1. Description

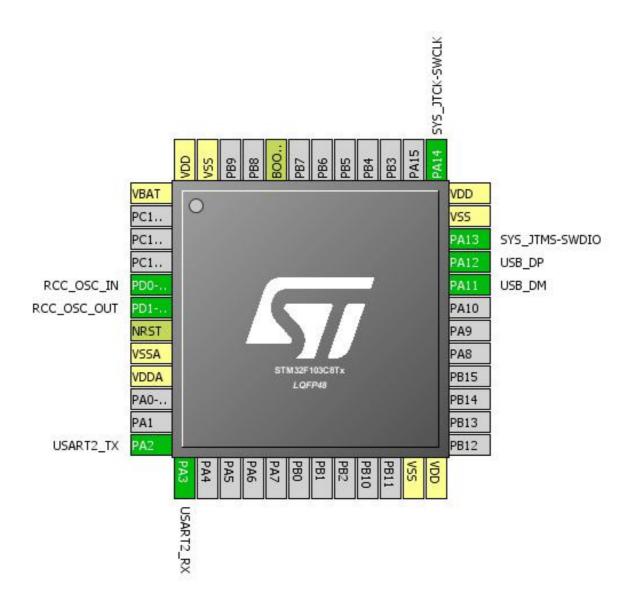
1.1. Project

Project Name	sensor-hid-stm32f103c8t6
Board Name	sensor-hid-stm32f103c8t6
Generated with:	STM32CubeMX 4.11.0
Date	02/17/2016

1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103C8Tx
MCU Package	LQFP48
MCU Pin number	48

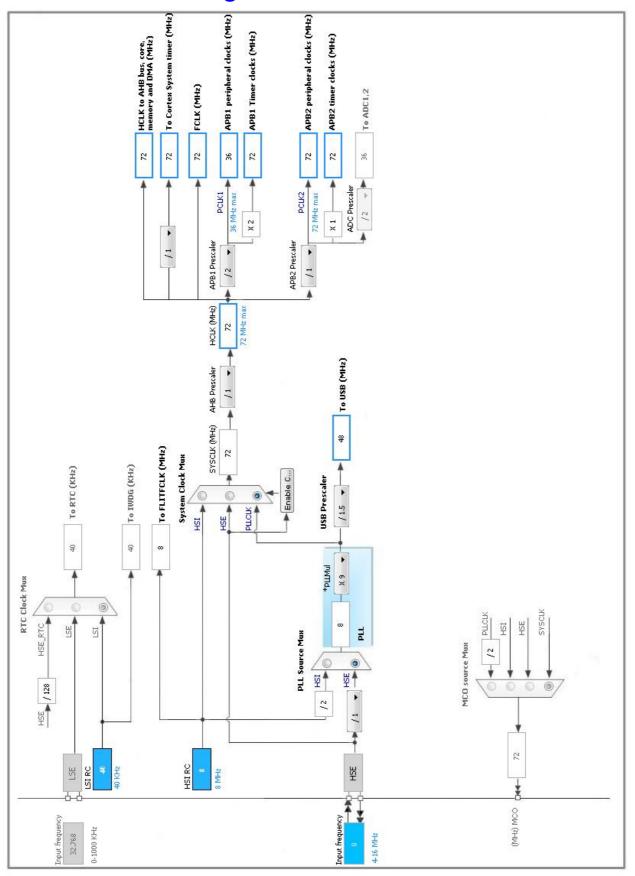
2. Pinout Configuration



3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
5	PD0-OSC_IN	I/O	RCC_OSC_IN	
6	PD1-OSC_OUT	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
12	PA2	I/O	USART2_TX	
13	PA3	I/O	USART2_RX	
23	VSS	Power		
24	VDD	Power		
32	PA11	I/O	USB_DM	
33	PA12	I/O	USB_DP	
34	PA13	I/O	SYS_JTMS-SWDIO	
35	VSS	Power		
36	VDD	Power		
37	PA14	I/O	SYS_JTCK-SWCLK	
44	воото	Boot		
47	VSS	Power		
48	VDD	Power		

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. CRC

mode: Activated

5.2. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.2.1. Parameter Settings:

System Parameters:

VDD voltage (V) 3.3
Prefetch Buffer Enabled

Flash Latency(WS) 2 WS (3 CPU cycle)

RCC Parameters:

HSI Calibration Value 16

5.3. SYS

Debug: Serial-Wire

5.4. TIM2

Clock Source: Internal Clock

5.4.1. 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)

5.5. **USART2**

Mode: Asynchronous

5.5.1. 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

5.6. USB

mode: Device (FS)

5.6.1. Parameter Settings:

Basic Parameters:

Speed Full Speed 12MBit/s

Endpoint 0 Max Packet size 8 Bytes

Power Parameters:

Low PowerDisabledLink Power ManagementDisabledBattery ChargingDisabled

5.7. USB DEVICE

Class For FS IP: Communication Device Class (Virtual Port Com)

5.7.1. Parameter Settings:

Basic Parameters:

USBD_MAX_NUM_INTERFACES (Maximum number of supported interfaces)

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)

Disabled

USBD_SUPPORT_USER_STRING (Enable user string descriptor)
USBD_SELF_POWERED (Enabled self power)

USBD_DEBUG_LEVEL (USBD Debug Level) 0: No debug message

Class Parameters:

USBD_CDC_INTERVAL (Number of micro-frames interval) 1000

5.7.2. Device Descriptor:

Device Descriptor:

VID (Vendor IDentifier) 1155

LANGID_STRING (Language Identifier) English(United States)

MANUFACTURER_STRING (Manufacturer Identifier)

DeepImmersion *

Device Descriptor FS:

PID (Product IDentifier) 22336

PRODUCT_STRING (Product Identifier) STM32 iMocap Virtual

ComPort *

Enabled

SERIALNUMBER_STRING (Serial number) 0000000001A
CONFIGURATION_STRING (Configuration Identifier) CDC Config
INTERFACE_STRING (Interface Identifier) CDC Interface

^{*} User modified value

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
RCC	PD0- OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PD1- OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SYS	PA13	SYS_JTMS- SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK- SWCLK	n/a	n/a	n/a	
USART2	PA2	USART2_TX	Alternate Function Push Pull	n/a	High *	
	PA3	USART2_RX	Input mode	No pull-up and no pull-down	n/a	
USB	PA11	USB_DM	n/a	n/a	n/a	
	PA12	USB_DP	n/a	n/a	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
USB low priority or CAN RX0 interrupts	true	0	0
TIM2 global interrupt	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		
USB high priority or CAN TX interrupts	unused		
USART2 global interrupt	unused		

^{*} User modified value

7. Power Plugin report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
мси	STM32F103C8Tx
Datasheet	13587_Rev17

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value	
Project Name	sensor-hid-stm32f103c8t6	
Project Folder	C:\home\dev\auvir\auvir_embed\mocap\sensor-hid\sensor-hid-stm32f103c8t	
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 only the necessary library files
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	No
consumption)	