1. Description

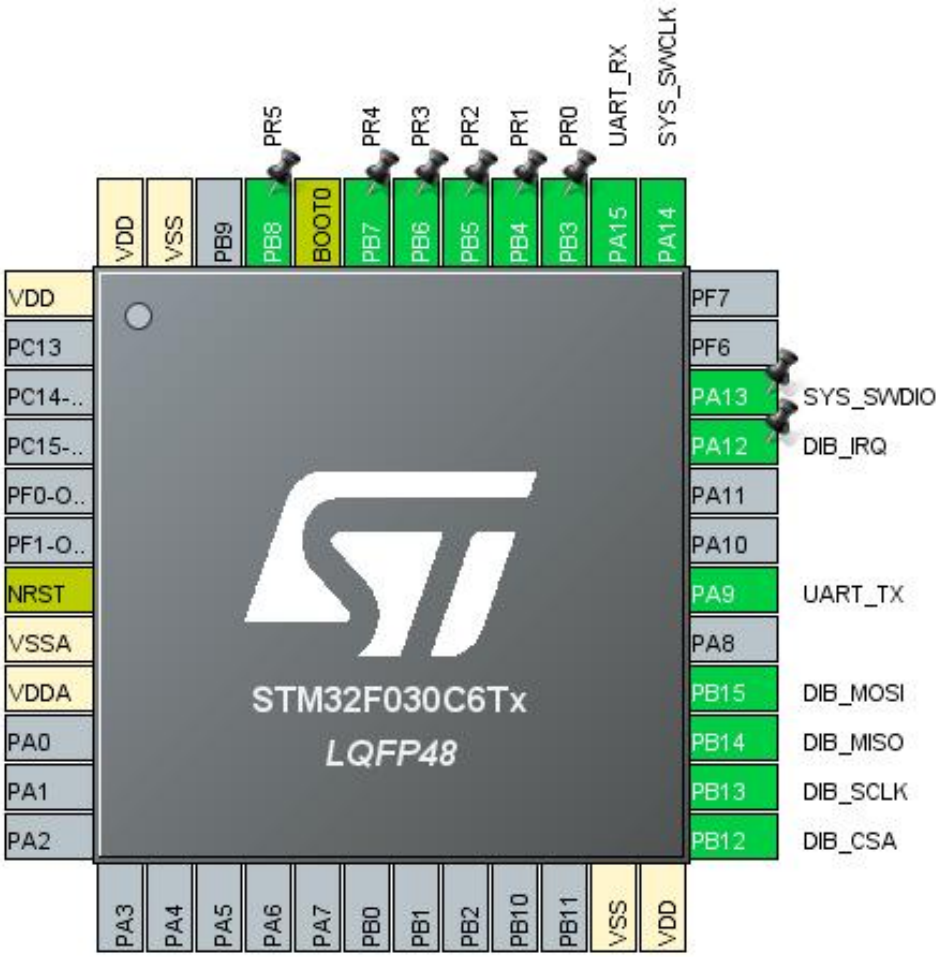
1.1. Project

Project Name	PREL6
Board Name	custom
Generated with:	STM32CubeMX 5.5.0
Date	02/14/2020

1.2. MCU

MCU Series	STM32F0
MCU Line	STM32F0x0 Value Line
MCU name	STM32F030C6Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration

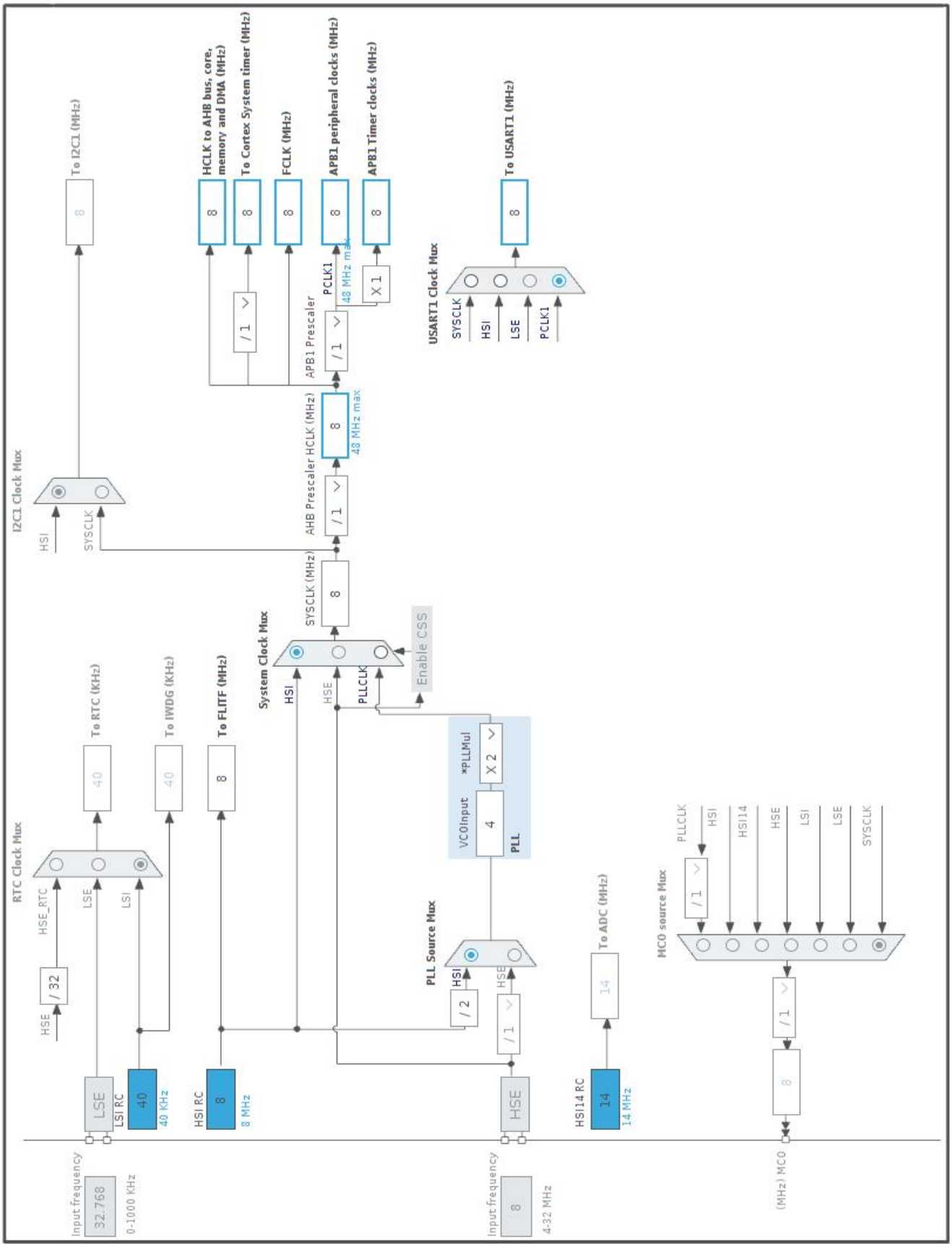


3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VDD	Power		
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
23	VSS	Power		
24	VDD	Power		
25	PB12	I/O	SPI1_NSS	DIB_CSA
26	PB13	I/O	SPI1_SCK	DIB_SCLK
27	PB14	I/O	SPI1_MISO	DIB_MISO
28	PB15	I/O	SPI1_MOSI	DIB_MOSI
30	PA9	I/O	USART1_TX	UART_TX
33	PA12 *	I/O	GPIO_Output	DIB_IRQ
34	PA13	I/O	SYS_SWDIO	
37	PA14	I/O	SYS_SWCLK	
38	PA15	I/O	USART1_RX	UART_RX
39	PB3 *	I/O	GPIO_Output	PR0
40	PB4 *	I/O	GPIO_Output	PR1
41	PB5 *	I/O	GPIO_Output	PR2
42	PB6 *	I/O	GPIO_Output	PR3
43	PB7 *	I/O	GPIO_Output	PR4
44	BOOT0	Boot		
45	PB8 *	I/O	GPIO_Output	PR5
47	VSS	Power		
48	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. Software Project

5.1. Project Settings

Name	Value
Project Name	PREL6
Project Folder	/home/denis/BACKUP/EEZ/Digital control/MCU/STM32/Projects/PREL6
Toolchain / IDE	EWARM V8.32
Firmware Package Name and Version	STM32Cube FW_F0 V1.11.0

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	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

6. Power Consumption Calculator report

6.1. Microcontroller Selection

Series	STM32F0
Line	STM32F0x0 Value Line
MCU	STM32F030C6Tx
Datasheet	024849_Rev2

6.2. Parameter Selection

Temperature	25
Vdd	3.6

7. IPs and Middleware Configuration

7.1. GPIO

7.2. RCC

7.2.1. 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

7.3. SPI1

Mode: Full-Duplex Slave

Hardware NSS Signal: Hardware NSS Input Signal

7.3.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Input Hardware

7.4. SYS

mode: Debug Serial Wire

Timebase Source: SysTick

7.5. USART1

Mode: Asynchronous

7.5.1. 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:

Auto Baudrate	Disable
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**

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
SPI1	PB12	SPI1_NSS	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	DIB_CSA
	PB13	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	DIB_SCLK
	PB14	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	DIB_MISO
	PB15	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	DIB_MOSI
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	UART_TX
	PA15	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	**High ***	UART_RX
GPIO	PA12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	DIB_IRQ
	PB3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PR0
	PB4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PR1
	PB5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PR2
	PB6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PR3
	PB7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PR4
	PB8	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PR5

8.2. DMA configuration

nothing configured in DMA service

8.3. 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
Flash global interrupt	unused		
RCC global interrupt	unused		
SPI1 global interrupt	unused		
USART1 global interrupt	unused		

*** User modified value**

9. Software Pack Report