
STM32
CubeMX

1. Description

1.1. Project

Project Name	iMS62F
Board Name	custom
Generated with:	STM32CubeMX 6.3.0
Date	01/25/2022

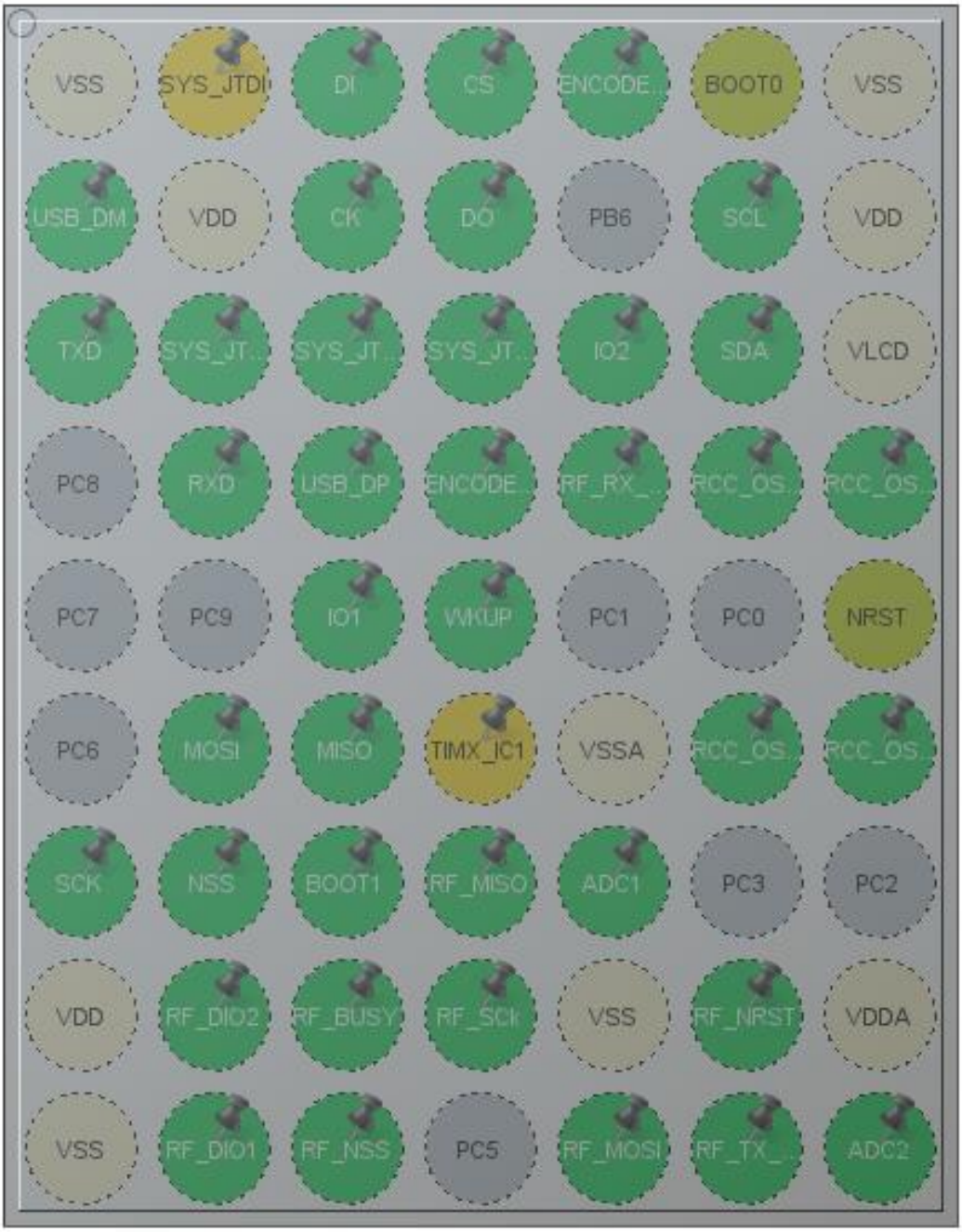
1.2. MCU

MCU Series	STM32L1
MCU Line	STM32L151/152
MCU name	STM32L151UCYx
MCU Package	WLCSP63
MCU Pin number	63

1.3. Core(s) information

Core(s)	Arm Cortex-M3

2. Pinout Configuration



WLCSP63 (Top view)

