1. Description

1.1. Project

Project Name	SR_manipulator
Board Name	STM32L476G-DISCO
Generated with:	STM32CubeMX 6.10.0
Date	04/24/2024

1.2. MCU

MCU Series	STM32L4
MCU Line	STM32L4x6
MCU name	STM32L476VGTx
MCU Package	LQFP100
MCU Pin number	100

1.3. Core(s) information

Core(s)	Arm Cortex-M4

2. Pinout Configuration
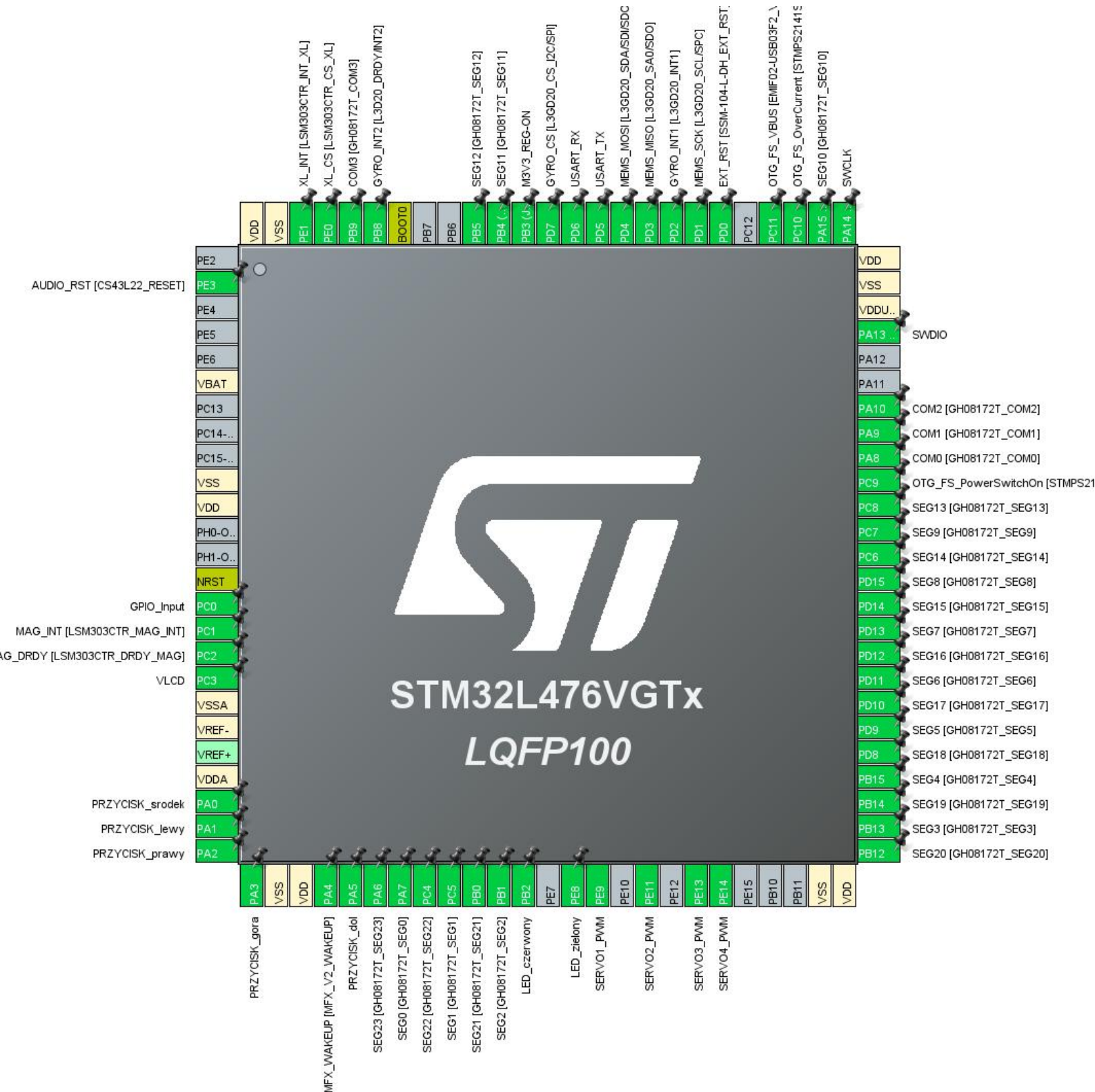
3. Pins Configuration

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
2	PE3 *	I/O	GPIO_Output	AUDIO_RST [CS43L22_RESET]
6	VBAT	Power		
10	VSS	Power		
11	VDD	Power		
14	NRST	Reset		
15	PC0 *	I/O	GPIO_Input	
16	PC1 *	I/O	GPIO_Input	MAG_INT [LSM303CTR_MAG_INT]
17	PC2 *	I/O	GPIO_Input	MAG_DRDY [LSM303CTR_DRDY_MAG]
18	PC3	I/O	LCD_VLCD	VLCD
19	VSSA	Power		
20	VREF-	Power		
22	VDDA	Power		
23	PA0 *	I/O	GPIO_Input	PRZYCISK_srodek
24	PA1 *	I/O	GPIO_Input	PRZYCISK_lewy
25	PA2 *	I/O	GPIO_Input	PRZYCISK_prawy
26	PA3 *	I/O	GPIO_Input	PRZYCISK_gora
27	VSS	Power		
28	VDD	Power		
29	PA4	I/O	GPIO_EXTI4	MFX_WAKEUP [MFX_V2_WAKEUP]
30	PA5 *	I/O	GPIO_Input	PRZYCISK_dol
31	PA6	I/O	LCD_SEG3	SEG23 [GH08172T_SEG23]
32	PA7	I/O	LCD_SEG4	SEG0 [GH08172T_SEG0]
33	PC4	I/O	LCD_SEG22	SEG22 [GH08172T_SEG22]
34	PC5	I/O	LCD_SEG23	SEG1 [GH08172T_SEG1]
35	PB0	I/O	LCD_SEG5	SEG21 [GH08172T_SEG21]
36	PB1	I/O	LCD_SEG6	SEG2 [GH08172T_SEG2]
37	PB2 *	I/O	GPIO_Output	LED_czerwony
39	PE8 *	I/O	GPIO_Output	LED_zielony
40	PE9	I/O	TIM1_CH1	SERVO1_PWM
42	PE11	I/O	TIM1_CH2	SERVO2_PWM
44	PE13	I/O	TIM1_CH3	SERVO3_PWM
