

## 1. Description

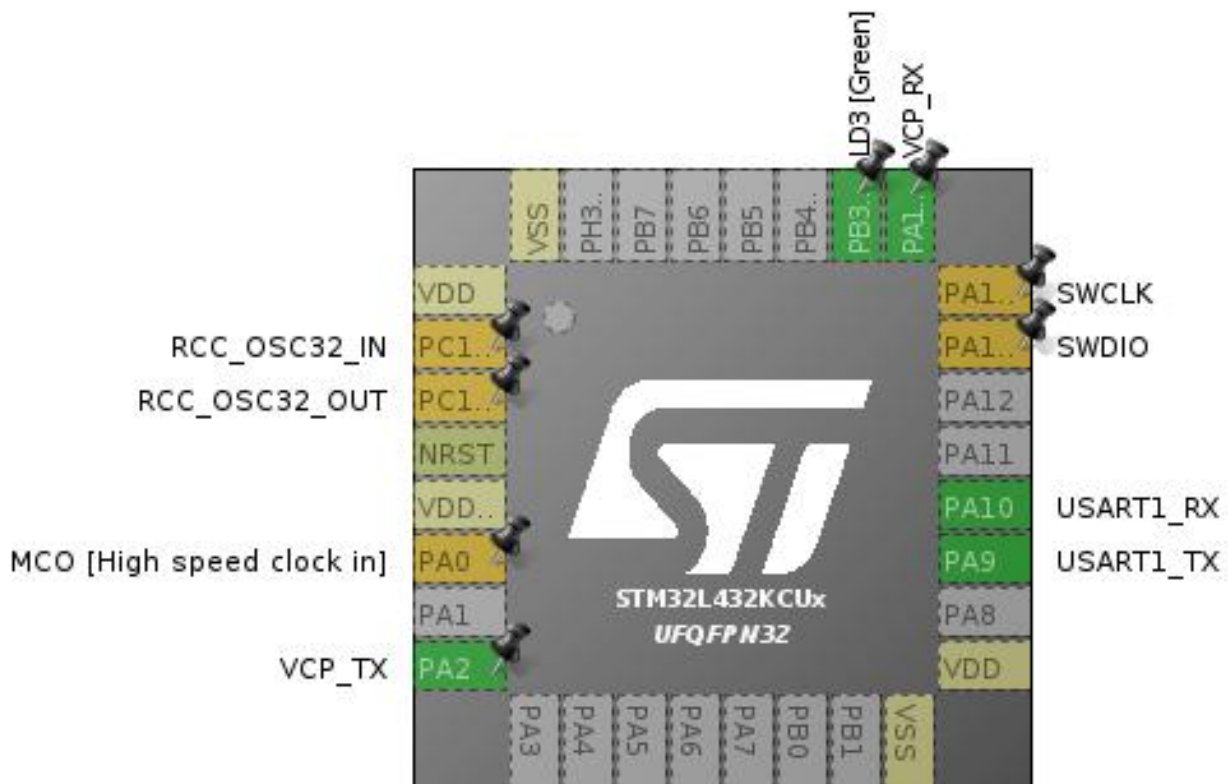
### 1.1. Project

Project Name	Communication
Board Name	NUCLEO-L432KC
Generated with:	STM32CubeMX 4.21.0
Date	05/27/2018

### 1.2. MCU

MCU Series	STM32L4
MCU Line	STM32L4x2
MCU name	STM32L432KCUx
MCU Package	UFQFPN32
MCU Pin number	32

