

1. Description

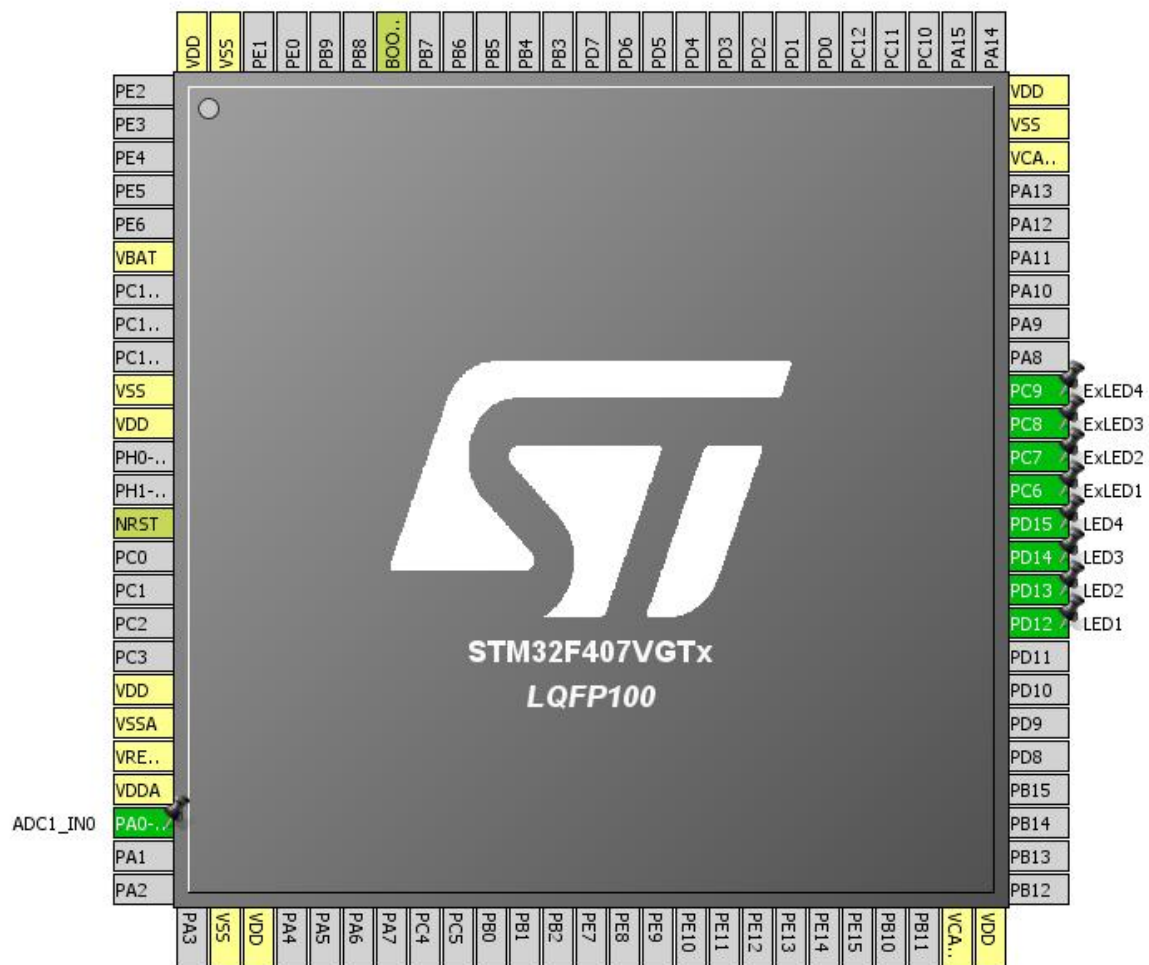
1.1. Project

| | |
|-----------------|--------------------|
| Project Name | Project_7(ADC-2) |
| Board Name | Project_7(ADC-2) |
| Generated with: | STM32CubeMX 4.10.1 |
| Date | 10/30/2015 |

1.2. MCU

| | |
|----------------|---------------|
| MCU Series | STM32F4 |
| MCU Line | STM32F407/417 |
| MCU name | STM32F407VGTx |
| MCU Package | LQFP100 |
| MCU Pin number | 100 |