45	PE14	I/O	TIM1_CH4	SERVO4_PWM

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
49	VSS	Power		
50	VDD	Power		
51	PB12	I/O	LCD_SEG12	SEG20 [GH08172T_SEG20]
52	PB13	I/O	LCD_SEG13	SEG3 [GH08172T_SEG3]
53	PB14	I/O	LCD_SEG14	SEG19 [GH08172T_SEG19]
54	PB15	I/O	LCD_SEG15	SEG4 [GH08172T_SEG4]
55	PD8	I/O	LCD_SEG28	SEG18 [GH08172T_SEG18]
56	PD9	I/O	LCD_SEG29	SEG5 [GH08172T_SEG5]
57	PD10	I/O	LCD_SEG30	SEG17 [GH08172T_SEG17]
58	PD11	I/O	LCD_SEG31	SEG6 [GH08172T_SEG6]
59	PD12	I/O	LCD_SEG32	SEG16 [GH08172T_SEG16]
60	PD13	I/O	LCD_SEG33	SEG7 [GH08172T_SEG7]
61	PD14	I/O	LCD_SEG34	SEG15 [GH08172T_SEG15]
62	PD15	I/O	LCD_SEG35	SEG8 [GH08172T_SEG8]
63	PC6	I/O	LCD_SEG24	SEG14 [GH08172T_SEG14]
64	PC7	I/O	LCD_SEG25	SEG9 [GH08172T_SEG9]
65	PC8	I/O	LCD_SEG26	SEG13 [GH08172T_SEG13]
66	PC9 *	I/O	GPIO_Output	OTG_FS_PowerSwitchOn [STMPS2141STR_EN]
67	PA8	I/O	LCD_COM0	COM0 [GH08172T_COM0]
68	PA9	I/O	LCD_COM1	COM1 [GH08172T_COM1]
69	PA10	I/O	LCD_COM2	COM2 [GH08172T_COM2]
72	PA13 (JTMS-SWDIO)	I/O	SYS_JTMS-SWDIO	SWDIO
73	VDDUSB	Power		
74	VSS	Power		
75	VDD	Power		
76	PA14 (JTCK-SWCLK)	I/O	SYS_JTCK-SWCLK	SWCLK
77	PA15 (JTDI)	I/O	LCD_SEG17	SEG10 [GH08172T_SEG10]
78	PC10	I/O	GPIO_EXTI10	OTG_FS_OverCurrent [STMPS2141STR_FAULT]
79	PC11 *	I/O	GPIO_Output	OTG_FS_VBUS [EMIF02-USB03F2_Vbus]
81	PD0	I/O	GPIO_EXTI0	EXT_RST [SSM-104-L-DH_EXT_RST]
82	PD1	I/O	SPI2_SCK	MEMS_SCK [L3GD20_SCL/SPC]
83	PD2	I/O	GPIO_EXTI2	GYRO_INT1 [L3GD20_INT1]
84	PD3	I/O	SPI2_MISO	MEMS_MISO [L3GD20_SA0/SDO]

