

## 1. Description

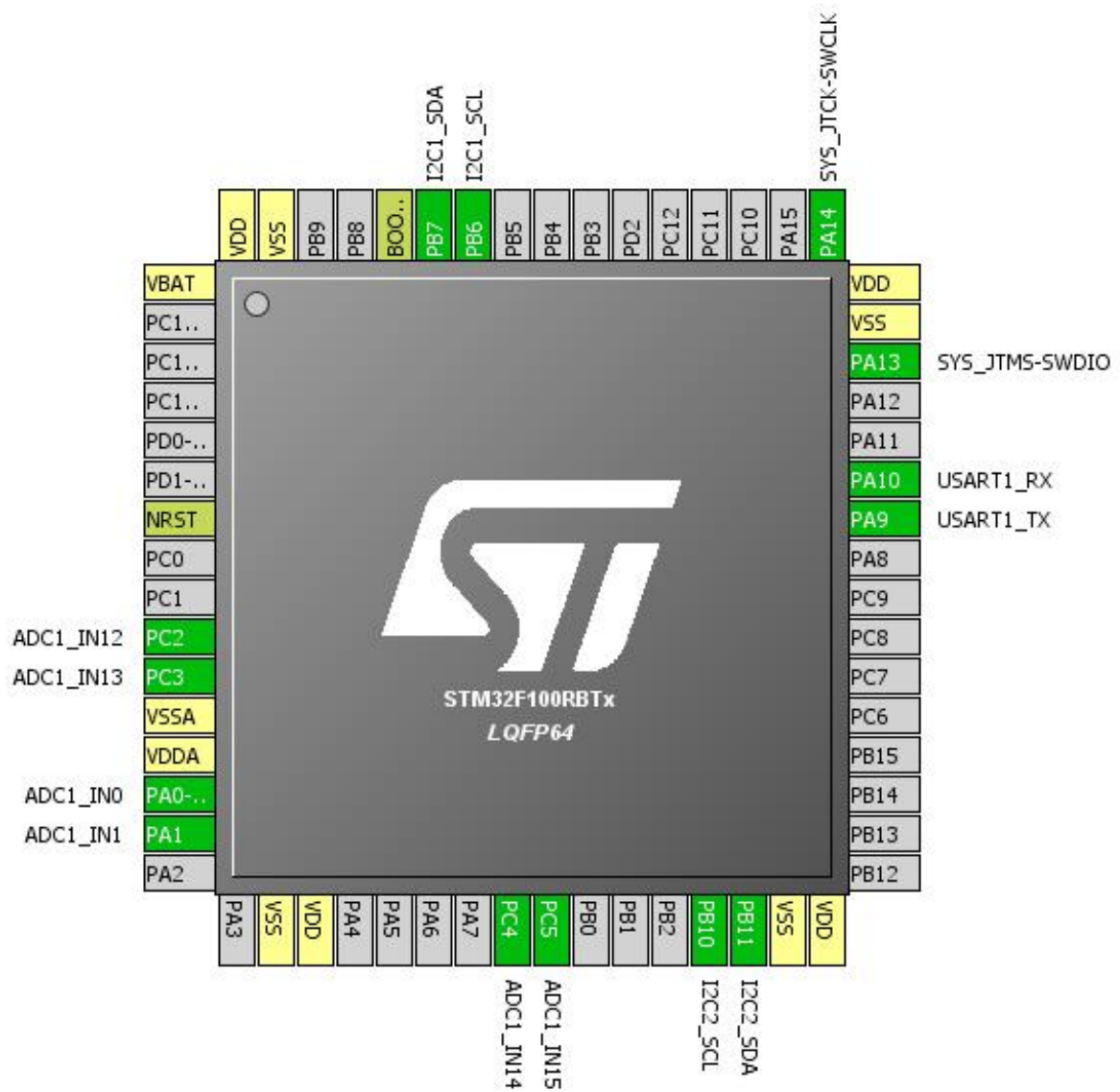
### 1.1. Project

Project Name	MotionSensor
Board Name	MotionSensor
Generated with:	STM32CubeMX 4.11.0
Date	11/28/2015

### 1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F100 Value Line
MCU name	STM32F100RBTx
MCU Package	LQFP64
MCU Pin number	64

## 2. Pinout Configuration



### 3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
7	NRST	Reset		
10	PC2	I/O	ADC1_IN12	
11	PC3	I/O	ADC1_IN13	
12	VSSA	Power		
13	VDDA	Power		
14	PA0-WKUP	I/O	ADC1_IN0	
15	PA1	I/O	ADC1_IN1	
18	VSS	Power		
19	VDD	Power		
24	PC4	I/O	ADC1_IN14	
25	PC5	I/O	ADC1_IN15	
29	PB10	I/O	I2C2_SCL	
30	PB11	I/O	I2C2_SDA	
31	VSS	Power		
32	VDD	Power		
42	PA9	I/O	USART1_TX	
43	PA10	I/O	USART1_RX	
46	PA13	I/O	SYS_JTMS-SWDIO	
47	VSS	Power		
48	VDD	Power		
49	PA14	I/O	SYS_JTCK-SWCLK	
58	PB6	I/O	I2C1_SCL	
59	PB7	I/O	I2C1_SDA	
60	BOOT0	Boot		
63	VSS	Power		
64	VDD	Power		



