

1. Description

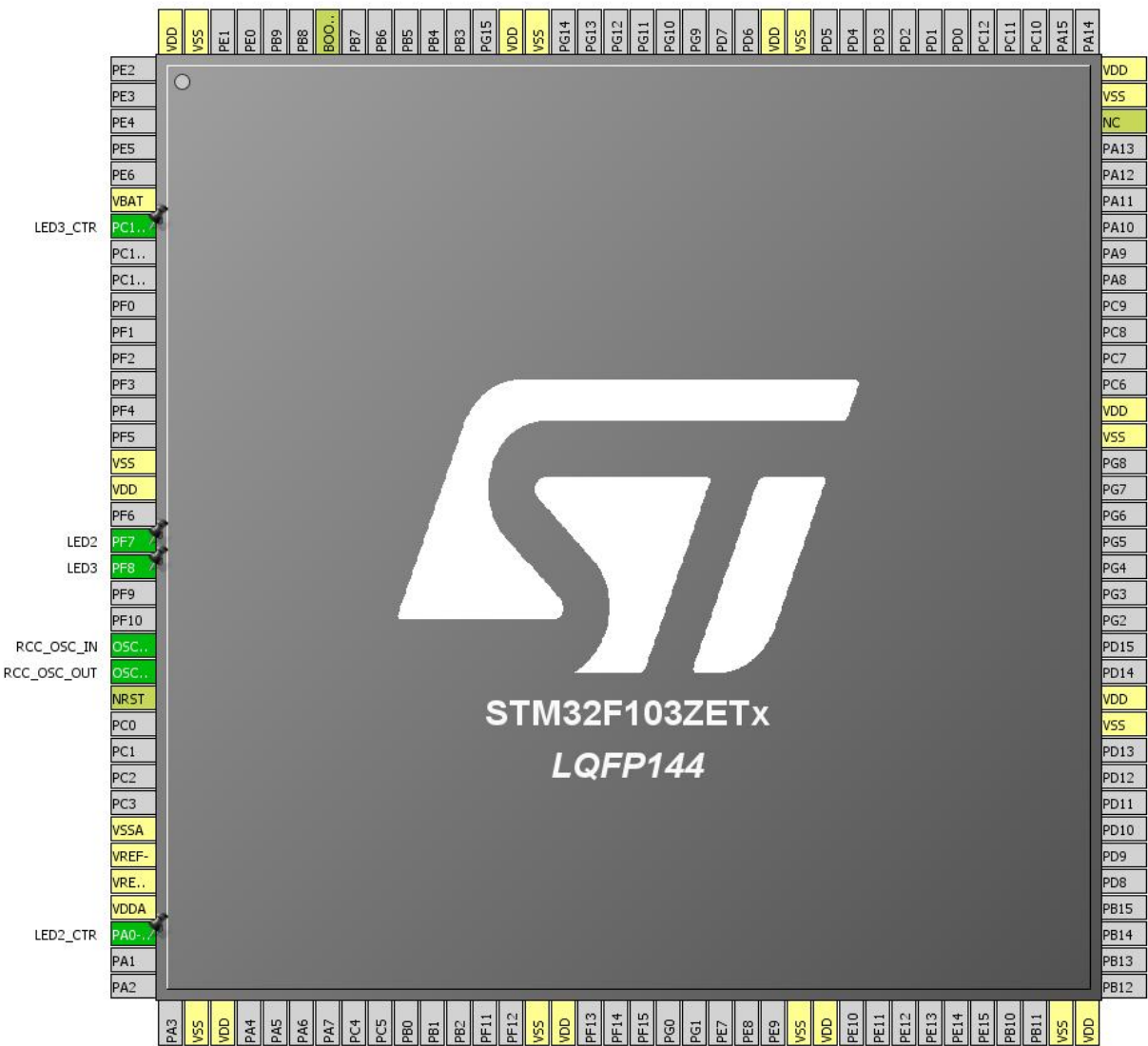
1.1. Project

| | |
|-----------------|--------------------|
| Project Name | JC3_TIM_LED |
| Board Name | custom |
| Generated with: | STM32CubeMX 4.27.0 |
| Date | 10/30/2018 |