## 2. Pinout Configuration



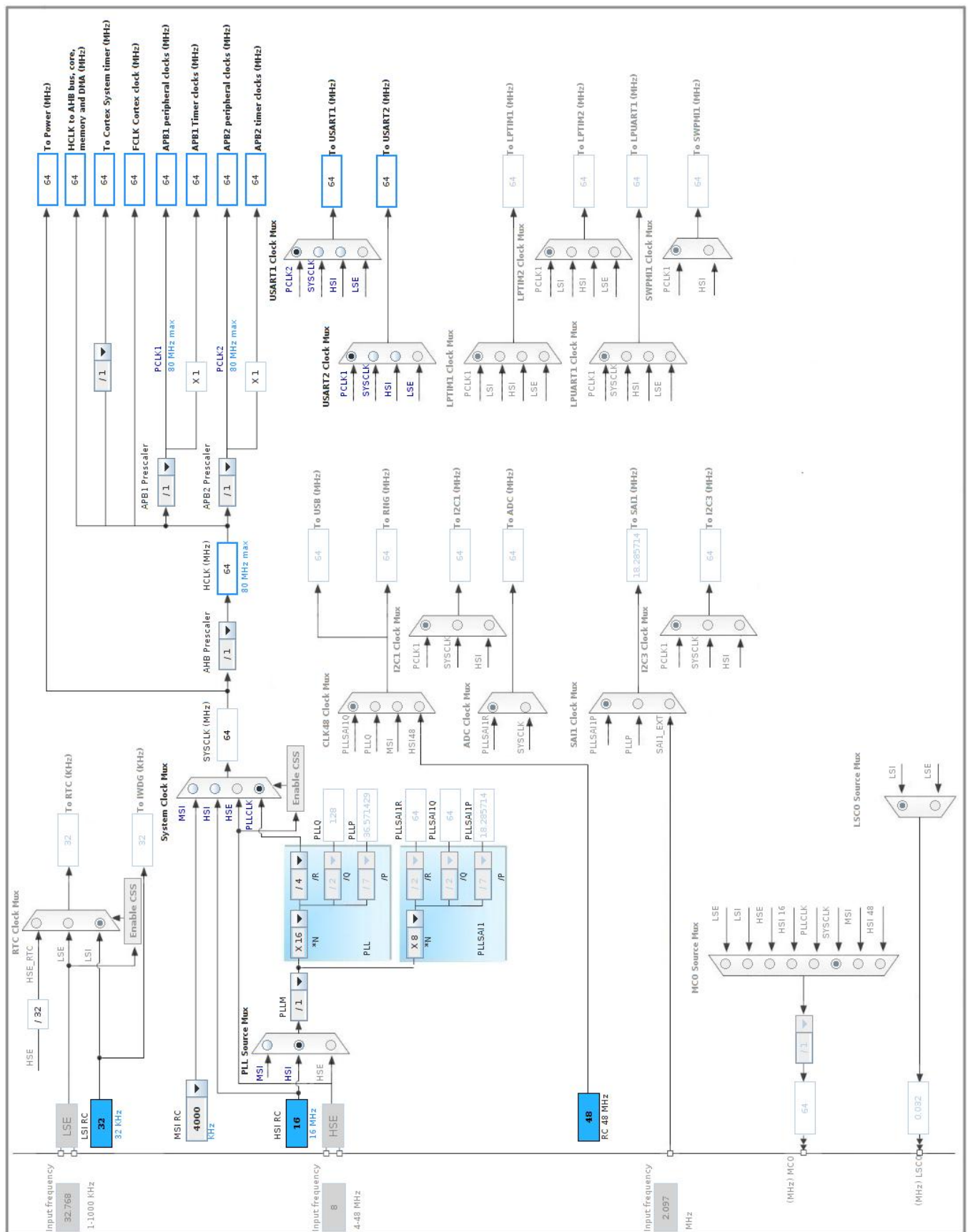
### 3. Pins Configuration

Pin Number UFQFPN32	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VDD	Power		
2	PC14-OSC32_IN (PC14) *	I/O	RCC_OSC32_IN	
3	PC15-OSC32_OUT (PC15) *	I/O	RCC_OSC32_OUT	
4	NRST	Reset		
5	VDDA/VREF+	Power		
6	PA0 *	I/O	RCC_CK_IN	MCO [High speed clock in]
8	PA2	I/O	USART2_TX	VCP_TX
16	VSS	Power		
17	VDD	Power		
19	PA9	I/O	USART1_TX	
20	PA10	I/O	USART1_RX	
23	PA13 (JTMS-SWDIO) *	I/O	SYS_JTMS-SWDIO	SWDIO
24	PA14 (JTCK-SWCLK) *	I/O	SYS_JTCK-SWCLK	SWCLK
25	PA15 (JTDI)	I/O	USART2_RX	VCP_RX
26	PB3 (JTDO-TRACESWO) **	I/O	GPIO_Output	LD3 [Green]
32	VSS	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

**Timebase Source:** SysTick

### 5.2. USART1

**Mode:** Asynchronous

#### 5.2.1. Parameter Settings:

##### Basic Parameters:

Baud Rate	1000000 *
Word Length	8 Bits (including Parity) *
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

### 5.3. USART2

**Mode:** Asynchronous

#### 5.3.1. Parameter Settings:

##### Basic Parameters:

Baud Rate

**1000000 \***

Word Length

**8 Bits (including Parity) \***

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
USART1	PA9	USART1_TX	Alternate Function Push Pull	Pull-up	Very High *	
	PA10	USART1_RX	Alternate Function Push Pull	Pull-up	Very High *	
USART2	PA2	USART2_TX	Alternate Function Push Pull	Pull-up	Very High *	VCP_TX
	PA15 (JTDI)	USART2_RX	Alternate Function Push Pull	Pull-up	Very High *	VCP_RX
Single Mapped Signals	PC14-OSC32_IN (PC14)	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT (PC15)	RCC_OSC32_OUT	n/a	n/a	n/a	
	PA0	RCC_CLK_IN	n/a	n/a	n/a	MCO [High speed clock in]
	PA13 (JTMS-SWDIO)	SYS_JTMS-SWDIO	n/a	n/a	n/a	SWDIO
	PA14 (JTCK-SWCLK)	SYS_JTCK-SWCLK	n/a	n/a	n/a	SWCLK
GPIO	PB3 (JTDO-TRACESWO)	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LD3 [Green]

### 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
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	1	0
USART1 global interrupt	true	0	0
USART2 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		
FPU global interrupt	unused		

\* User modified value



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

### 7.1. Microcontroller Selection

Series	STM32L4
Line	STM32L4x2
MCU	STM32L432KCUx
Datasheet	028798_Rev1

### 7.2. Parameter Selection

Temperature	25
Vdd	null

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	Communication
Project Folder	/home/vuwij/Documents/soccer-
Toolchain / IDE	SW4STM32
Firmware Package Name and Version	STM32Cube FW_L4 V1.8.1

### 8.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	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