

## 1. Description

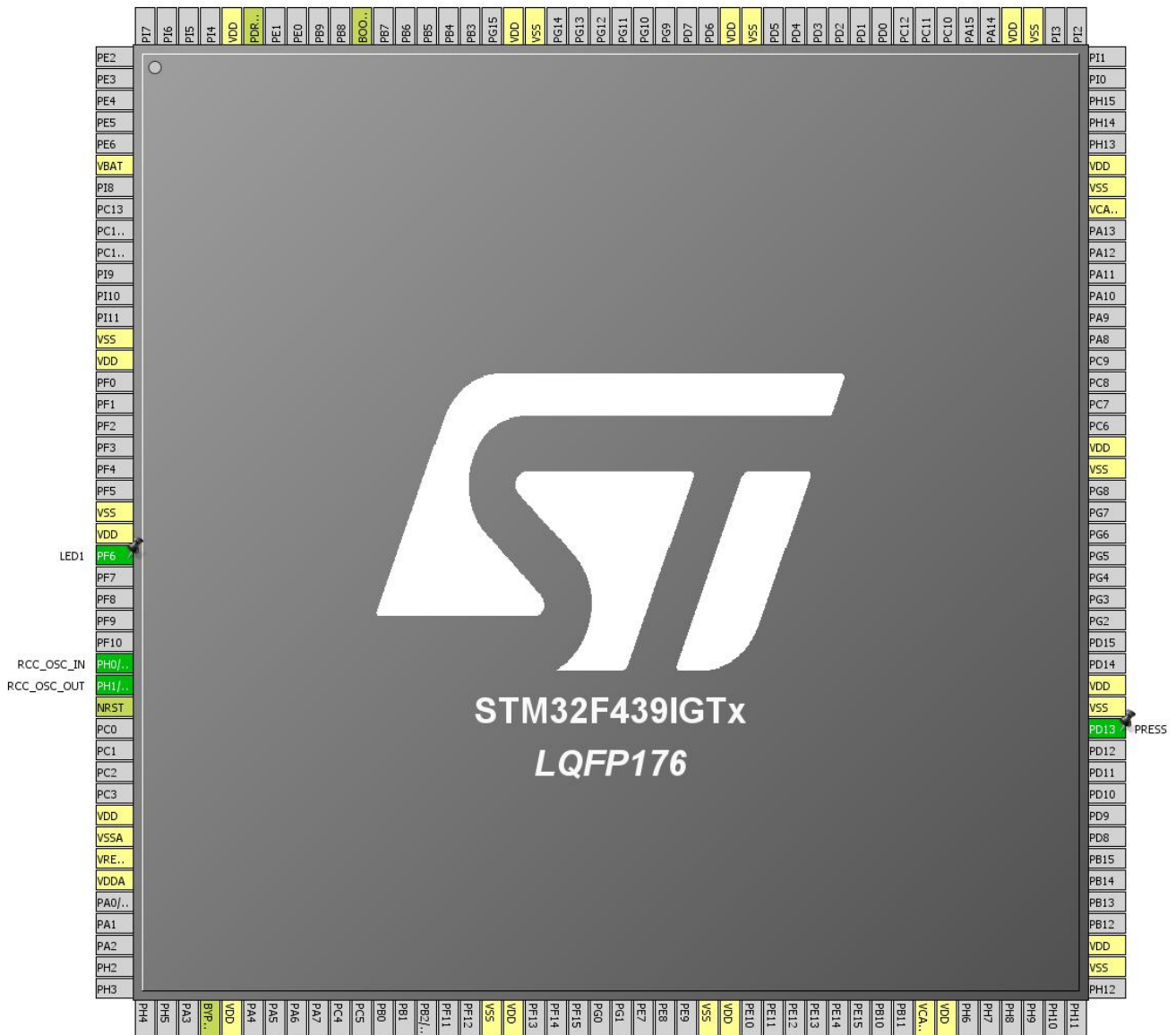
### 1.1. Project

|                 |                    |
|-----------------|--------------------|
| Project Name    | STM32F429I         |
| Board Name      | STM32F429I         |
| Generated with: | STM32CubeMX 4.11.0 |
| Date            | 12/10/2015         |

### 1.2. MCU

|                |               |
|----------------|---------------|
| MCU Series     | STM32F4       |
| MCU Line       | STM32F429/439 |
| MCU name       | STM32F439IGTx |
| MCU Package    | LQFP176       |
| MCU Pin number | 176           |

