1. Description

1.1. Project

Project Name	Gniazdo_modul
Board Name	Gniazdo_modul
Generated with:	STM32CubeMX 4.24.0
Date	06/12/2018

1.2. MCU

MCU Series	STM32F0
MCU Line	STM32F0x0 Value Line
MCU name	STM32F030R8Tx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration
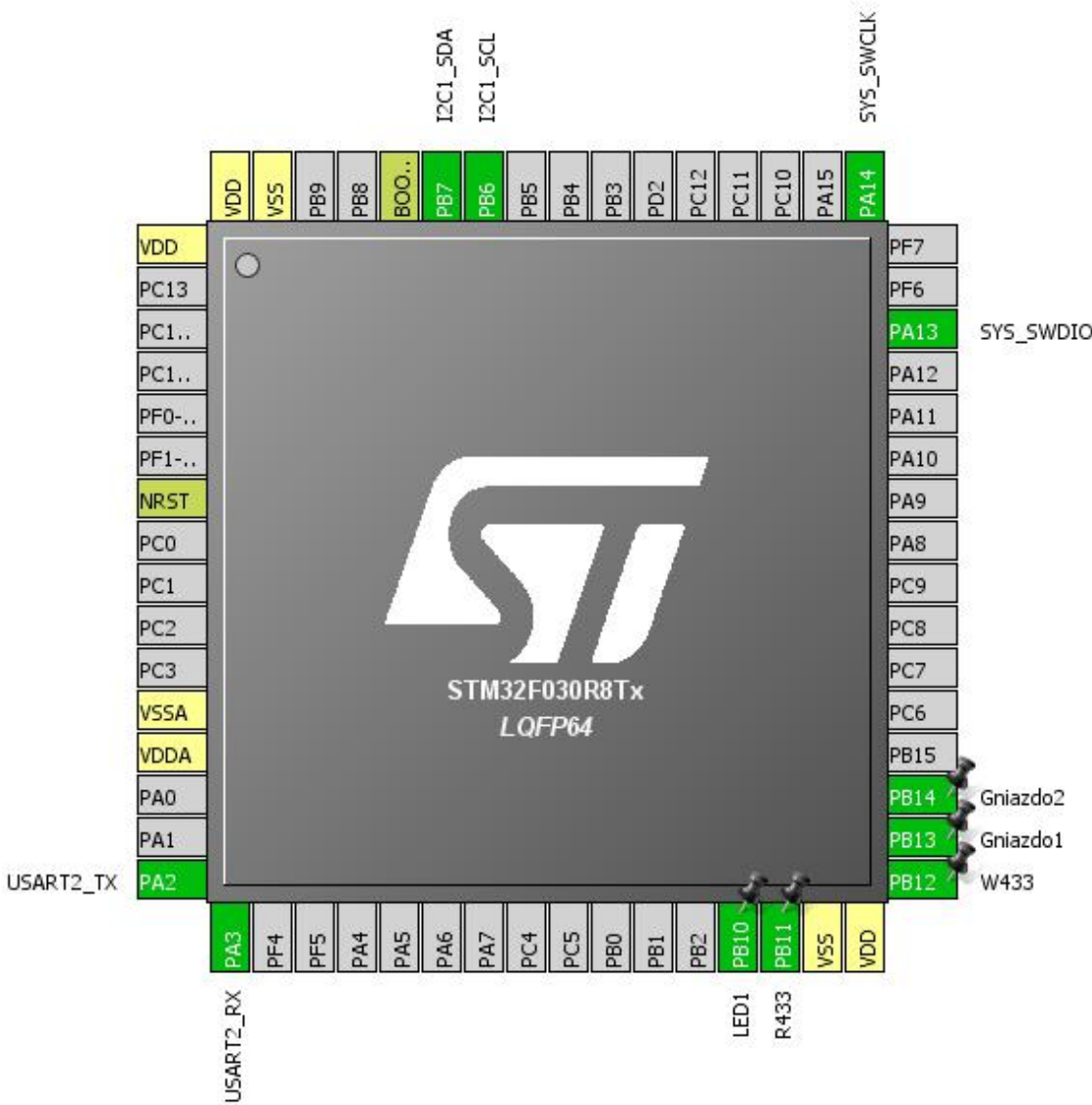
3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VDD	Power		
7	NRST	Reset		
12	VSSA	Power		
13	VDDA	Power		
16	PA2	I/O	USART2_TX	
17	PA3	I/O	USART2_RX	
29	PB10 *	I/O	GPIO_Output	LED1
30	PB11 *	I/O	GPIO_Input	R433
31	VSS	Power		
32	VDD	Power		
33	PB12 *	I/O	GPIO_Output	W433
34	PB13 *	I/O	GPIO_Output	Gniazdo1
35	PB14 *	I/O	GPIO_Output	Gniazdo2
46	PA13	I/O	SYS_SWDIO	
49	PA14	I/O	SYS_SWCLK	
58	PB6	I/O	I2C1_SCL	
59	PB7	I/O	I2C1_SDA	
60	BOOT0	Boot		
63	VSS	Power		
64	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration
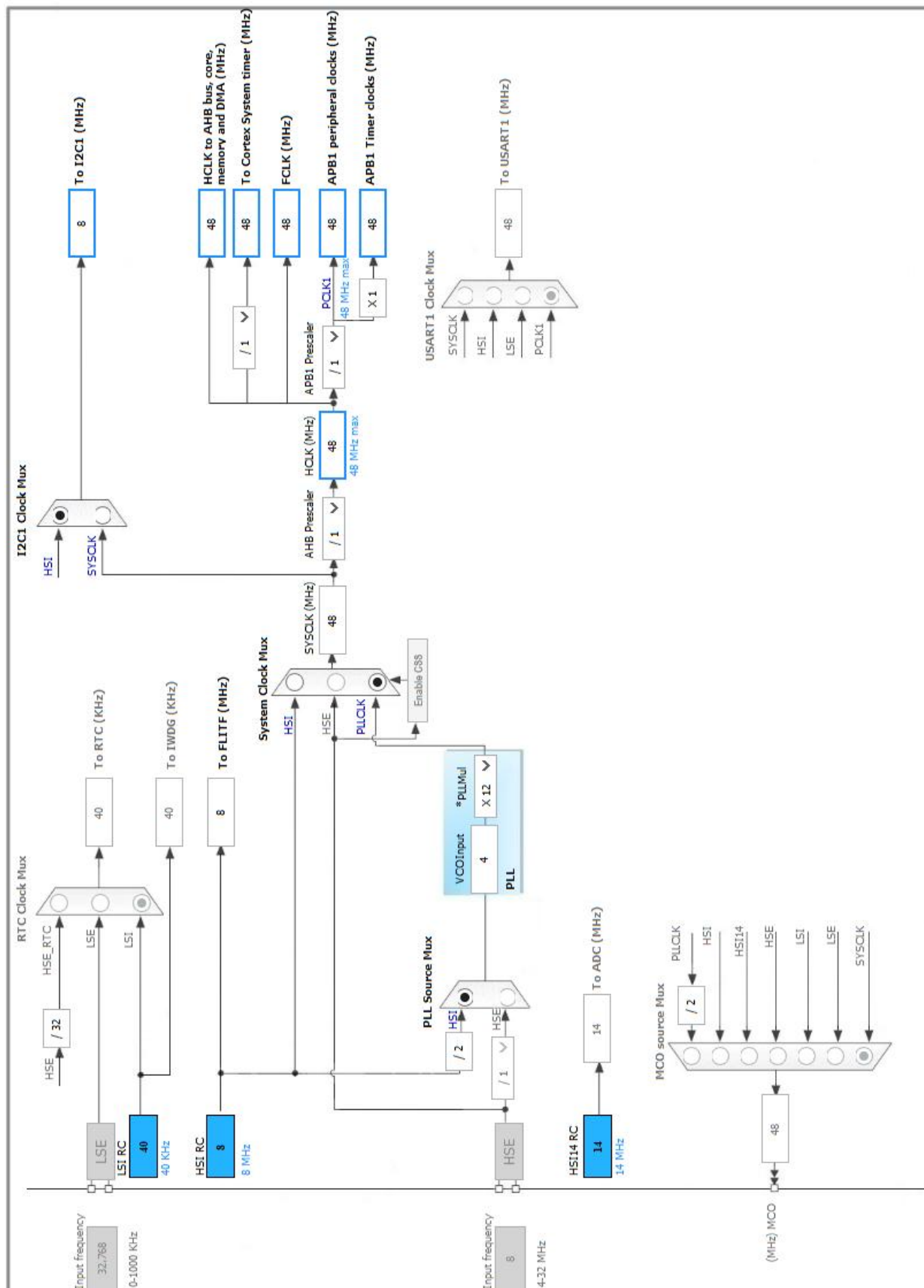
5. IPs and Middleware Configuration

