1. Description

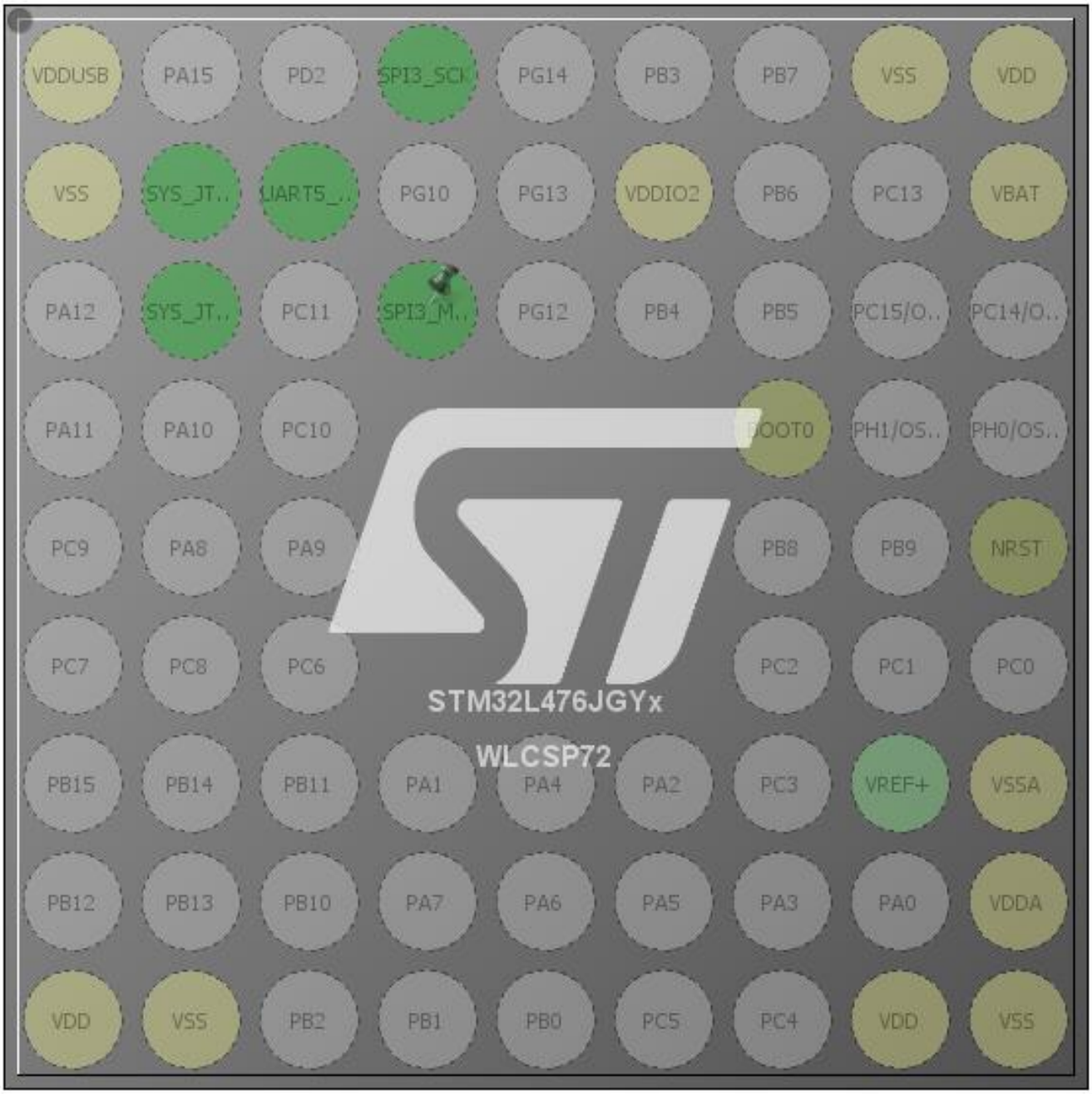
1.1. Project

Project Name	SensorTile
Board Name	SensorTile
Generated with:	STM32CubeMX 4.20.0
Date	04/22/2017

1.2. MCU

MCU Series	STM32L4
MCU Line	STM32L4x6
MCU name	STM32L476JGYx
MCU Package	WLCSP72
MCU Pin number	72