3. Pins Configuration

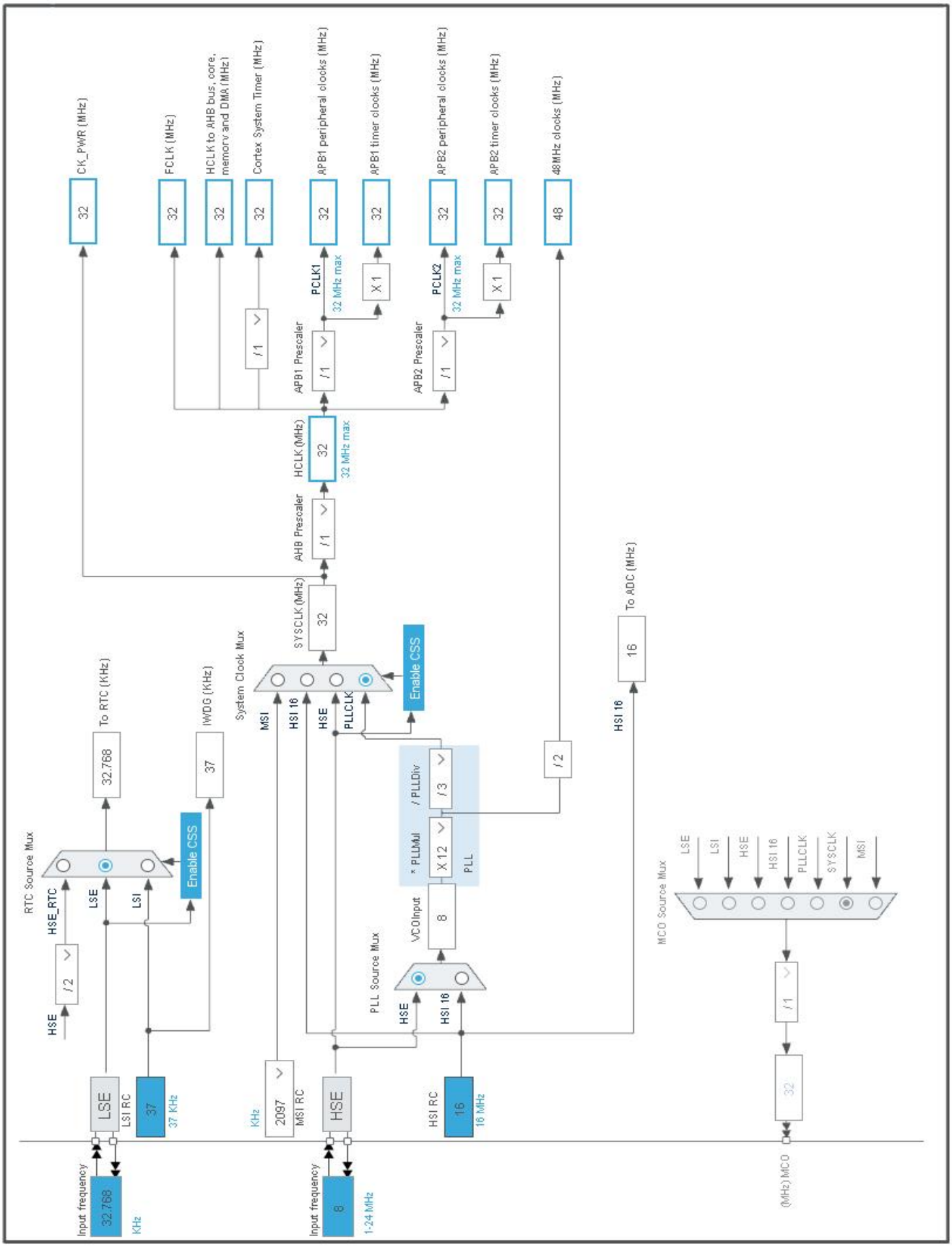
Pin Number WLCSP63	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
A1	VSS	Power		
A2	PA15 *	I/O	SYS_JTDI	
A3	PC11	I/O	SPI3_MISO	DI
A4	PD2 **	I/O	GPIO_Output	CS
A5	PB5	I/O	TIM3_CH2	ENCODER_M
A6	BOOT0	Boot		
A7	VSS	Power		
B1	PA11	I/O	USB_DM	
B2	VDD	Power		
B3	PC10	I/O	SPI3_SCK	CK
B4	PC12	I/O	SPI3_MOSI	DO
B6	PB8	I/O	I2C1_SCL	SCL
B7	VDD	Power		
C1	PA9	I/O	USART1_TX	TXD
C2	PA13	I/O	SYS_JTMS-SWDIO	
C3	PA14	I/O	SYS_JTCK-SWCLK	
C4	PB3	I/O	SYS_JTDO-TRACESWO	
C5	PB7 **	I/O	GPIO_Output	IO2
C6	PB9	I/O	I2C1_SDA	SDA
C7	VLCD	Power		
D2	PA10	I/O	USART1_RX	RXD
D3	PA12	I/O	USB_DP	
D4	PB4	I/O	TIM3_CH1	ENCODER_P
D5	PC13-WKUP2 **	I/O	GPIO_Output	RF_RX_SW
D6	PC15-OSC32_OUT	I/O	RCC_OSC32_OUT	
D7	PC14-OSC32_IN	I/O	RCC_OSC32_IN	
E3	PA8 **	I/O	GPIO_Output	IO1
E4	PA0-WKUP1	I/O	SYS_WKUP1	WKUP
E7	NRST	Reset		
F2	PB15	I/O	SPI2_MOSI	MOSI
F3	PB14	I/O	SPI2_MISO	MISO
F4	PC4 *	I/O	TIMX_IC1	
F5	VSSA	Power		
F6	PH0-OSC_IN	I/O	RCC_OSC_IN	
F7	PH1-OSC_OUT	I/O	RCC_OSC_OUT	
G1	PB13	I/O	SPI2_SCK	SCK

