

## 1. Description

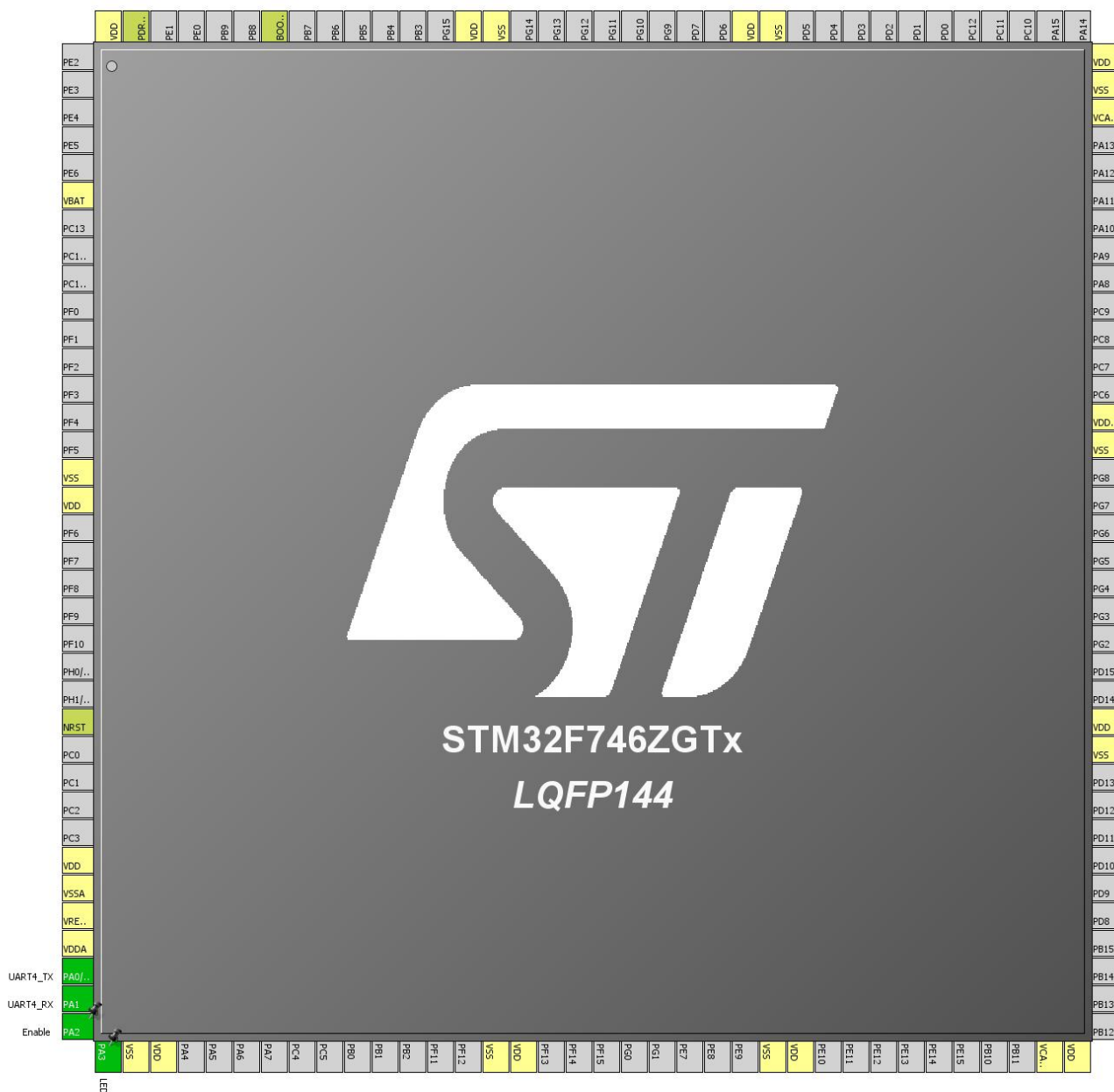
### 1.1. Project

Project Name	ESP_TEST
Board Name	NUCLEO-F746ZG
Generated with:	STM32CubeMX 4.16.1
Date	11/19/2016

### 1.2. MCU

MCU Series	STM32F7
MCU Line	STM32F7x6
MCU name	STM32F746ZGTx
MCU Package	LQFP144
MCU Pin number	144

