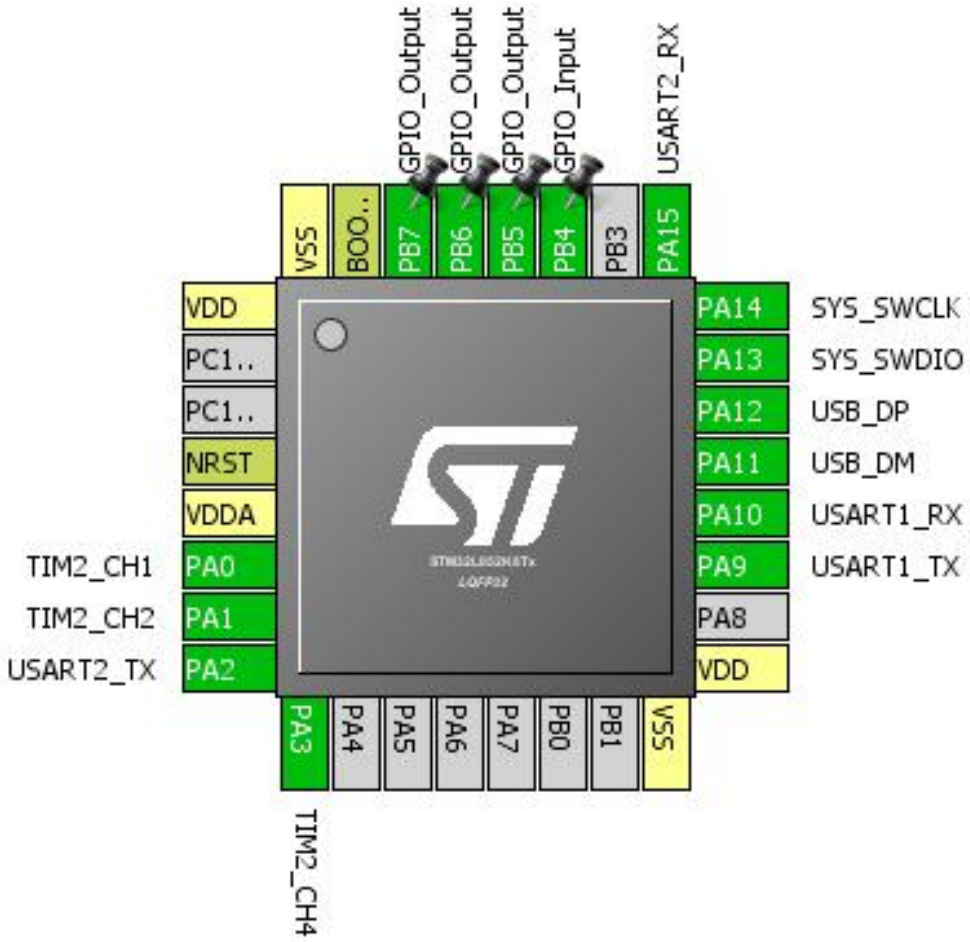
1.1. Project

Project Name	Test
Board Name	Test
Generated with:	STM32CubeMX 4.14.0
Date	05/10/2016

1.2. MCU

MCU Series	STM32L0
MCU Line	STM32L0x2
MCU name	STM32L052K8Tx
MCU Package	LQFP32
MCU Pin number	32