5.1. I2C1

I2C: I2C

5.1.1. Parameter Settings:

Timing configuration:

I2C Speed Mode	Standard Mode
I2C Speed Frequency (KHz)	100
Rise Time (ns)	0
Fall Time (ns)	0
Coefficient of Digital Filter	0
Analog Filter	Enabled
Timing	0x2000090E

Slave Features:

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

5.2. SYS

mode: Debug Serial Wire
Timebase Source: SysTick

5.3. TIM17

mode: Activated

5.3.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**130 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**36 ***
Internal Clock Division (CKD)	No Division

Repetition Counter (RCR - 8 bits value)   0

auto-reload preload   Disable

5.4. USART2

Mode: Asynchronous

5.4.1. Parameter Settings:

Basic Parameters:

Baud Rate   38400

Word Length   8 Bits (including Parity)

Parity   None

Stop Bits   1

Advanced Parameters:

Data Direction   Receive and Transmit

Over Sampling   16 Samples

Single Sample   Disable

Advanced Features:

TX Pin Active Level Inversion   Disable

RX Pin Active Level Inversion   Disable

Data Inversion   Disable

TX and RX Pins Swapping   Disable

Overrun   Enable

DMA on RX Error   Enable

MSB First   Disable

* User modified value

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
I2C1	PB6	I2C1_SCL	Alternate Function Open Drain	Pull-up	**High ***	
	PB7	I2C1_SDA	Alternate Function Open Drain	Pull-up	**High ***	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
USART2	PA2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	
	PA3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	
GPIO	PB10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED1
	PB11	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	R433
	PB12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	W433
	PB13	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Gniazdo1
	PB14	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Gniazdo2

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
System service call via SWI instruction	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	0	0
TIM17 global interrupt	true	0	0
Flash global interrupt	unused		
RCC global interrupt	unused		
I2C1 global interrupt	unused		
USART2 global interrupt	unused		

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F0
Line	STM32F0x0 Value Line
MCU	STM32F030R8Tx
Datasheet	024849_Rev2

7.2. Parameter Selection

Temperature	25
Vdd	3.6

8. Software Project

8.1. Project Settings

Name	Value
Project Name	Gniazdo_modul
Project Folder	D:\projekty\Gniazdo_modul
Toolchain / IDE	TrueSTUDIO
Firmware Package Name and Version	STM32Cube FW_F0 V1.9.0

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	Yes
Backup previously generated files when re-generating	No
Delete previously generated files when not re-generated	No
Set all free pins as analog (to optimize the power consumption)	No

9. Software Pack Report