Pin Number WLCSP63	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
G2	PB12 **	I/O	GPIO_Output	NSS
G3	PB2 **	I/O	GPIO_Analog	BOOT1
G4	PA6	I/O	SPI1_MISO	RF_MISO
G5	PA1	I/O	ADC_IN1	ADC1
H1	VDD	Power		
H2	PB11	I/O	GPIO_EXTI11	RF_DIO2
H3	PB1	I/O	GPIO_EXTI1	RF_BUSY
H4	PA5	I/O	SPI1_SCK	RF_SCk
H5	VSS	Power		
H6	PA2 **	I/O	GPIO_Output	RF_NRST
H7	VDDA	Power		
J1	VSS	Power		
J2	PB10	I/O	GPIO_EXTI10	RF_DIO1
J3	PB0 **	I/O	GPIO_Output	RF_NSS
J5	PA7	I/O	SPI1_MOSI	RF_MOSI
J6	PA4 **	I/O	GPIO_Output	RF_TX_SW
J7	PA3	I/O	ADC_IN3	ADC2

** The pin is affected with an I/O function

* The pin is affected with a peripheral function but no peripheral mode is activated

4. Clock Tree Configuration



5. Software Project

5.1. Project Settings

Name	Value
Project Name	iMS62F
Project Folder	F:\emod-ims62f
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_L1 V1.10.3
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	No
Keep User Code when re-generating	Yes
Delete previously generated files when not re-generated	Yes
Set all free pins as analog (to optimize the power consumption)	Yes
Enable Full Assert	Yes

5.3. Advanced Settings - Generated Function Calls

Rank	Function Name	Peripheral Instance Name
1	MX_GPIO_Init	GPIO
2	SystemClock_Config	RCC
3	MX_CRC_Init	CRC
4	MX_I2C1_Init	I2C1
5	MX_RTC_Init	RTC
6	MX_SPI1_Init	SPI1
7	MX_SPI2_Init	SPI2
8	MX_USART1_UART_Init	USART1
9	MX_ADC_Init	ADC
10	MX_IWDG_Init	IWDG
11	MX_SPI3_Init	SPI3

Rank	Function Name	Peripheral Instance Name
12	MX_TIM3_Init	TIM3
13	MX_WWDG_Init	WWDG
14	MX_USB_DEVICE_Init	USB_DEVICE

6. Power Consumption Calculator report

6.1. Microcontroller Selection

Series	STM32L1
Line	STM32L151/152
MCU	STM32L151UCYx
Datasheet	DS8890_Rev12

6.2. Parameter Selection

Temperature	25
Vdd	3.0

6.3. Battery Selection

Battery	Li-SOCL2(AAA700)
Capacity	700.0 mAh
Self Discharge	0.08 %/month
Nominal Voltage	3.6 V
Max Cont Current	10.0 mA
Max Pulse Current	30.0 mA
Cells in series	1
Cells in parallel	1

