# *1. Description*

## 1.1. Project

| | |
|---|---|
| Project Name | Blinky |
| Board Name | Blinky |
| Generated with: | STM32CubeMX 4.14.0 |
| Date | 12/21/2016 |

## 1.2. MCU

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

# 2. Pinout Configuration
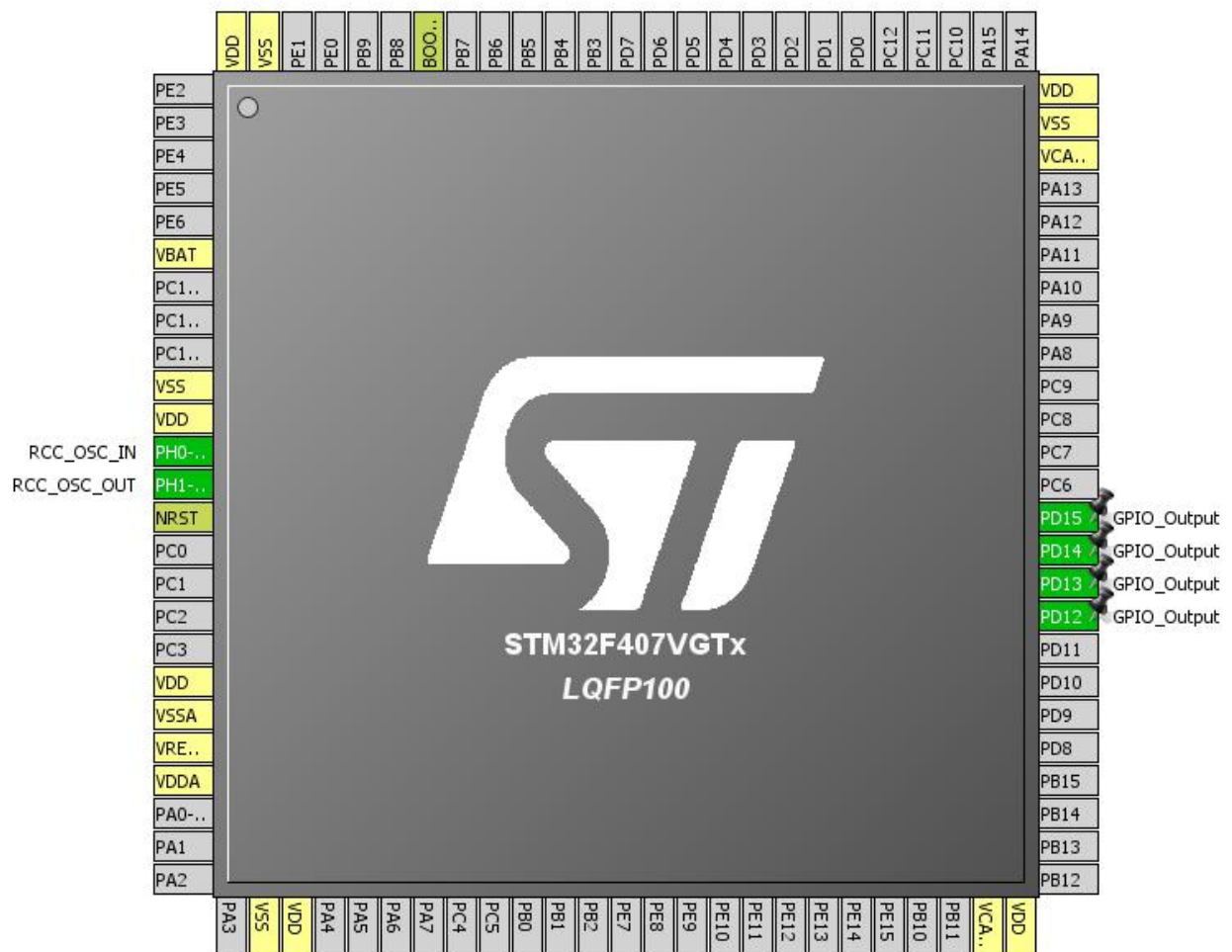
# *3. Pins Configuration*

| Pin Number LQFP100 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|---|---|---|---|---|
| 6 | VBAT | Power | | |
| 10 | VSS | Power | | |
| 11 | VDD | Power | | |
| 12 | PH0-OSC_IN | I/O | RCC_OSC_IN | |
| 13 | PH1-OSC_OUT | I/O | RCC_OSC_OUT | |
| 14 | NRST | Reset | | |
| 19 | VDD | Power | | |
| 20 | VSSA | Power | | |
| 21 | VREF+ | Power | | |
| 22 | VDDA | Power | | |
| 27 | VSS | Power | | |
| 28 | VDD | Power | | |
| 49 | VCAP_1 | Power | | |
| 50 | VDD | Power | | |
| 59 | PD12 * | I/O | GPIO_Output | |
| 60 | PD13 * | I/O | GPIO_Output | |
| 61 | PD14 * | I/O | GPIO_Output | |
| 62 | PD15 * | I/O | GPIO_Output | |
| 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
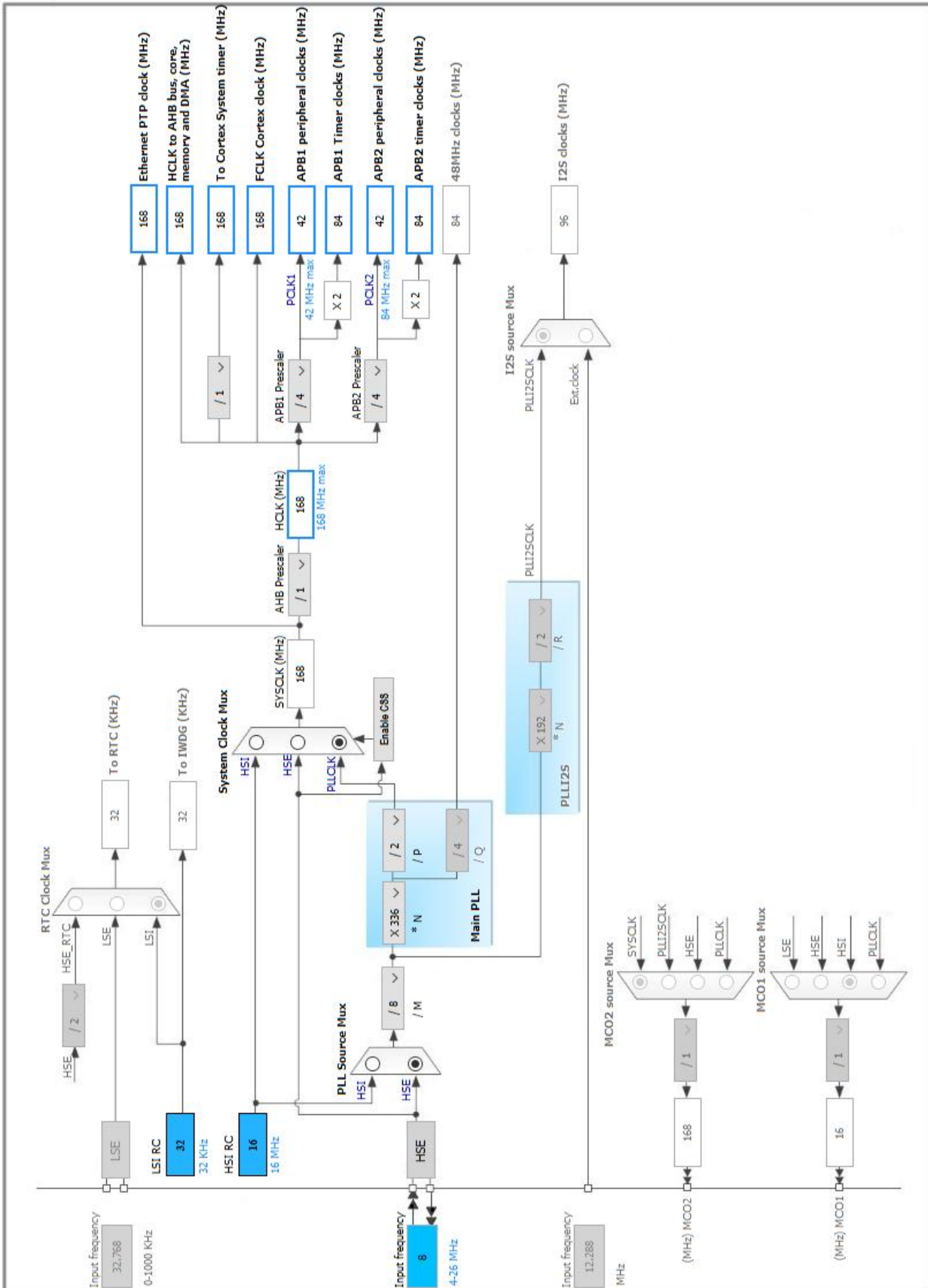
# 5. IPs and Middleware Configuration

## 5.1. RCC

**High Speed Clock (HSE): Crystal/Ceramic Resonator**

### 5.1.1. Parameter Settings:

**System Parameters:**

| | |
|---|---|
| VDD voltage (V) | 3.3 |
| Instruction Cache | Enabled |
| Prefetch Buffer | Enabled |
| Data Cache | Enabled |
| Flash Latency(WS) | 5 WS (6 CPU cycle) |

