1. Description

1.1. Project

Project Name	stm32f103_ugfx_trial
Board Name	stm32f103_ugfx_trial
Generated with:	STM32CubeMX 4.23.0
Date	12/07/2017

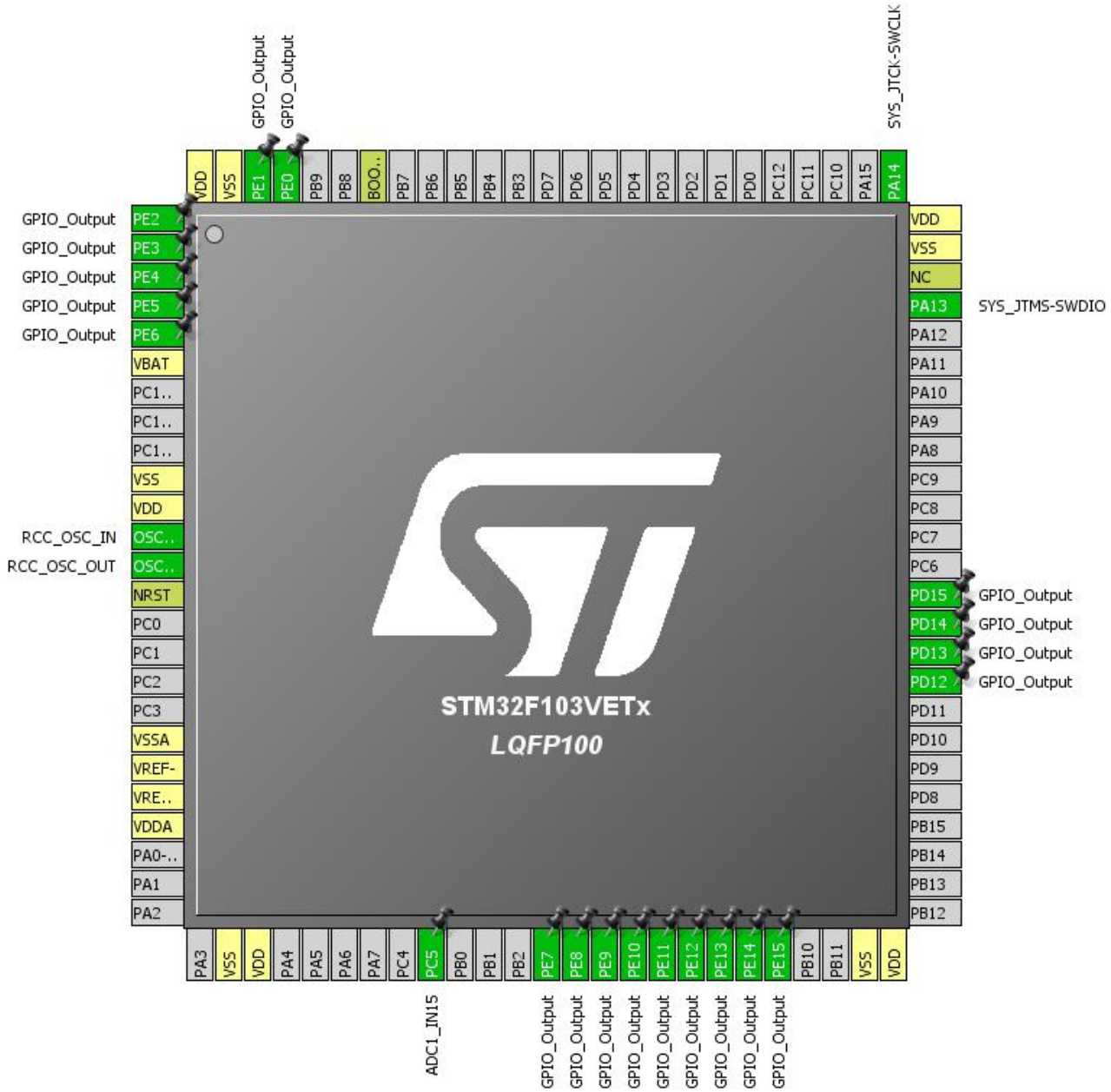
1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103VETx
MCU Package	LQFP100
MCU Pin number	100

1.3. Caution

The report was generated although the configuration was in a modified state. It may be not accurate