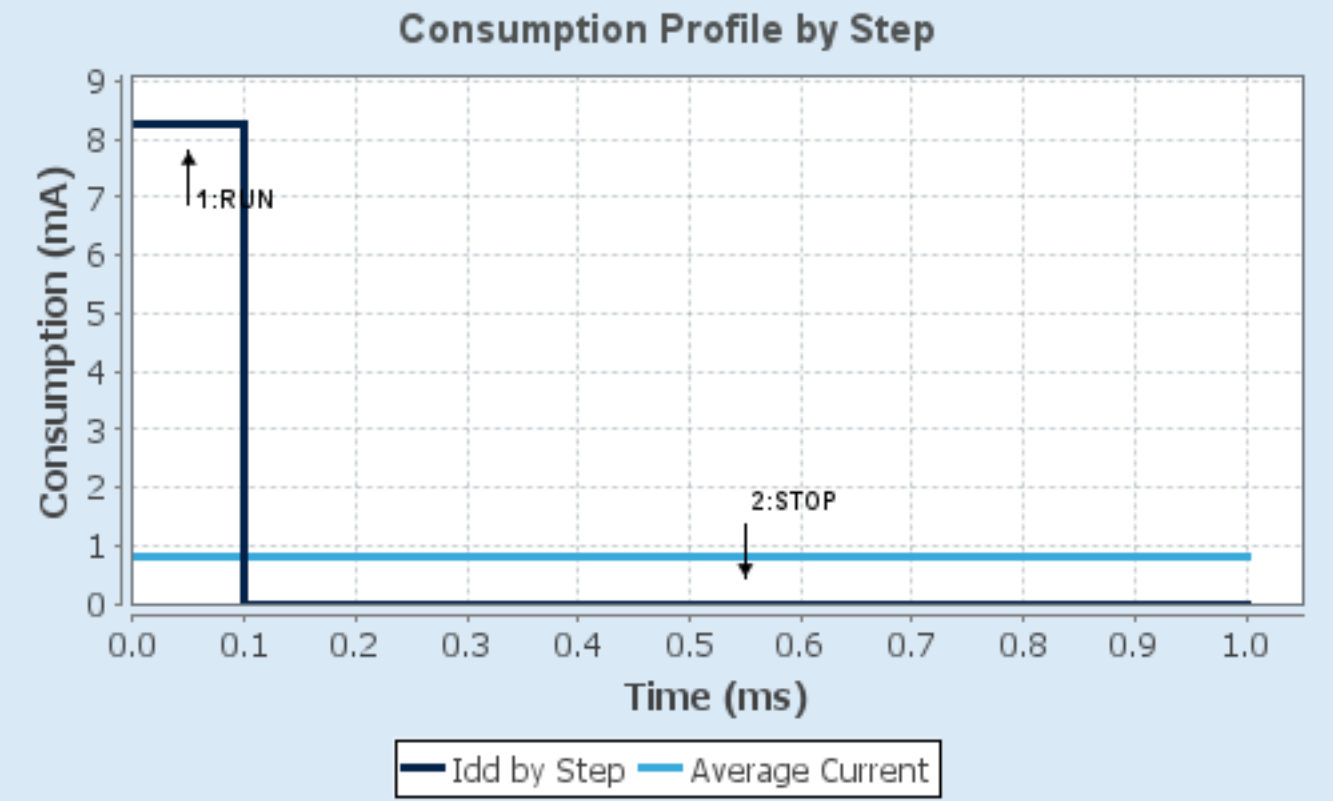
6.4. Sequence

Step	Step1	Step2
Mode	RUN	STOP
Vdd	3.0	3.0
Voltage Source	Battery	Battery
Range	Range1-High	NoRange
Fetch Type	FLASH	n/a
CPU Frequency	32 MHz	0 Hz
Clock Configuration	HSEBYP PLL	ALL CLOCKS OFF
Clock Source Frequency	16 MHz	0 Hz
Peripherals		
Additional Cons.	0 mA	0 mA
Average Current	8.25 mA	435 nA
Duration	0.1 ms	0.9 ms
DMIPS	33.0	0.0
Ta Max	103.79	105
Category	In DS Table	In DS Table

6.5. Results

Sequence Time	1 ms	Average Current	825.39 µA
Battery Life	1 month, 4 days, 21 hours	Average DMIPS	33.0 DMIPS

6.6. Chart


Consumption Profile by Step
Consumption (mA)
9
8
7
6
5
4
3
2
1
0
1:RUN
2:STOP
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Time (ms)
Idd by Step
Average Current

