1. Description

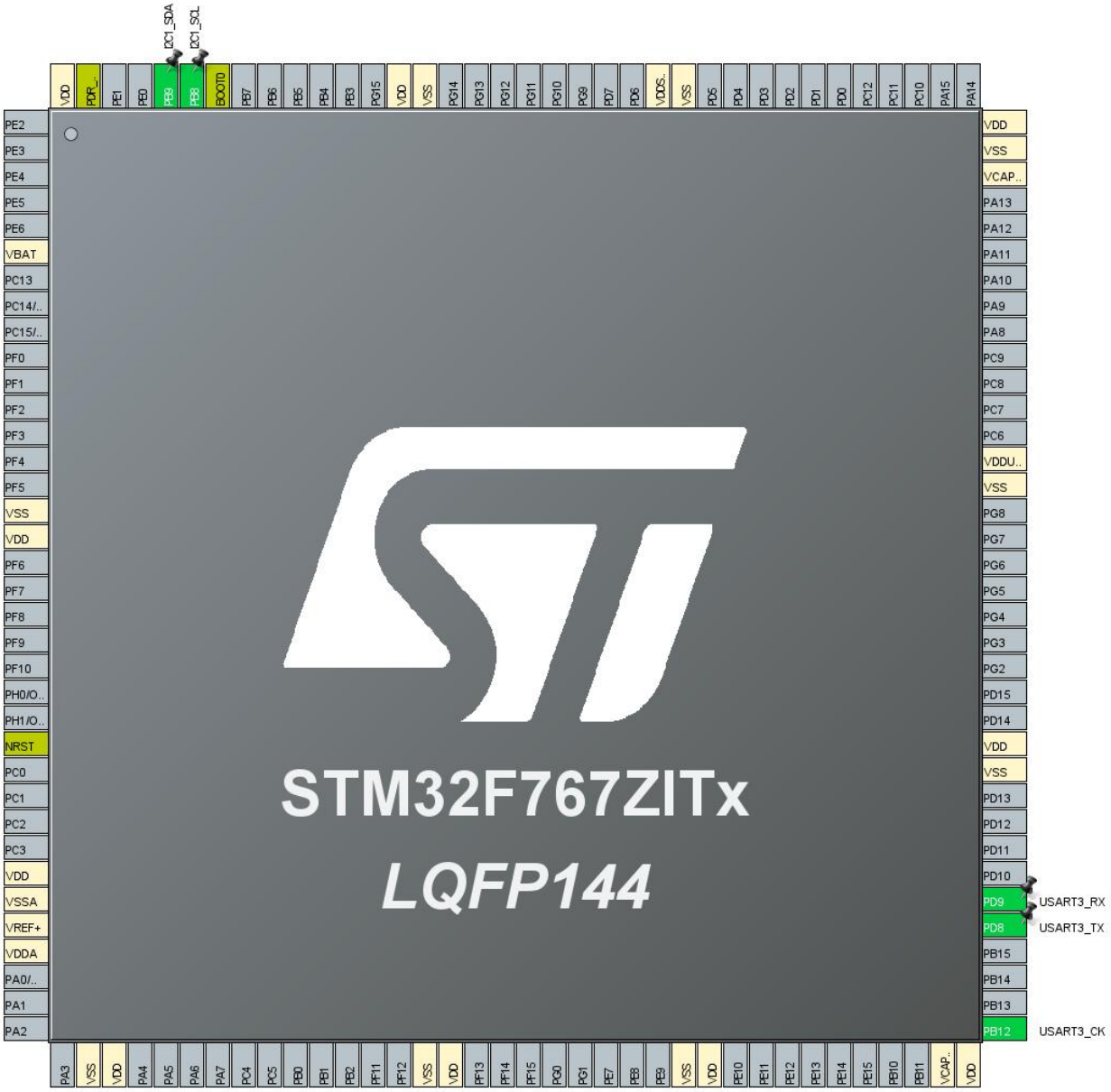
1.1. Project

Project Name	Serial_com
Board Name	custom
Generated with:	STM32CubeMX 5.5.0
Date	05/05/2020

1.2. MCU

MCU Series	STM32F7
MCU Line	STM32F7x7
MCU name	STM32F767ZITx
MCU Package	LQFP144
MCU Pin number	144