2. Pinout Configuration



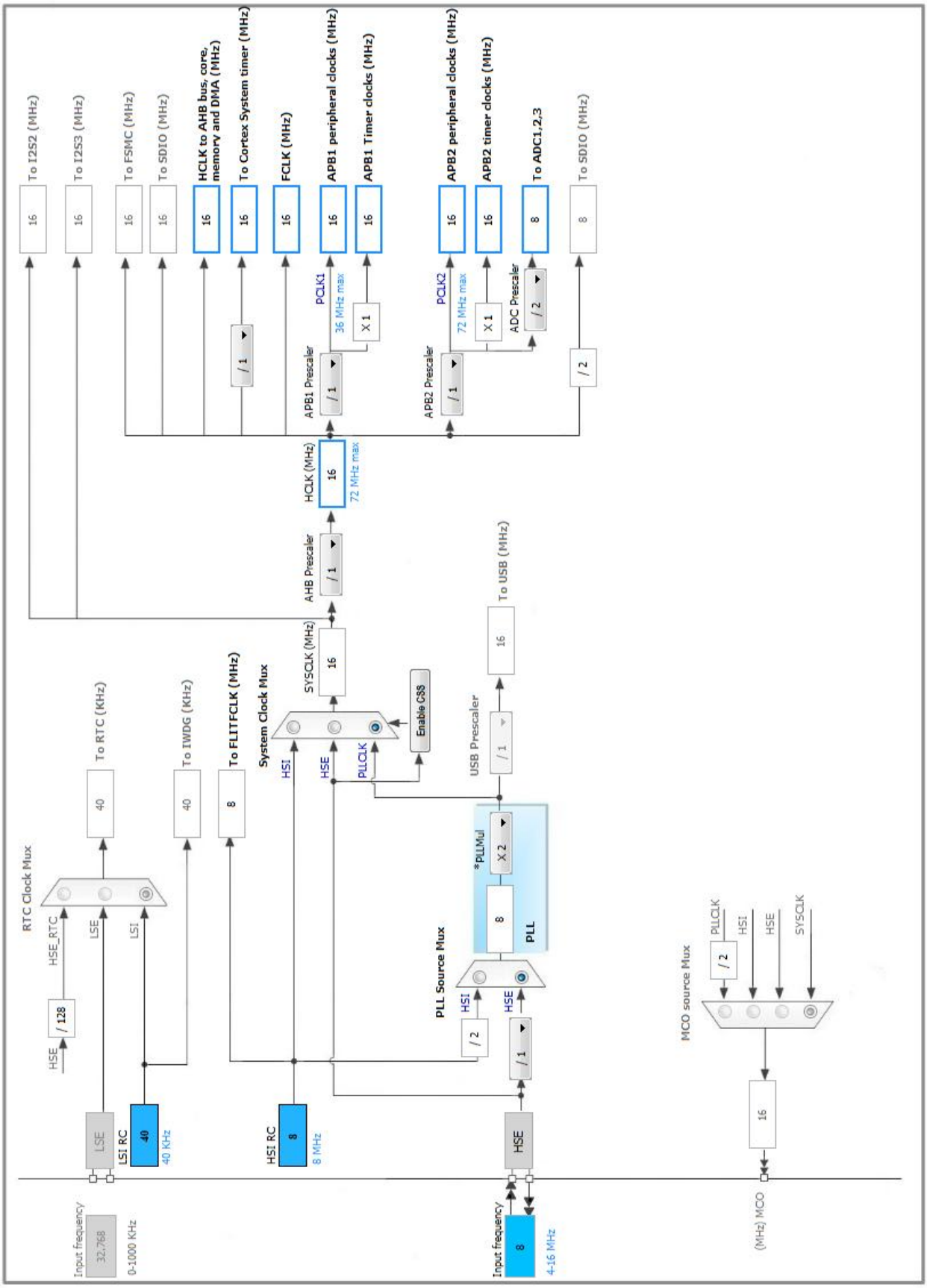
3. Pins Configuration

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	PE2 *	I/O	GPIO_Output	
2	PE3 *	I/O	GPIO_Output	
3	PE4 *	I/O	GPIO_Output	
4	PE5 *	I/O	GPIO_Output	
5	PE6 *	I/O	GPIO_Output	
6	VBAT	Power		
10	VSS	Power		
11	VDD	Power		
12	OSC_IN	I/O	RCC_OSC_IN	
13	OSC_OUT	I/O	RCC_OSC_OUT	
14	NRST	Reset		
19	VSSA	Power		
20	VREF-	Power		
21	VREF+	Power		
22	VDDA	Power		
27	VSS	Power		
28	VDD	Power		
34	PC5	I/O	ADC1_IN15	
38	PE7 *	I/O	GPIO_Output	
39	PE8 *	I/O	GPIO_Output	
40	PE9 *	I/O	GPIO_Output	
41	PE10 *	I/O	GPIO_Output	
42	PE11 *	I/O	GPIO_Output	
43	PE12 *	I/O	GPIO_Output	
44	PE13 *	I/O	GPIO_Output	
45	PE14 *	I/O	GPIO_Output	
46	PE15 *	I/O	GPIO_Output	
49	VSS	Power		
50	VDD	Power		
59	PD12 *	I/O	GPIO_Output	
60	PD13 *	I/O	GPIO_Output	
61	PD14 *	I/O	GPIO_Output	
62	PD15 *	I/O	GPIO_Output	
72	PA13	I/O	SYS_JTMS-SWDIO	
73	NC	NC		
74	VSS	Power		

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
75	VDD	Power		
76	PA14	I/O	SYS_JTCK-SWCLK	
94	BOOT0	Boot		
97	PE0 *	I/O	GPIO_Output	
98	PE1 *	I/O	GPIO_Output	
99	VSS	Power		
100	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC1

mode: IN15

mode: Temperature Sensor Channel

mode: Vrefint Channel

5.1.1. Parameter Settings:

ADCs_Common_Settings:	
Mode	Independent mode
ADC_Settings:	
Data Alignment	Right alignment
Scan Conversion Mode	Enabled
Continuous Conversion Mode	**Enabled ***
Discontinuous Conversion Mode	Disabled
ADC_Regular_ConversionMode:	
Enable Regular Conversions	Enable
Number Of Conversion	**3 ***
External Trigger Conversion Source	Regular Conversion launched by software
Rank	1
Channel	Channel 15
Sampling Time	**239.5 Cycles ***
Rank	**2 ***
Channel	**Channel Temperature Sensor ***
Sampling Time	**239.5 Cycles ***
Rank	**3 ***
Channel	**Channel Vrefint ***
Sampling Time	**239.5 Cycles ***
ADC_Injected_ConversionMode:	
Number Of Conversions	0
WatchDog:	
Enable Analog WatchDog Mode	false

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)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

5.3. SYS

Debug: Serial Wire

Timebase Source: SysTick

5.4. TIM1

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
Repetition Counter (RCR - 8 bits value)	0
auto-reload preload	Disable

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)

