1. Description

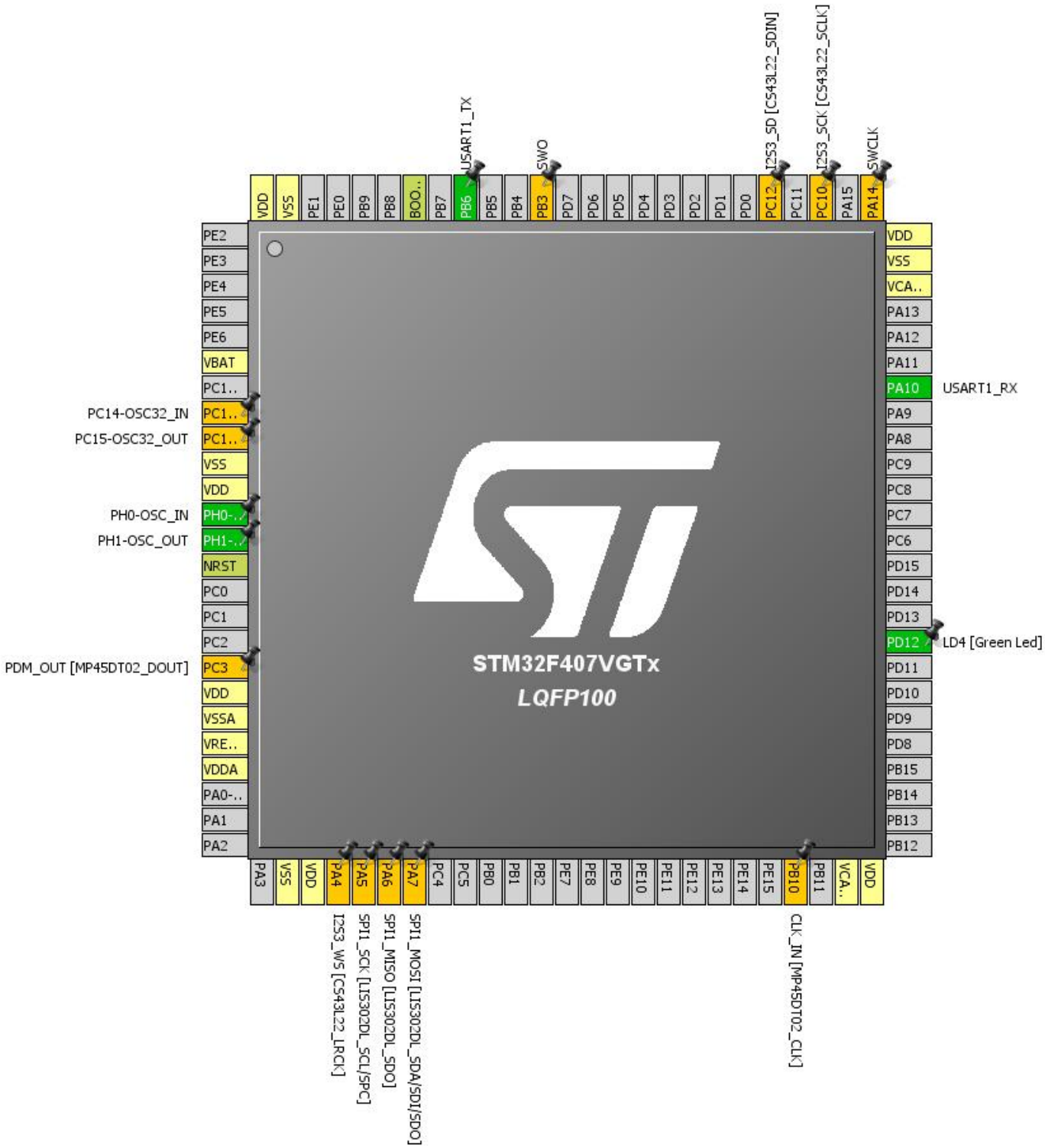
1.1. Project

Project Name	UART
Board Name	STM32F407G-DISC1
Generated with:	STM32CubeMX 4.14.0
Date	10/29/2017

1.2. MCU

MCU Series	STM32F4
MCU Line	STM32F407/417
MCU name	STM32F407VGTx
MCU Package	LQFP100
MCU Pin number	100

