1. Description

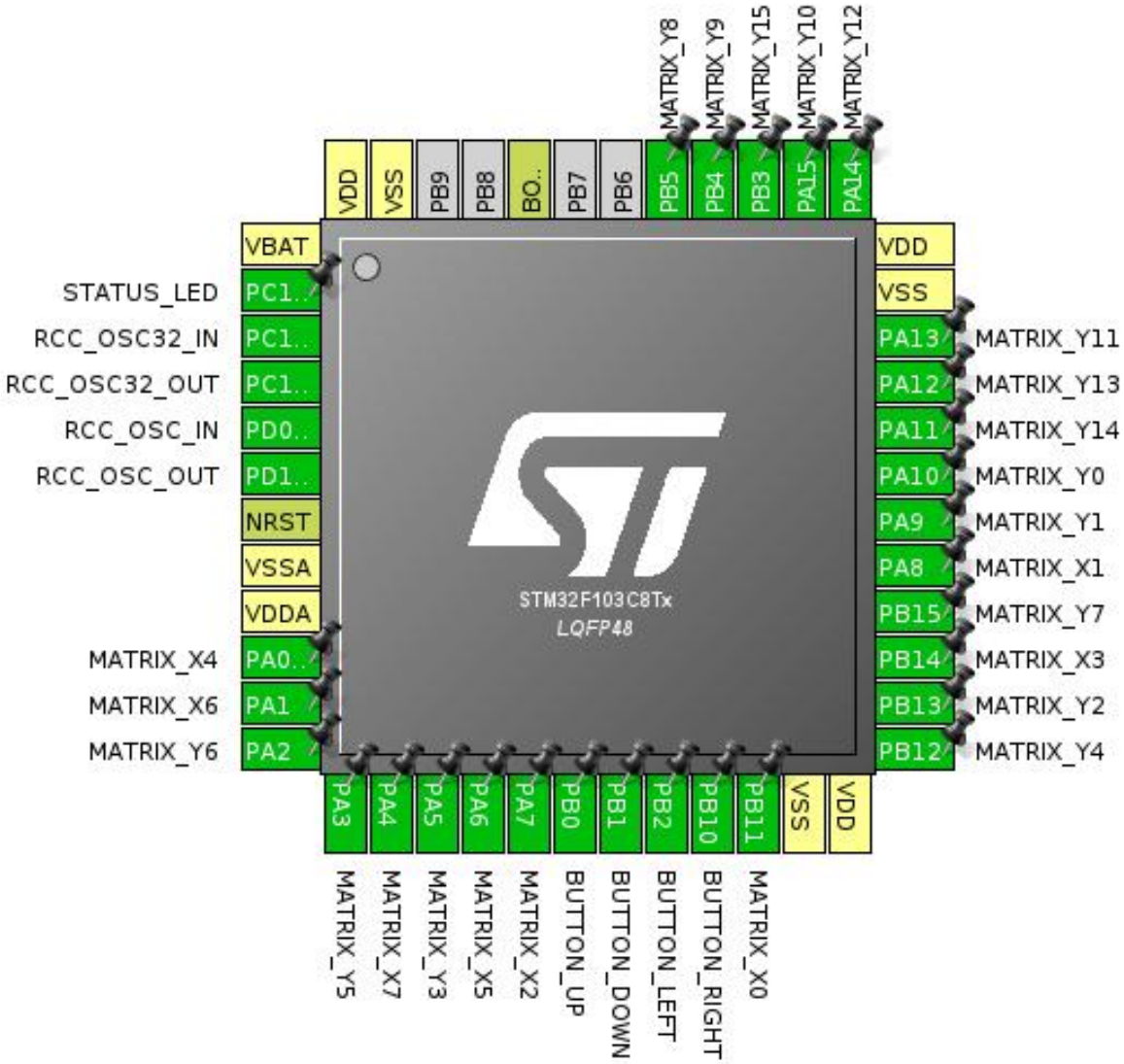
1.1. Project

Project Name	code
Board Name	code
Generated with:	STM32CubeMX 4.14.0
Date	04/26/2016

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103C8Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration



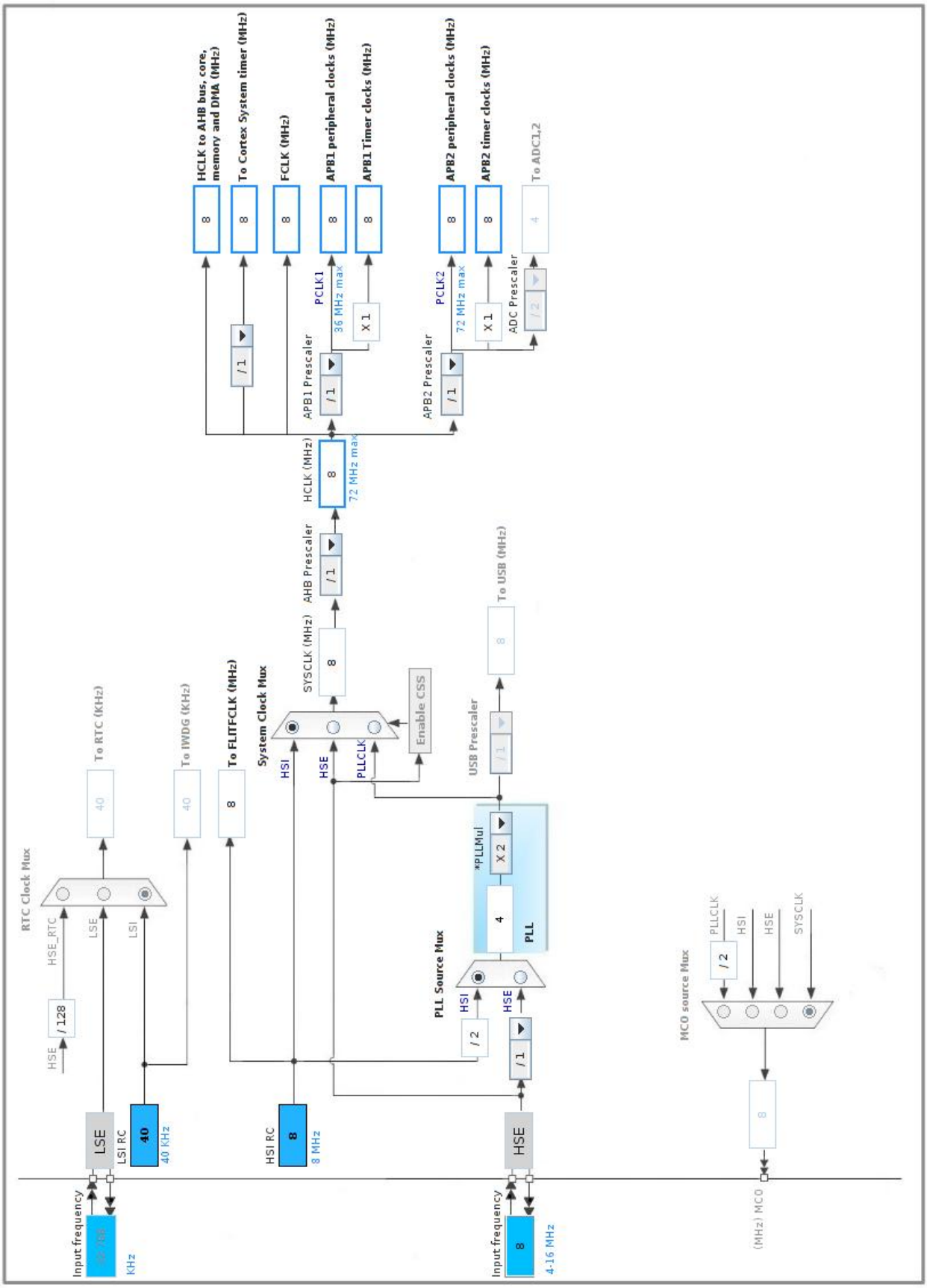
3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13-TAMPER-RTC *	I/O	GPIO_Output	STATUS_LED
3	PC14-OSC32_IN	I/O	RCC_OSC32_IN	
4	PC15-OSC32_OUT	I/O	RCC_OSC32_OUT	
5	PD0-OSC_IN	I/O	RCC_OSC_IN	
6	PD1-OSC_OUT	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
10	PA0-WKUP *	I/O	GPIO_Output	MATRIX_X4
11	PA1 *	I/O	GPIO_Output	MATRIX_X6
12	PA2 *	I/O	GPIO_Output	MATRIX_Y6
13	PA3 *	I/O	GPIO_Output	MATRIX_Y5
14	PA4 *	I/O	GPIO_Output	MATRIX_X7
15	PA5 *	I/O	GPIO_Output	MATRIX_Y3
16	PA6 *	I/O	GPIO_Output	MATRIX_X5
17	PA7 *	I/O	GPIO_Output	MATRIX_X2
18	PB0	I/O	GPIO_EXTI0	BUTTON_UP
19	PB1	I/O	GPIO_EXTI1	BUTTON_DOWN
20	PB2	I/O	GPIO_EXTI2	BUTTON_LEFT
21	PB10	I/O	GPIO_EXTI10	BUTTON_RIGHT
22	PB11 *	I/O	GPIO_Output	MATRIX_X0
23	VSS	Power		
24	VDD	Power		
25	PB12 *	I/O	GPIO_Output	MATRIX_Y4
26	PB13 *	I/O	GPIO_Output	MATRIX_Y2
27	PB14 *	I/O	GPIO_Output	MATRIX_X3
28	PB15 *	I/O	GPIO_Output	MATRIX_Y7
29	PA8 *	I/O	GPIO_Output	MATRIX_X1
30	PA9 *	I/O	GPIO_Output	MATRIX_Y1
31	PA10 *	I/O	GPIO_Output	MATRIX_Y0
32	PA11 *	I/O	GPIO_Output	MATRIX_Y14
33	PA12 *	I/O	GPIO_Output	MATRIX_Y13
34	PA13 *	I/O	GPIO_Output	MATRIX_Y11
35	VSS	Power		
36	VDD	Power		