7. Peripherals and Middlewares Configuration

7.1. ADC

mode: IN1

IN3: IN3

mode: Temperature Sensor Channel

mode: Vrefint Channel

7.1.1. Parameter Settings:

ADC_Settings:

Clock Prescaler	Asynchronous clock mode divided by 1
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Scan Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	Disabled
End Of Conversion Selection	End of sequence conversion
Low Power Auto Wait	Disabled
Low Power Auto Off	Disabled

ADC_Regular_ConversionMode:

Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
External Trigger Conversion Edge	None
Rank	1
Channel	**Channel Temperature Sensor ***
Sampling Time	4 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0

WatchDog:

Enable Analog WatchDog Mode	false

7.2. CRC

mode: Activated

7.3. I2C1

I2C: I2C

7.3.1. Parameter Settings:

Master Features:

I2C Speed Mode	Standard Mode
I2C Clock Speed (Hz)	100000

Slave Features:

Clock No Stretch Mode	Disabled
Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0
General Call address detection	Disabled

7.4. IWDG

mode: Activated

7.4.1. Parameter Settings:

Clocking:

IWDG counter clock prescaler	**256 ***
IWDG down-counter reload value	4095

7.5. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

Low Speed Clock (LSE) : Crystal/Ceramic Resonator

7.5.1. Parameter Settings:

System Parameters:

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

RCC Parameters:

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

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1

7.6. RTC

mode: Activate Clock Source

mode: Activate Calendar

7.6.1. Parameter Settings:

General:

Hour Format	Hourformat 24
Asynchronous Predivider value	127
Synchronous Predivider value	255

Calendar Time:

Data Format	BCD data format
Hours	0
Minutes	0
Seconds	0
Day Light Saving: value of hour adjustment	Daylightsaving None
Store Operation	Storeoperation Reset

Calendar Date:

Week Day	Monday
Month	January
Date	1
Year	0

7.7. SPI1

Mode: Full-Duplex Master

7.7.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**16.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Software

7.8. SPI2

Mode: Full-Duplex Slave

7.8.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Software

7.9. SPI3

Mode: Full-Duplex Master

7.9.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**16.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Software

7.10. SYS

Debug: Trace Asynchronous Sw

mode: System Wake-Up 1

Power Voltage Detector In: Power Voltage Detector In (Internal analog voltage)

Timebase Source: TIM6

7.10.1. Parameter Settings:

Programmable_Voltage_Detector_Settings:

PVD detection Level	PWR PVD LEVEL 0 (1.9 V)
PWR PVD Mode	Basic mode

7.11. TIM3

Combined Channels: Encoder Mode

7.11.1. 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
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

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

Encoder:

Encoder Mode	Encoder Mode TI1
____ Parameters for Channel 1 ____	
Polarity	Rising Edge
IC Selection	Direct
Prescaler Division Ratio	No division
Input Filter	0
____ Parameters for Channel 2 ____	
Polarity	Rising Edge
IC Selection	Direct
Prescaler Division Ratio	No division
Input Filter	0

7.12. USART1

Mode: Asynchronous

7.12.1. 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

7.13. USB

mode: Device (FS)

7.13.1. Parameter Settings:

Basic Parameters:

Speed	Full Speed 12MBit/s
Physical interface	Internal Phy

Power Parameters:

Low Power	Disabled
Battery Charging	Disabled

7.14. WWDG

mode: Activated

7.14.1. Parameter Settings:

Watchdog Clocking:

WWDG counter clock prescaler	**8 ***
WWDG window value	64
WWDG free-running downcounter value	64

Watchdog Interrupt:

Early wakeup interrupt	**Enable ***

7.15. FREERTOS

Interface: CMSIS_V2

7.15.1. Config parameters:

API:

FreeRTOS API	CMSIS v2

Versions:

FreeRTOS version	10.0.1
CMSIS-RTOS version	2.00

Kernel settings:

USE_PREEMPTION	Enabled
CPU_CLOCK_HZ	SystemCoreClock
TICK_RATE_HZ	1000
MAX_PRIORITIES	56
MINIMAL_STACK_SIZE	128
MAX_TASK_NAME_LEN	16
USE_16_BIT_TICKS	Disabled
IDLE_SHOULD_YIELD	Enabled
USE_MUTEXES	Enabled
USE_RECURSIVE_MUTEXES	Enabled
USE_COUNTING_SEMAPHORES	Enabled
QUEUE_REGISTRY_SIZE	8
USE_APPLICATION_TASK_TAG	Disabled
ENABLE_BACKWARD_COMPATIBILITY	Enabled
USE_PORT_OPTIMISED_TASK_SELECTION	Disabled
USE_TICKLESS_IDLE	Disabled
USE_TASK_NOTIFICATIONS	Enabled
RECORD_STACK_HIGH_ADDRESS	Disabled

