1. Description

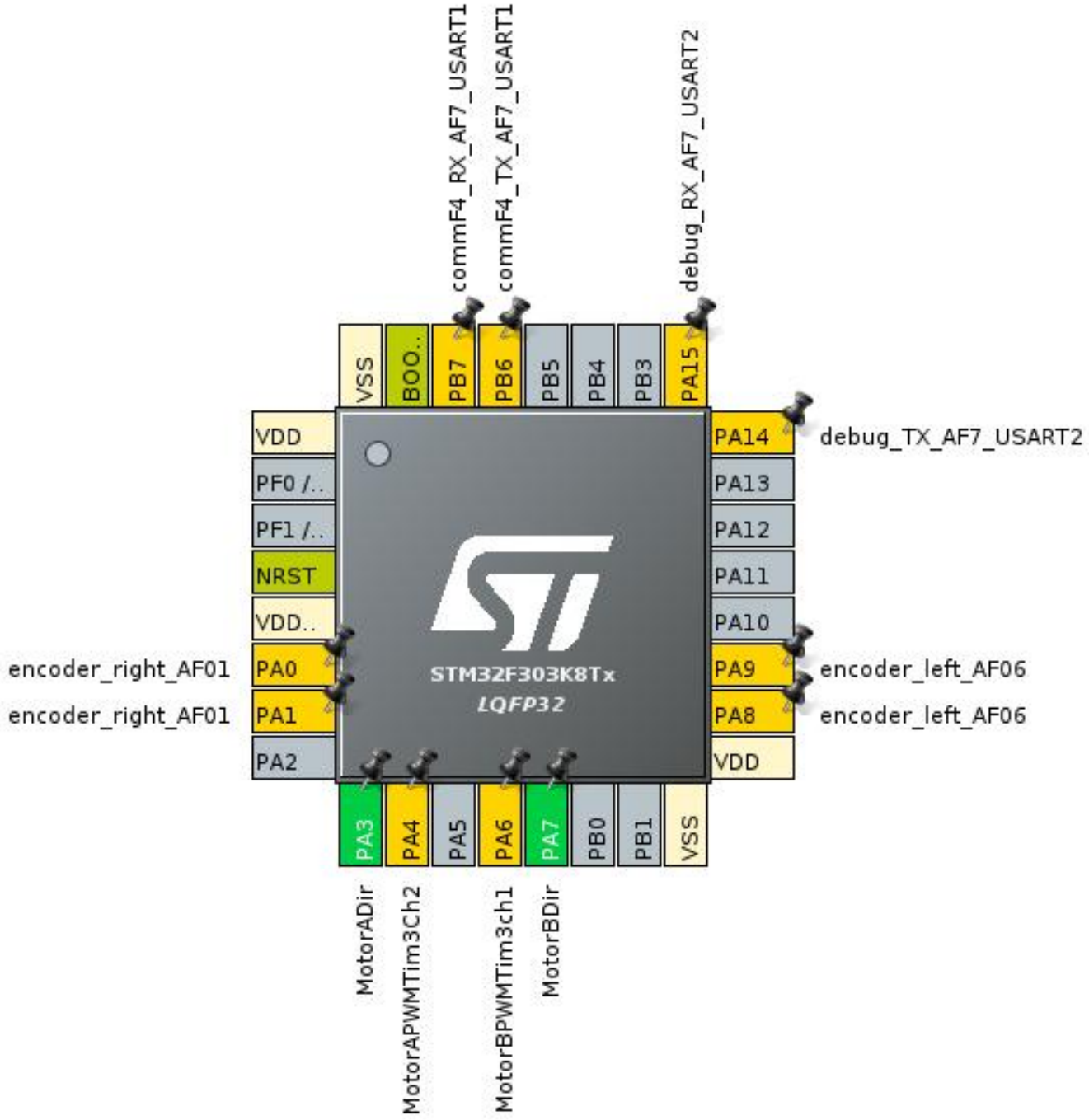
1.1. Project

Project Name	pinMap
Board Name	custom
Generated with:	STM32CubeMX 5.6.0
Date	03/26/2020