## 2. Pinout Configuration



### 3. Pins Configuration

| Pin Number<br>LQFP176 | Pin Name<br>(function after<br>reset) | Pin Type | Alternate<br>Function(s) | Label |
|-----------------------|---------------------------------------|----------|--------------------------|-------|
| 6                     | VBAT                                  | Power    |                          |       |
| 14                    | VSS                                   | Power    |                          |       |
| 15                    | VDD                                   | Power    |                          |       |
| 22                    | VSS                                   | Power    |                          |       |
| 23                    | VDD                                   | Power    |                          |       |
| 24                    | PF6 *                                 | I/O      | GPIO_Output              | LED1  |
| 29                    | PH0/OSC_IN                            | I/O      | RCC_OSC_IN               |       |
| 30                    | PH1/OSC_OUT                           | I/O      | RCC_OSC_OUT              |       |
| 31                    | NRST                                  | Reset    |                          |       |
| 36                    | VDD                                   | Power    |                          |       |
| 37                    | VSSA                                  | Power    |                          |       |
| 38                    | VREF+                                 | Power    |                          |       |
| 39                    | VDDA                                  | Power    |                          |       |
| 48                    | BYPASS_REG                            | Reset    |                          |       |
| 49                    | VDD                                   | Power    |                          |       |
| 61                    | VSS                                   | Power    |                          |       |
| 62                    | VDD                                   | Power    |                          |       |
| 71                    | VSS                                   | Power    |                          |       |
| 72                    | VDD                                   | Power    |                          |       |
| 81                    | VCAP_1                                | Power    |                          |       |
| 82                    | VDD                                   | Power    |                          |       |
| 90                    | VSS                                   | Power    |                          |       |
| 91                    | VDD                                   | Power    |                          |       |
| 101                   | PD13                                  | I/O      | GPIO_EXTI13              | PRESS |
| 102                   | VSS                                   | Power    |                          |       |
| 103                   | VDD                                   | Power    |                          |       |
| 113                   | VSS                                   | Power    |                          |       |
| 114                   | VDD                                   | Power    |                          |       |
| 125                   | VCAP_2                                | Power    |                          |       |
| 126                   | VSS                                   | Power    |                          |       |
| 127                   | VDD                                   | Power    |                          |       |
| 135                   | VSS                                   | Power    |                          |       |
| 136                   | VDD                                   | Power    |                          |       |
| 148                   | VSS                                   | Power    |                          |       |
| 149                   | VDD                                   | Power    |                          |       |
| 158                   | VSS                                   | Power    |                          |       |

| Pin Number<br>LQFP176 | Pin Name<br>(function after<br>reset) | Pin Type | Alternate<br>Function(s) | Label |
|-----------------------|---------------------------------------|----------|--------------------------|-------|
| 159                   | VDD                                   | Power    |                          |       |
| 166                   | BOOT0                                 | Boot     |                          |       |
| 171                   | PDR_ON                                | Reset    |                          |       |
| 172                   | VDD                                   | Power    |                          |       |

\* The pin is affected with an I/O function



## 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       |
| TIM Prescaler Selection | Disabled |

###### Power Parameters:

|                               |                                 |
|-------------------------------|---------------------------------|
| Power Regulator Voltage Scale | Power Regulator Voltage Scale 1 |
| Power Over Drive              | Disabled                        |

\* 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 | PF6         | GPIO_Output | Output Push Pull   | No pull-up and no pull-down | Low       | LED1       |
|      | PD13        | GPIO_EXTI13 | <b>External Interrupt Mode with Falling edge trigger detection</b> | <b>Pull-up *</b>            | n/a       | PRESS      |

### 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           |
| EXTI line[15:10] 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      | STM32F429/439 |
| MCU       | STM32F439IGTx |
| Datasheet | 024244_Rev6   |

### 7.2. Parameter Selection

|             |      |
|-------------|------|
| Temperature | 25   |
| Vdd         | null |

## 8. Software Project

### 8.1. Project Settings

| Name                              | Value   |
|-----------------------------------|---|
| Project Name                      | STM32F429I  |
| Project Folder                    | C:\Users\Administrator\Desktop\stm32cube\STM32F429I\3.Interrupt |
| Toolchain / IDE                   | MDK-ARM V5  |
| Firmware Package Name and Version | STM32Cube FW_F4 V1.9.0  |

### 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   | 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  |