1. Description

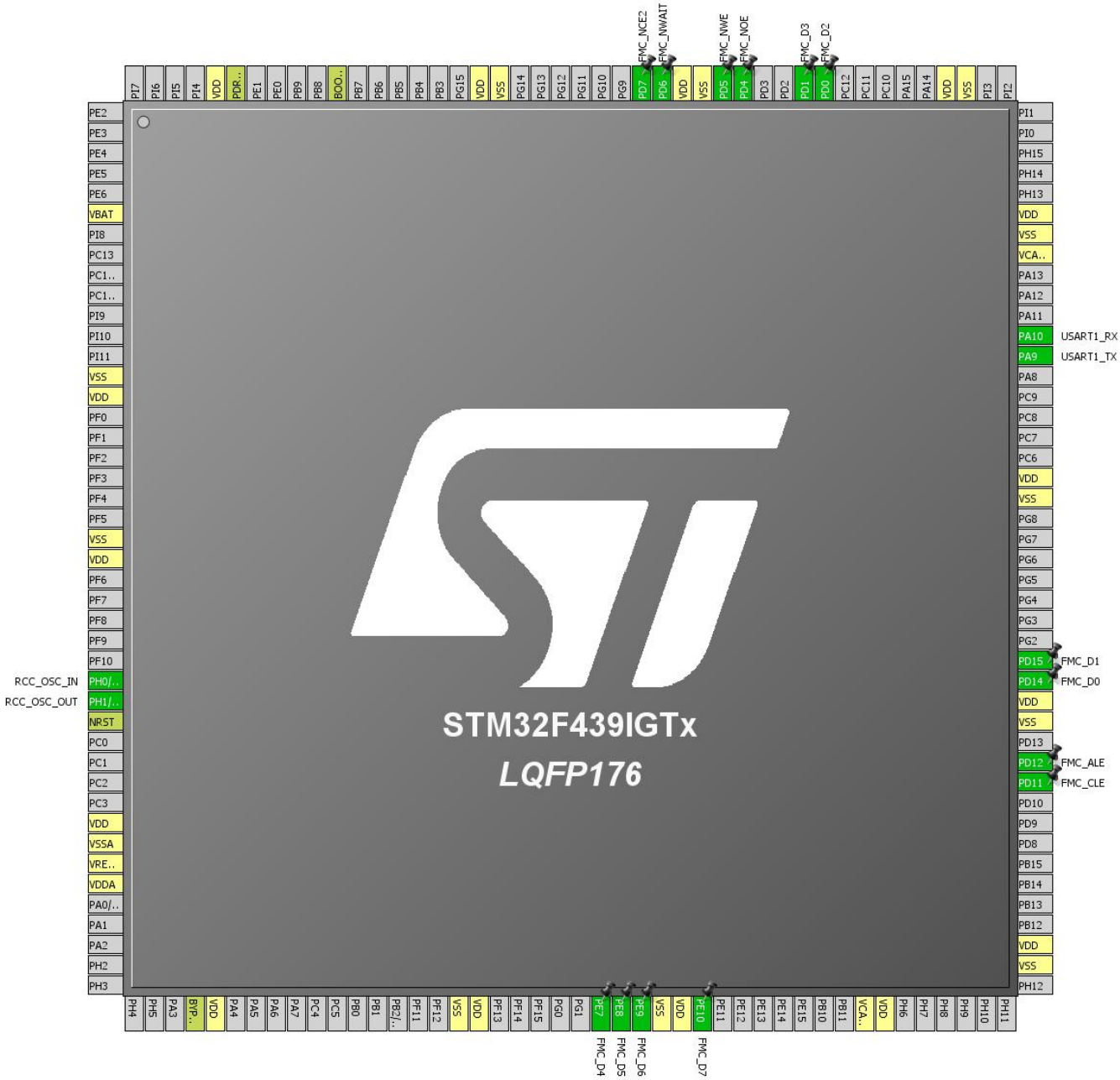
1.1. Project

Project Name	STM32F429I
Board Name	STM32F429I
Generated with:	STM32CubeMX 4.11.0
Date	11/12/2015

