1. Description

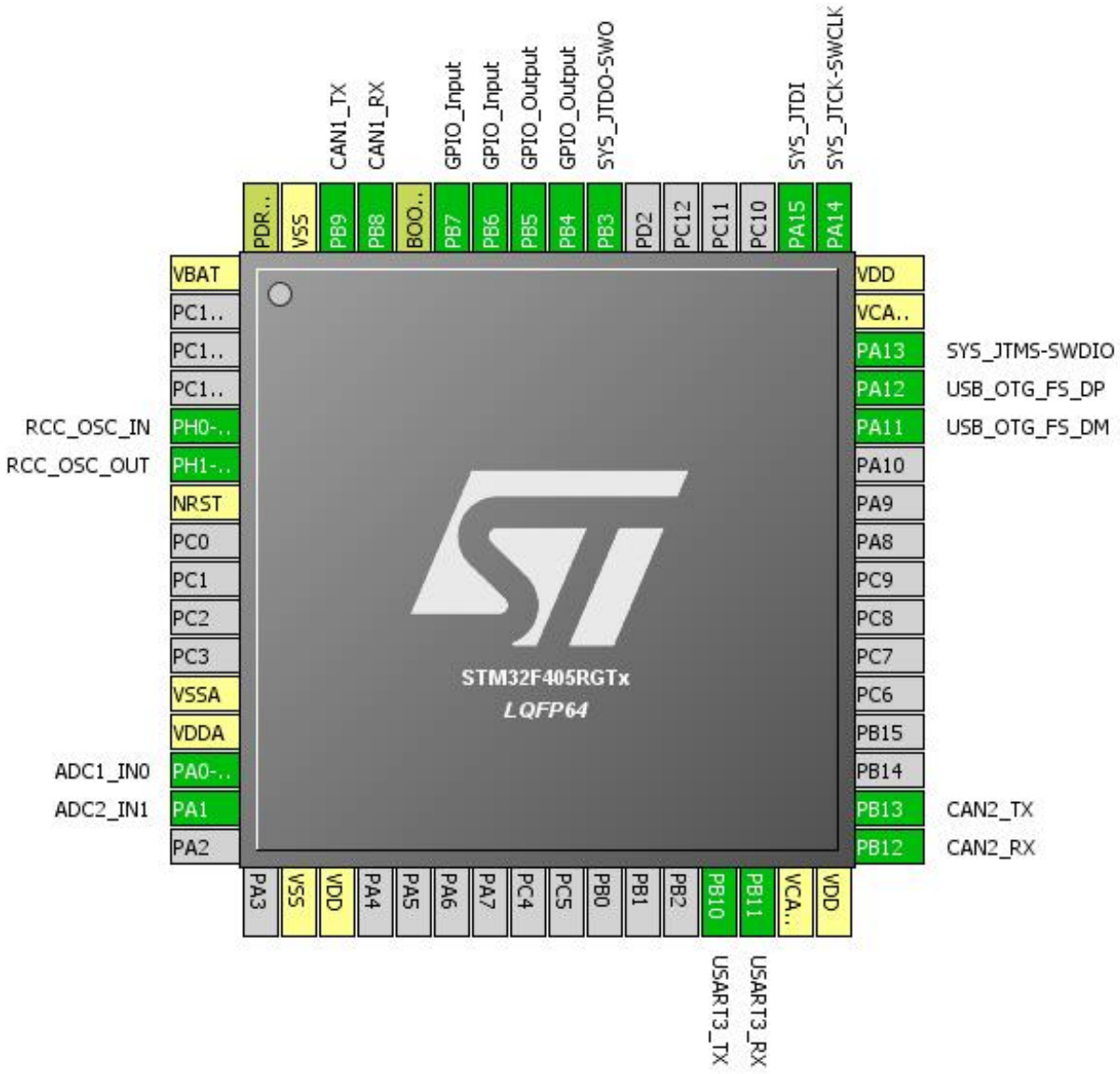
1.1. Project

Project Name	CiA OpenHW
Generated with:	STM32CubeMX 4.2.0
Date	08/29/2014

1.2. MCU

MCU Serie	STM32F4
MCU Line	STM32F405/415
MCU name	STM32F405RGTx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



3. IPs and Middlewares Configuration

IP	Mode	Fonction	Pin
ADC1	IN0	ADC1_IN0	PA0-WKUP
ADC2	IN1	ADC2_IN1	PA1
CAN1	Mode	CAN1_RX	PB8
		CAN1_TX	PB9
CAN2	Mode	CAN2_RX	PB12
		CAN2_TX	PB13
RCC	High Speed Clock (HSE): BYPASS Clock Source	RCC_OSC_IN	PH0-OSC_IN
		RCC_OSC_OUT	PH1-OSC_OUT
SYS	Debug: JTAG (4 pins)	SYS_JTCK-SWCLK	PA14
		SYS_JTDI	PA15
		SYS_JTDO-SWO	PB3
		SYS_JTMS-SWDIO	PA13
USART3	Mode: Asynchronous	USART3_RX	PB11
		USART3_TX	PB10
USB_OTG_FS	Mode: Device_Only	USB_OTG_FS_DM	PA11
		USB_OTG_FS_DP	PA12