Memory management settings:

Memory Allocation	Dynamic / Static
TOTAL_HEAP_SIZE	3072
Memory Management scheme	heap_4

Hook function related definitions:

USE_IDLE_HOOK	Disabled
USE_TICK_HOOK	Disabled
USE_MALLOC_FAILED_HOOK	Disabled
USE_DAEMON_TASK_STARTUP_HOOK	Disabled
CHECK_FOR_STACK_OVERFLOW	Disabled

Run time and task stats gathering related definitions:

GENERATE_RUN_TIME_STATS	Disabled
USE_TRACE_FACILITY	Enabled
USE_STATS_FORMATTING_FUNCTIONS	Disabled

Co-routine related definitions:

USE_CO_ROUTINES	Disabled
MAX_CO_ROUTINE_PRIORITIES	2

Software timer definitions:

USE_TIMERS	Enabled
TIMER_TASK_PRIORITY	2
TIMER_QUEUE_LENGTH	10
TIMER_TASK_STACK_DEPTH	256

Interrupt nesting behaviour configuration:

LIBRARY_LOWEST_INTERRUPT_PRIORITY	15
LIBRARY_MAX_SYSCALL_INTERRUPT_PRIORITY	5

7.15.2. Include parameters:

Include definitions:

vTaskPrioritySet	Enabled
uxTaskPriorityGet	Enabled
vTaskDelete	Enabled
vTaskCleanUpResources	Disabled
vTaskSuspend	Enabled
vTaskDelayUntil	Enabled
vTaskDelay	Enabled
xTaskGetSchedulerState	Enabled
xTaskResumeFromISR	Enabled
xQueueGetMutexHolder	Enabled
xSemaphoreGetMutexHolder	Disabled
pcTaskGetTaskName	Disabled
uxTaskGetStackHighWaterMark	Enabled
xTaskGetCurrentTaskHandle	Disabled
eTaskGetState	Enabled
xEventGroupSetBitFromISR	Disabled
xTimerPendFunctionCall	Enabled
xTaskAbortDelay	Disabled
xTaskGetHandle	Disabled

7.15.3. Advanced settings:

Newlib settings (see parameter description first):

USE_NEWLIB_REENTRANT	Disabled

Project settings (see parameter description first):

Use FW pack heap file	Enabled

7.16. USB_DEVICE

Class For FS IP: Download Firmware Update Class (DFU)

7.16.1. Parameter Settings:

Basic Parameters:

USBD_MAX_NUM_INTERFACES (Maximum number of supported interfaces)	1
USBD_MAX_NUM_CONFIGURATION (Maximum number of supported configuration)	1
USBD_MAX_STR_DESC_SIZ (Maximum size for the string descriptors)	512
USBD_SUPPORT_USER_STRING (Enable user string descriptor)	Enabled
USBD_SELF_POWERED (Enabled self power)	Enabled
USBD_DEBUG_LEVEL (USBD Debug Level)	0: No debug message

Class Parameters:

USBD_DFU_MAX_ITF_NUM (DFU maximum interface numbers)	1
USBD_DFU_XFER_SIZE	1024
USBD_DFU_APP_DEFAULT_ADD (Base Address 0x)	**0x08000000 ***
USBD_DFU_MEDIA Interface	@Internal Flash /0x08000000/03*016Ka,01*016Kg,01*064Kg,07*128Kg,04*016Kg,01*064Kg,07*1

7.16.2. Device Descriptor:

Device Descriptor:

VID (Vendor IDentifier)	1155
LANGID_STRING (Language Identifier)	English(United States)
MANUFACTURER_STRING (Manufacturer Identifier)	STMicroelectronics

Device Descriptor FS:

PID (Product IDentifier)	57105
PRODUCT_STRING (Product Identifier)	STM32 DownLoad Firmware Update
CONFIGURATION_STRING (Configuration Identifier)	DFU Config
INTERFACE_STRING (Interface Identifier)	DFU Interface