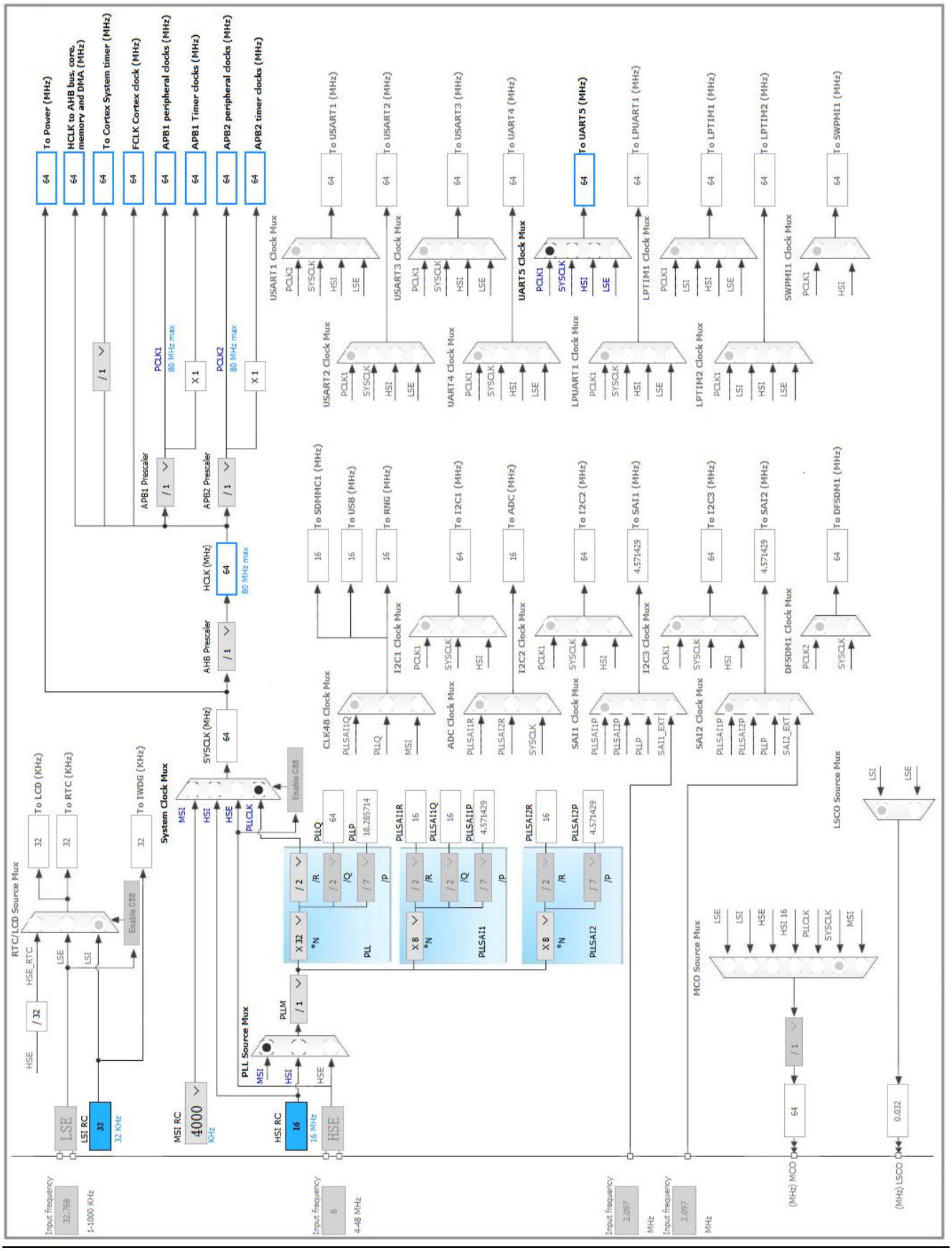
2. Pinout Configuration



3. Pins Configuration

Pin Number WLCSP72	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
A1	VDDUSB	Power		
A4	PG9	I/O	SPI3_SCK	
A8	VSS	Power		
A9	VDD	Power		
B1	VSS	Power		
B2	PA14	I/O	SYS_JTCK-SWCLK	
B3	PC12	I/O	UART5_TX	
B6	VDDIO2	Power		
B9	VBAT	Power		
C2	PA13	I/O	SYS_JTMS-SWDIO	
C4	PG11	I/O	SPI3_MOSI	
D7	BOOT0	Boot		
E9	NRST	Reset		
G9	VSSA	Power		
H9	VDDA	Power		
J1	VDD	Power		
J2	VSS	Power		
J8	VDD	Power		
J9	VSS	Power		

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. SPI3

Mode: Transmit Only Master

5.1.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	**8 Bits ***
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	**8 ***
Baud Rate	**8.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

5.2. SYS

Debug: Serial Wire

5.3. UART5

Mode: Single Wire (Half-Duplex)

5.3.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
Word Length	**8 Bits (including Parity) ***
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	**Transmit Only ***
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
SPI3	PG9	SPI3_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PG11	SPI3_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
SYS	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
UART5	PC12	UART5_TX	Alternate Function Open Drain	Pull-up	**Very High** *	

6.2. DMA configuration

DMA request	Stream	Direction	Priority
SPI3_TX	DMA2_Channel2	Memory To Peripheral	Low

SPI3_TX: DMA2_Channel2 DMA request Settings:

Mode:	Normal
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

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
Prefetch 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
DMA2 channel2 global interrupt	true	0	0
PVD/PVM1/PVM2/PVM3/PVM4 interrupts through EXTI lines 16/35/36/37/38	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
SPI3 global interrupt	unused		
UART5 global interrupt	unused		
FPU global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L4
Line	STM32L4x6
MCU	STM32L476JGYx
Datasheet	025976_Rev4

7.2. Parameter Selection

Temperature	25
Vdd	null

8. Software Project

8.1. Project Settings

Name	Value
Project Name	SensorTile
Project Folder	C:\Users\DengQ\Desktop\SensorTile
Toolchain / IDE	EWARM
Firmware Package Name and Version	STM32Cube FW_L4 V1.7.0

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	Yes
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)	Yes