

## 1. Description

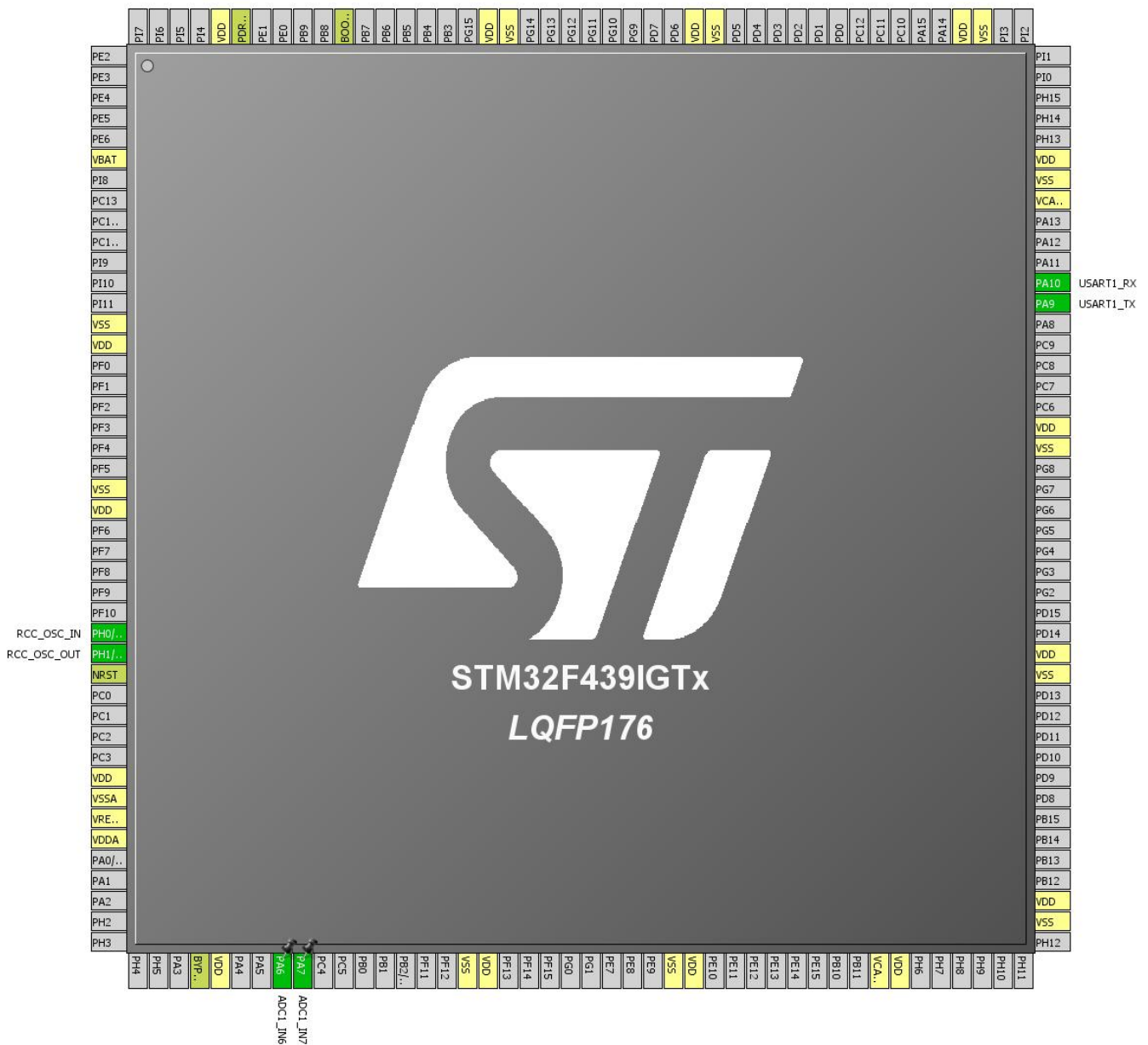
### 1.1. Project

Project Name	STM32F429I
Board Name	STM32F429I
Generated with:	STM32CubeMX 4.11.0
Date	11/27/2015

### 1.2. MCU

MCU Series	STM32F4
MCU Line	STM32F429/439
MCU name	STM32F439IGTx
MCU Package	LQFP176
MCU Pin number	176