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
85	PD4	I/O	SPI2_MOSI	MEMS_MOSI [L3GD20_SDA/SDI/SDO]
86	PD5	I/O	USART2_TX	USART_TX
87	PD6	I/O	USART2_RX	USART_RX
88	PD7 *	I/O	GPIO_Output	GYRO_CS [L3GD20_CS_I2C/SPI]
89	PB3 (JTDO-TRACESWO) *	I/O	GPIO_Output	M3V3_REG-ON
90	PB4 (NJTRST)	I/O	LCD_SEG8	SEG11 [GH08172T_SEG11]
91	PB5	I/O	LCD_SEG9	SEG12 [GH08172T_SEG12]
94	BOOT0	Boot		
95	PB8	I/O	GPIO_EXTI8	GYRO_INT2 [L3D20_DRDY/INT2]
96	PB9	I/O	LCD_COM3	COM3 [GH08172T_COM3]
97	PE0 *	I/O	GPIO_Output	XL_CS [LSM303CTR_CS_XL]
98	PE1	I/O	GPIO_EXTI1	XL_INT [LSM303CTR_INT_XL]
99	VSS	Power		
100	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration
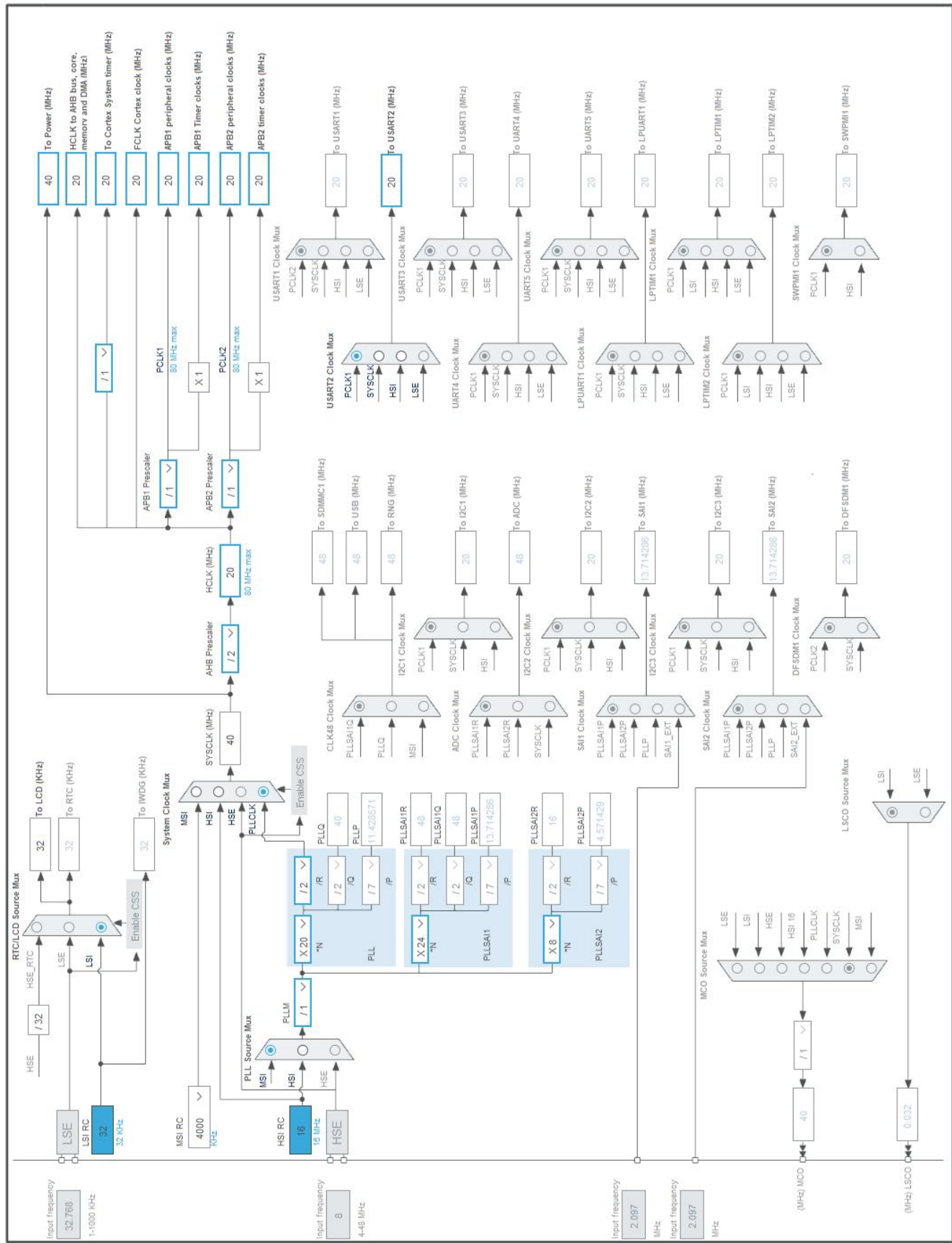
5. Software Project