1.2. MCU

MCU Series	STM32F3
MCU Line	STM32F303
MCU name	STM32F303K8Tx
MCU Package	LQFP32
MCU Pin number	32

2. Pinout Configuration



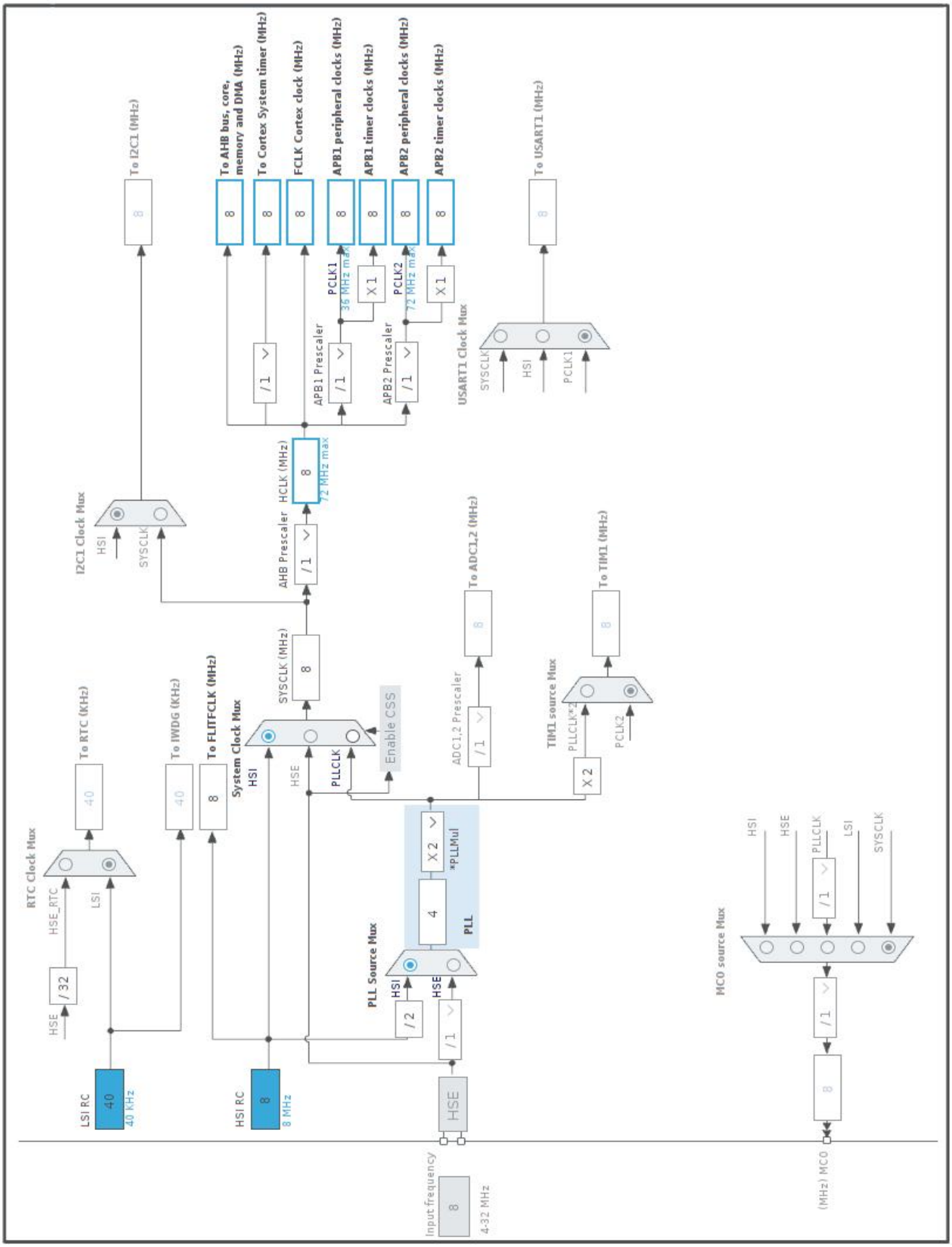
3. Pins Configuration

Pin Number LQFP32	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VDD	Power		
4	NRST	Reset		
5	VDDA/VREF+	Power		
6	PA0 *	I/O	TIM2_CH1	encoder_right_AF01
7	PA1 *	I/O	TIM2_CH2	encoder_right_AF01
9	PA3 **	I/O	GPIO_Output	MotorADir
10	PA4 *	I/O	TIM3_CH2	MotorAPWMTim3Ch2
12	PA6 *	I/O	TIM3_CH1	MotorBPWMTim3ch1
13	PA7 **	I/O	GPIO_Output	MotorBDir
16	VSS	Power		
17	VDD	Power		
18	PA8 *	I/O	TIM1_CH1	encoder_left_AF06
19	PA9 *	I/O	TIM1_CH2	encoder_left_AF06
24	PA14 *	I/O	USART2_TX	debug_TX_AF7_USART2
25	PA15 *	I/O	USART2_RX	debug_RX_AF7_USART2
29	PB6 *	I/O	USART1_TX	commF4_TX_AF7_USART1
30	PB7 *	I/O	USART1_RX	commF4_RX_AF7_USART1
31	BOOT0	Boot		
32	VSS	Power		

** 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	pinMap
Project Folder	/home/hina/Documents/robotronik/pinMapF3
Toolchain / IDE	EWARM V8.32
Firmware Package Name and Version	STM32Cube FW_F3 V1.11.0

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	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. Power Consumption Calculator report

6.1. Microcontroller Selection

Series	STM32F3
Line	STM32F303
MCU	STM32F303K8Tx
Datasheet	025083_Rev5

6.2. Parameter Selection

Temperature	25
Vdd	3.6

6.3. Battery Selection

Battery	Li-SOCL2(A3400)
Capacity	3400.0 mAh
Self Discharge	0.08 %/month
Nominal Voltage	3.6 V
Max Cont Current	100.0 mA
Max Pulse Current	200.0 mA
Cells in series	1
Cells in parallel	1