1.2. MCU

| | |
|----------------|---------------|
| MCU Series | STM32F1 |
| MCU Line | STM32F103 |
| MCU name | STM32F103ZETx |
| MCU Package | LQFP144 |
| MCU Pin number | 144 |

2. Pinout Configuration

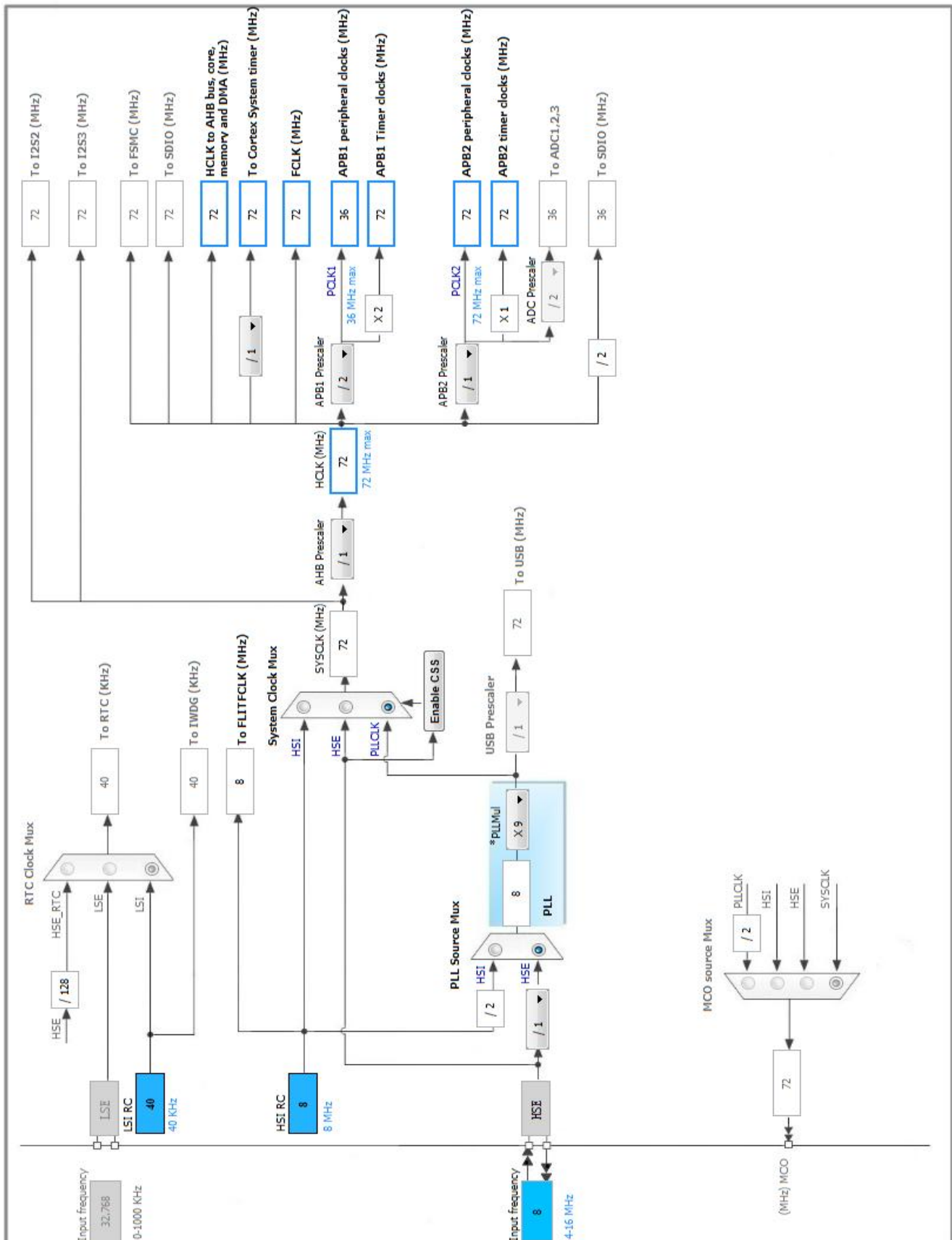


3. Pins Configuration

| Pin Number LQFP144 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|-----------------------|---------------------------------------|----------|--------------------------|----------|
| 6 | VBAT | Power | | |
| 7 | PC13-TAMPER-RTC * | I/O | GPIO_Input | LED3_CTR |
| 16 | VSS | Power | | |
| 17 | VDD | Power | | |
| 19 | PF7 * | I/O | GPIO_Output | LED2 |
| 20 | PF8 * | I/O | GPIO_Output | LED3 |
| 23 | OSC_IN | I/O | RCC_OSC_IN | |
| 24 | OSC_OUT | I/O | RCC_OSC_OUT | |
| 25 | NRST | Reset | | |
| 30 | VSSA | Power | | |
| 31 | VREF- | Power | | |
| 32 | VREF+ | Power | | |
| 33 | VDDA | Power | | |
| 34 | PA0-WKUP * | I/O | GPIO_Input | LED2_CTR |
| 38 | VSS | Power | | |
| 39 | VDD | Power | | |
| 51 | VSS | Power | | |
| 52 | VDD | Power | | |
| 61 | VSS | Power | | |
| 62 | VDD | Power | | |
| 71 | VSS | Power | | |
| 72 | VDD | Power | | |
| 83 | VSS | Power | | |
| 84 | VDD | Power | | |
| 94 | VSS | Power | | |
| 95 | VDD | Power | | |
| 106 | NC | NC | | |
| 107 | VSS | Power | | |
| 108 | VDD | Power | | |
| 120 | VSS | Power | | |
| 121 | VDD | Power | | |
| 130 | VSS | Power | | |
| 131 | VDD | Power | | |
| 138 | BOOT0 | Boot | | |
| 143 | VSS | Power | | |
| 144 | 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 |
| Prefetch Buffer | Enabled |
| Flash Latency(WS) | 2 WS (3 CPU cycle) |

RCC Parameters:

| | |
|--------------------------------|------|
| HSI Calibration Value | 16 |
| HSE Startup Timeout Value (ms) | 100 |
| LSE Startup Timeout Value (ms) | 5000 |

5.2. SYS

Debug: No Debug

Timebase Source: SysTick

5.3. TIM3

Clock Source : Internal Clock

5.3.1. Parameter Settings:

Counter Settings:

| | |
|---|------------------|