1.2. MCU

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

2. Pinout Configuration

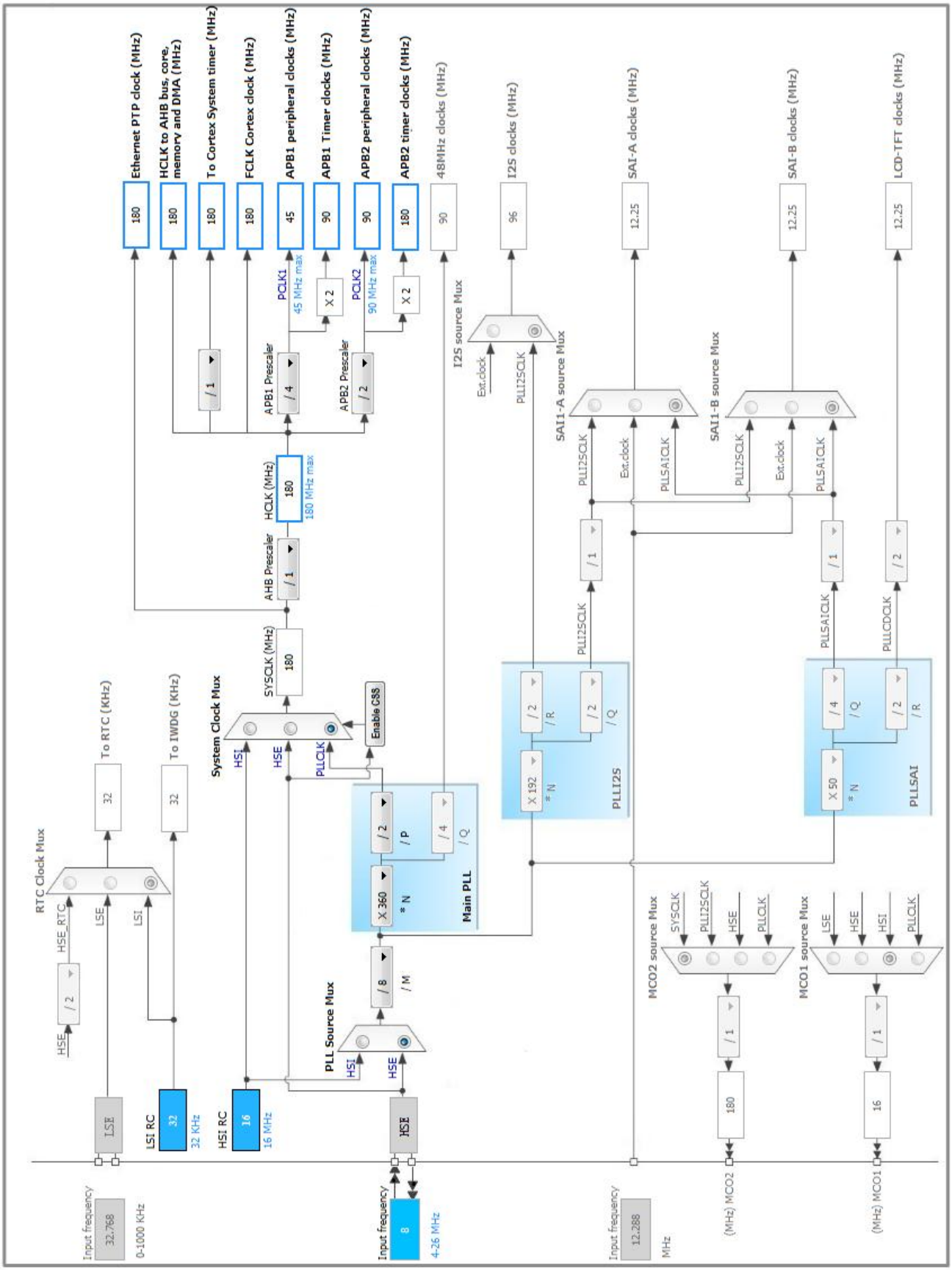


3. Pins Configuration

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		
61	VSS	Power		
62	VDD	Power		
68	PE7	I/O	FMC_D4	
69	PE8	I/O	FMC_D5	
70	PE9	I/O	FMC_D6	
71	VSS	Power		
72	VDD	Power		
73	PE10	I/O	FMC_D7	
81	VCAP_1	Power		
82	VDD	Power		
90	VSS	Power		
91	VDD	Power		
99	PD11	I/O	FMC_CLE	
100	PD12	I/O	FMC_ALE	
102	VSS	Power		
103	VDD	Power		
104	PD14	I/O	FMC_D0	
105	PD15	I/O	FMC_D1	
113	VSS	Power		
114	VDD	Power		
120	PA9	I/O	USART1_TX	
121	PA10	I/O	USART1_RX	

Pin Number LQFP176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
125	VCAP_2	Power		
126	VSS	Power		
127	VDD	Power		
135	VSS	Power		
136	VDD	Power		
142	PD0	I/O	FMC_D2	
143	PD1	I/O	FMC_D3	
146	PD4	I/O	FMC_NOE	
147	PD5	I/O	FMC_NWE	
148	VSS	Power		
149	VDD	Power		
150	PD6	I/O	FMC_NWAIT	
151	PD7	I/O	FMC_NCE2	
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. FMC

NAND Flash 1

Chip select: NCE2

Data/Address: 8 bits

Ready or busy: NWAIT

5.1.1. NAND 1:

NAND control:

Bank	NAND bank 2
ECC computation	**Enabled ***
ECC page size	**512 bytes ***
CLE low to RE low delay in HCLK cycles	**1 ***
ALE low to RE low delay in HCLK cycles	**1 ***

NAND common space timing in HCLK cycles:

Common space setup time	**0xF5 ***
Common space wait time	**0xF3 ***
Common space hold time	**0xF2 ***
Common space Hi-Z time	**0xF5 ***

NAND attribute space timing in HCLK cycles:

Attribute space setup time	**0xF5 ***
Attribute space wait time	**0xF3 ***
Attribute space hold time	**0xF2 ***
