

1. Description

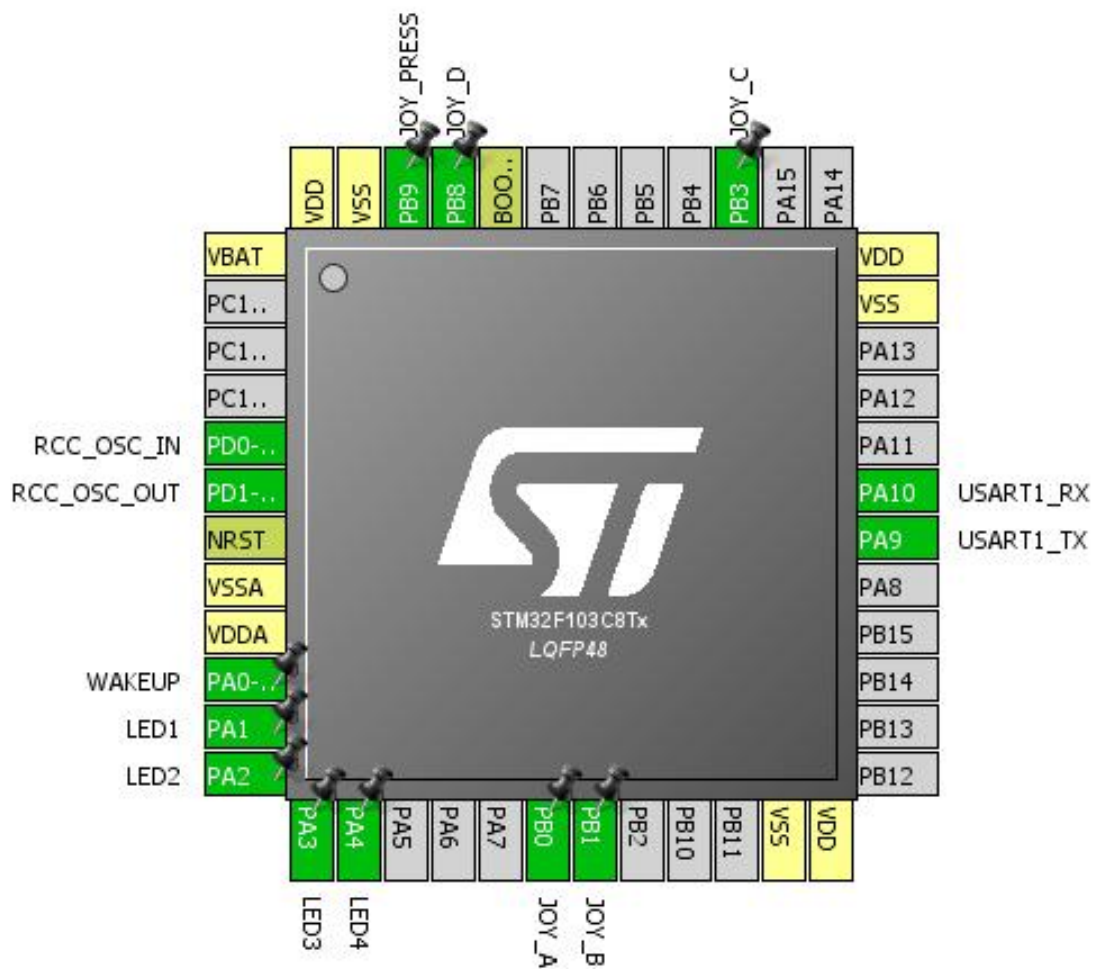
1.1. Project

Project Name	TIM
Board Name	TIM
Generated with:	STM32CubeMX 4.19.0
Date	03/24/2017

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103C8Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration

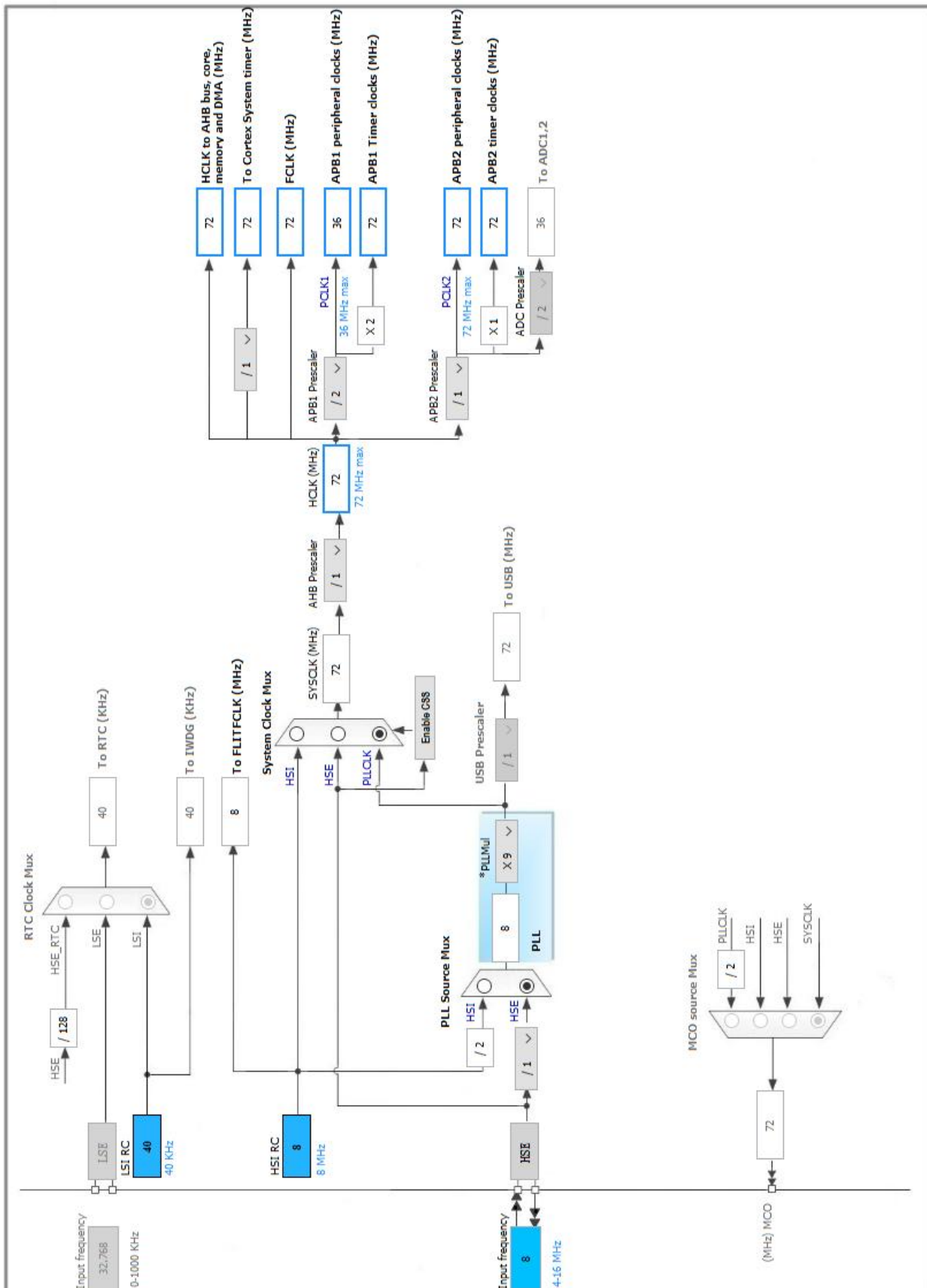


3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
5	PD0-OSC_IN	I/O	RCC_OSC_IN	
6	PD1-OSC_OUT	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
10	PA0-WKUP *	I/O	GPIO_Input	WAKEUP
11	PA1 *	I/O	GPIO_Output	LED1
12	PA2 *	I/O	GPIO_Output	LED2
13	PA3 *	I/O	GPIO_Output	LED3
14	PA4 *	I/O	GPIO_Output	LED4
18	PB0 *	I/O	GPIO_Input	JOY_A
19	PB1 *	I/O	GPIO_Input	JOY_B
23	VSS	Power		
24	VDD	Power		
30	PA9	I/O	USART1_TX	
31	PA10	I/O	USART1_RX	
35	VSS	Power		
36	VDD	Power		
39	PB3 *	I/O	GPIO_Input	JOY_C
44	BOOT0	Boot		
45	PB8 *	I/O	GPIO_Input	JOY_D
46	PB9 *	I/O	GPIO_Input	JOY_PRESS
47	VSS	Power		
48	VDD	Power		

* 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
Prefetch Buffer	Enabled
Flash Latency(WS)	2 WS (3 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

5.2. SYS

Debug: No Debug

Timebase Source: SysTick

5.3. TIM2

Clock Source : Internal Clock

5.3.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	36000-1 *
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	2000-1 *
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)

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
RCC	PD0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PD1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	n/a	High *	
	PA10	USART1_RX	Input mode	No pull-up and no pull-down	n/a	
GPIO	PA0-WKUP	GPIO_Input	Input mode	Pull-up *	n/a	WAKEUP
	PA1	GPIO_Output	Output Push Pull	n/a	Low	LED1
	PA2	GPIO_Output	Output Push Pull	n/a	Low	LED2
	PA3	GPIO_Output	Output Push Pull	n/a	Low	LED3
	PA4	GPIO_Output	Output Push Pull	n/a	Low	LED4
	PB0	GPIO_Input	Input mode	Pull-up *	n/a	JOY_A
	PB1	GPIO_Input	Input mode	Pull-up *	n/a	JOY_B
	PB3	GPIO_Input	Input mode	Pull-up *	n/a	JOY_C
	PB8	GPIO_Input	Input mode	Pull-up *	n/a	JOY_D
	PB9	GPIO_Input	Input mode	Pull-up *	n/a	JOY_PRESS

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
Prefetch 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
TIM2 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
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	STM32F1
Line	STM32F103
MCU	STM32F103C8Tx
Datasheet	13587_Rev17

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	TIM
Project Folder	E:\Open103C-Demo-HAL\3.TIM\TIM
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.4.0

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