

## 1. Description

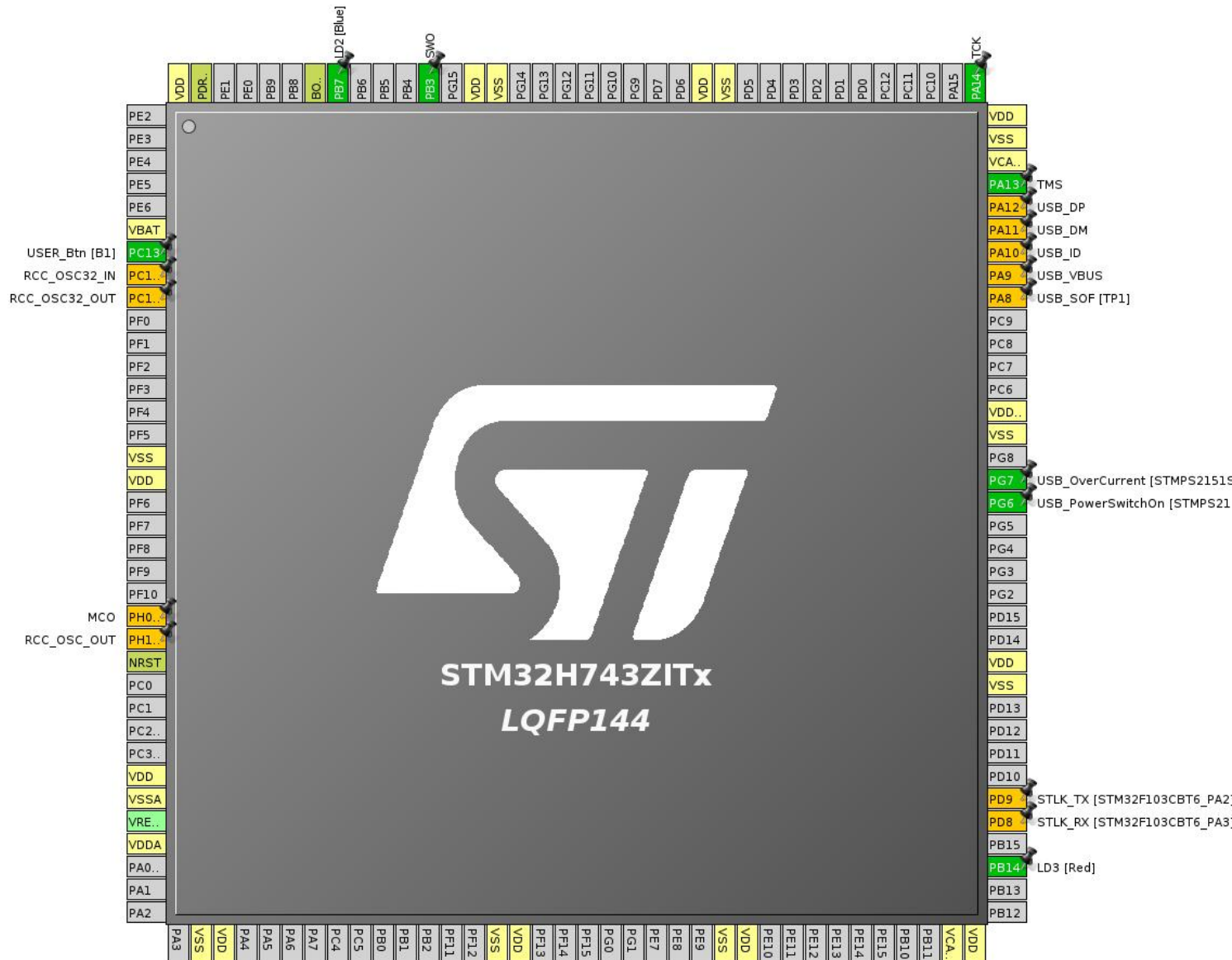
### 1.1. Project

Project Name	Test
Board Name	NUCLEO-H743ZI
Generated with:	STM32CubeMX 4.21.0
Date	01/05/2018

### 1.2. MCU

MCU Series	STM32H7
MCU Line	STM32H7x3
MCU name	STM32H743ZITx
MCU Package	LQFP144
MCU Pin number	144