2. Pinout Configuration

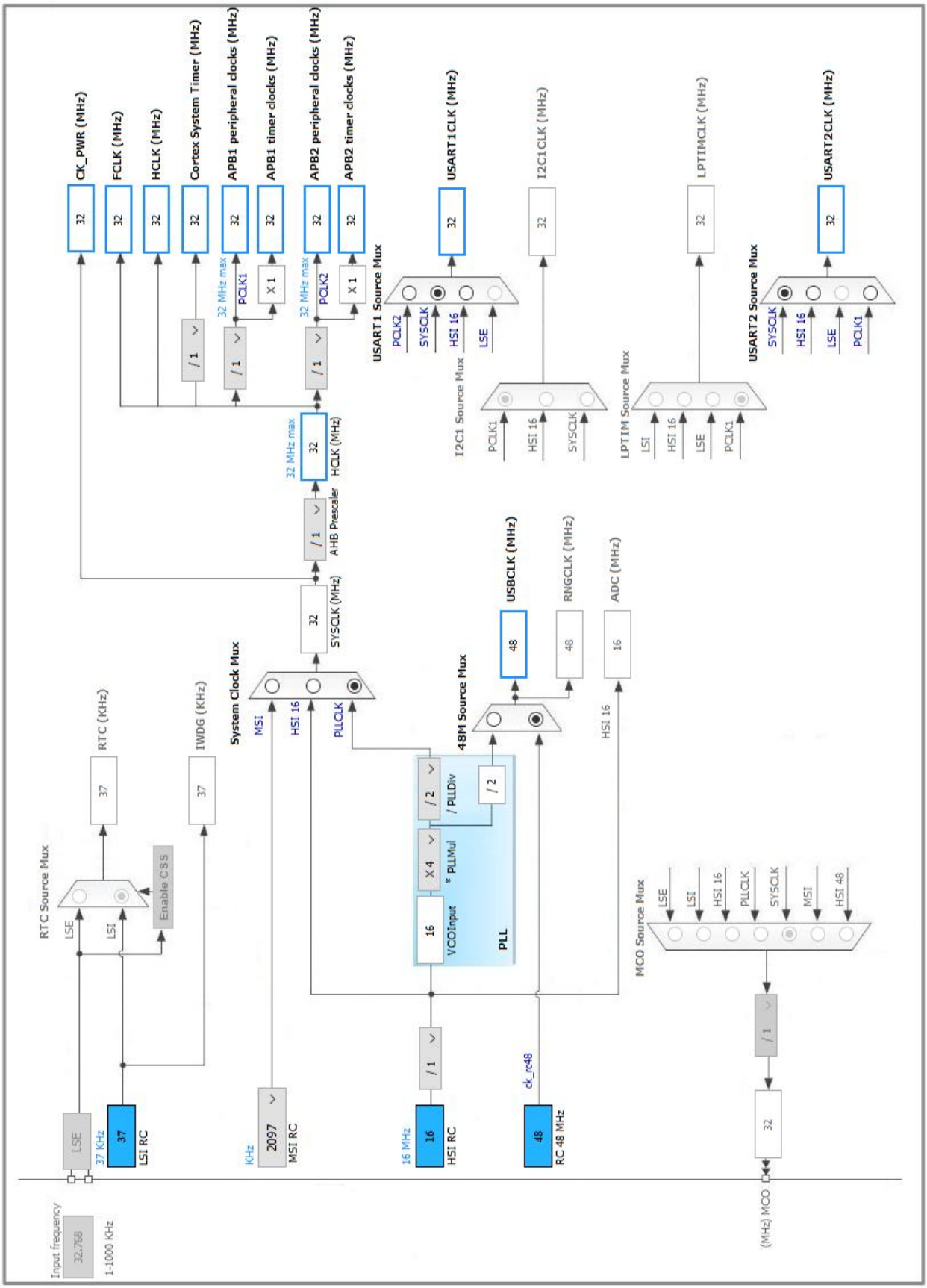


3. Pins Configuration

Pin Number LQFP32	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VDD	Power		
4	NRST	Reset		
5	VDDA	Power		
6	PA0	I/O	TIM2_CH1	
7	PA1	I/O	TIM2_CH2	
8	PA2	I/O	USART2_TX	
9	PA3	I/O	TIM2_CH4	
16	VSS	Power		
17	VDD	Power		
19	PA9	I/O	USART1_TX	
20	PA10	I/O	USART1_RX	
21	PA11	I/O	USB_DM	
22	PA12	I/O	USB_DP	
23	PA13	I/O	SYS_SWDIO	
24	PA14	I/O	SYS_SWCLK	
25	PA15	I/O	USART2_RX	
27	PB4 *	I/O	GPIO_Input	
28	PB5 *	I/O	GPIO_Output	
29	PB6 *	I/O	GPIO_Output	
30	PB7 *	I/O	GPIO_Output	
31	BOOT0	Boot		
32	VSS	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. SYS

mode: Serial Wire Debug (SWD)

