1. Description

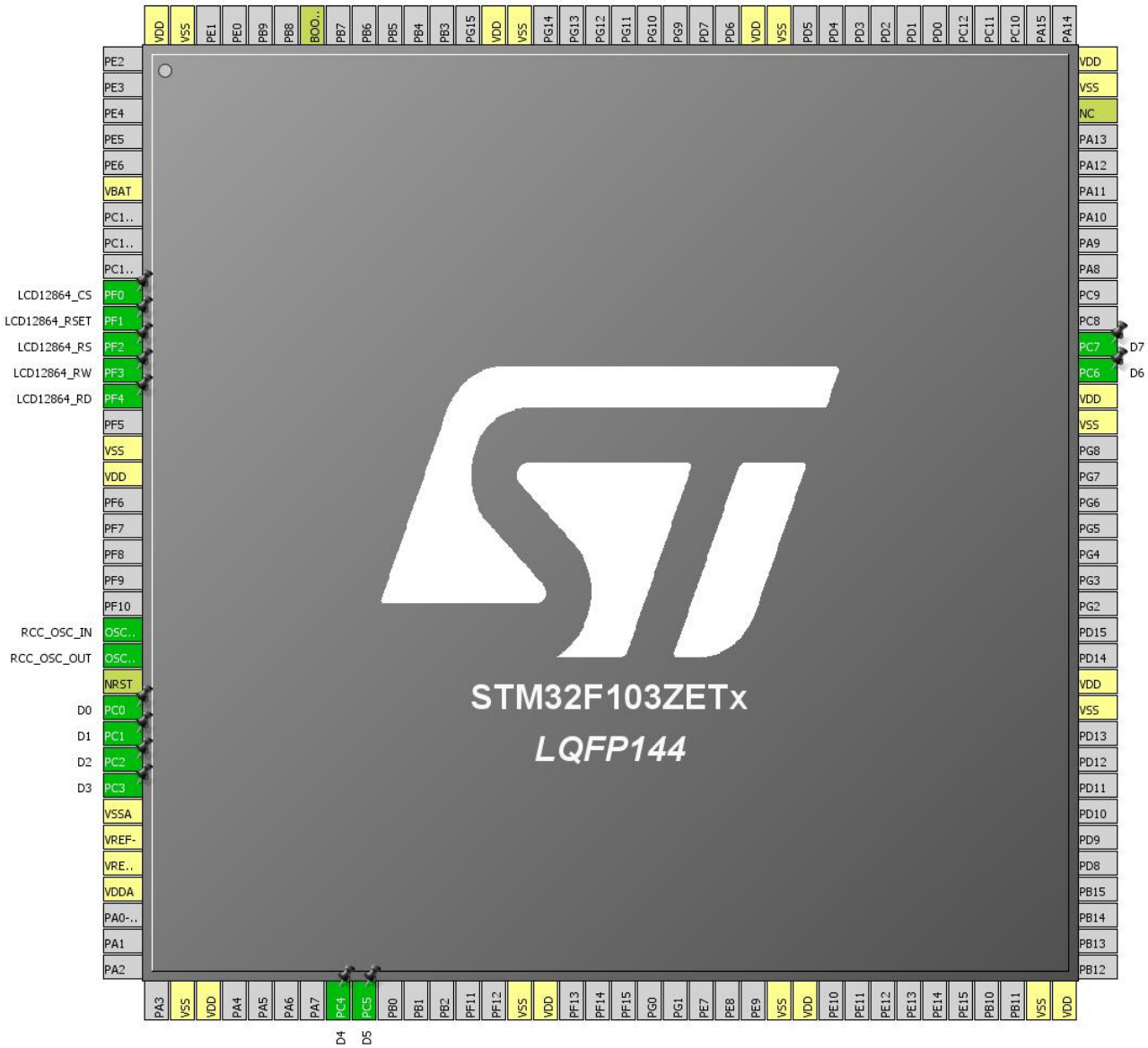
1.1. Project

Project Name	LCD12864_01
Board Name	LCD12864_01
Generated with:	STM32CubeMX 4.22.0
Date	08/03/2017

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103ZETx
MCU Package	LQFP144
MCU Pin number	144

