1. Description

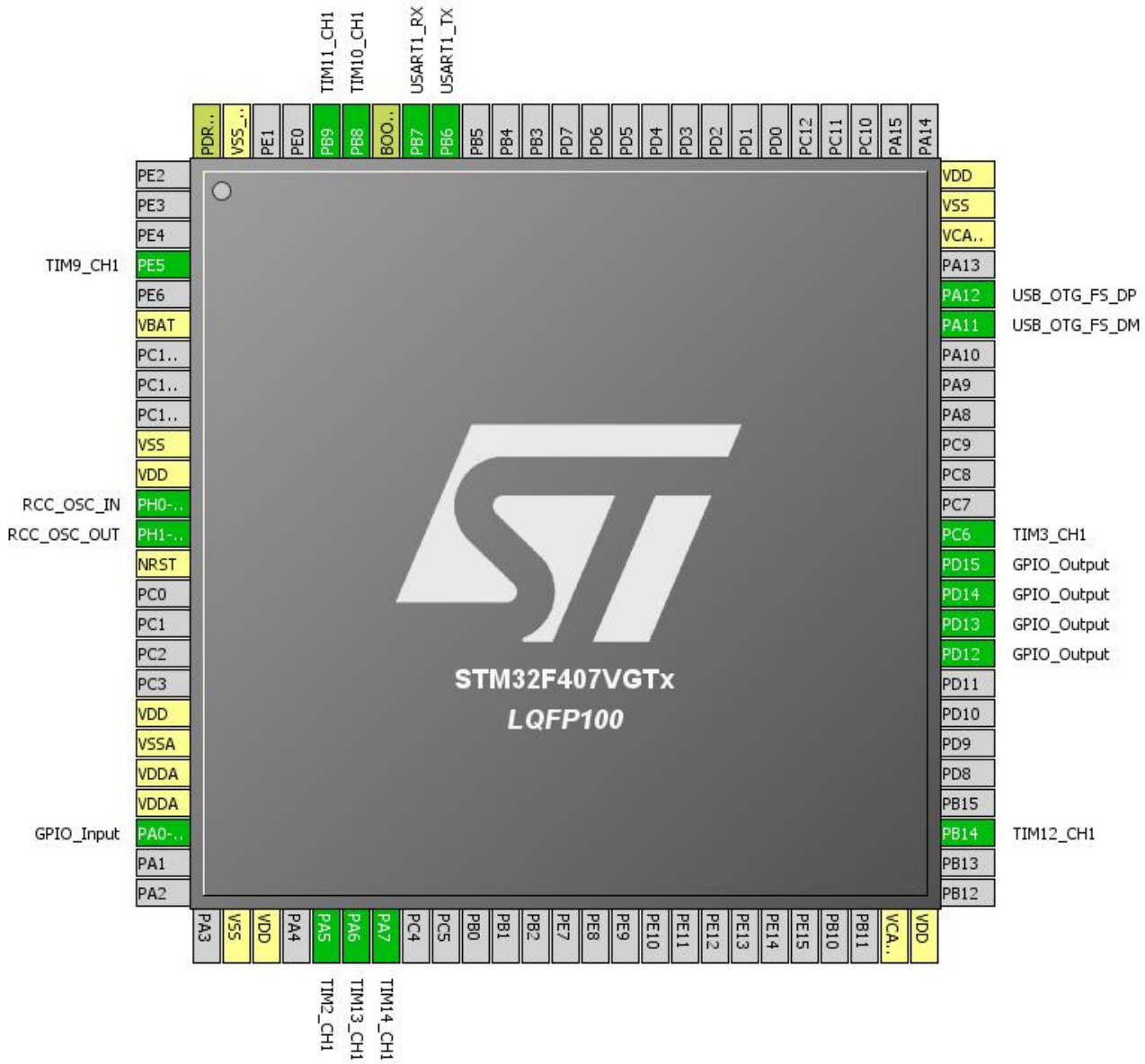
1.1. Project

Project Name	Sonar-Module
Generated with:	STM32CubeMX 4.1.0
Date	04/30/2014

1.2. MCU

MCU Serie	STM32F4
MCU Line	STM32F407/417
MCU name	STM32F407VGTx
MCU Package	LQFP100
MCU Pin number	100

