

1. Description

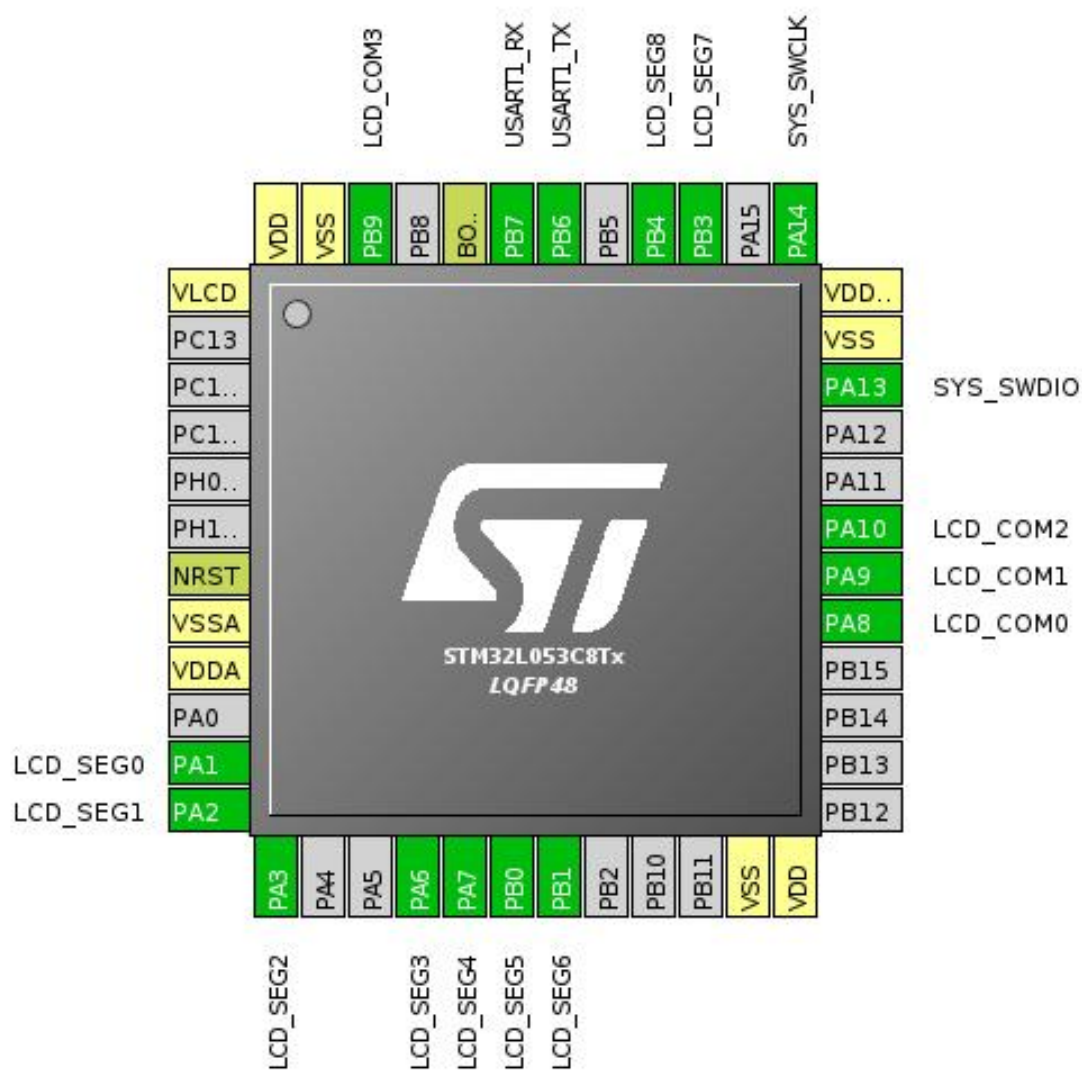
1.1. Project

Project Name	scales
Board Name	scales
Generated with:	STM32CubeMX 4.23.0
Date	10/28/2017

1.2. MCU

MCU Series	STM32L0
MCU Line	STM32L0x3
MCU name	STM32L053C8Tx
MCU Package	LQFP48
MCU Pin number	48