2. Pinout Configuration



3. Pins Configuration

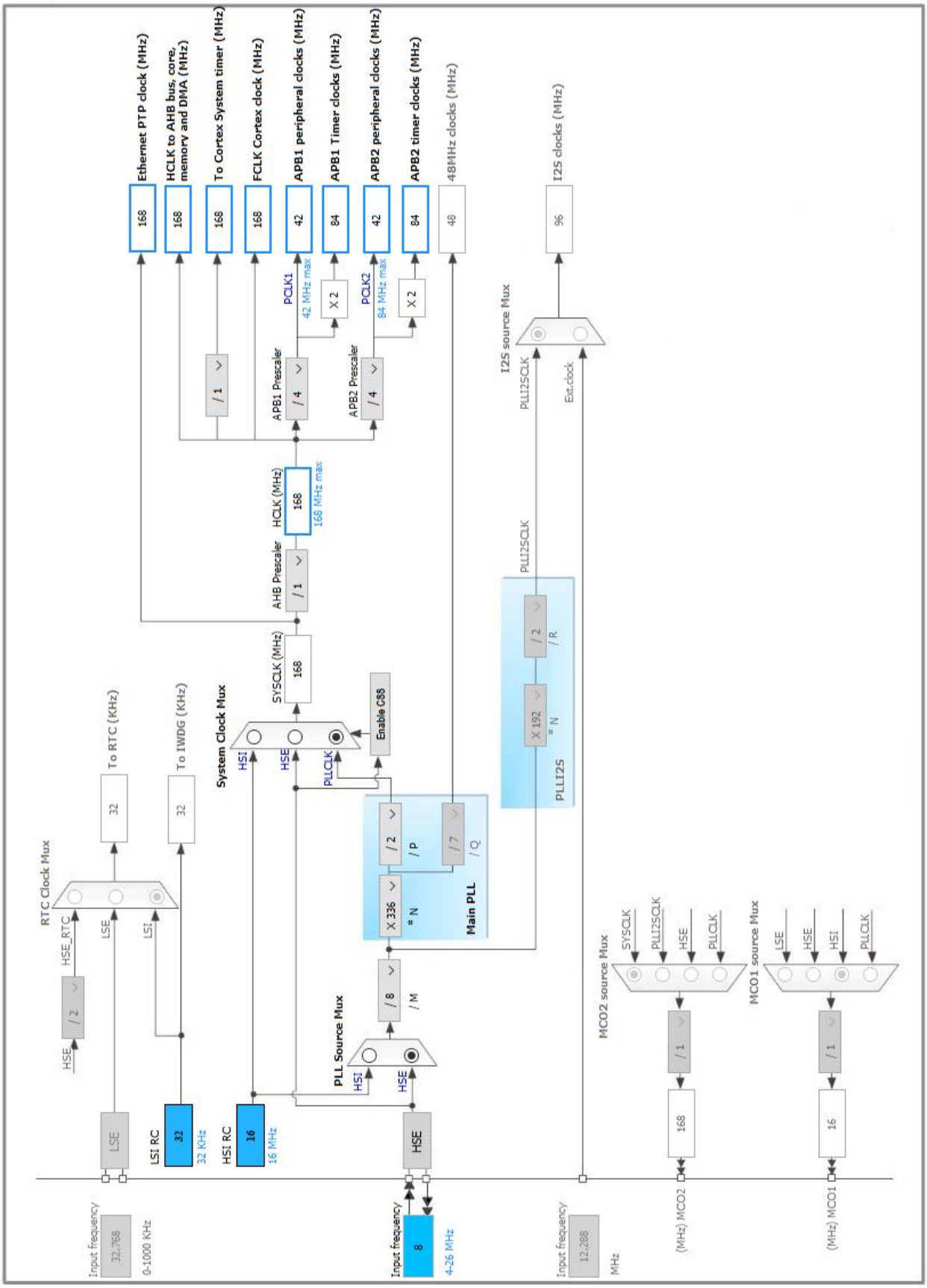
Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
8	PC14-OSC32_IN *	I/O	RCC_OSC32_IN	PC14-OSC32_IN
9	PC15-OSC32_OUT *	I/O	RCC_OSC32_OUT	PC15-OSC32_OUT
10	VSS	Power		
11	VDD	Power		
12	PH0-OSC_IN	I/O	RCC_OSC_IN	PH0-OSC_IN
13	PH1-OSC_OUT	I/O	RCC_OSC_OUT	PH1-OSC_OUT
14	NRST	Reset		
18	PC3 *	I/O	I2S2_SD	PDM_OUT [MP45DT02_DOUT]
19	VDD	Power		
20	VSSA	Power		
21	VREF+	Power		
22	VDDA	Power		
27	VSS	Power		
28	VDD	Power		
29	PA4 *	I/O	I2S3_WS	I2S3_WS [CS43L22_LRCK]
30	PA5 *	I/O	SPI1_SCK	SPI1_SCK [LIS302DL_SCL/SPC]
31	PA6 *	I/O	SPI1_MISO	SPI1_MISO [LIS302DL_SDO]
32	PA7 *	I/O	SPI1_MOSI	SPI1_MOSI [LIS302DL_SDA/SDI/SDO]
47	PB10 *	I/O	I2S2_CK	CLK_IN [MP45DT02_CLK]
49	VCAP_1	Power		
50	VDD	Power		
59	PD12 **	I/O	GPIO_Output	LD4 [Green Led]
69	PA10	I/O	USART1_RX	
73	VCAP_2	Power		
74	VSS	Power		
75	VDD	Power		
76	PA14 *	I/O	SYS_JTCK-SWCLK	SWCLK
78	PC10 *	I/O	I2S3_CK	I2S3_SCK [CS43L22_SCLK]
80	PC12 *	I/O	I2S3_SD	I2S3_SD [CS43L22_SDIN]
89	PB3 *	I/O	SYS_JTDO-SWO	SWO
92	PB6	I/O	USART1_TX	