*** User modified value**

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC	PA1	ADC_IN1	Analog mode	No pull-up and no pull-down	n/a	ADC1
	PA3	ADC_IN3	Analog mode	No pull-up and no pull-down	n/a	ADC2
I2C1	PB8	I2C1_SCL	Alternate Function Open Drain	No pull-up and no pull-down	**High ***	SCL
	PB9	I2C1_SDA	Alternate Function Open Drain	No pull-up and no pull-down	**High ***	SDA
RCC	PC15-OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	
	PC14-OSC32_IN	RCC_OSC32_IN	n/a	n/a	n/a	
	PH0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PH1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SPI1	PA6	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	RF_MISO
	PA5	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	RF_SCk
	PA7	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	RF_MOSI
SPI2	PB15	SPI2_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	MOSI
	PB14	SPI2_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	MISO
	PB13	SPI2_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	SCK
SPI3	PC11	SPI3_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	DI
	PC10	SPI3_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	CK
	PC12	SPI3_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	DO
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PB3	SYS_JTDO-TRACESWO	n/a	n/a	n/a	
	PA0-WKUP1	SYS_WKUP1	n/a	n/a	n/a	WKUP
TIM3	PB5	TIM3_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Very Low	ENCODER_M
	PB4	TIM3_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Very Low	ENCODER_P
USART1	PA9	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	TXD
	PA10	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	RXD
USB	PA11	USB_DM	n/a	n/a	n/a	

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PA12	USB_DP	n/a	n/a	n/a	
Single Mapped Signals	PA15	SYS_JTDI	n/a	n/a	n/a	
	PC4	TIMX_IC1	Alternate Function Push Pull	No pull-up and no pull-down	Very Low	
GPIO	PD2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	CS
	PB7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	IO2
	PC13-WKUP2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	RF_RX_SW
	PA8	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	IO1
	PB12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	NSS
	PB2	GPIO_Analog	Analog mode	No pull-up and no pull-down	n/a	BOOT1
	PB11	GPIO_EXTI11	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	RF_DIO2
	PB1	GPIO_EXTI1	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	RF_BUSY
	PA2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	RF_NRST
	PB10	GPIO_EXTI10	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	RF_DIO1
	PB0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	RF_NSS
	PA4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Very Low	RF_TX_SW

8.2. DMA configuration

nothing configured in DMA service

8.3. NVIC configuration

8.3.1. 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
Pre-fetch 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	15	0
System tick timer	true	15	0
Window watchdog interrupt	true	5	0
ADC global interrupt	true	5	0
USB high priority interrupt	true	5	0
USB low priority interrupt	true	5	0
TIM3 global interrupt	true	5	0
I2C1 event interrupt	true	5	0
I2C1 error interrupt	true	5	0
SPI1 global interrupt	true	5	0
SPI2 global interrupt	true	5	0
USART1 global interrupt	true	5	0
TIM6 global interrupt	true	15	0
SPI3 global interrupt	true	5	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
EXTI line1 interrupt	unused		
EXTI line[15:10] interrupts	unused		

8.3.2. 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
Pre-fetch fault, memory access fault	false	true	false
Undefined instruction or illegal state	false	true	false
System service call via SWI instruction	false	false	false
Debug monitor	false	true	false