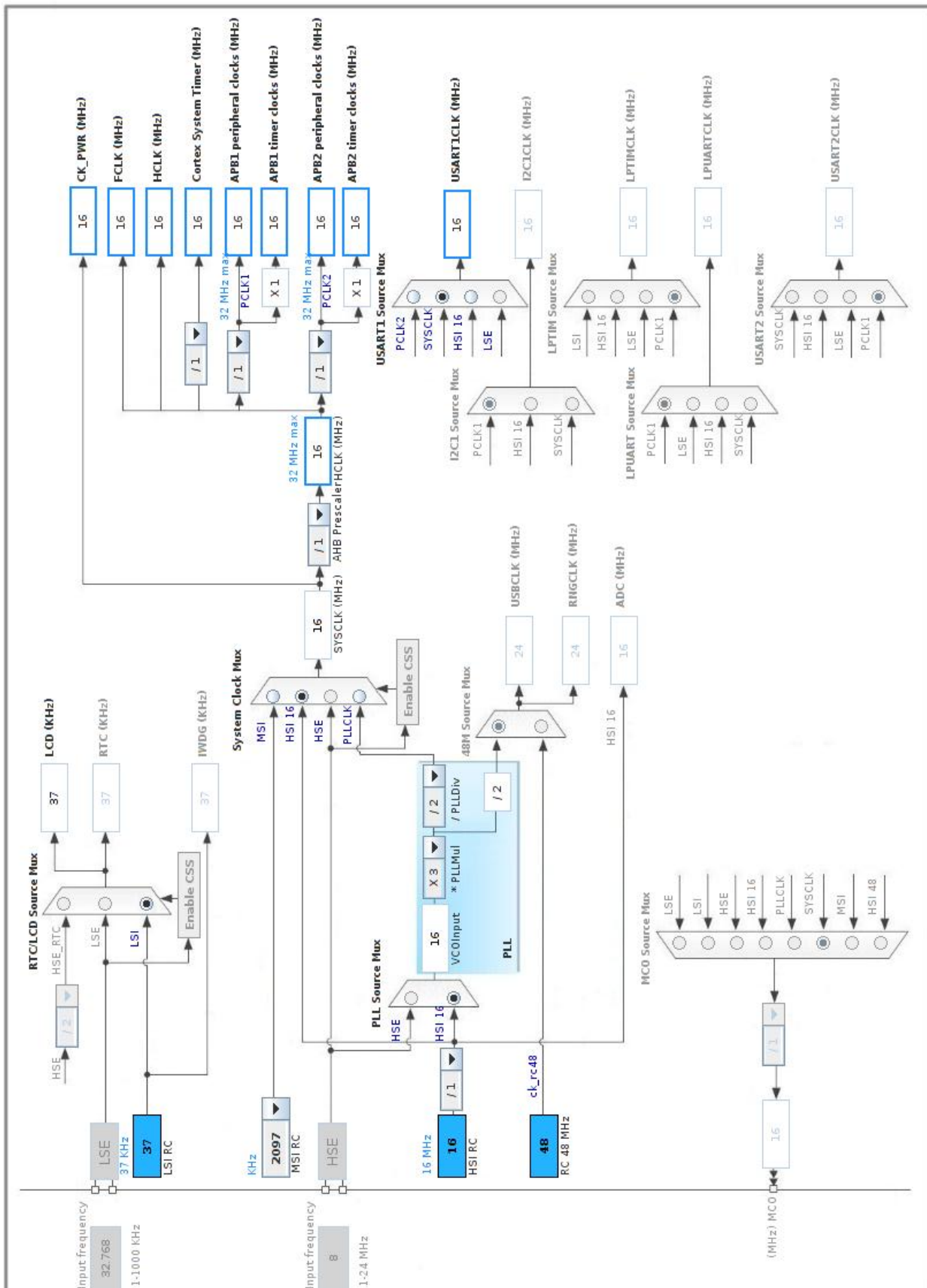
2. Pinout Configuration



3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VLCD	Power		
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
11	PA1	I/O	LCD_SEG0	
12	PA2	I/O	LCD_SEG1	
13	PA3	I/O	LCD_SEG2	
16	PA6	I/O	LCD_SEG3	
17	PA7	I/O	LCD_SEG4	
18	PB0	I/O	LCD_SEG5	
19	PB1	I/O	LCD_SEG6	
23	VSS	Power		
24	VDD	Power		
29	PA8	I/O	LCD_COM0	
30	PA9	I/O	LCD_COM1	
31	PA10	I/O	LCD_COM2	
34	PA13	I/O	SYS_SWDIO	
35	VSS	Power		
36	VDD_USB	Power		
37	PA14	I/O	SYS_SWCLK	
39	PB3	I/O	LCD_SEG7	
40	PB4	I/O	LCD_SEG8	
42	PB6	I/O	USART1_TX	
43	PB7	I/O	USART1_RX	
44	BOOT0	Boot		
46	PB9	I/O	LCD_COM3	
47	VSS	Power		
48	VDD	Power		

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. LCD

Mode: 1/4 Duty Cycle

Bias Selector: 1/3 Bias

mode: SEG0

mode: SEG1

mode: SEG2

mode: SEG3

mode: SEG4

mode: SEG5

mode: SEG6

mode: SEG7

mode: SEG8

5.1.1. Parameter Settings:

Clock Parameters:

Clock Prescaler **8 ***

Clock Divider **21 ***

Basic Parameters:

Duty Selection 1/4

Bias Selector 1/3

Multiplex mode Disable

Advanced Parameters:

Voltage Source Selection Internal

Contrast Control **3.26V ***

Dead Time Duration No dead Time

High Drive **Enable ***

Pulse ON Duration 1/CK_PS

Blink Mode Disabled

Blink Frequency fLCD/8

5.2. SYS

mode: Debug Serial Wire
Timebase Source: SysTick

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
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
LCD	PA1	LCD_SEG0	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA2	LCD_SEG1	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA3	LCD_SEG2	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA6	LCD_SEG3	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA7	LCD_SEG4	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB0	LCD_SEG5	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB1	LCD_SEG6	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA8	LCD_COM0	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA9	LCD_COM1	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA10	LCD_COM2	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB3	LCD_SEG7	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB4	LCD_SEG8	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB9	LCD_COM3	Alternate Function Push Pull	No pull-up and no pull-down	Low	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
USART1	PB6	USART1_TX	Alternate Function Push Pull	Pull-up	Very High *	
	PB7	USART1_RX	Alternate Function Push Pull	Pull-up	Very High *	

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
System service call via SWI instruction	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 and EEPROM global interrupt	unused		
RCC and CRS global interrupt	unused		
USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25	unused		
LCD global interrupt	unused		

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L0
Line	STM32L0x3
MCU	STM32L053C8Tx
Datasheet	025844_Rev7

7.2. Parameter Selection

Temperature	25
Vdd	null

8. Software Project

8.1. Project Settings

Name	Value
Project Name	scales
Project Folder	/home/peter/repos/salter_scales_lcd/scales
Toolchain / IDE	SW4STM32
Firmware Package Name and Version	STM32Cube FW_L0 V1.10.0

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