**RCC Parameters:**

| | |
|---|---|
| HSI Calibration Value | 16 |

**Power Parameters:**

| | |
|---|---|
| Power Regulatror Voltage Scale | Power Regulator Voltage Scale 1 |

## 5.2. SYS

**Timebase Source: SysTick**

**\* User modified value**

# 6. System Configuration

## 6.1. GPIO configuration

| IP | Pin | Signal | GPIO mode | GPIO pull/up pull down | Max Speed | User Label |
|---|---|---|---|---|---|---|
| RCC | PH0-OSC_IN | RCC_OSC_IN | n/a | n/a | n/a | |
| | PH1-OSC_OUT | RCC_OSC_OUT | n/a | n/a | n/a | |
| GPIO | PD12 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | |
| | PD13 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | |
| | PD14 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | |
| | PD15 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | |

## 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 |
| Debug monitor | true | 0 | 0 |
| System tick timer | true | 0 | 0 |
| 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_Rev6 |

## 7.2. Parameter Selection

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

# *8. Software Project*

## 8.1. Project Settings

| Name | Value |
|------|-------|
| Project Name | Blinky |
| Project Folder | C:\Users\Duy Luan\Desktop\STM\Blinky\Blinky |
| Toolchain / IDE | EWARM |
| Firmware Package Name and Version | STM32Cube FW_F4 V1.11.0 |

## 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 |