

1. Description

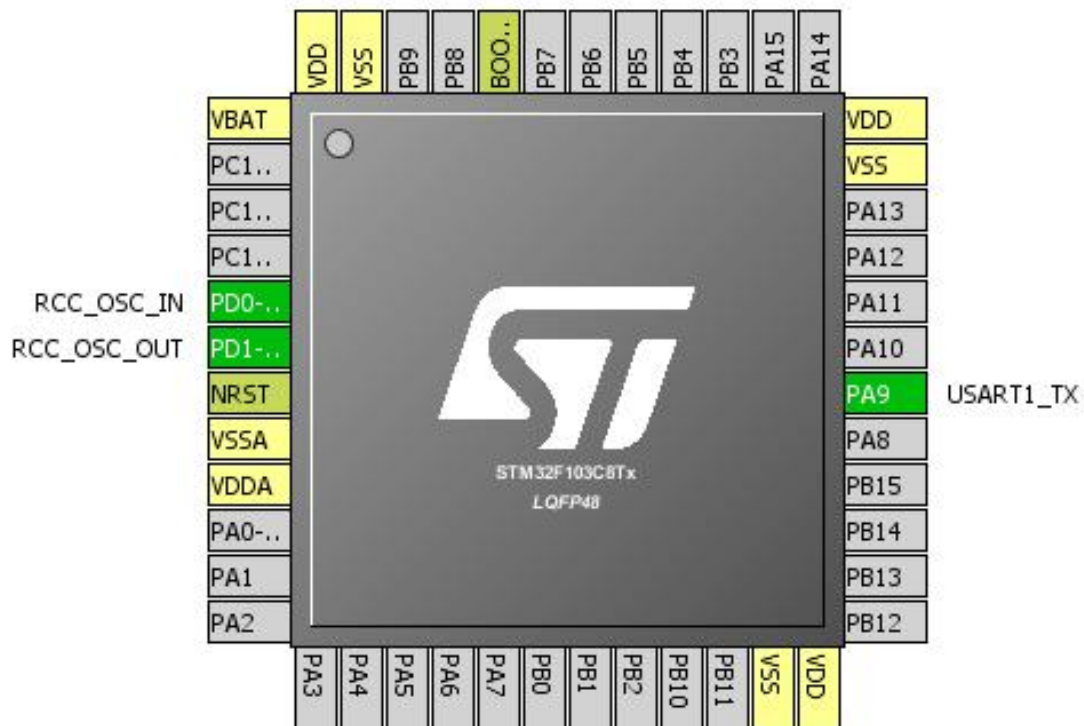
1.1. Project

| | |
|-----------------|------------------------|
| Project Name | Project_Termal_Sensors |
| Board Name | Project_Termal_Sensors |
| Generated with: | STM32CubeMX 4.12.0 |
| Date | 04/10/2016 |

1.2. MCU

| | |
|----------------|---------------|
| MCU Series | STM32F1 |
| MCU Line | STM32F103 |
| MCU name | STM32F103C8Tx |
| MCU Package | LQFP48 |
| MCU Pin number | 48 |