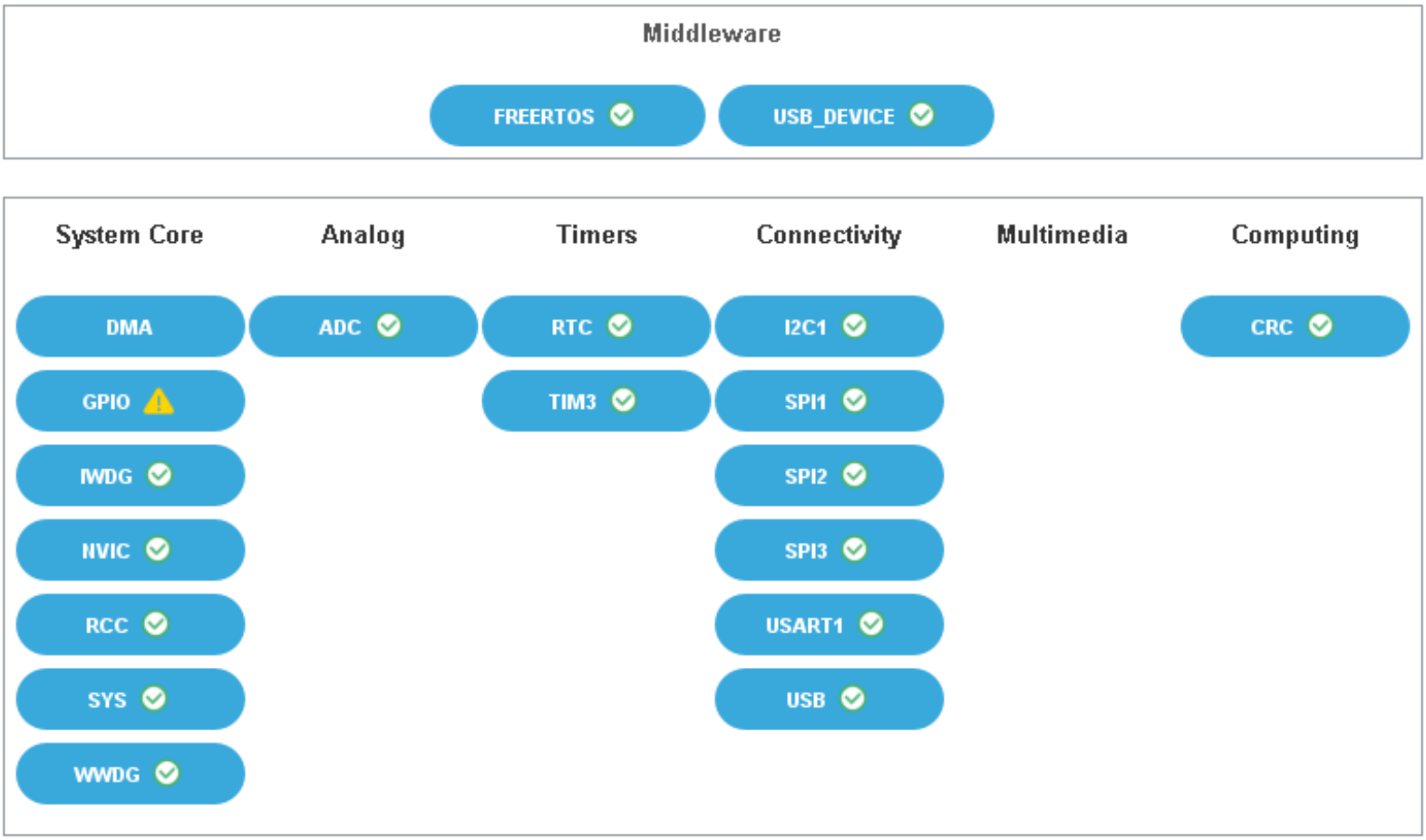
Enabled interrupt Table	Select for init sequence ordering	Generate IRQ handler	Call HAL handler
Pendable request for system service	false	false	false
System tick timer	false	false	true
Window watchdog interrupt	false	true	true
ADC global interrupt	false	true	true
USB high priority interrupt	false	true	true
USB low priority interrupt	false	true	true
TIM3 global interrupt	false	true	true
I2C1 event interrupt	false	true	true
I2C1 error interrupt	false	true	true
SPI1 global interrupt	false	true	true
SPI2 global interrupt	false	true	true
USART1 global interrupt	false	true	true
TIM6 global interrupt	false	true	true
SPI3 global interrupt	false	true	true

*** User modified value**

9. System Views

9.1. Category view

9.1.1. Current



10. Docs & Resources

Type	Link
Datasheet	http://www.st.com/resource/en/datasheet/DM00048356.pdf
Reference manual	http://www.st.com/resource/en/reference_manual/CD00240193.pdf
Programming manual	http://www.st.com/resource/en/programming_manual/CD00228163.pdf
Errata sheet	http://www.st.com/resource/en/errata_sheet/DM00105474.pdf
Application note	http://www.st.com/resource/en/application_note/CD00160362.pdf
Application note	http://www.st.com/resource/en/application_note/CD00167594.pdf
Application note	http://www.st.com/resource/en/application_note/CD00211314.pdf
Application note	http://www.st.com/resource/en/application_note/CD00259245.pdf
Application note	http://www.st.com/resource/en/application_note/CD00264342.pdf
Application note	http://www.st.com/resource/en/application_note/CD00264379.pdf
Application note	http://www.st.com/resource/en/application_note/CD00270081.pdf
Application note	http://www.st.com/resource/en/application_note/CD00273528.pdf
Application note	http://www.st.com/resource/en/application_note/CD00280599.pdf
Application note	http://www.st.com/resource/en/application_note/DM00024853.pdf
Application note	http://www.st.com/resource/en/application_note/DM00025071.pdf
Application note	http://www.st.com/resource/en/application_note/DM00032987.pdf
Application note	http://www.st.com/resource/en/application_note/DM00040808.pdf
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