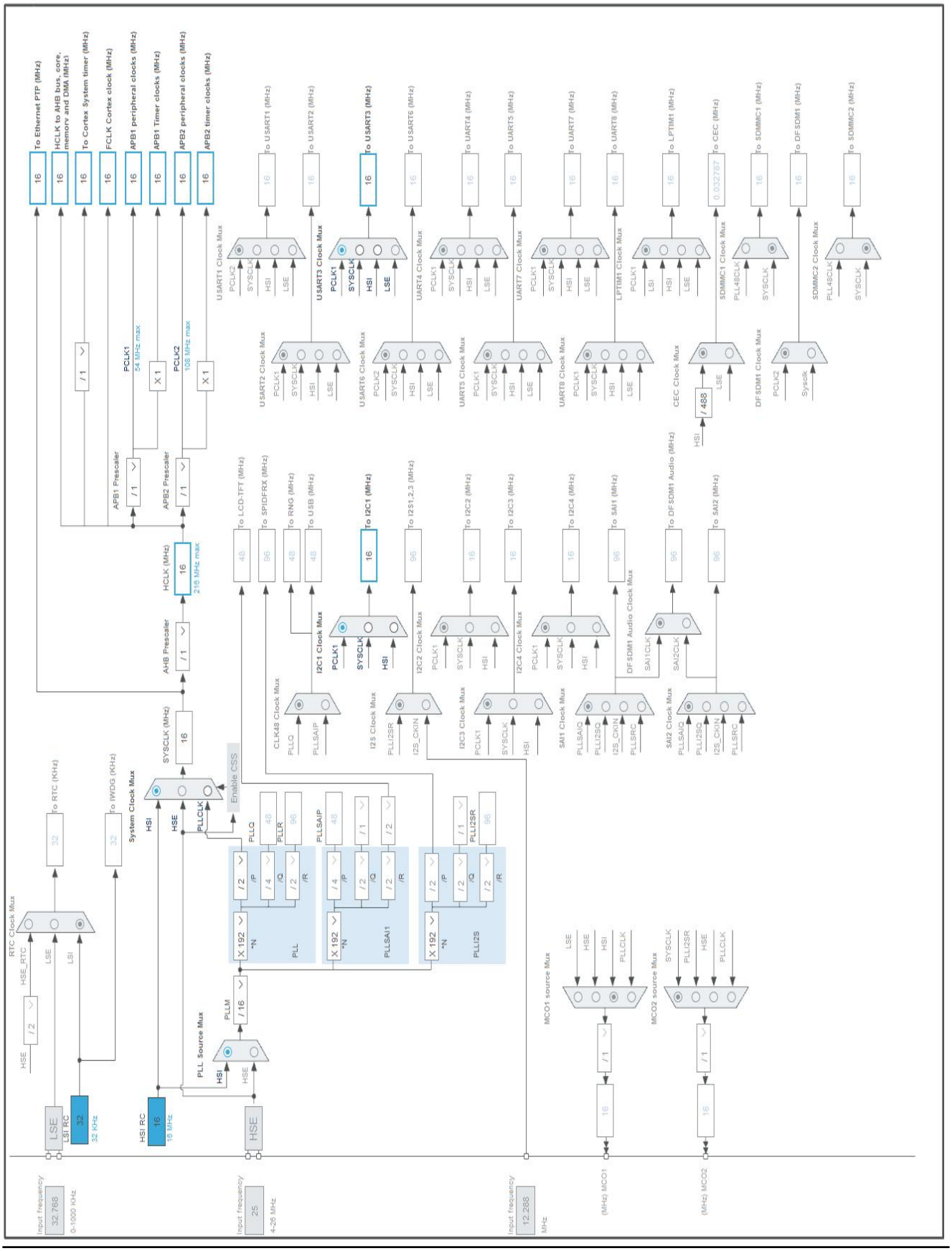
2. Pinout Configuration



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		
73	PB12	I/O	USART3_CK	
77	PD8	I/O	USART3_TX	
78	PD9	I/O	USART3_RX	
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	VDDSDMMC	Power		
130	VSS	Power		
131	VDD	Power		
138	BOOT0	Boot		
139	PB8	I/O	I2C1_SCL	
140	PB9	I/O	I2C1_SDA	
143	PDR_ON	Reset		
144	VDD	Power		

4. Clock Tree Configuration



5. Software Project

5.1. Project Settings

Name	Value
Project Name	Serial_com
Project Folder	C:\Users\Giorgio\STM32Cube\workspace\Serial_com
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_F7 V1.15.0

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	Copy only the necessary library files
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

6. Power Consumption Calculator report

6.1. Microcontroller Selection

Series	STM32F7
Line	STM32F7x7
MCU	STM32F767ZITx
Datasheet	029041_Rev4

6.2. Parameter Selection

Temperature	25
Vdd	3.3

7. IPs and Middleware Configuration

7.1. CORTEX_M7

7.1.1. Parameter Settings:

Cortex Interface Settings:

Flash Interface	AXI Interface
ART ACCLERATOR	Disabled
Instruction Prefetch	Disabled
CPU ICache	Disabled
CPU DCache	Disabled

Cortex Memory Protection Unit Control Settings:

MPU Control Mode	MPU NOT USED

7.2. GPIO

7.3. I2C1

I2C: I2C

7.3.1. Parameter Settings:

Timing configuration:

I2C Speed Mode	Standard Mode
I2C Speed Frequency (KHz)	100
Rise Time (ns)	0
Fall Time (ns)	0
Coefficient of Digital Filter	0
Analog Filter	Enabled
Timing	0x00303D5B

Slave Features:

Clock No Stretch Mode	Disabled
General Call Address Detection	Disabled
Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0

7.4. SYS

Timebase Source: SysTick

7.5. TIM1

Clock Source : Internal Clock

7.5.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**16 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**65000 ***
Internal Clock Division (CKD)	No Division
Repetition Counter (RCR - 16 bits value)	0
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection TRGO	Reset (UG bit from TIMx_EGR)
Trigger Event Selection TRGO2	Reset (UG bit from TIMx_EGR)

7.6. USART3

Mode: Synchronous

7.6.1. 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

Clock Parameters:

Clock Polarity	Low
Clock Phase	One Edge
Clock Last Bit	Disable

*** User modified value**

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
I2C1	PB8	I2C1_SCL	Alternate Function Open Drain	Pull-up	**Very High** *	
	PB9	I2C1_SDA	Alternate Function Open Drain	Pull-up	**Very High** *	
USART3	PB12	USART3_CK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD8	USART3_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD9	USART3_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	

8.2. DMA configuration

nothing configured in DMA service

8.3. 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		
TIM1 break interrupt and TIM9 global interrupt	unused		
TIM1 update interrupt and TIM10 global interrupt	unused		
TIM1 trigger and commutation interrupts and TIM11 global interrupt	unused		
TIM1 capture compare interrupt	unused		
I2C1 event interrupt	unused		
I2C1 error interrupt	unused		
USART3 global interrupt	unused		
FPU global interrupt	unused		

*** User modified value**

9. Software Pack Report