2. Pinout Configuration



3. IPs and Middlewares Configuration

IP	Mode	Fonction	Pin
RCC	High Speed Clock (HSE): BYPASS Clock Source	RCC_OSC_IN	PH0-OSC_IN
		RCC_OSC_OUT	PH1-OSC_OUT
TIM2	Slave Mode: Reset Mode	N/A	N/A
	Trigger Source: TI1FP1	TIM2_CH1	PA5
	Clock Source : Internal Clock	N/A	N/A
	Channel1: Input Capture direct mode	TIM2_CH1	PA5
	Channel2: Input Capture indirect mode	TIM2_CH1	PA5
TIM3	Slave Mode: Reset Mode	N/A	N/A
	Trigger Source: TI1FP1	TIM3_CH1	PC6
	Clock Source : Internal Clock	N/A	N/A
	Channel1: Input Capture direct mode	TIM3_CH1	PC6
	Channel2: Input Capture indirect mode	TIM3_CH1	PC6
TIM9	Slave Mode: Reset Mode	N/A	N/A
	Trigger Source: TI1FP1	TIM9_CH1	PE5
	Clock Source	N/A	N/A
	Channel1: Input Capture direct mode	TIM9_CH1	PE5
	Channel2: Input Capture indirect mode	TIM9_CH1	PE5
TIM10	Activated	N/A	N/A
	Channel1: PWM Generation CH1	TIM10_CH1	PB8
	One Pulse Mode	N/A	N/A
TIM11	Activated	N/A	N/A
	Channel1: PWM Generation CH1	TIM11_CH1	PB9
	One Pulse Mode	N/A	N/A
	Slave Mode: Reset Mode	N/A	N/A

IP	Mode	Fonction	Pin
TIM12	Trigger Source: TI1FP1	TIM12_CH1	PB14
	Clock Source	N/A	N/A
	Channel1: Input Capture direct mode	TIM12_CH1	PB14
	Channel2: Input Capture indirect mode	TIM12_CH1	PB14
TIM13	Activated	N/A	N/A
	Channel1: PWM Generation CH1	TIM13_CH1	PA6
	One Pulse Mode	N/A	N/A
TIM14	Activated	N/A	N/A
	Channel1: PWM Generation CH1	TIM14_CH1	PA7
	One Pulse Mode	N/A	N/A
USART1	Mode: Asynchronous	USART1_RX	PB7
		USART1_TX	PB6
USB_OTG_FS	Mode: Device_Only	USB_OTG_FS_DM	PA11
		USB_OTG_FS_DP	PA12

4. Pins Configuration

Pins	Pos	Functions
PE5	4	TIM9_CH1
PH0-OSC_IN	12	RCC_OSC_IN
PH1-OSC_OUT	13	RCC_OSC_OUT
PA0-WKUP *	23	GPIO_Input
PA5	30	TIM2_CH1
PA6	31	TIM13_CH1
PA7	32	TIM14_CH1
PB14	53	TIM12_CH1
PD12 *	59	GPIO_Output
PD13 *	60	GPIO_Output
PD14 *	61	GPIO_Output
PD15 *	62	GPIO_Output
PC6	63	TIM3_CH1
PA11	70	USB_OTG_FS_DM
PA12	71	USB_OTG_FS_DP
PB6	92	USART1_TX
PB7	93	USART1_RX
PB8	95	TIM10_CH1
PB9	96	TIM11_CH1

* The pin is affected with an I/O function

5. Power Plugin report

5.1. Microcontroller Selection

Serie	STM32F4
Line	STM32F407/417
MCU	STM32F407VGTx
Datasheet	022152_Rev5

5.2. Parameter Selection

Temperature	25
Vdd	3.3

6. Software Project

6.1. Project Settings

Name	Value
Project Name	Sonar-Module
Project Folder	C:\devel\GitHub\RoboController\LLU\Sonar-Module
Toolchain / IDE	EWARM 6.70
Firmware Package Name and Version	STM32Cube FW_F4 V1.1.0

6.2. 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	Yes
Delete previously generated files when not re-generated	Yes
Set all free pins as analog (to optimize the power consumption)	No

6.3. Toolchains Settings

Name	Value
Compiler Optimizations	Balanced Size/Speed