## 2. Pinout Configuration



### 3. Pins Configuration

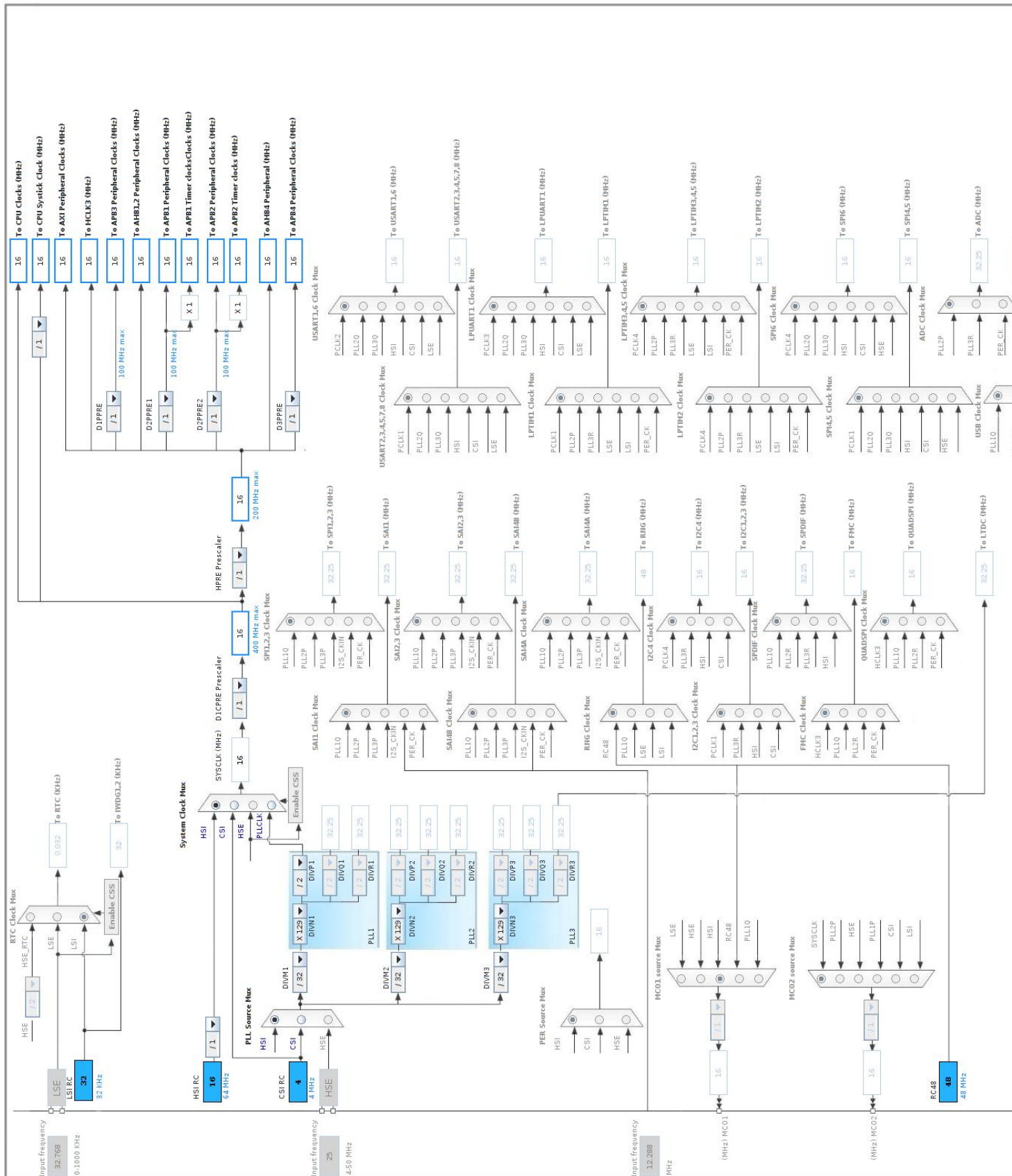
Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
7	PC13	I/O	GPIO_EXTI13	USER_Btn [B1]
8	PC14-OSC32_IN *	I/O	RCC_OSC32_IN	
9	PC15-OSC32_OUT *	I/O	RCC_OSC32_OUT	
16	VSS	Power		
17	VDD	Power		
23	PH0-OSC_IN *	I/O	RCC_OSC_IN	MCO
24	PH1-OSC_OUT *	I/O	RCC_OSC_OUT	
25	NRST	Reset		
30	VDD	Power		
31	VSSA	Power		
33	VDDA	Power		
38	VSS	Power		
39	VDD	Power		
51	VSS	Power		
52	VDD	Power		
61	VSS	Power		
62	VDD	Power		
71	VCAP1	Power		
72	VDD	Power		
75	PB14 **	I/O	GPIO_Output	LD3 [Red]
77	PD8 *	I/O	USART3_TX	STLK_RX [STM32F103CBT6_PA3]
78	PD9 *	I/O	USART3_RX	STLK_TX [STM32F103CBT6_PA2]
83	VSS	Power		
84	VDD	Power		
91	PG6 **	I/O	GPIO_Output	USB_PowerSwitchOn [STMPS2151STR_EN]
92	PG7 **	I/O	GPIO_Input	USB_OverCurrent [STMPS2151STR_FAULT]
94	VSS	Power		
95	VDD33_USB	Power		
100	PA8 *	I/O	USB_OTG_FS_SOF	USB_SOF [TP1]
101	PA9 *	I/O	USB_OTG_FS_VBUS	USB_VBUS
102	PA10 *	I/O	USB_OTG_FS_ID	USB_ID