2. Pinout Configuration

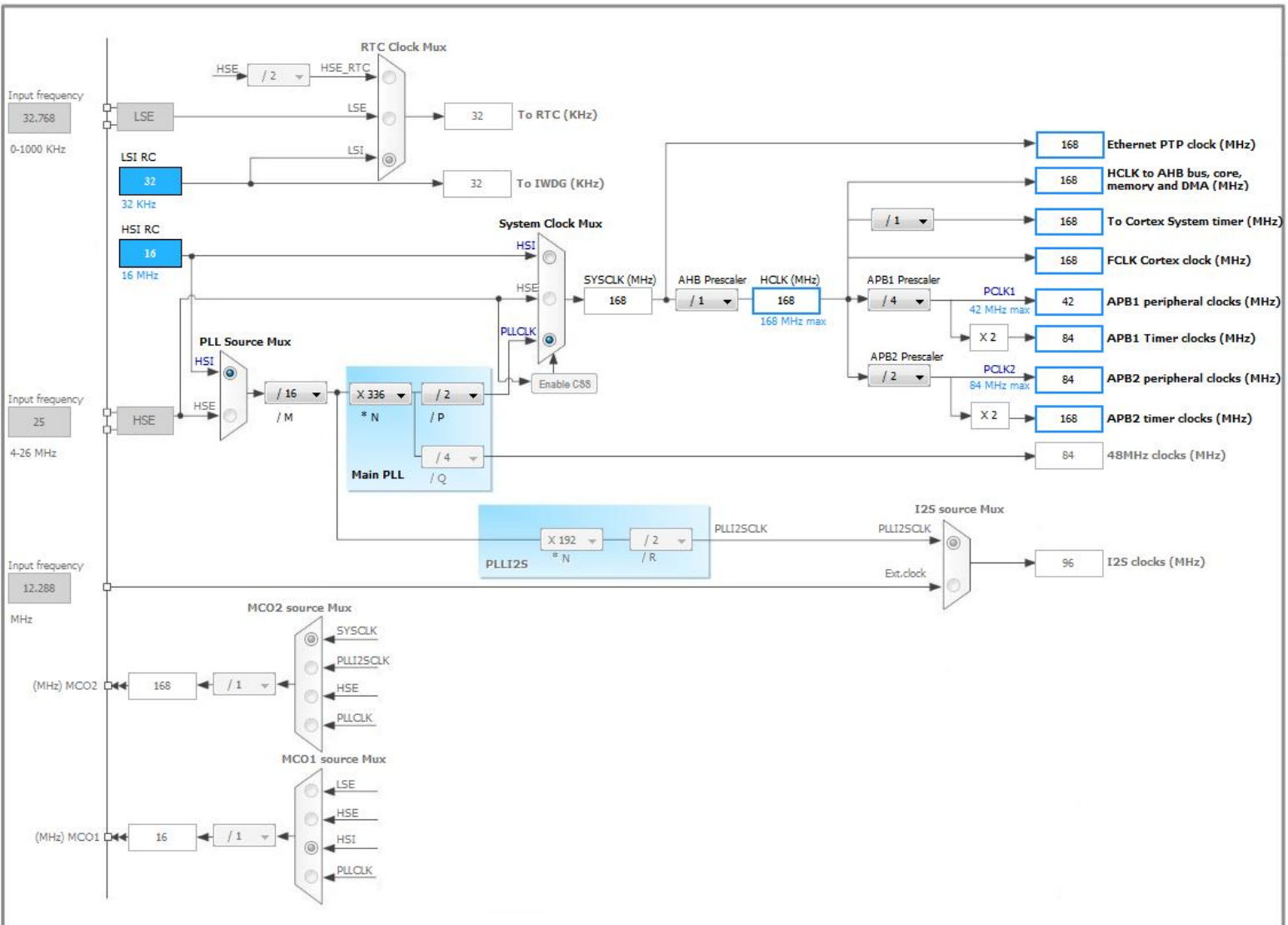


3. Pins Configuration

| Pin Number LQFP100 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|-----------------------|---------------------------------------|----------|--------------------------|--------|
| 6 | VBAT | Power | | |
| 10 | VSS | Power | | |
| 11 | VDD | Power | | |
| 14 | NRST | Reset | | |
| 19 | VDD | Power | | |
| 20 | VSSA | Power | | |
| 21 | VREF+ | Power | | |
| 22 | VDDA | Power | | |
| 23 | PA0-WKUP | I/O | ADC1_IN0 | |
| 27 | VSS | Power | | |
| 28 | VDD | Power | | |
| 49 | VCAP_1 | Power | | |
| 50 | VDD | Power | | |
| 59 | PD12 * | I/O | GPIO_Output | LED1 |
| 60 | PD13 * | I/O | GPIO_Output | LED2 |
| 61 | PD14 * | I/O | GPIO_Output | LED3 |
| 62 | PD15 * | I/O | GPIO_Output | LED4 |
| 63 | PC6 * | I/O | GPIO_Output | ExLED1 |
| 64 | PC7 * | I/O | GPIO_Output | ExLED2 |
| 65 | PC8 * | I/O | GPIO_Output | ExLED3 |
| 66 | PC9 * | I/O | GPIO_Output | ExLED4 |
| 73 | VCAP_2 | Power | | |
| 74 | VSS | Power | | |
| 75 | VDD | Power | | |
| 94 | BOOT0 | Boot | | |
| 99 | VSS | Power | | |
| 100 | VDD | Power | | |

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC1

mode: IN0

5.1.1. Parameter Settings:

ADCs_Common_Settings:

Mode Independent mode

ADC_Settings:

Clock Prescaler PCLK2 divided by 4

Resolution 12 bits (15 ADC Clock cycles)

Data Alignment Right alignment

Scan Conversion Mode Disabled

Continuous Conversion Mode Disabled

Discontinuous Conversion Mode Disabled

DMA Continuous Requests Disabled

End Of Conversion Selection EOC flag at the end of single channel conversion

ADC_Regular_ConversionMode:

Number Of Conversion 1

External Trigger Conversion Edge None

Rank 1

Channel Channel 0

Sampling Time 3 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions 0

WatchDog:

Enable Analog WatchDog Mode false

* 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 | PA0-WKUP | ADC1_IN0 | Analog mode | No pull-up and no pull-down | n/a | |