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
94	BOOT0	Boot		
99	VSS	Power		
100	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. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.1.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Enabled
Data Cache	Enabled
Flash Latency(WS)	5 WS (6 CPU cycle)

RCC Parameters:

HSI Calibration Value	16

Power Parameters:

Power Regulatror Voltage Scale	Power Regulator Voltage Scale 1

5.2. SYS

Timebase Source: SysTick

5.3. USART1

Mode: Asynchronous

5.3.1. Parameter Settings:

Basic Parameters:

Baud Rate	**9600 ***
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	PH0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	PH0-OSC_IN
	PH1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	PH1-OSC_OUT
USART1	PA10	USART1_RX	Alternate Function Push Pull	Pull-up	**High ***	
	PB6	USART1_TX	Alternate Function Push Pull	Pull-up	**High ***	
Single Mapped Signals	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	PC14-OSC32_IN
	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	PC15-OSC32_OUT
	PC3	I2S2_SD	Alternate Function Push Pull	No pull-up and no pull-down	Low	PDM_OUT [MP45DT02_DOUT]
	PA4	I2S3_WS	Alternate Function Push Pull	No pull-up and no pull-down	Low	I2S3_WS [CS43L22_LRCK]
	PA5	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	Low	SPI1_SCK [LIS302DL_SCL/SPC]
	PA6	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	Low	SPI1_MISO [LIS302DL_SDO]
	PA7	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	Low	SPI1_MOSI [LIS302DL_SDA/SDI/SDO]
	PB10	I2S2_CK	Alternate Function Push Pull	No pull-up and no pull-down	Low	CLK_IN [MP45DT02_CLK]
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	SWCLK
	PC10	I2S3_CK	Alternate Function Push Pull	No pull-up and no pull-down	Low	I2S3_SCK [CS43L22_SCLK]
	PC12	I2S3_SD	Alternate Function Push Pull	No pull-up and no pull-down	Low	I2S3_SD [CS43L22_SDIN]
	PB3	SYS_JTDO-SWO	n/a	n/a	n/a	SWO
GPIO	PD12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	**High ***	LD4 [Green 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
Debug monitor	true	0	0
System tick timer	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 Plugin report

7.1. Microcontroller Selection

Series	STM32F4
Line	STM32F407/417
MCU	STM32F407VGTx
Datasheet	022152_Rev6

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	UART
Project Folder	D:\Documents\uart\UART
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F4 V1.11.0

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