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
103	PA11 *	I/O	USB_OTG_FS_DM	USB_DM
104	PA12 *	I/O	USB_OTG_FS_DP	USB_DP
105	PA13	I/O	SYS_JTMS-SWDIO	TMS
106	VCAP2	Power		
107	VSS	Power		
108	VDD	Power		
109	PA14	I/O	SYS_JTCK-SWCLK	TCK
120	VSS	Power		
121	VDD	Power		
130	VSS	Power		
131	VDD	Power		
133	PB3	I/O	SYS_JTDO-SWO	SWO
137	PB7 **	I/O	GPIO_Output	LD2 [Blue]
138	BOOT0	Boot		
143	PDR_ON	Reset		
144	VDD	Power		

\*\* The pin is affected with an I/O function

\* The pin is affected with a peripheral function but no peripheral mode is activated

## 4. Clock Tree Configuration



## ***5. IPs and Middleware Configuration***

### ***5.1. SYS***

**Debug: Trace Asynchronous Sw**

**Timebase Source: SysTick**

**\* 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_JTMS-SWDIO	n/a	n/a	n/a	TMS
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	TCK
	PB3	SYS_JTDO-SWO	n/a	n/a	n/a	SWO
Single Mapped Signals	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	
	PH0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	MCO
	PH1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
	PD8	USART3_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	STLK_RX [STM32F103CBT6_PA3]
	PD9	USART3_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	STLK_TX [STM32F103CBT6_PA2]
	PA8	USB_OTG_FS_SOF	Alternate Function Push Pull	No pull-up and no pull-down	Low	USB_SOF [TP1]
	PA9	USB_OTG_FS_VBUS	n/a	n/a	n/a	USB_VBUS
	PA10	USB_OTG_FS_ID	Alternate Function Push Pull	No pull-up and no pull-down	Low	USB_ID
	PA11	USB_OTG_FS_DM	Alternate Function Push Pull	No pull-up and no pull-down	Low	USB_DM
	PA12	USB_OTG_FS_DP	Alternate Function Push Pull	No pull-up and no pull-down	Low	USB_DP
GPIO	PC13	GPIO_EXTI13	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	USER_Btn [B1]
	PB14	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LD3 [Red]
	PG6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	USB_PowerSwitchOn [STMP2151STR_EN]
	PG7	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	USB_OverCurrent [STMP2151STR_FAULT]
	PB7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LD2 [Blue]

## **6.2. DMA configuration**

nothing configured in DMA service

## **6.3. BDMA configuration**

nothing configured in DMA service

## **6.4. MDMA configuration**

nothing configured in DMA service



## 6.5. 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
PVD and AVD interrupts through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
EXTI line[15:10] interrupts	unused		
FPU global interrupt	unused		

\* User modified value

## ***7. Power Consumption Calculator report***

### 7.1. Microcontroller Selection

Series	STM32H7
Line	STM32H7x3
MCU	STM32H743ZITx
Datasheet	12345_Rev2

### 7.2. Parameter Selection

Temperature	25
Vdd	3.3

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	Test
Project Folder	/home/vuwij/Documents/soccer-embedded/JasonTest/Test
Toolchain / IDE	EWARM
Firmware Package Name and Version	STM32Cube FW_H7 V1.0.0

### 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