| GPIO | PD12 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | LED1 |
| | PD13 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | LED2 |
| | PD14 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | LED3 |
| | PD15 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | LED4 |
| | PC6 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | ExLED1 |
| | PC7 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | ExLED2 |
| | PC8 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | ExLED3 |
| | PC9 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | ExLED4 |

6.2. DMA configuration

nothing configured in DMA service

6.3. NVIC configuration

| Interrupt Table | Enable | Preenmption Priority | SubPriority |
|--|--------|----------------------|-------------|
| System tick timer | true | 0 | 0 |
| ADC1, ADC2 and ADC3 global interrupts | true | 0 | 0 |
| Non maskable interrupt | unused | | |
| Memory management fault | unused | | |
| Pre-fetch fault, memory access fault | unused | | |
| Undefined instruction or illegal state | unused | | |
| Debug monitor | unused | | |
| PVD interrupt through EXTI line 16 | unused | | |
| Flash global interrupt | unused | | |
| RCC global interrupt | unused | | |

* User modified value

7. Power Plugin report

7.1. Microcontroller Selection

| | |
|-----------|---------------|
| Series | STM32F4 |
| Line | STM32F407/417 |
| MCU | STM32F407VGTx |
| Datasheet | 022152_Rev5 |

7.2. Parameter Selection

| | |
|-------------|-----|
| Temperature | 25 |
| Vdd | 3.3 |

8. Software Project

8.1. Project Settings

| Name | Value |
|-----------------------------------|--|
| Project Name | Project_7(ADC-2) |
| Project Folder | C:\Users\SLaYeR\Documents\stm32cube\Project_7(ADC-2) |
| Toolchain / IDE | MDK-ARM V5 |
| Firmware Package Name and Version | STM32Cube FW_F4 V1.8.0 |

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 |

8.3. Toolchains Settings

| Name | Value |
|------------------------|---------------------|
| Compiler Optimizations | Balanced Size/Speed |