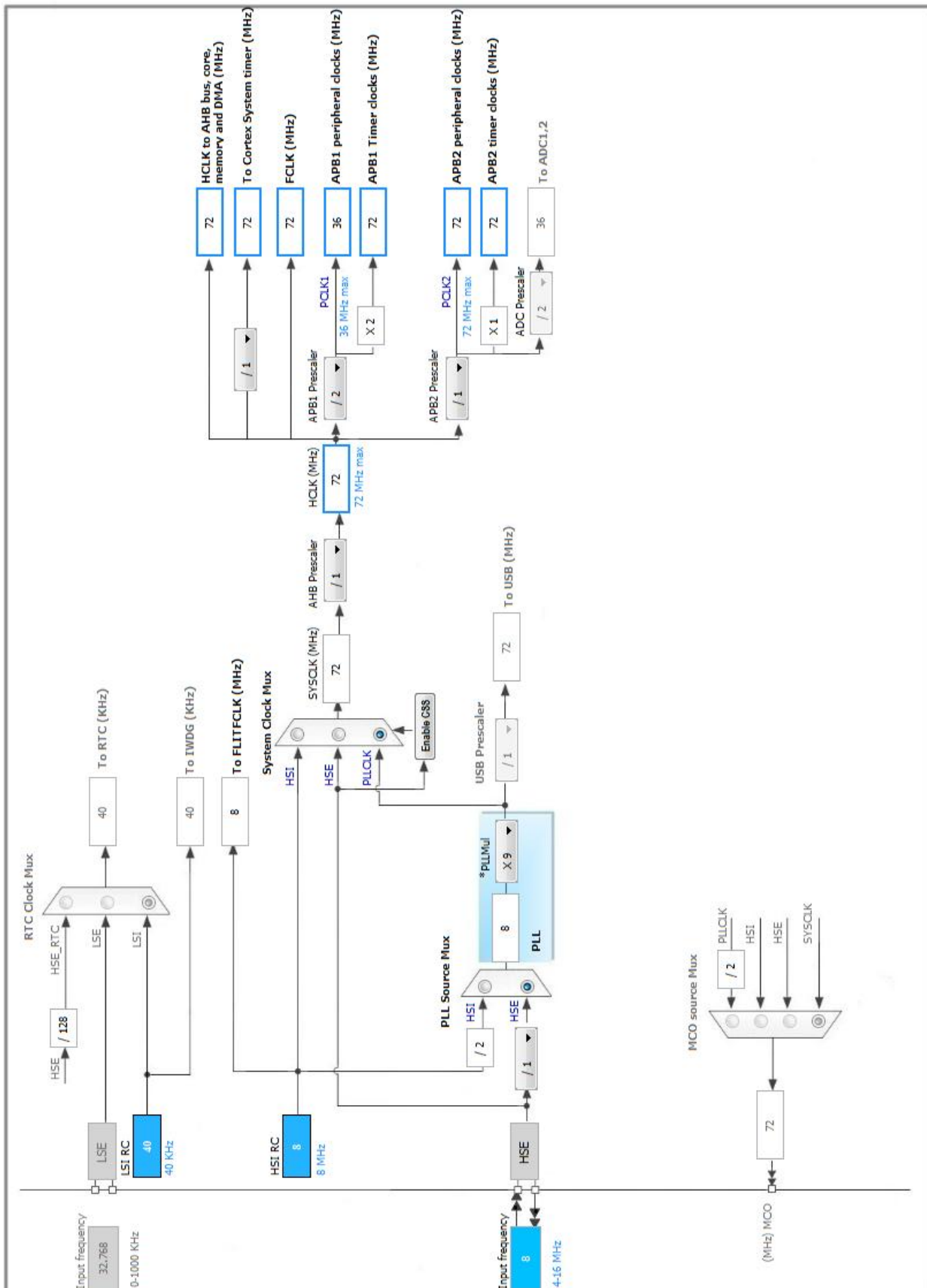
2. Pinout Configuration



3. Pins Configuration

| Pin Number LQFP48 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|----------------------|---------------------------------------|----------|--------------------------|-------|
| 1 | VBAT | Power | | |
| 5 | PD0-OSC_IN | I/O | RCC_OSC_IN | |
| 6 | PD1-OSC_OUT | I/O | RCC_OSC_OUT | |
| 7 | NRST | Reset | | |
| 8 | VSSA | Power | | |
| 9 | VDDA | Power | | |
| 23 | VSS | Power | | |
| 24 | VDD | Power | | |
| 30 | PA9 | I/O | USART1_TX | |
| 35 | VSS | Power | | |
| 36 | VDD | Power | | |
| 44 | BOOT0 | Boot | | |
| 47 | VSS | Power | | |
| 48 | VDD | Power | | |

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 |
|-----------------------|----|

5.2. USART1

Mode: Single Wire (Half-Duplex)

5.2.1. Parameter Settings:

Basic Parameters:

| | |
|-------------|---------------------------|
| Baud Rate | 115200 |
| Word Length | 8 Bits (including Parity) |
| Parity | None |
| Stop Bits | 1 |

Advanced Parameters:

| | |
|----------------|----------------------|
| Data Direction | Receive and Transmit |
| Over Sampling | 16 Samples |

* 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 | PD0-OSC_IN | RCC_OSC_IN | n/a | n/a | n/a | |
| | PD1-OSC_OUT | RCC_OSC_OUT | n/a | n/a | n/a | |
| USART1 | PA9 | USART1_TX | Alternate Function Open Drain | n/a | High * | |

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 |
| Non maskable interrupt | unused | | |
| Hard fault interrupt | unused | | |
| Memory management fault | unused | | |
| Prefetch 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 | | |
| USART1 global interrupt | unused | | |

* User modified value

7. Power Plugin report

7.1. Microcontroller Selection

| | |
|-----------|---------------|
| Series | STM32F1 |
| Line | STM32F103 |
| MCU | STM32F103C8Tx |
| Datasheet | 13587_Rev17 |

7.2. Parameter Selection

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

8. Software Project

8.1. Project Settings

| Name | Value |
|-----------------------------------|---|
| Project Name | Project_Termal_Sensors |
| Project Folder | F:\Smart_House_Project\smart_house\Project_Termal_Sensors |
| Toolchain / IDE | EWARM |
| Firmware Package Name and Version | STM32Cube FW_F1 V1.3.1 |

8.2. Code Generation Settings

| Name | Value |
|---|---------------------------------------|
| STM32Cube Firmware Library Package | Copy only the necessary library files |
| 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 |