5.1. Project Settings

Name	Value
Project Name	SR_manipulator
Project Folder	C:\Users\joann\STM32CubeIDE\workspace_1.14.0\SR_manipulator
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_L4 V1.18.0
Application Structure	Advanced
Generate Under Root	Yes
Do not generate the main()	No
Minimum Heap Size	0x200
Minimum Stack Size	0x400

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	Copy only the necessary library files
Generate peripheral initialization as a pair of '.c/.h' files	Yes
Backup previously generated files when re-generating	Yes
Keep User Code when re-generating	Yes
Delete previously generated files when not re-generated	No
Set all free pins as analog (to optimize the power consumption)	No
Enable Full Assert	No

5.3. Advanced Settings - Generated Function Calls

Rank	Function Name	Peripheral Instance Name
1	SystemClock_Config	RCC
2	MX_GPIO_Init	GPIO
3	MX_LCD_Init	LCD
4	MX_SPI2_Init	SPI2
5	MX_USART2_UART_Init	USART2
6	MX_TIM1_Init	TIM1

1. Power Consumption Calculator report

1.1. Microcontroller Selection

Series	STM32L4
Line	STM32L4x6
MCU	STM32L476VGTx
Datasheet	DS10198_Rev4

1.2. Parameter Selection

Temperature	25
Vdd	3.0

1.3. Battery Selection

Battery	Li-SOCL2(A3400)
Capacity	3400.0 mAh
Self Discharge	0.08 %/month
Nominal Voltage	3.6 V
Max Cont Current	100.0 mA
Max Pulse Current	200.0 mA
Cells in series	1
Cells in parallel	1

1.4. Sequence

Step	Step1	Step2
Mode	RUN	STOP2
Vdd	3.0	3.0
Voltage Source	Battery	Battery
Range	Range1-High	NoRange
Fetch Type	SRAM2	n/a
CPU Frequency	80 MHz	0 Hz
Clock Configuration	HSE PLL	ALL CLOCKS OFF
Clock Source Frequency	4 MHz	0 Hz
Peripherals		
Additional Cons.	0 mA	0 mA
Average Current	10.7 mA	1.18 µA
Duration	0.1 ms	0.9 ms
DMIPS	100.0	0.0
Ta Max	103.65	105
Category	In DS Table	In DS Table

1.5. Results

Sequence Time	1 ms	Average Current	1.07 mA
Battery Life	4 months, 10 days, 3 hours	Average DMIPS	100.0 DMIPS