## 2. Pinout Configuration

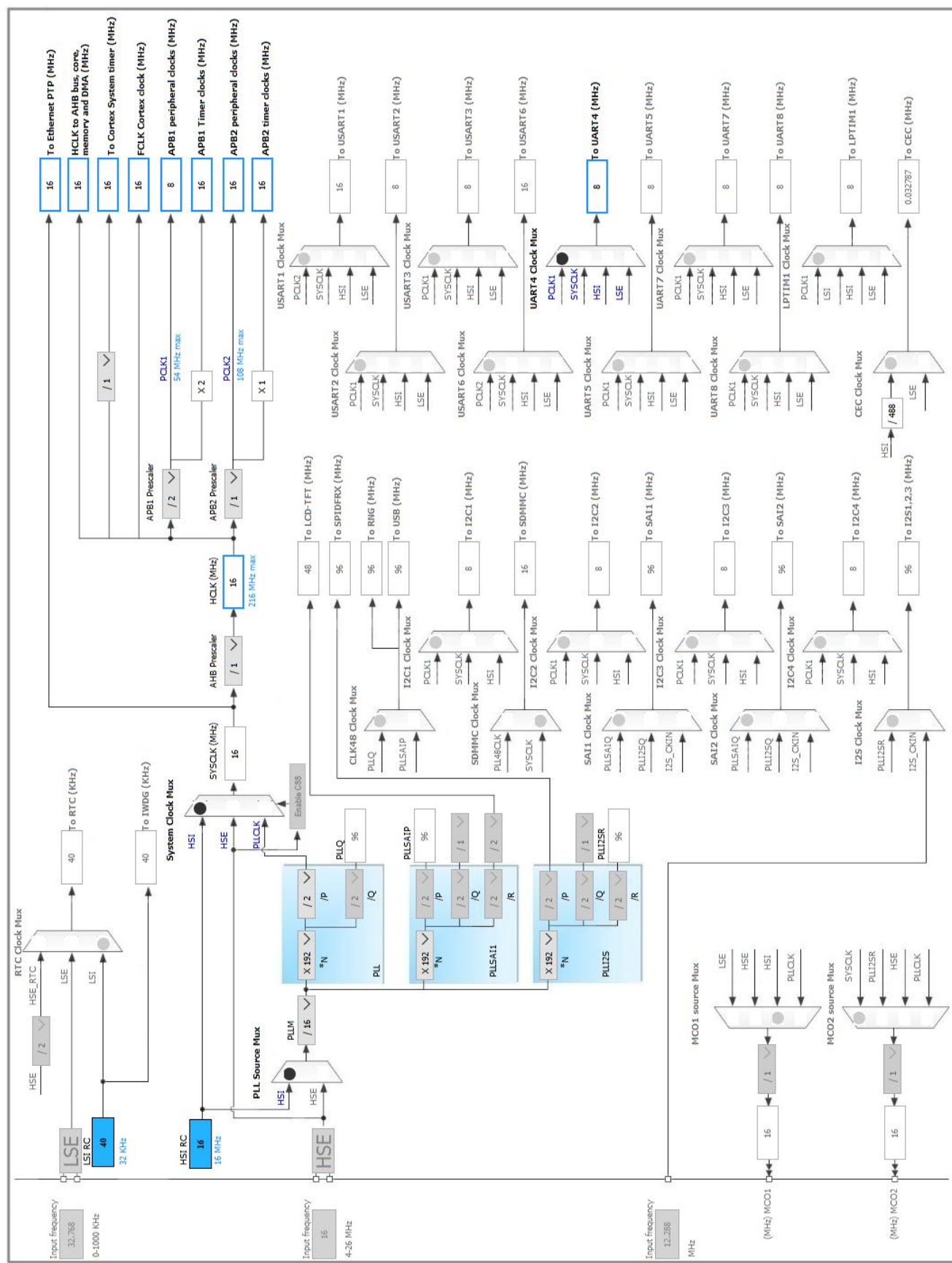


### 3. Pins Configuration

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		
34	PA0/WKUP	I/O	UART4_TX	
35	PA1	I/O	UART4_RX	
36	PA2 *	I/O	GPIO_Output	Enable
37	PA3 *	I/O	GPIO_Output	LED
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	VDDUSB	Power		
106	VCAP_2	Power		
107	VSS	Power		
108	VDD	Power		
120	VSS	Power		
121	VDD	Power		
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. SYS

Timebase Source: SysTick

### 5.2. UART4

Mode: Asynchronous

#### 5.2.1. Parameter Settings:

##### Basic Parameters:

Baud Rate	115200
Word Length	<b>8 Bits (including Parity) *</b>
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

\* User modified value

## 6. System Configuration

### 6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
UART4	PA0/WKUP	UART4_TX	Alternate Function Push Pull	Pull-up	<b>Very High</b> *	
	PA1	UART4_RX	Alternate Function Push Pull	Pull-up	<b>Very High</b> *	
GPIO	PA2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Enable
	PA3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED

### 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
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
UART4 global interrupt	unused		
FPU global interrupt	unused		

\* User modified value



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

### 7.1. Microcontroller Selection

Series	STM32F7
Line	STM32F7x6
MCU	STM32F746ZGTx
Datasheet	027590_Rev4

### 7.2. Parameter Selection

Temperature	25
Vdd	3.6