Attribute space Hi-Z time	**0xF5 ***

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 Regulatror Voltage Scale	Power Regulator Voltage Scale 1
Power Over Drive	Enabled

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
FMC	PE7	FMC_D4	Alternate Function Push Pull	**Pull-up ***	High	
	PE8	FMC_D5	Alternate Function Push Pull	**Pull-up ***	High	
	PE9	FMC_D6	Alternate Function Push Pull	**Pull-up ***	High	
	PE10	FMC_D7	Alternate Function Push Pull	**Pull-up ***	High	
	PD11	FMC_CLE	Alternate Function Push Pull	**Pull-up ***	High	
	PD12	FMC_ALE	Alternate Function Push Pull	**Pull-up ***	High	
	PD14	FMC_D0	Alternate Function Push Pull	**Pull-up ***	High	
	PD15	FMC_D1	Alternate Function Push Pull	**Pull-up ***	High	
	PD0	FMC_D2	Alternate Function Push Pull	**Pull-up ***	High	
	PD1	FMC_D3	Alternate Function Push Pull	**Pull-up ***	High	
	PD4	FMC_NOE	Alternate Function Push Pull	**Pull-up ***	High	
	PD5	FMC_NWE	Alternate Function Push Pull	**Pull-up ***	High	
	PD6	FMC_NWAIT	Alternate Function Push Pull	**Pull-up ***	High	
	PD7	FMC_NCE2	Alternate Function Push Pull	**Pull-up ***	High	
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	**High ***	
	PA10	USART1_RX	Alternate Function Push Pull	Pull-up	**High ***	

6.2. DMA configuration

nothing configured in DMA service

6.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
System tick timer	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		
USART1 global interrupt	unused		
FMC 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\32.NandFlash
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