## 2. Pinout Configuration

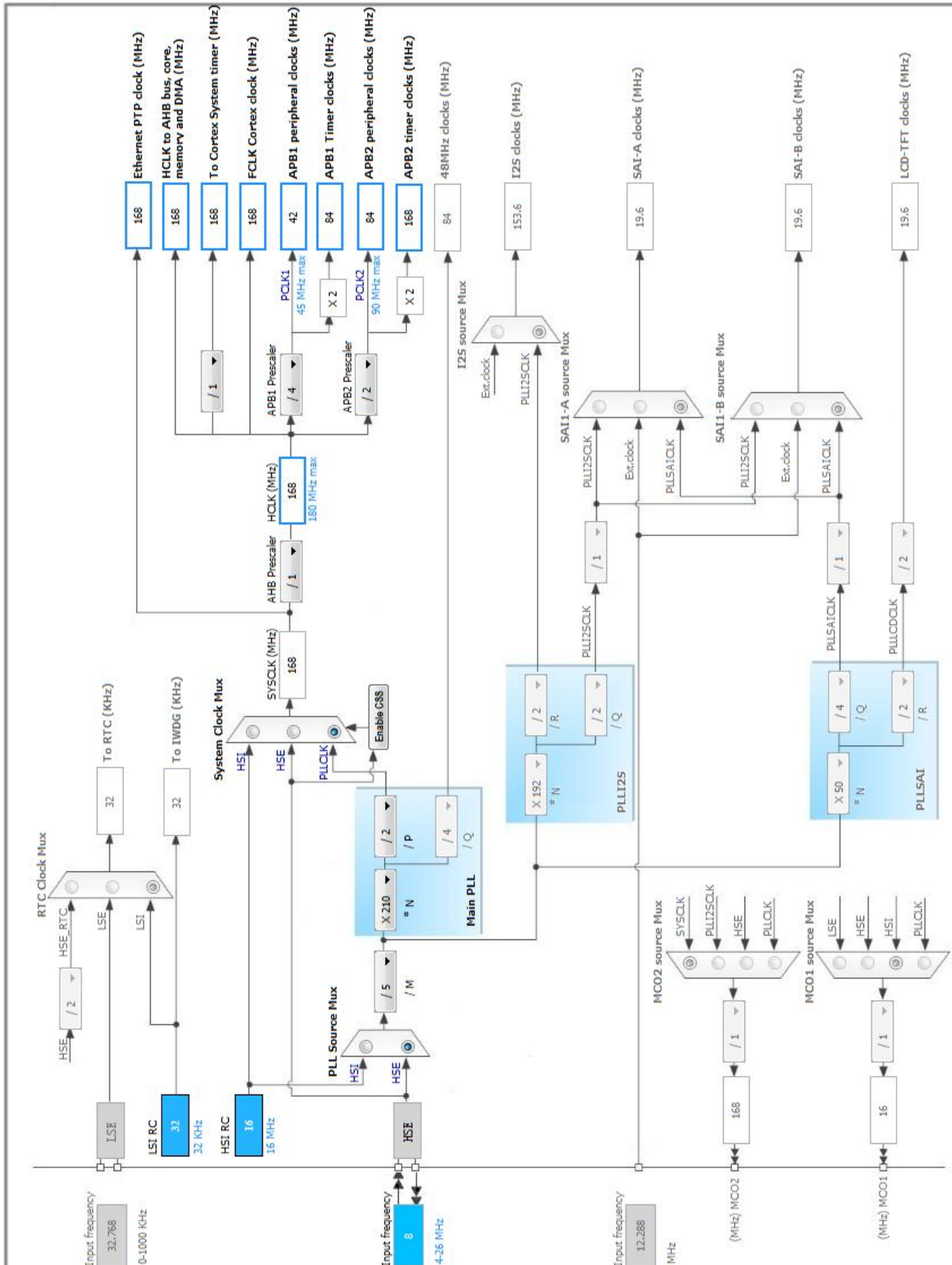


### 3. Pins Configuration

Pin Number LQFP176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
14	VSS	Power		
15	VDD	Power		
22	VSS	Power		
23	VDD	Power		
29	PH0/OSC_IN	I/O	RCC_OSC_IN	
30	PH1/OSC_OUT	I/O	RCC_OSC_OUT	
31	NRST	Reset		
36	VDD	Power		
37	VSSA	Power		
38	VREF+	Power		
39	VDDA	Power		
48	BYPASS_REG	Reset		
49	VDD	Power		
52	PA6	I/O	ADC1_IN6	
53	PA7	I/O	ADC1_IN7	
61	VSS	Power		
62	VDD	Power		
71	VSS	Power		
72	VDD	Power		
81	VCAP_1	Power		
82	VDD	Power		
90	VSS	Power		
91	VDD	Power		
102	VSS	Power		
103	VDD	Power		
113	VSS	Power		
114	VDD	Power		
120	PA9	I/O	USART1_TX	
121	PA10	I/O	USART1_RX	
125	VCAP_2	Power		
126	VSS	Power		
127	VDD	Power		
135	VSS	Power		
136	VDD	Power		
148	VSS	Power		

Pin Number LQFP176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
149	VDD	Power		
158	VSS	Power		
159	VDD	Power		
166	BOOT0	Boot		
171	PDR_ON	Reset		
172	VDD	Power		

## 4. Clock Tree Configuration



## 5. IPs and Middleware Configuration

### 5.1. ADC1

mode: IN6

mode: IN7

#### 5.1.1. Parameter Settings:

##### ADCs\_Common\_Settings:

Mode Independent mode

##### ADC\_Settings:

Clock Prescaler PCLK2 divided by 4

Resolution 12 bits (15 ADC Clock cycles)

Data Alignment Right alignment

Scan Conversion Mode **Enabled \***

Continuous Conversion Mode **Enabled \***

Discontinuous Conversion Mode Disabled

DMA Continuous Requests **Enabled \***

End Of Conversion Selection EOC flag at the end of single channel conversion

##### ADC\_Regular\_ConversionMode:

Number Of Conversion **2 \***

External Trigger Conversion Edge None

Rank 1

Channel Channel 6

Sampling Time 3 Cycles

Rank **2 \***

Channel **Channel 7 \***

Sampling Time 3 Cycles

##### ADC\_Injected\_ConversionMode:

Number Of Conversions 0

##### WatchDog:

Enable Analog WatchDog Mode false