| Prescaler (PSC - 16 bits value) | 7200-1 * |
| Counter Mode | Up |
| Counter Period (AutoReload Register - 16 bits value) | 10000-1 * |
| Internal Clock Division (CKD) | No Division |
| auto-reload preload | Disable |

Trigger Output (TRGO) Parameters:

| | |
|-----------------------------|--|
| Master/Slave Mode (MSM bit) | Disable (Trigger input effect not delayed) |
| Trigger Event Selection | Reset (UG bit from TIMx_EGR) |

* 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 | OSC_IN | RCC_OSC_IN | n/a | n/a | n/a | |
| | OSC_OUT | RCC_OSC_OUT | n/a | n/a | n/a | |
| GPIO | PC13-TAMPER-RTC | GPIO_Input | Input mode | No pull-up and no pull-down | n/a | LED3_CTR |
| | PF7 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | LED2 |
| | PF8 | GPIO_Output | Output Push Pull | No pull-up and no pull-down | Low | LED3 |
| | PA0-WKUP | GPIO_Input | Input mode | No pull-up and no pull-down | n/a | LED2_CTR |

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 |
| Prefetch 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 |
| TIM3 global interrupt | true | 0 | 0 |
| PVD interrupt through EXTI line 16 | unused | | |
| Flash global interrupt | unused | | |
| RCC global interrupt | unused | | |

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

| | |
|-----------|---------------|
| Series | STM32F1 |
| Line | STM32F103 |
| MCU | STM32F103ZETx |
| Datasheet | 14611_Rev12 |

7.2. Parameter Selection

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

8. Software Project

8.1. Project Settings

| Name | Value |
|-----------------------------------|-----------------------------------|
| Project Name | JC3_TIM_LED |
| Project Folder | D:\STM32Cube_Learning\JC3_TIM_LED |
| Toolchain / IDE | MDK-ARM V5 |
| Firmware Package Name and Version | STM32Cube FW_F1 V1.6.1 |

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 | Yes |
| 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 |

9. Software Pack Report