

1. Description

1.1. Project

Project Name	I2C_Uart_WithInterrupts
Board Name	I2C_Uart_WithInterrupts
Generated with:	STM32CubeMX 4.22.1
Date	10/14/2017

1.2. MCU

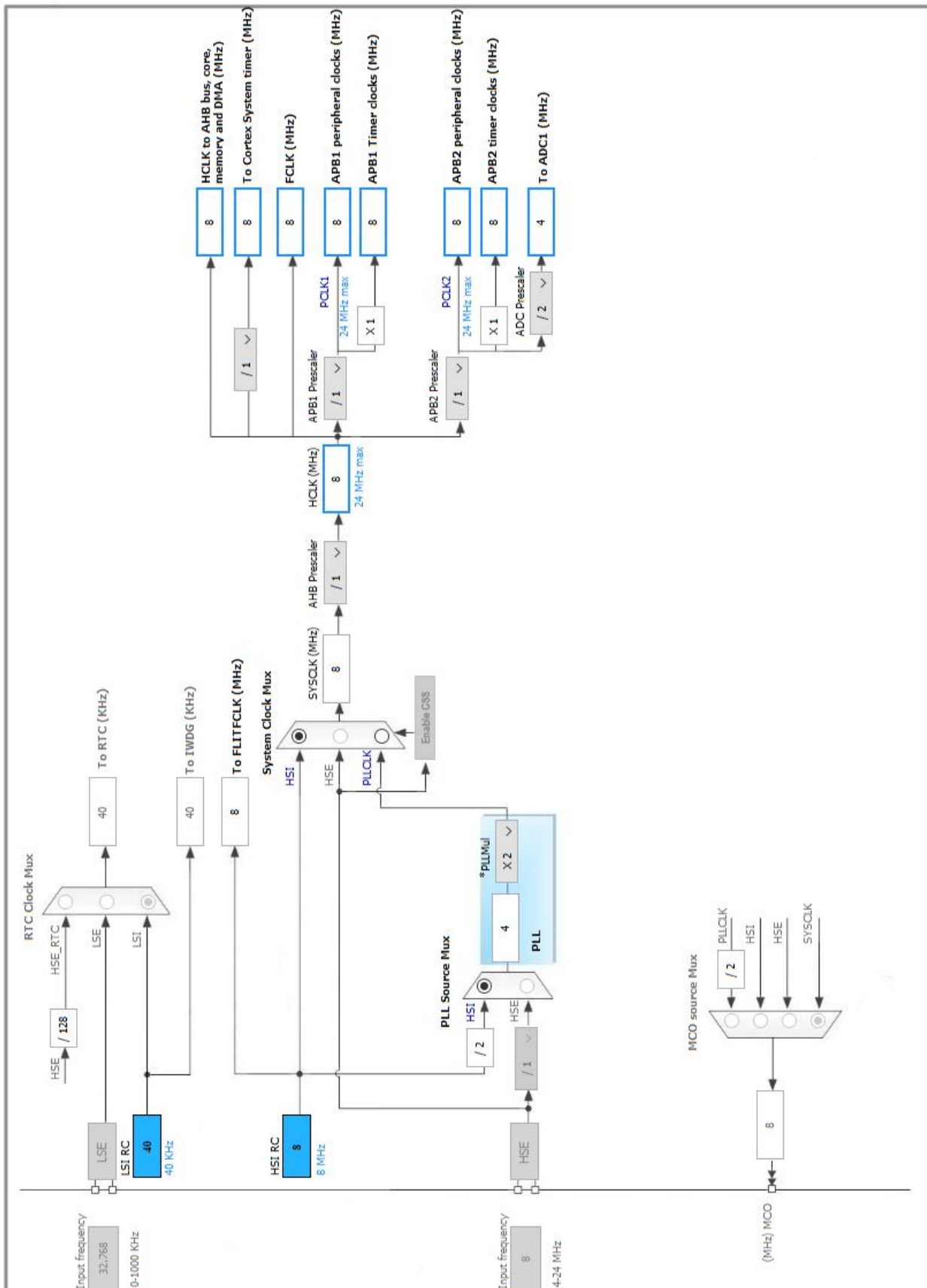
MCU Series	STM32F1
MCU Line	STM32F100 Value Line
MCU name	STM32F100RBTx
MCU Package	LQFP64
MCU Pin number	64

3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
7	NRST	Reset		
12	VSSA	Power		
13	VDDA	Power		
16	PA2	I/O	ADC1_IN2	
17	PA3	I/O	ADC1_IN3	
18	VSS	Power		
19	VDD	Power		
29	PB10	I/O	I2C2_SCL	
30	PB11	I/O	I2C2_SDA	
31	VSS	Power		
32	VDD	Power		
39	PC8 *	I/O	GPIO_Output	LD4_Blue
40	PC9 *	I/O	GPIO_Output	LD3_Green
42	PA9	I/O	USART1_TX	
43	PA10	I/O	USART1_RX	
46	PA13	I/O	SYS_JTMS-SWDIO	
47	VSS	Power		
48	VDD	Power		
49	PA14	I/O	SYS_JTCK-SWCLK	
60	BOOT0	Boot		
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. ADC1

mode: IN2

mode: IN3

mode: Temperature Sensor Channel

mode: Vrefint Channel

5.1.1. Parameter Settings:

ADC_Settings:

Data Alignment	Right alignment
Scan Conversion Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
<u>Rank</u>	1
Channel	Channel Temperature Sensor *
Sampling Time	1.5 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0
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WatchDog:

Enable Analog WatchDog Mode	false
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5.2. I2C2

I2C: I2C

5.2.1. Parameter Settings:

Master Features:

I2C Speed Mode	Standard Mode
I2C Clock Speed (Hz)	100000

Slave Features:

Clock No Stretch Mode	Disabled
Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0
General Call address detection	Disabled

5.3. SYS

Debug: Serial Wire

Timebase Source: SysTick

5.4. USART1

Mode: Asynchronous

5.4.1. 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

*** 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	PA2	ADC1_IN2	Analog mode	n/a	n/a	
	PA3	ADC1_IN3	Analog mode	n/a	n/a	
I2C2	PB10	I2C2_SCL	Alternate Function Open Drain	n/a	High *	
	PB11	I2C2_SDA	Alternate Function Open Drain	n/a	High *	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	n/a	High *	
	PA10	USART1_RX	Input mode	No pull-up and no pull-down	n/a	
GPIO	PC8	GPIO_Output	Output Push Pull	n/a	Low	LD4_Blue
	PC9	GPIO_Output	Output Push Pull	n/a	Low	LD3_Green

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
I2C2 event interrupt	true	0	0
I2C2 error interrupt	true	0	0
USART1 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1 global interrupt	unused		

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F1
Line	STM32F100 Value Line
MCU	STM32F100RBTx
Datasheet	16455_Rev9

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	I2C_Uart_WithInterrupts
Project Folder	C:\FirmwareProjects\CubeMxAutoGenerated\I2C_Uart_WithInterrupts
Toolchain / IDE	TrueSTUDIO
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