### 5.2. RCC

## High Speed Clock (HSE): Crystal/Ceramic Resonator

### 5.2.1. 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
TIM Prescaler Selection	Disabled

#### Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1
Power Over Drive	Disabled

## 5.3. USART1

### Mode: Asynchronous

### 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	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
ADC1	PA6	ADC1_IN6	Analog mode	No pull-up and no pull-down	n/a	
	PA7	ADC1_IN7	Analog mode	No pull-up and no pull-down	n/a	
RCC	PH0/OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PH1/OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	Pull-up	<b>High *</b>	
	PA10	USART1_RX	Alternate Function Push Pull	Pull-up	<b>High *</b>	



## 6.2. DMA configuration

DMA request	Stream	Direction	Priority
ADC1	DMA2_Stream0	Peripheral To Memory	<b>Very High *</b>

### ADC1: DMA2\_Stream0 DMA request Settings:

Mode: **Circular \***

Use fifo: Disable

Peripheral Increment: Disable

Memory Increment: **Enable \***

Peripheral Data Width: Half Word

Memory Data Width: Half Word

### 6.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
System tick timer	true	0	0
DMA2 stream0 global interrupt	true	0	0
Non maskable interrupt	unused		
Memory management fault	unused		
Pre-fetch fault, memory access fault	unused		
Undefined instruction or illegal state	unused		
Debug monitor	unused		
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1, ADC2 and ADC3 global interrupts	unused		
USART1 global interrupt	unused		

\* User modified value

## ***7. Power Plugin report***

### 7.1. Microcontroller Selection

Series	STM32F4
Line	STM32F429/439
MCU	STM32F439IGTx
Datasheet	024244_Rev6

### 7.2. Parameter Selection

Temperature	25
Vdd	null

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	STM32F429I
Project Folder	C:\Users\Administrator\Desktop\stm32cube\STM32F429I\11.ADC - DMA
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F4 V1.9.0

### 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)	No