4. Pins Configuration

Pin	Pos	Function(s)	Label
PH0-OSC_IN	5	RCC_OSC_IN	
PH1-OSC_OUT	6	RCC_OSC_OUT	
PA0-WKUP	14	ADC1_IN0	
PA1	15	ADC2_IN1	
PB10	29	USART3_TX	
PB11	30	USART3_RX	
PB12	33	CAN2_RX	
PB13	34	CAN2_TX	
PA11	44	USB_OTG_FS_DM	
PA12	45	USB_OTG_FS_DP	
PA13	46	SYS_JTMS-SWDIO	
PA14	49	SYS_JTCK-SWCLK	
PA15	50	SYS_JTDI	
PB3	55	SYS_JTDO-SWO	
PB4 *	56	GPIO_Output	
PB5 *	57	GPIO_Output	
PB6 *	58	GPIO_Input	
PB7 *	59	GPIO_Input	
PB8	61	CAN1_RX	
PB9	62	CAN1_TX	

* The pin is affected with an I/O function

5. Power Plugin report

5.1. Microcontroller Selection

Serie	STM32F4
Line	STM32F405/415
MCU	STM32F405RGTx
Datasheet	022152_Rev5

5.2. Parameter Selection

Temperature	25
Vdd	3.3

5.3. Battery Selection

Battery	Alkaline(AA LR6)
Capacity	2850.0 mAh
Self discharge	0.3 %/month
Nominal voltage	1.5 V
Max Cont Current	1000.0 mA
Max Pulse Current	0.0 mA
Cells in series	1
Cells in parallel	1

5.4. Sequence

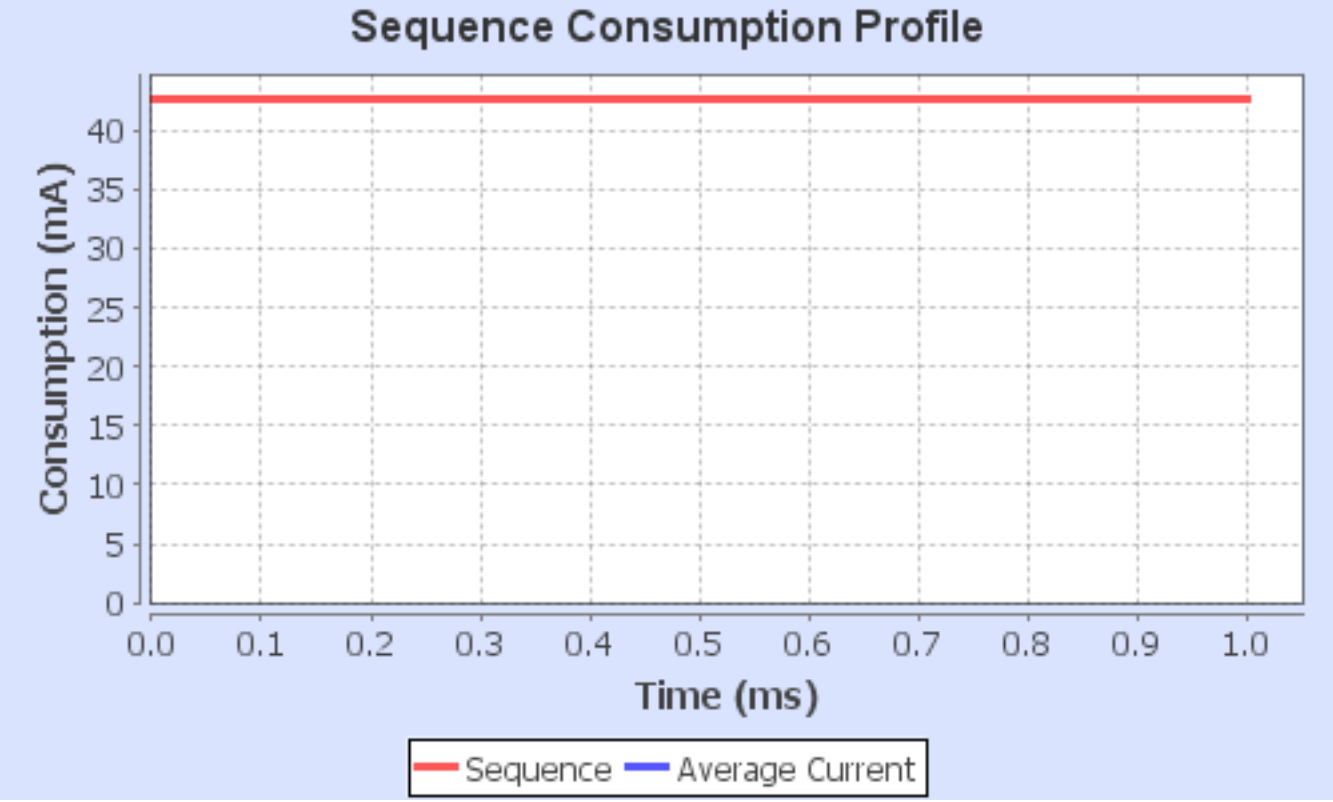
Step	STEP1
Mode	RUN
Range	Scale1-High
Fetch type	RAM/FLASH-ART_ON
Clock Config.	HSE PLL_ON

Clock Source Freq.	4.0 MHz
CPU Freq.	168.0 MHz
Periph.	CAN1 CAN2 GPIOD PWR SYSCFG TIM1 USART3 USB_OTG_FS WWDG
Additional Cons.	0 mA
Average Current	42.66569 mA
Duration	1 ms
DMIPS	210.0

5.5. Results

Sequence time	1.0 ms	Average current	42.666 mA
Battery Life	2 days & 18 hours	Average DMIPS	210.0 DMIPS

5.6. Chart



6. Software Project

6.1. Project Settings

Name	Value
Project Name	CiA OpenHW
Project Folder	C:\Users\carsten sbick\Documents\TestMX\CiA OpenHW
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	No
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