

## 1. Description

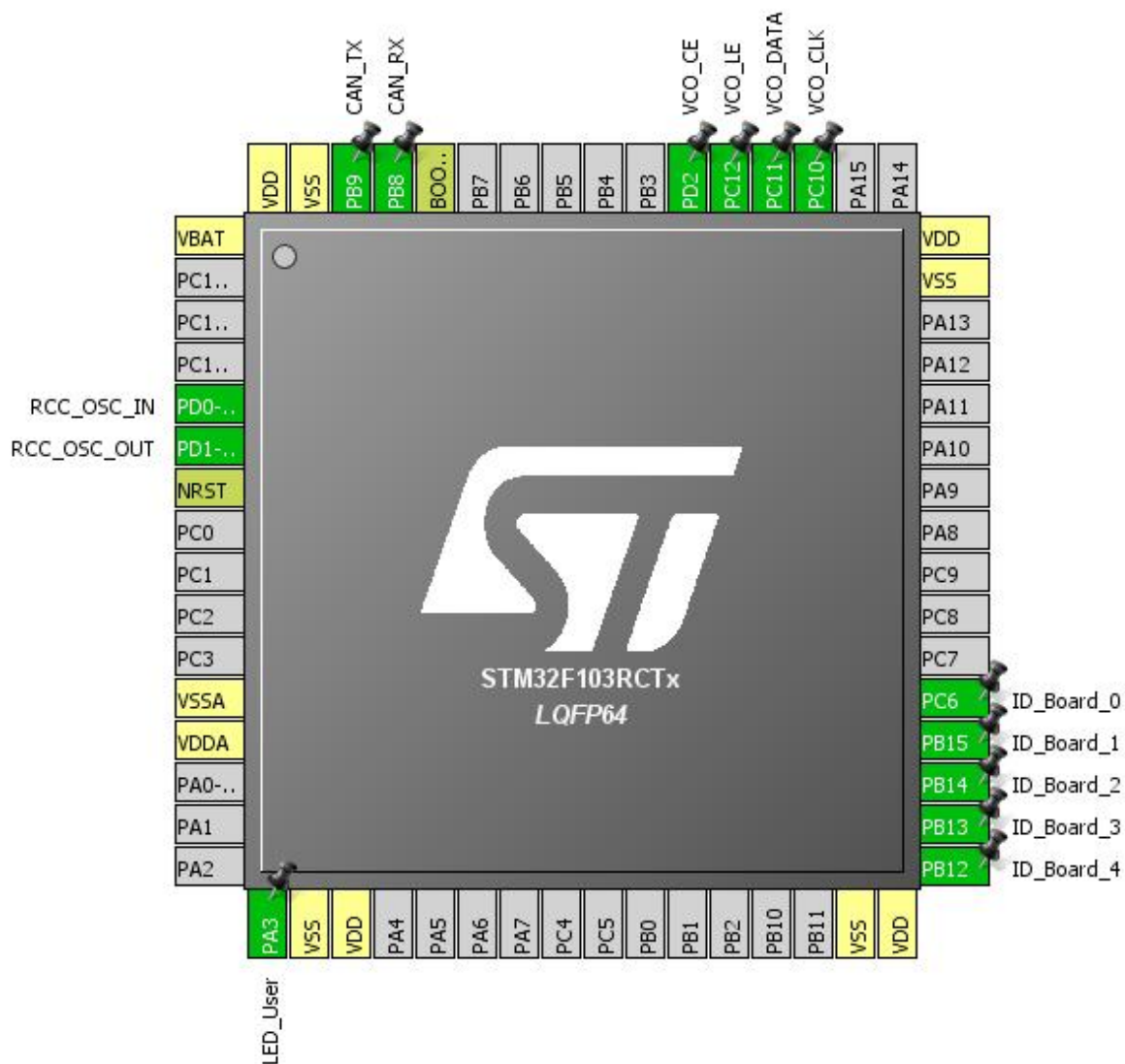
### 1.1. Project

Project Name	VCO_ADF4355_TC2
Board Name	VCO_ADF4355_TC2
Generated with:	STM32CubeMX 4.24.0
Date	05/22/2019