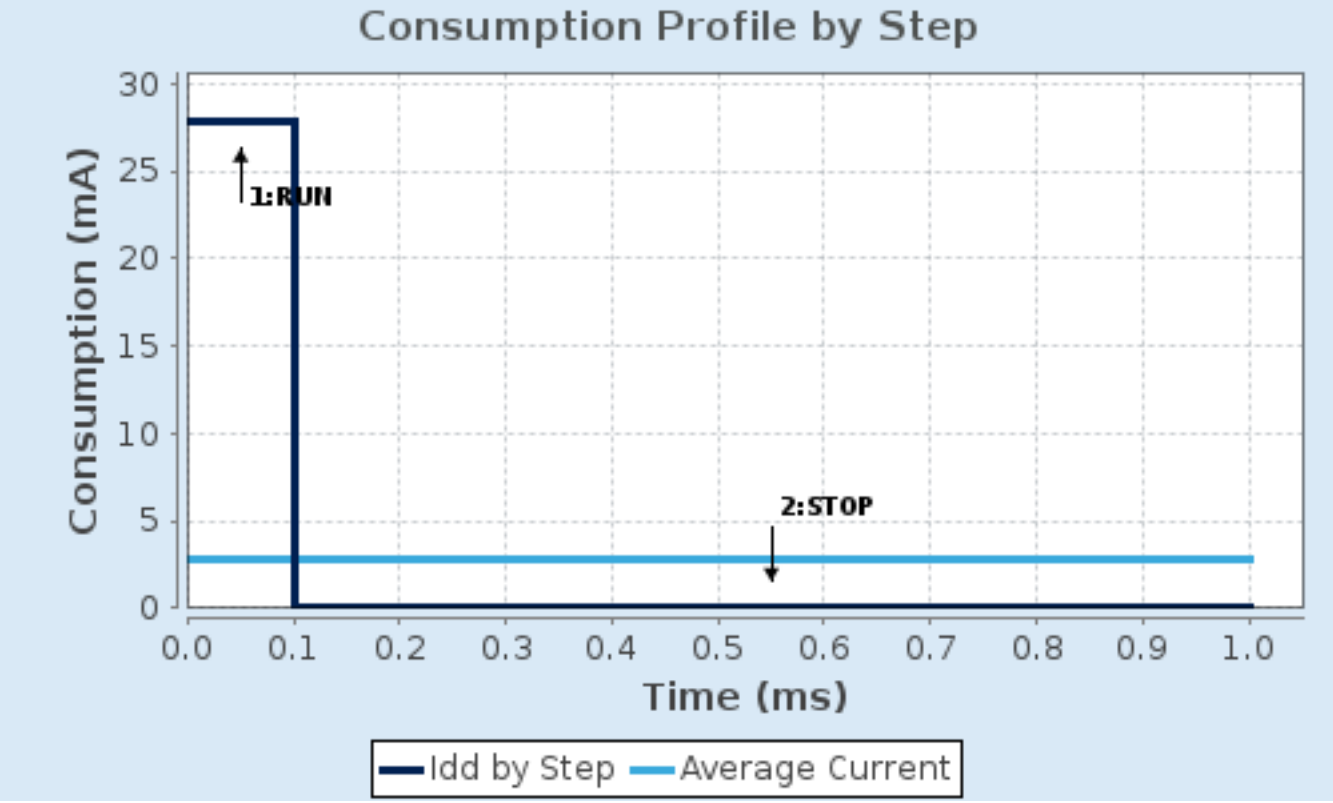
6.4. Sequence

Step	Step1	Step2
Mode	RUN	STOP
Vdd	3.6	3.6
Voltage Source	Battery	Battery
Range	No Scale	No Scale
Fetch Type	RAM	n/a
CPU Frequency	72 MHz	0 Hz
Clock Configuration	HSEBYP PLL	Regulator_LP
Clock Source Frequency	8 MHz	0 Hz
Peripherals		
Additional Cons.	0 mA	0 mA
Average Current	27.84 mA	9.55 µA
Duration	0.1 ms	0.9 ms
DMIPS	90.0	0.0
Ta Max	98.99	105
Category	In DS Table	In DS Table

6.5. RESULTS

Sequence Time	1 ms	Average Current	2.79 mA
Battery Life	1 month, 20 days, 5 hours	Average DMIPS	90.0 DMIPS

6.6. Chart


Consumption Profile by Step
Consumption (mA)
30
25
20
15
10
5
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. IPs and Middleware Configuration

7.1. GPIO

7.2. SYS

Timebase Source: SysTick

*** User modified value**

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
Single Mapped Signals	PA0	TIM2_CH1	Alternate Function Push Pull	No pull up pull down	Low	encoder_right_AF01
	PA1	TIM2_CH2	Alternate Function Push Pull	No pull up pull down	Low	encoder_right_AF01
	PA4	TIM3_CH2	Alternate Function Push Pull	No pull up pull down	Low	MotorAPWMTim3Ch2
	PA6	TIM3_CH1	Alternate Function Push Pull	No pull up pull down	Low	MotorBPWMTim3ch1
	PA8	TIM1_CH1	Alternate Function Push Pull	No pull up pull down	Low	encoder_left_AF06
	PA9	TIM1_CH2	Alternate Function Push Pull	No pull up pull down	Low	encoder_left_AF06
	PA14	USART2_TX	Alternate Function Push Pull	No pull up pull down	**High ***	debug_TX_AF7_USART2
	PA15	USART2_RX	Alternate Function Push Pull	No pull up pull down	**High ***	debug_RX_AF7_USART2
	PB6	USART1_TX	Alternate Function Push Pull	No pull up pull down	**High ***	commF4_TX_AF7_USART1
	PB7	USART1_RX	Alternate Function Push Pull	No pull up pull down	**High ***	commF4_RX_AF7_USART1
GPIO	PA3	GPIO_Output	Output Push Pull	No pull up pull down	Low	MotorADir
	PA7	GPIO_Output	Output Push Pull	No pull up pull down	Low	MotorBDir