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
37	PA14 *	I/O	GPIO_Output	MATRIX_Y12
38	PA15 *	I/O	GPIO_Output	MATRIX_Y10
39	PB3 *	I/O	GPIO_Output	MATRIX_Y15
40	PB4 *	I/O	GPIO_Output	MATRIX_Y9
41	PB5 *	I/O	GPIO_Output	MATRIX_Y8
44	BOOT0	Boot		
47	VSS	Power		
48	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

Low Speed Clock (LSE) : Crystal/Ceramic Resonator

5.1.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Prefetch Buffer	Enabled
Flash Latency(WS)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	16

5.2. SYS

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	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	
	PD0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PD1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
GPIO	PC13-TAMPER-RTC	GPIO_Output	Output Push Pull	n/a	Low	STATUS_LED
	PA0-WKUP	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X4
	PA1	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X6
	PA2	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y6
	PA3	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y5
	PA4	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X7
	PA5	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y3
	PA6	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X5
	PA7	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X2
	PB0	GPIO_EXTI0	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	BUTTON_UP
	PB1	GPIO_EXTI1	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	BUTTON_DOWN
	PB2	GPIO_EXTI2	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	BUTTON_LEFT
	PB10	GPIO_EXTI10	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	BUTTON_RIGHT
	PB11	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X0
	PB12	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y4
	PB13	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y2
	PB14	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X3
	PB15	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y7
	PA8	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_X1
	PA9	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y1
	PA10	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y0

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PA11	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y14
	PA12	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y13
	PA13	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y11
	PA14	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y12
	PA15	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y10
	PB3	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y15
	PB4	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y9
	PB5	GPIO_Output	Output Push Pull	n/a	Low	MATRIX_Y8

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
Debug monitor	true	0	0
System tick timer	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
EXTI line0 interrupt	unused		
EXTI line1 interrupt	unused		
EXTI line2 interrupt	unused		
EXTI line[15:10] interrupts	unused		

*** User modified value**

7. Power Plugin report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103C8Tx
Datasheet	13587_Rev17

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	code
Project Folder	/home/javy/Proyectos/STM32Tris/cubeMX_files
Toolchain / IDE	SW4STM32
Firmware Package Name and Version	STM32Cube FW_F1 V1.3.1

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	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