1.6. Chart

Consumption Profile by Step
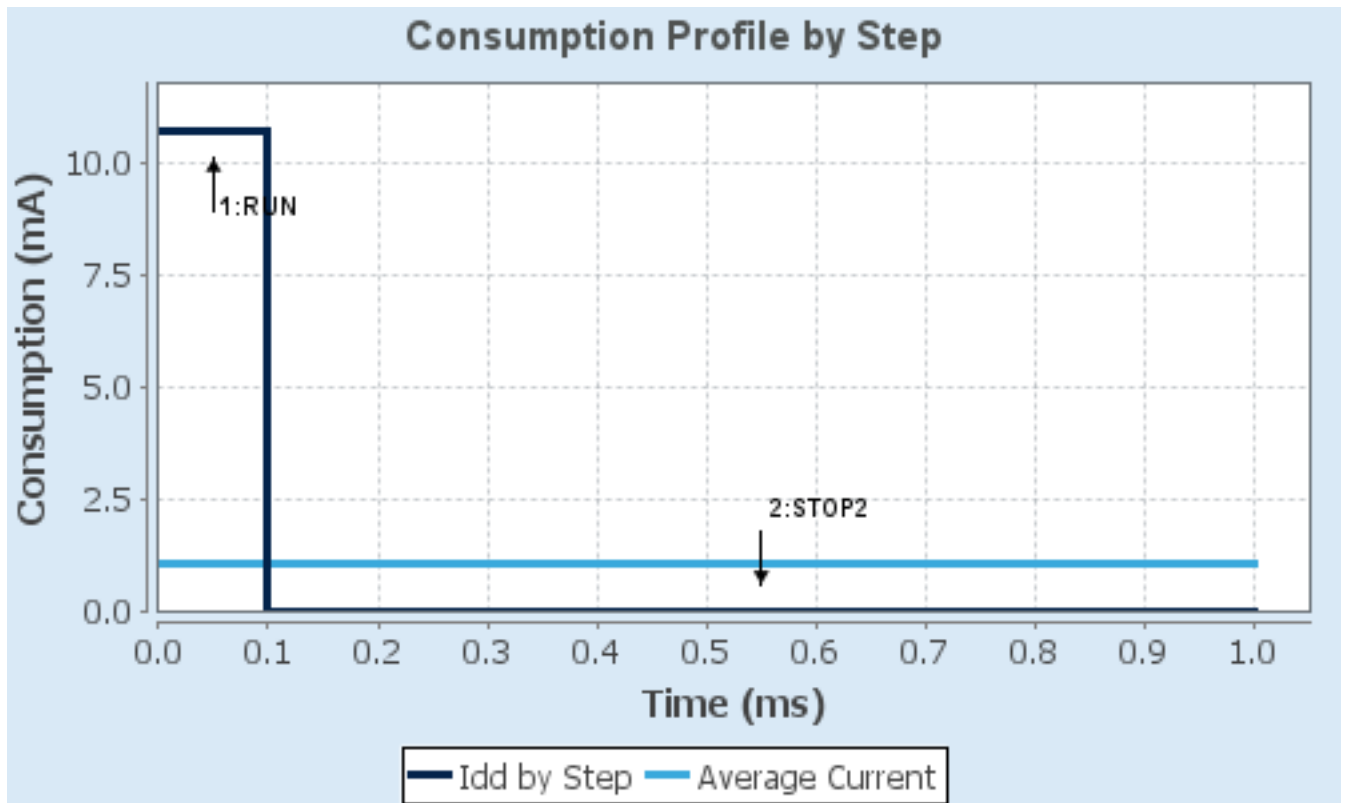
2. Peripherals and Middlewares Configuration

2.1. LCD

Mode: 1/4 Duty Cycle

mode: SEG3

mode: SEG4

mode: SEG5

mode: SEG6

mode: SEG8

mode: SEG9

mode: SEG12

mode: SEG13

mode: SEG14

mode: SEG15

mode: SEG17

mode: SEG22

mode: SEG23

mode: SEG24

mode: SEG25

mode: SEG26

mode: SEG28

mode: SEG29

mode: SEG30

mode: SEG31

mode: SEG32

mode: SEG33

mode: SEG34

mode: SEG35

2.1.1. Parameter Settings:

Clock Parameters:

Clock Prescaler	1
Clock Divider	16

Basic Parameters:

Duty Selection	1/4
Bias Selector	1/4
Multiplex mode	Disable

Advanced Parameters:

Voltage Source Selection	Internal
Contrast Control	2.60V
Dead Time Duration	No dead Time
High Drive	Disable
Pulse ON Duration	0 pulse
Blink Mode	Disabled
Blink Frequency	fLCD/8

2.2. RCC

2.2.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	**Enabled** *
Data Cache	Enabled
Flash Latency(WS)	1 WS (2 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
MSI Calibration Value	0
MSI Auto Calibration	Disabled
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1