### 1.2. MCU

MCU Series	STM32F1
MCU Line	STM32F103
MCU name	STM32F103RCTx
MCU Package	LQFP64
MCU Pin number	64

## 2. Pinout Configuration

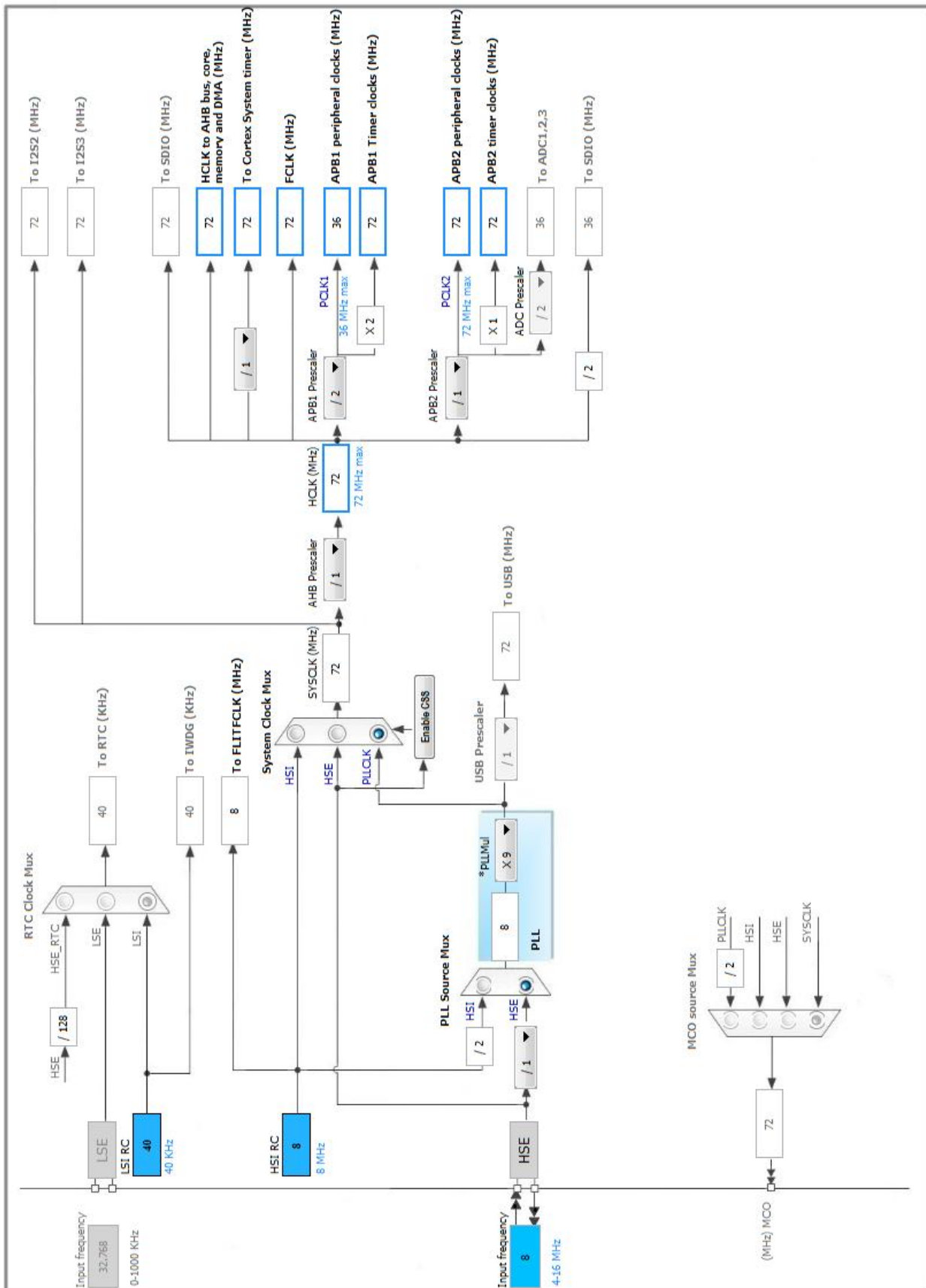


### 3. Pins Configuration

Pin Number LQFP64	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		
12	VSSA	Power		
13	VDDA	Power		
17	PA3 *	I/O	GPIO_Output	LED_User
18	VSS	Power		
19	VDD	Power		
31	VSS	Power		
32	VDD	Power		
33	PB12 *	I/O	GPIO_Input	ID_Board_4
34	PB13 *	I/O	GPIO_Input	ID_Board_3
35	PB14 *	I/O	GPIO_Input	ID_Board_2
36	PB15 *	I/O	GPIO_Input	ID_Board_1
37	PC6 *	I/O	GPIO_Input	ID_Board_0
47	VSS	Power		
48	VDD	Power		
51	PC10 *	I/O	GPIO_Output	VCO_CLK
52	PC11 *	I/O	GPIO_Output	VCO_DATA
53	PC12 *	I/O	GPIO_Output	VCO_LE
54	PD2 *	I/O	GPIO_Output	VCO_CE
60	BOOT0	Boot		
61	PB8	I/O	CAN_RX	
62	PB9	I/O	CAN_TX	
63	VSS	Power		
64	VDD	Power		

\* The pin is affected with an I/O function

## 4. Clock Tree Configuration



## 5. IPs and Middleware Configuration

### 5.1. CAN

mode: Mode

#### 5.1.1. Parameter Settings:

##### Bit Timings Parameters:

Prescaler (for Time Quantum)	16
Time Quantum	<b>444.44444444444446 *</b>
Time Quanta in Bit Segment 1	<b>3 Times *</b>
Time Quanta in Bit Segment 2	<b>5 Times *</b>
Time for one Bit	<b>4000 *</b>
ReSynchronization Jump Width	1 Time

##### Basic Parameters:

Time Triggered Communication Mode	Disable
Automatic Bus-Off Management	<b>Enable *</b>
Automatic Wake-Up Mode	<b>Enable *</b>
No-Automatic Retransmission	Disable
Receive Fifo Locked Mode	Disable
Transmit Fifo Priority	Disable

##### Advanced Parameters:

Operating Mode	Normal
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### 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
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HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

