1. Description

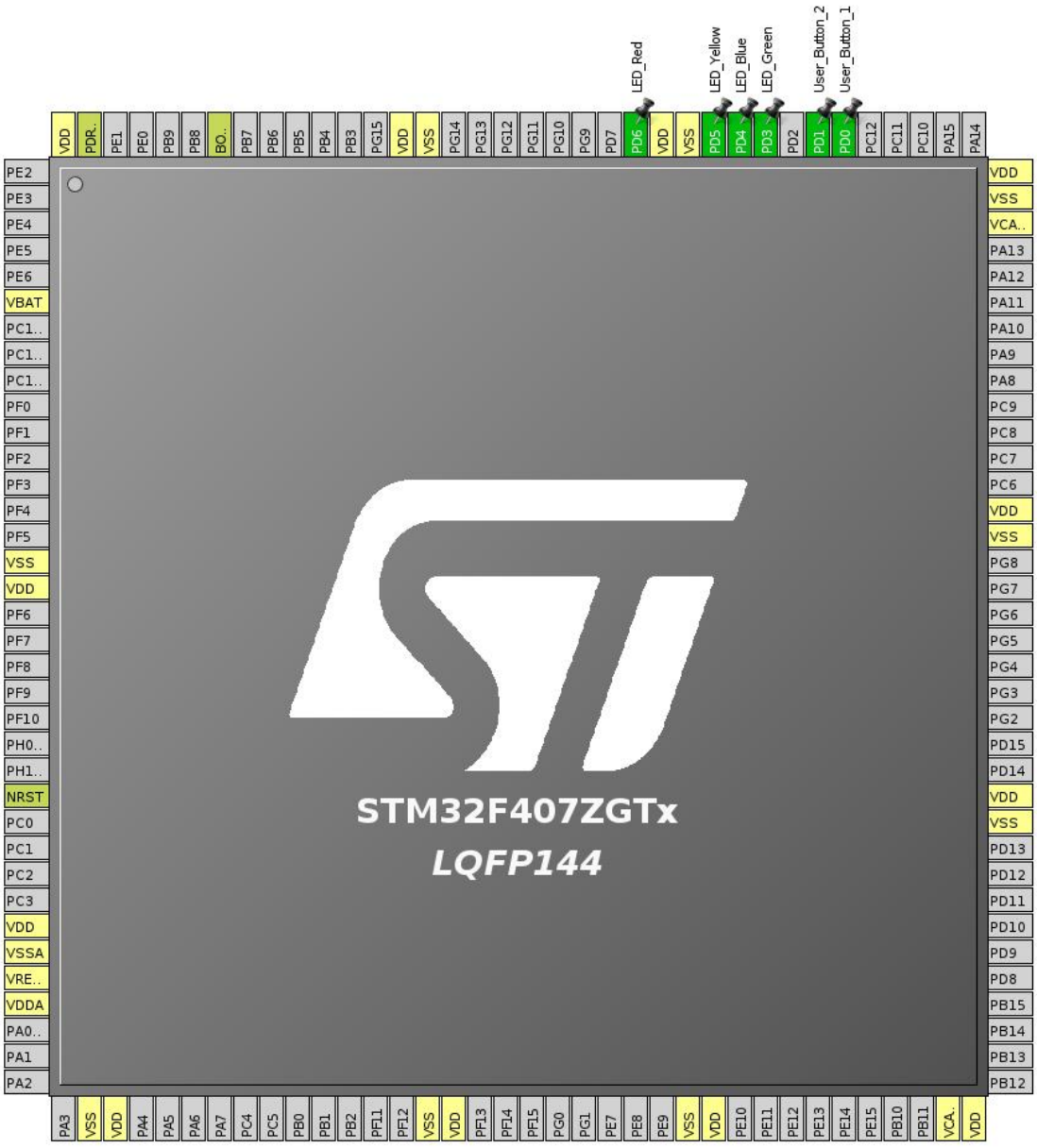
1.1. Project

Project Name	User_Hardware
Board Name	User_Hardware
Generated with:	STM32CubeMX 4.22.1
Date	10/26/2017

1.2. MCU

MCU Series	STM32F4
MCU Line	STM32F407/417
MCU name	STM32F407ZGTx
MCU Package	LQFP144
MCU Pin number	144