2.3. SPI2

Mode: Full-Duplex Master

2.3.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2

Baud Rate	**10.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge
Advanced Parameters:	
CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

2.4. SYS
Debug: Serial Wire
Timebase Source: SysTick

2.5. TIM1
Channel1: PWM Generation CH1
Channel2: PWM Generation CH2
Channel3: PWM Generation CH3
Channel4: PWM Generation CH4
2.5.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	65535
Internal Clock Division (CKD)	No Division
Repetition Counter (RCR - 16 bits value)	0
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection TRGO	Reset (UG bit from TIMx_EGR)
Trigger Event Selection TRGO2	Reset (UG bit from TIMx_EGR)

Break And Dead Time management - BRK Configuration:

BRK State	Disable
BRK Polarity	High
BRK Filter (4 bits value)	0
BRK Sources Configuration	
- Digital Input	Disable
- COMP1	Disable
- COMP2	Disable

- DFSDM	Disable

Break And Dead Time management - BRK2 Configuration:

BRK2 State	Disable
BRK2 Polarity	High
BRK2 Filter (4 bits value)	0
BRK2 Sources Configuration	
- Digital Input	Disable
- COMP1	Disable
- COMP2	Disable
- DFSDM	Disable

Break And Dead Time management - Output Configuration:

Automatic Output State	Disable
Off State Selection for Run Mode (OSSR)	Disable
Off State Selection for Idle Mode (OSSI)	Disable
Lock Configuration	Off

Clear Input:

Clear Input Source	Disable

PWM Generation Channel 1:

Mode	PWM mode 1
Pulse (16 bits value)	0
Output compare preload	Enable
Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

PWM Generation Channel 2:

Mode	PWM mode 1
Pulse (16 bits value)	0
Output compare preload	Enable
Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

PWM Generation Channel 3:

Mode	PWM mode 1
Pulse (16 bits value)	0
Output compare preload	Enable
Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

PWM Generation Channel 4:

Mode	PWM mode 1
Pulse (16 bits value)	0
Output compare preload	Enable

Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

2.6. USART2

Mode: Asynchronous

2.6.1. 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

3. System Configuration

3.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
LCD	PC3	LCD_VLCD	Alternate Function Push Pull	No pull-up and no pull-down	Low	VLCD
	PA6	LCD_SEG3	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG23 [GH08172T_SEG23]
	PA7	LCD_SEG4	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG0 [GH08172T_SEG0]
	PC4	LCD_SEG22	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG22 [GH08172T_SEG22]
	PC5	LCD_SEG23	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG1 [GH08172T_SEG1]
	PB0	LCD_SEG5	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG21 [GH08172T_SEG21]
	PB1	LCD_SEG6	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG2 [GH08172T_SEG2]
	PB12	LCD_SEG12	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG20 [GH08172T_SEG20]
	PB13	LCD_SEG13	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG3 [GH08172T_SEG3]
	PB14	LCD_SEG14	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG19 [GH08172T_SEG19]
	PB15	LCD_SEG15	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG4 [GH08172T_SEG4]
	PD8	LCD_SEG28	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG18 [GH08172T_SEG18]
	PD9	LCD_SEG29	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG5 [GH08172T_SEG5]
	PD10	LCD_SEG30	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG17 [GH08172T_SEG17]
	PD11	LCD_SEG31	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG6 [GH08172T_SEG6]
	PD12	LCD_SEG32	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG16 [GH08172T_SEG16]
	PD13	LCD_SEG33	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG7 [GH08172T_SEG7]
	PD14	LCD_SEG34	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG15 [GH08172T_SEG15]
	PD15	LCD_SEG35	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG8 [GH08172T_SEG8]
	PC6	LCD_SEG24	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG14 [GH08172T_SEG14]
	PC7	LCD_SEG25	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG9 [GH08172T_SEG9]
	PC8	LCD_SEG26	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG13 [GH08172T_SEG13]
	PA8	LCD_COM0	Alternate Function Push Pull	No pull-up and no pull-down	Low	COM0 [GH08172T_COM0]
	PA9	LCD_COM1	Alternate Function Push Pull	No pull-up and no pull-down	Low	COM1 [GH08172T_COM1]
	PA10	LCD_COM2	Alternate Function Push Pull	No pull-up and no pull-down	Low	COM2 [GH08172T_COM2]
	PA15 (JTDI)	LCD_SEG17	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG10 [GH08172T_SEG10]
	PB4	LCD_SEG8	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG11