### 5.3. SYS

**Debug: No Debug**

**Timebase Source: SysTick**

\* User modified value

## 6. System Configuration

### 6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
CAN	PB8	CAN_RX	Input mode	No pull-up and no pull-down	n/a	
	PB9	CAN_TX	Alternate Function Push Pull	n/a	<b>High *</b>	
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	
GPIO	PA3	GPIO_Output	Output Push Pull	n/a	Low	LED_User
	PB12	GPIO_Input	Input mode	<b>Pull-down *</b>	n/a	ID_Board_4
	PB13	GPIO_Input	Input mode	<b>Pull-down *</b>	n/a	ID_Board_3
	PB14	GPIO_Input	Input mode	<b>Pull-down *</b>	n/a	ID_Board_2
	PB15	GPIO_Input	Input mode	<b>Pull-down *</b>	n/a	ID_Board_1
	PC6	GPIO_Input	Input mode	<b>Pull-down *</b>	n/a	ID_Board_0
	PC10	GPIO_Output	Output Push Pull	<b>n/a</b>	<b>High *</b>	VCO_CLK
	PC11	GPIO_Output	Output Push Pull	<b>n/a</b>	<b>High *</b>	VCO_DATA
	PC12	GPIO_Output	Output Push Pull	<b>n/a</b>	<b>High *</b>	VCO_LE
	PD2	GPIO_Output	Output Push Pull	<b>n/a</b>	Low	VCO_CE

### 6.2. DMA configuration

nothing configured in DMA service

### 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
CAN RX1 interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
USB high priority or CAN TX interrupts	unused		
USB low priority or CAN RX0 interrupts	unused		
CAN SCE interrupt	unused		

\* User modified value



## ***7. Power Consumption Calculator report***

### 7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103RCTx
Datasheet	14611_Rev12

### 7.2. Parameter Selection

Temperature	25
Vdd	3.3

## 8. Software Project

### 8.1. Project Settings

Name	Value
Project Name	VCO_ADF4355_TC2
Project Folder	F:\NHOM_NC\mang pha ve tinh tc2\thiet
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F1 V1.6.1

### 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

## ***9. Software Pack Report***