8.2. DMA configuration

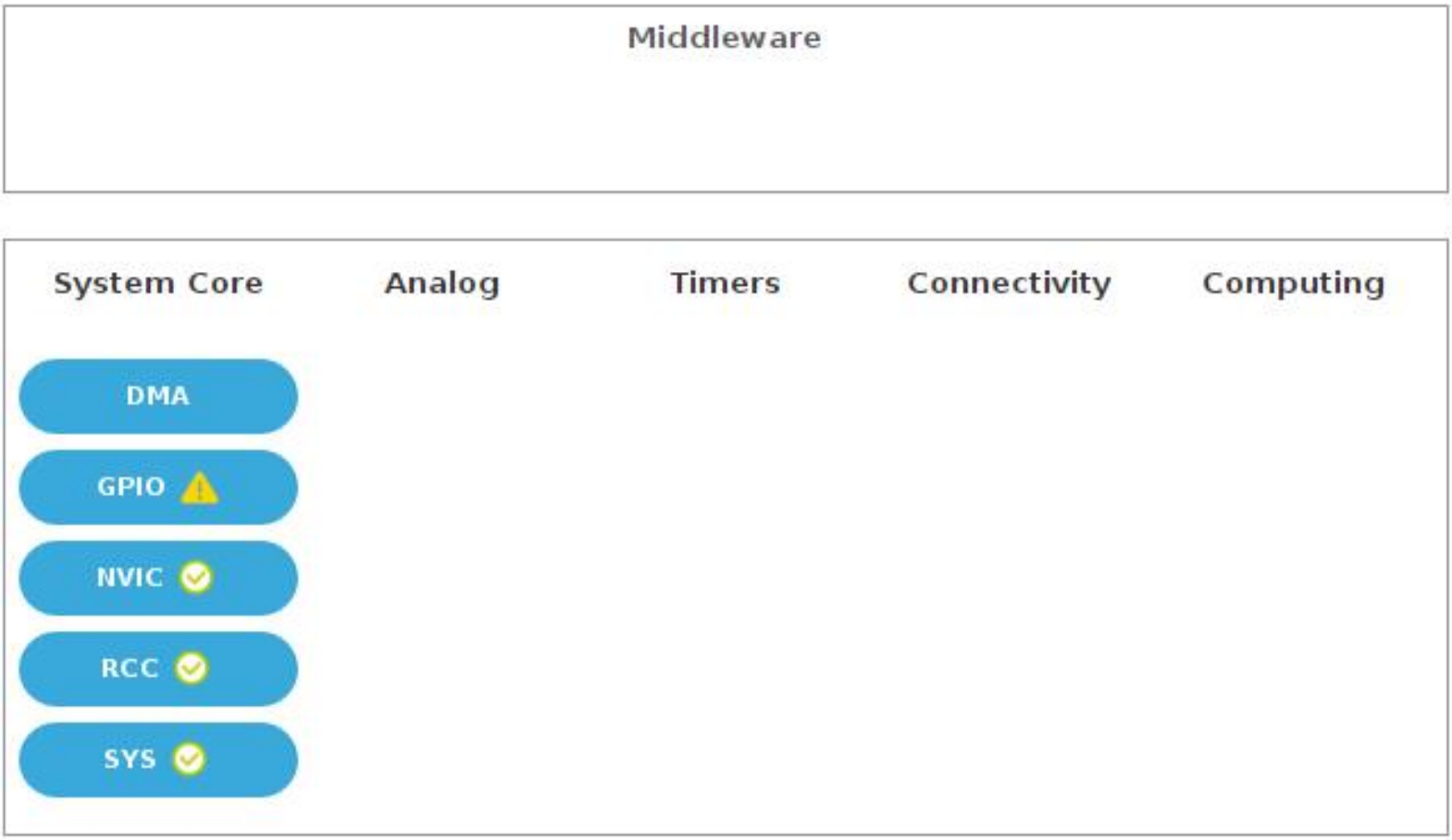
nothing configured in DMA service

8.3. NVIC configuration

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	0	0
System tick timer	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
Floating point unit interrupt	unused		

*** User modified value**

9. Predefined Views - Category view : Current



10. Software Pack Report