*** 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	PC5	ADC1_IN15	Analog mode	n/a	n/a	
RCC	OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	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	
GPIO	PE2	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE3	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE4	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE5	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE6	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE7	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE8	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE9	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE10	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE11	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE12	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE13	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE14	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE15	GPIO_Output	Output Push Pull	n/a	**High ***	
	PD12	GPIO_Output	Output Push Pull	n/a	**High ***	
	PD13	GPIO_Output	Output Push Pull	n/a	**High ***	
	PD14	GPIO_Output	Output Push Pull	n/a	**High ***	
	PD15	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE0	GPIO_Output	Output Push Pull	n/a	**High ***	
	PE1	GPIO_Output	Output Push Pull	n/a	**High ***	

6.2. DMA configuration

DMA request	Stream	Direction	Priority
ADC1	DMA1_Channel1	Peripheral To Memory	Low
TIM1_UP	DMA1_Channel5	Memory To Peripheral	Low

ADC1: DMA1_Channel1 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Half Word
Memory Data Width:	Half Word

TIM1_UP: DMA1_Channel5 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Half Word
Memory Data Width:	Half Word

6.3. 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
Prefetch 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
RCC global interrupt	true	0	0
DMA1 channel1 global interrupt	true	0	0
DMA1 channel5 global interrupt	true	0	0
ADC1 and ADC2 global interrupts	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
TIM1 break interrupt	unused		
TIM1 update interrupt	unused		
TIM1 trigger and commutation interrupts	unused		
TIM1 capture compare interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103VETx
Datasheet	14611_Rev12

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	stm32f103_ugfx_trial
Project Folder	C:\Users\Rafiq Rahman\Documents\CubeMX Workspace\stm32f103_ugfx_trial
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.6.0

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 consumption)	No