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	(NJTRST)					[GH08172T_SEG11]
	PB5	LCD_SEG9	Alternate Function Push Pull	No pull-up and no pull-down	Low	SEG12 [GH08172T_SEG12]
	PB9	LCD_COM3	Alternate Function Push Pull	No pull-up and no pull-down	Low	COM3 [GH08172T_COM3]
SPI2	PD1	SPI2_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	MEMS_SCK [L3GD20_SCL/SPC]
	PD3	SPI2_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	MEMS_MISO [L3GD20_SA0/SDO]
	PD4	SPI2_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	MEMS_MOSI [L3GD20_SDA/SDI/SDO]
SYS	PA13 (JTMS-SWDIO)	SYS_JTMS-SWDIO	n/a	n/a	n/a	SWDIO
	PA14 (JTCK-SWCLK)	SYS_JTCK-SWCLK	n/a	n/a	n/a	SWCLK
TIM1	PE9	TIM1_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	SERVO1_PWM
	PE11	TIM1_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	SERVO2_PWM
	PE13	TIM1_CH3	Alternate Function Push Pull	No pull-up and no pull-down	Low	SERVO3_PWM
	PE14	TIM1_CH4	Alternate Function Push Pull	No pull-up and no pull-down	Low	SERVO4_PWM
USART2	PD5	USART2_TX	Alternate Function Push Pull	**Pull-up ***	**Very High ***	USART_TX
	PD6	USART2_RX	Alternate Function Push Pull	**Pull-up ***	**Very High ***	USART_RX
GPIO	PE3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	**High ***	AUDIO_RST [CS43L22_RESET]
	PC0	GPIO_Input	Input mode	No pull-up and no pull-down	**n/a**	
	PC1	GPIO_Input	Input mode	No pull-up and no pull-down	**n/a**	MAG_INT [LSM303CTR_MAG_INT]
	PC2	GPIO_Input	Input mode	No pull-up and no pull-down	**n/a**	MAG_DRDY [LSM303CTR_DRDY_MAG]
	PA0	GPIO_Input	Input mode	**Pull-down ***	**n/a**	PRZYCISK_srodek
	PA1	GPIO_Input	Input mode	**Pull-down ***	**n/a**	PRZYCISK_lewy
	PA2	GPIO_Input	Input mode	**Pull-down ***	**n/a**	PRZYCISK_prawy
	PA3	GPIO_Input	Input mode	**Pull-down ***	**n/a**	PRZYCISK_gora
	PA4	GPIO_EXTI4	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	**n/a**	MFX_WAKEUP [MFX_V2_WAKEUP]
	PA5	GPIO_Input	Input mode	**Pull-down ***	**n/a**	PRZYCISK_dol
	PB2	GPIO_Output	Output Push Pull			LED_czerwony

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
				Pull-up *	**Very High ***	
	PE8	GPIO_Output	Output Push Pull	**Pull-up ***	**Very High ***	LED_zielony
	PC9	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	OTG_FS_PowerSwitchOn [STMPS2141STR_EN]
	PC10	GPIO_EXTI10	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	OTG_FS_OverCurrent [STMPS2141STR_FAULT]
	PC11	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	OTG_FS_VBUS [EMIF02-USB03F2_Vbus]
	PD0	GPIO_EXTI0	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	EXT_RST [SSM-104-L-DH_EXT_RST]
	PD2	GPIO_EXTI2	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	GYRO_INT1 [L3GD20_INT1]
	PD7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	**Very High ***	GYRO_CS [L3GD20_CS_I2C/SPI]
	PB3 (JTDO-TRACESWO)	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	M3V3_REG-ON
	PB8	GPIO_EXTI8	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	GYRO_INT2 [L3D20_DRDY/INT2]
	PE0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	XL_CS [LSM303CTR_CS_XL]
	PE1	GPIO_EXTI1	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	XL_INT [LSM303CTR_INT_XL]

3.2. DMA configuration

nothing configured in DMA service

3.3. NVIC configuration

3.3.1. NVIC

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/PVM1/PVM2/PVM3/PVM4 interrupts through EXTI lines 16/35/36/37/38	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
TIM1 break interrupt and TIM15 global interrupt	unused		
TIM1 update interrupt and TIM16 global interrupt	unused		
TIM1 trigger and commutation interrupts and TIM17 global interrupt	unused		
TIM1 capture compare interrupt	unused		
SPI2 global interrupt	unused		
USART2 global interrupt	unused		
LCD global interrupt	unused		
FPU global interrupt	unused		