2. Pinout Configuration



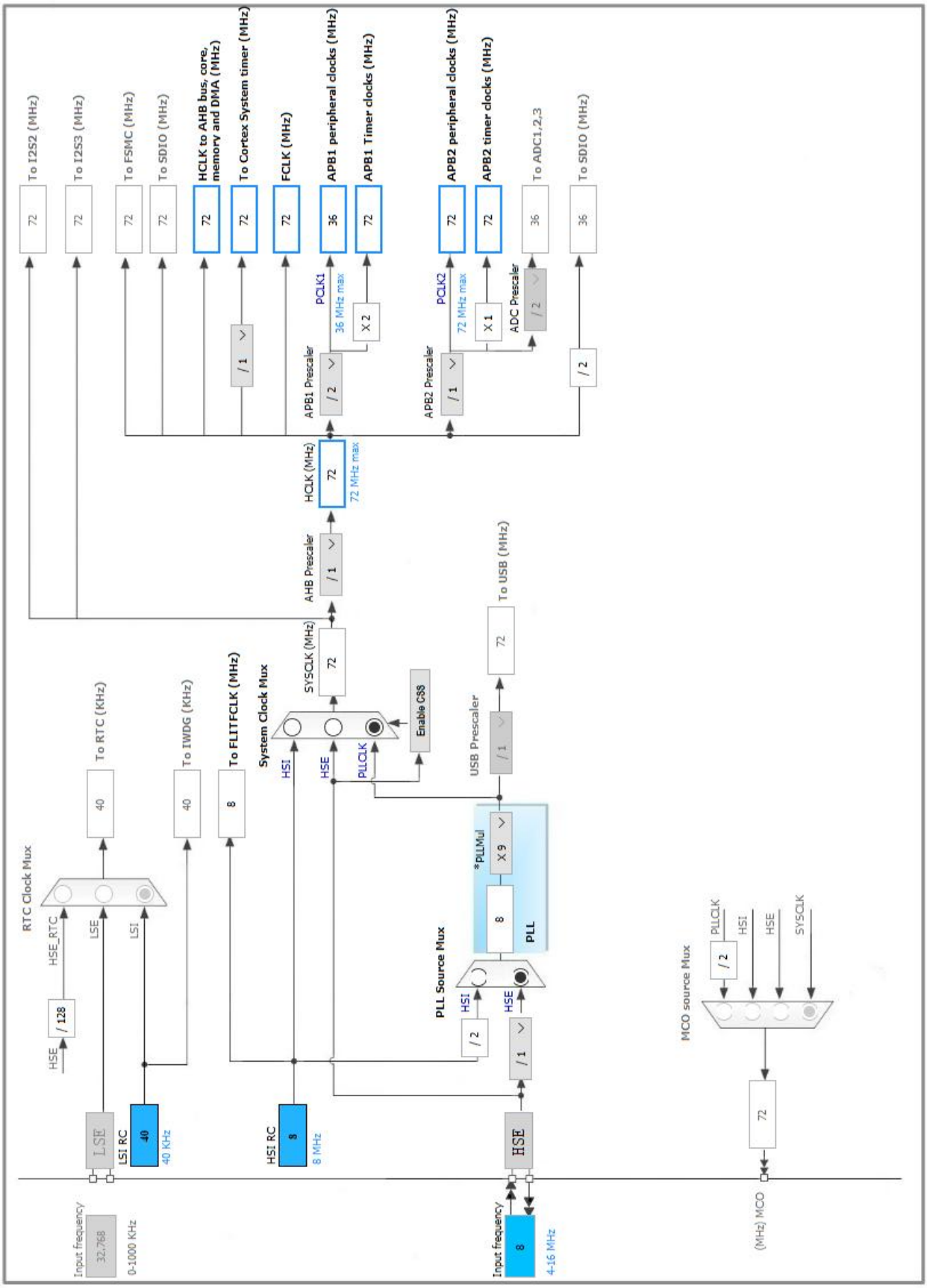
3. Pins Configuration

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
10	PF0 *	I/O	GPIO_Output	LCD12864_CS
11	PF1 *	I/O	GPIO_Output	LCD12864_RSET
12	PF2 *	I/O	GPIO_Output	LCD12864_RS
13	PF3 *	I/O	GPIO_Output	LCD12864_RW
14	PF4 *	I/O	GPIO_Output	LCD12864_RD
16	VSS	Power		
17	VDD	Power		
23	OSC_IN	I/O	RCC_OSC_IN	
24	OSC_OUT	I/O	RCC_OSC_OUT	
25	NRST	Reset		
26	PC0 *	I/O	GPIO_Output	D0
27	PC1 *	I/O	GPIO_Output	D1
28	PC2 *	I/O	GPIO_Output	D2
29	PC3 *	I/O	GPIO_Output	D3
30	VSSA	Power		
31	VREF-	Power		
32	VREF+	Power		
33	VDDA	Power		
38	VSS	Power		
39	VDD	Power		
44	PC4 *	I/O	GPIO_Output	D4
45	PC5 *	I/O	GPIO_Output	D5
51	VSS	Power		
52	VDD	Power		
61	VSS	Power		
62	VDD	Power		
71	VSS	Power		
72	VDD	Power		
83	VSS	Power		
84	VDD	Power		
94	VSS	Power		
95	VDD	Power		
96	PC6 *	I/O	GPIO_Output	D6
97	PC7 *	I/O	GPIO_Output	D7
106	NC	NC		

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
107	VSS	Power		
108	VDD	Power		
120	VSS	Power		
121	VDD	Power		
130	VSS	Power		
131	VDD	Power		
138	BOOT0	Boot		
143	VSS	Power		
144	VDD	Power		

* The pin is affected with an I/O function

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
Prefetch Buffer	Enabled
Flash Latency(WS)	2 WS (3 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

5.2. SYS

Debug: No Debug

Timebase Source: SysTick

*** 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	OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
GPIO	PF0	GPIO_Output	Output Push Pull	n/a	Low	LCD12864_CS
	PF1	GPIO_Output	Output Push Pull	n/a	Low	LCD12864_RSET
	PF2	GPIO_Output	Output Push Pull	n/a	Low	LCD12864_RS
	PF3	GPIO_Output	Output Push Pull	n/a	Low	LCD12864_RW
	PF4	GPIO_Output	Output Push Pull	n/a	Low	LCD12864_RD
	PC0	GPIO_Output	Output Push Pull	n/a	Low	D0
	PC1	GPIO_Output	Output Push Pull	n/a	Low	D1
	PC2	GPIO_Output	Output Push Pull	n/a	Low	D2
	PC3	GPIO_Output	Output Push Pull	n/a	Low	D3
	PC4	GPIO_Output	Output Push Pull	n/a	Low	D4
	PC5	GPIO_Output	Output Push Pull	n/a	Low	D5
	PC6	GPIO_Output	Output Push Pull	n/a	Low	D6
	PC7	GPIO_Output	Output Push Pull	n/a	Low	D7

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	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103ZETx
Datasheet	14611_Rev12

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	LCD12864_01
Project Folder	E:\STM32F103ZET6\LCD12864_01
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.6.0

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