## 5. IPs and Middleware Configuration

### 5.1. ADC1

mode: IN0

mode: IN1

mode: IN12

mode: IN13

mode: IN14

mode: IN15

#### 5.1.1. Parameter Settings:

##### ADC\_Settings:

Data Alignment	Right alignment
Scan Conversion Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled

##### ADC\_Regular\_ConversionMode:

Enable Regular Conversions	Enable
Number Of Conversion	1
External Trigger Conversion Edge	None
<u>Rank</u>	1
Channel	<b>Channel 15 *</b>
Sampling Time	1.5 Cycles

##### ADC\_Injected\_ConversionMode:

Number Of Conversions	0
-----------------------	---

##### WatchDog:

Enable Analog WatchDog Mode	false
-----------------------------	-------

### 5.2. I2C1

I2C: I2C

#### 5.2.1. 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

## 5.3. I2C2

### I2C: I2C

#### 5.3.1. 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

## 5.4. SYS

### Debug: Serial-Wire

## 5.5. TIM1

### Clock Source : Internal Clock

#### 5.5.1. Parameter Settings:

**Counter Settings:**

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	0

Internal Clock Division (CKD)	No Division
Repetition Counter (RCR - 8 bits value)	0

**Trigger Output (TRGO) Parameters:**

Master/Slave Mode	Disable (no sync between this TIM (Master) and its Slaves)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

## 5.6. TIM2

**Clock Source : Internal Clock**

### 5.6.1. Parameter Settings:

**Counter Settings:**

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	0
Internal Clock Division (CKD)	No Division

**Trigger Output (TRGO) Parameters:**

Master/Slave Mode	Disable (no sync between this TIM (Master) and its Slaves)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

## 5.7. TIM3

**Clock Source : Internal Clock**

### 5.7.1. Parameter Settings:

**Counter Settings:**

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	0
Internal Clock Division (CKD)	No Division

**Trigger Output (TRGO) Parameters:**

Master/Slave Mode	Disable (no sync between this TIM (Master) and its Slaves)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

## 5.8. TIM4

mode: Clock Source

### 5.8.1. Parameter Settings:

#### Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	0
Internal Clock Division (CKD)	No Division

#### Trigger Output (TRGO) Parameters:

Master/Slave Mode	Disable (no sync between this TIM (Master) and its Slaves)
Trigger Event Selection	Reset (UG bit from TIMx_EGR)

## 5.9. TIM6

mode: Activated

### 5.9.1. Parameter Settings:

#### Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	0

#### Trigger Output (TRGO) Parameters:

Trigger Event Selection	Reset (UG bit from TIMx_EGR)
-------------------------	------------------------------

## 5.10. TIM7

mode: Activated

### 5.10.1. Parameter Settings:

#### Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value )	0



Trigger Output (TRGO) Parameters:

Trigger Event Selection

Reset (UG bit from TIMx\_EGR)

5.11. USART1

Mode: Asynchronous

5.11.1. 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

\* User modified value

## 6. System Configuration

### 6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC1	PC2	ADC1_IN12	Analog mode	n/a	n/a	
	PC3	ADC1_IN13	Analog mode	n/a	n/a	
	PA0-WKUP	ADC1_IN0	Analog mode	n/a	n/a	
	PA1	ADC1_IN1	Analog mode	n/a	n/a	
	PC4	ADC1_IN14	Analog mode	n/a	n/a	
	PC5	ADC1_IN15	Analog mode	n/a	n/a	
I2C1	PB6	I2C1_SCL	Alternate Function Open Drain	n/a	High *	
	PB7	I2C1_SDA	Alternate Function Open Drain	n/a	High *	
I2C2	PB10	I2C2_SCL	Alternate Function Open Drain	n/a	High *	
	PB11	I2C2_SDA	Alternate Function Open Drain	n/a	High *	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	n/a	High *	
	PA10	USART1_RX	Input mode	No pull-up and no pull-down	n/a	

### 6.2. DMA configuration

nothing configured in DMA service

### 6.3. NVIC configuration

Interrupt Table	Enable	Preenmption Priority	SubPriority
System tick timer	true	0	0
Non maskable interrupt		unused	
Memory management fault		unused	
Prefetch fault, memory access fault		unused	
Undefined instruction or illegal state		unused	
Debug monitor		unused	
PVD interrupt through EXTI line 16		unused	
Flash global interrupt		unused	
RCC global interrupt		unused	
ADC1 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	
TIM2 global interrupt		unused	
TIM3 global interrupt		unused	
TIM4 global interrupt		unused	
I2C1 event interrupt		unused	
I2C1 error interrupt		unused	
I2C2 event interrupt		unused	
I2C2 error interrupt		unused	
USART1 global interrupt		unused	
TIM6 global interrupt and DAC underrun error interrupts		unused	
TIM7 global interrupt		unused	

\* User modified value

## 7. Power Plugin report

### 7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F100 Value Line
MCU	STM32F100RBTx
Datasheet	16455_Rev8

### 7.2. Parameter Selection

Temperature	25
Vdd	3.3

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	MotionSensor
Project Folder	C:\home\dev\auvir\auvir_embed\cubemx\stm32f100rbt\MotionSensor
Toolchain / IDE	SW4STM32
Firmware Package Name and Version	STM32Cube FW_F1 V1.2.0

### 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	No
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