2. Pinout Configuration

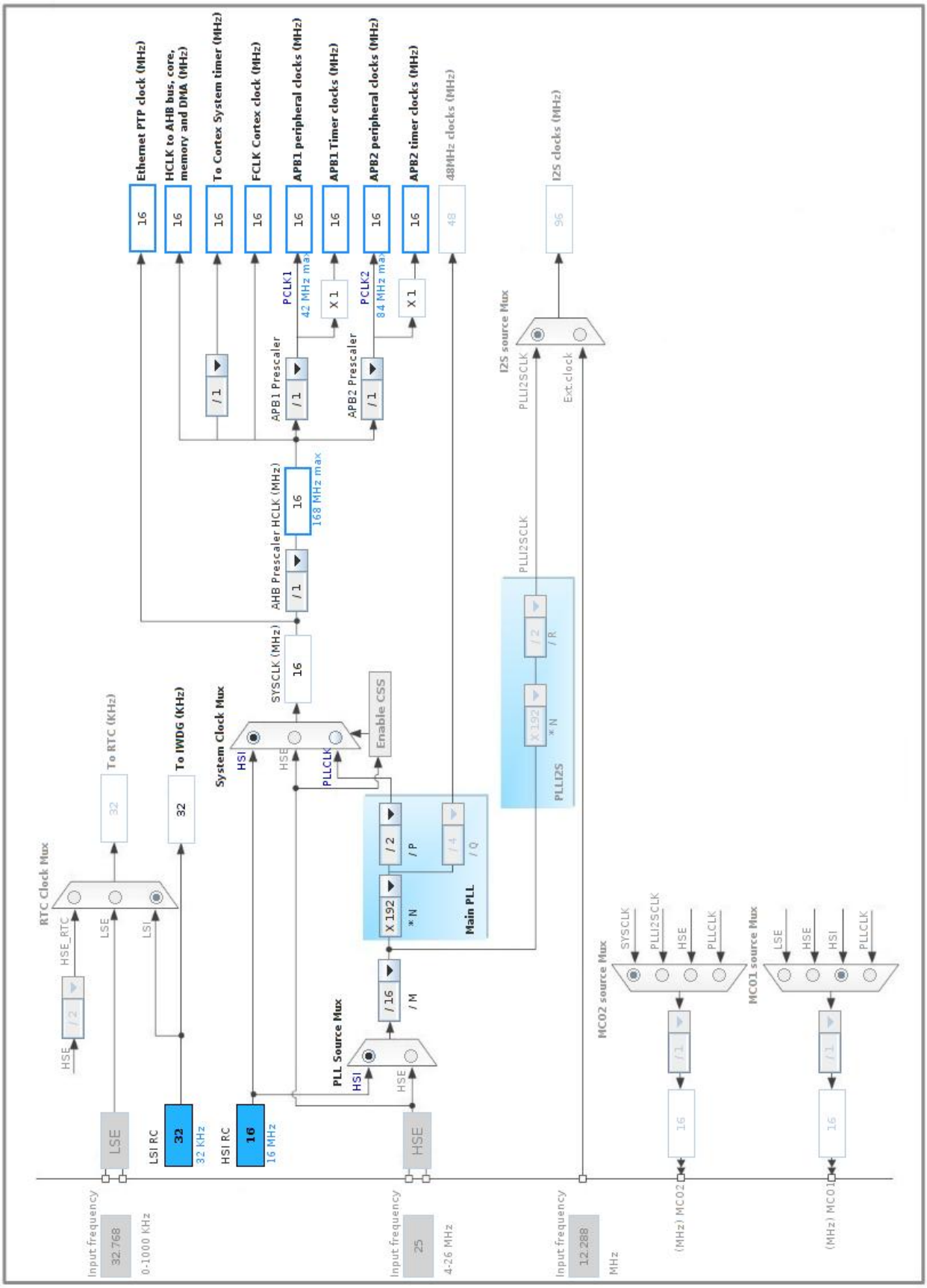


3. Pins Configuration

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
16	VSS	Power		
17	VDD	Power		
25	NRST	Reset		
30	VDD	Power		
31	VSSA	Power		
32	VREF+	Power		
33	VDDA	Power		
38	VSS	Power		
39	VDD	Power		
51	VSS	Power		
52	VDD	Power		
61	VSS	Power		
62	VDD	Power		
71	VCAP_1	Power		
72	VDD	Power		
83	VSS	Power		
84	VDD	Power		
94	VSS	Power		
95	VDD	Power		
106	VCAP_2	Power		
107	VSS	Power		
108	VDD	Power		
114	PD0	I/O	GPIO_EXTI0	User_Button_1
115	PD1	I/O	GPIO_EXTI1	User_Button_2
117	PD3 *	I/O	GPIO_Output	LED_Green
118	PD4 *	I/O	GPIO_Output	LED_Blue
119	PD5 *	I/O	GPIO_Output	LED_Yellow
120	VSS	Power		
121	VDD	Power		
122	PD6 *	I/O	GPIO_Output	LED_Red
130	VSS	Power		
131	VDD	Power		
138	BOOT0	Boot		
143	PDR_ON	Reset		
144	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. IWDG

mode: Activated

5.1.1. Parameter Settings:

Clocking:

IWDG counter clock prescaler	**32 ***
IWDG down-counter reload value	4095

5.2. SYS

Timebase Source: SysTick

5.3. TIM5

mode: Clock Source

Channel4: Input Capture direct mode from Remap

5.3.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 32 bits value)	**0xFFFF ***
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)

Input Capture Channel 4:

Polarity Selection	Rising Edge
IC Selection	Direct
Prescaler Division Ratio	No division
Input Filter (4 bits value)	0
TI4 remap capabilities for TIM5	TIM5 Channel 4 is connected to LSI

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
GPIO	PD0	GPIO_EXTI0	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	User_Button_1
	PD1	GPIO_EXTI1	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	User_Button_2
	PD3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Green
	PD4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Blue
	PD5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Yellow
	PD6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Red

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
RCC global interrupt	true	0	0
EXTI line0 interrupt	true	0	0
EXTI line1 interrupt	true	0	0
TIM5 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
FPU global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F4
Line	STM32F407/417
MCU	STM32F407ZGTx
Datasheet	022152_Rev8

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	User_Hardware
Project Folder	/home/saicharan/Desktop/User_Hardware
Toolchain / IDE	Makefile
Firmware Package Name and Version	STM32Cube FW_F4 V1.16.0

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