3.3.2. NVIC Code generation

Enabled interrupt Table	Select for init sequence ordering	Generate IRQ handler	Call HAL handler
Non maskable interrupt	false	true	false
Hard fault interrupt	false	true	false
Memory management fault	false	true	false
Prefetch fault, memory access fault	false	true	false
Undefined instruction or illegal state	false	true	false
System service call via SWI instruction	false	true	false
Debug monitor	false	true	false
Pendable request for system service	false	true	false
System tick timer	false	true	true

* User modified value

4. System Views

4.1. Category view

4.1.1. Current

Middleware

System Core	Analog	Timers	Connectivity	Multimedia	Security	Computing
DMA		TIM1 ✓	SPI2 ✓	LCD ✓		
GPIO ✓			USART2 ✓			
NVIC ✓						
RCC ✓						
SYS ✓						
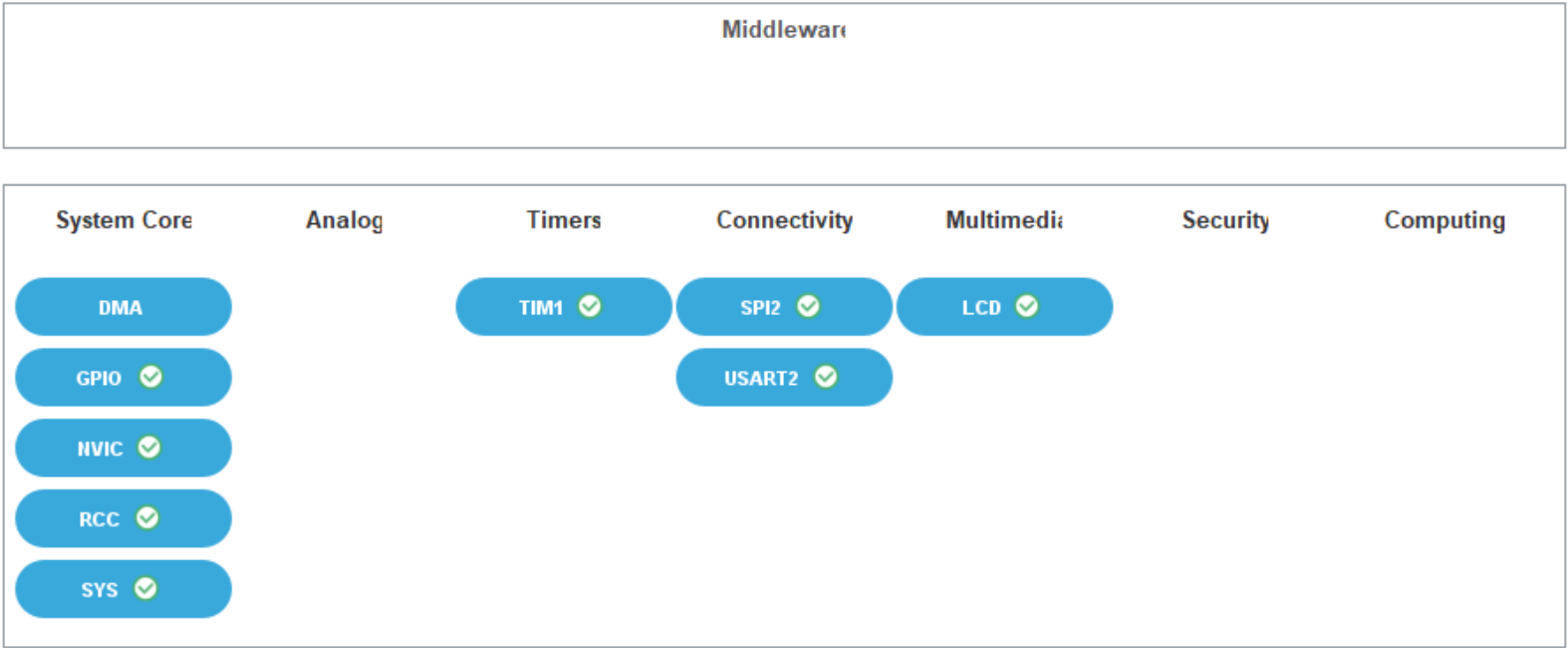
5. Docs & Resources

Type   Link