

1. Description

1.1. Project

Project Name	UART_TwoBoards_ComIT
Board Name	UART_TwoBoards_ComIT
Generated with:	STM32CubeMX 4.23.0
Date	11/13/2017

1.2. MCU

MCU Series	STM32F4
MCU Line	STM32F407/417
MCU name	STM32F407ZGTx
MCU Package	LQFP144
MCU Pin number	144



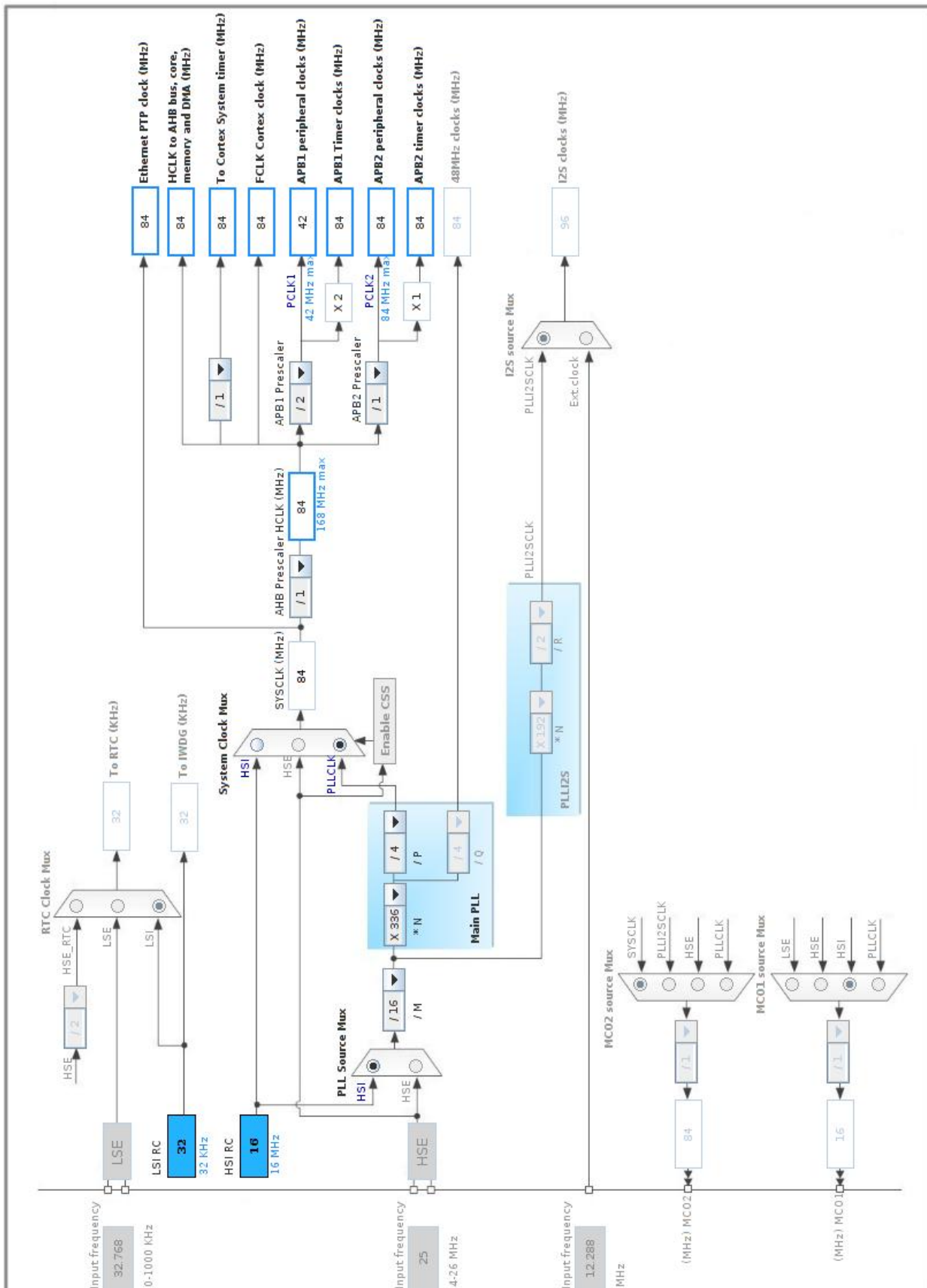
3. Pins Configuration

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
7	PC13-ANTI_TAMP *	I/O	GPIO_Output	LED_User
12	PF2 *	I/O	GPIO_Output	LED_Green
13	PF3 *	I/O	GPIO_Output	LED_Blue
14	PF4 *	I/O	GPIO_Output	LED_Yellow
15	PF5 *	I/O	GPIO_Output	LED_Red
16	VSS	Power		
17	VDD	Power		
25	NRST	Reset		
30	VDD	Power		
31	VSSA	Power		
32	VREF+	Power		
33	VDDA	Power		
34	PA0-WKUP	I/O	GPIO_EXTI0	WKUP_BUTTON
36	PA2	I/O	USART2_TX	
37	PA3	I/O	USART2_RX	
38	VSS	Power		
39	VDD	Power		
51	VSS	Power		
52	VDD	Power		
61	VSS	Power		
62	VDD	Power		
71	VCAP_1	Power		
72	VDD	Power		
83	VSS	Power		
84	VDD	Power		
94	VSS	Power		
95	VDD	Power		
106	VCAP_2	Power		
107	VSS	Power		
108	VDD	Power		
120	VSS	Power		
121	VDD	Power		
130	VSS	Power		
131	VDD	Power		
138	BOOT0	Boot		

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
143	PDR_ON	Reset		
144	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. SYS

Timebase Source: SysTick

5.2. USART2

Mode: Multiprocessor Communication

5.2.1. Parameter Settings:

Basic Parameters:

Baud Rate	9600 *
Word Length	8 Bits (including Parity)
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	Receive and Transmit
Over Sampling	16 Samples
Wake-Up Method	Idle Line

* User modified value

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
USART2	PA2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
	PA3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
GPIO	PC13-ANTI_TAMP	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_User
	PF2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Green
	PF3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Blue
	PF4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Yellow
	PF5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_Red
	PA0-WKUP	GPIO_EXTI0	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	WKUP_BUTTON

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
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
EXTI line0 interrupt	true	1	0
USART2 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
FPU global interrupt	unused		

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F4
Line	STM32F407/417
MCU	STM32F407ZGTx
Datasheet	022152_Rev8

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	UART_TwoBoards_ComIT
Project Folder	/home/saicharan/Dropbox/arbeit/lichtsteuer-
Toolchain / IDE	Makefile
Firmware Package Name and Version	STM32Cube FW_F4 V1.17.0

8.2. 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