Timebase Source: SysTick

5.2. TIM2

Clock Source : Internal Clock

Channel1: PWM Generation CH1

Channel2: PWM Generation CH2

Channel4: PWM Generation CH4

5.2.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**31 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**255 ***
Internal Clock Division (CKD)	No Division

Trigger Output (TRGO) Parameters:

Master/Slave Mode	Disable (no sync between this TIM (Master) and its Slaves
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

PWM Generation Channel 1:

Mode	PWM mode 1
Pulse (32 bits value)	0
Fast Mode	Disable
CH Polarity	High

PWM Generation Channel 2:

Mode	PWM mode 1
Pulse (32 bits value)	0
Fast Mode	Disable
CH Polarity	High

PWM Generation Channel 4:

Mode	PWM mode 1
Pulse (32 bits value)	0
Fast Mode	Disable
CH Polarity	High

5.3. USART1

Mode: Asynchronous

5.3.1. 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
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

5.4. USART2

Mode: Asynchronous

5.4.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
Word Length	7 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

5.5. USB

mode: Device (FS)

5.5.1. Parameter Settings:

Basic Parameters:

Speed	Full Speed 12MBit/s
Endpoint 0 Max Packet size	8 Bytes
Physical interface	Internal Phy

Power Parameters:

Low Power	Disabled
Link Power Management	Disabled

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
TIM2	PA0	TIM2_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA1	TIM2_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA3	TIM2_CH4	Alternate Function Push Pull	No pull-up and no pull-down	Low	
USART1	PA9	USART1_TX	Alternate Function Push Pull	Pull-up	**High ***	
	PA10	USART1_RX	Alternate Function Push Pull	Pull-up	**High ***	
USART2	PA2	USART2_TX	Alternate Function Push Pull	Pull-up	**High ***	
	PA15	USART2_RX	Alternate Function Push Pull	Pull-up	**High ***	
USB	PA11	USB_DM	n/a	n/a	n/a	
	PA12	USB_DP	n/a	n/a	n/a	
GPIO	PB4	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	
	PB5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PB6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PB7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	

6.2. DMA configuration

DMA request	Stream	Direction	Priority
USART2_RX	DMA1_Channel5	Peripheral To Memory	Low
USART1_RX	DMA1_Channel3	Peripheral To Memory	Low

USART2_RX: DMA1_Channel5 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

USART1_RX: DMA1_Channel3 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

6.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
Non maskable interrupt	true	0	0
Hard fault interrupt	true	0	0
System tick timer	true	0	0
DMA1 channel 2 and channel 3 interrupts	true	0	0
DMA1 channel 4, channel 5, channel 6 and channel 7 interrupts	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash and EEPROM global interrupt	unused		
RCC and CRS global interrupt	unused		
TIM2 global interrupt	unused		
USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25	unused		
USART2 global interrupt / USART2 wake-up interrupt through EXTI line 26	unused		
USB event interrupt / USB wake-up interrupt through EXTI line 18	unused		

*** User modified value**

7. Power Plugin report

7.1. Microcontroller Selection

Series	STM32L0
Line	STM32L0x2
MCU	STM32L052K8Tx
Datasheet	025936_Rev5

7.2. Parameter Selection

Temperature	25
Vdd	null

8. Software Project

8.1. Project Settings

Name	Value
Project Name	Test
Project Folder	C:\Users\John\Documents\Arm Cortex Dev\ledStripController\Test
Toolchain / IDE	Other Toolchains (GPDSC)
Firmware Package Name and Version	STM32Cube FW_L0 V1.5.0

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	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